

APPENDIX 11

**TECHNICAL SUPPLEMENT TO THE DECEMBER 10, 2014 PROPOSAL OF THE
DALLAS-FORT WORTH REASONABLE FURTHER PROGRESS STATE
IMPLEMENTATION PLAN REVISION FOR THE 2008 EIGHT-HOUR OZONE
STANDARD NONATTAINMENT AREA**

TECHNICAL SUPPLEMENT TO THE DECEMBER 10, 2014 PROPOSAL OF THE DALLAS-FORT WORTH REASONABLE FURTHER PROGRESS STATE IMPLEMENTATION PLAN REVISION FOR THE 2008 EIGHT-HOUR OZONE STANDARD NONATTAINMENT AREA

This supplement provides additional technical detail regarding Motor Vehicle Emission Simulator (MOVES) 2014 model-based on-road mobile emissions estimates. These estimates became available after the Dallas-Fort Worth (DFW) Reasonable Further Progress (RFP) State Implementation Plan (SIP) Revision for the 2008 Eight-Hour Ozone National Ambient Air Quality Standard (Non-Rule Project No. 2013-014-SIP-NR) was approved for proposal by the commission on December 10, 2014. The Texas Commission on Environmental Quality (TCEQ) is taking comment from December 26, 2014 through February 11, 2015 on using MOVES2014-based on-road emission inventories for this DFW RFP SIP revision.

Introduction

The United States Environmental Protection Agency (EPA) made MOVES2014 available on July 31, 2014; officially released the MOVES2014 version of the model as a replacement to MOVES2010b for SIP applications on October 7, 2014 (70 FR 60343); and released an update to the model on October 27, 2014. The October 27, 2014 update fixed a significant error in the new non-road portion of MOVES2014; addressed a number of minor issues with the on-road portion of MOVES2014; improved the installation process; and included small performance improvements. The October 27, 2014 version of MOVES2014 was used for all on-road updates provided in this supplement. The MOVES2014 model was not available in time for MOVES2014-based emissions estimates to be included in the proposed DFW RFP SIP revision. The TCEQ may use MOVES2014 emissions inventories to replace the MOVES2010b emissions inventories in the adopted version of the DFW RFP SIP revision. This supplement to the proposed DFW RFP SIP revision provides an RFP analysis prepared using recently completed MOVES2014-based on-road emissions inventories for consideration during the public comment period. Since the MOVES2014 emissions estimates have very recently been developed, the TCEQ is still conducting a quality assurance review process. The emission estimates are subject to change if any errors are identified.

MOVES2014-Based On-Road Mobile Sources Emissions Inventories

In December 2014, the North Central Texas Council of Governments (NCTCOG) completed MOVES2014-based on-road mobile emissions inventories for the current proposed DFW RFP SIP revision and submitted the work to the TCEQ. The NCTCOG developed these inventories for the 10-county DFW 2008 eight-hour ozone nonattainment area (hereafter referred to as the DFW area). The methods used for the development of the MOVES2014-based on-road mobile inventories are consistent with EPA inventory guidance and transportation conformity requirements. The planning assumptions, fleet characteristics, and vehicle miles traveled (VMT) estimates were also updated to incorporate the latest available information at the time the inventories were developed. A summary of the control strategies used for the MOVES2014 inventory development is provided in the *MOVES2014-Based On-Road Mobile Source Controls* section of this document. The inventories and control strategy reductions developed for the proposed DFW RFP SIP revision analysis include:

- 2011 RFP base year on-road mobile emission inventories for the DFW area based on VMT estimates from the local travel demand model;

- 2011, 2017, and 2018 RFP adjusted base year on-road mobile emission inventories for the DFW area based on VMT estimates from the local travel demand model;
- 2011, 2017, and 2018 RFP uncontrolled on-road mobile emission inventories for the DFW area based on VMT estimates from the local travel demand model;
- 2011, 2017, and 2018 RFP post-control on-road mobile emission inventories for the DFW area based on VMT estimates from the local travel demand model; and
- 2017, 2018, and 2019 control strategy reductions.

Summaries of the inventory results are provided in the *MOVES2014-Based Emissions Inventory Summary* section of this document. The TCEQ requested that NCTCOG develop MOVES2014-based on-road mobile emissions inventory projections to develop a final MOVES-based RFP analysis for the DFW area. This analysis is presented in the *MOVES2014-Based RFP Analysis* section of this document.

MOVES2014-Based On-Road Mobile Source Controls

The on-road mobile emissions inventories for each DFW RFP analysis year were developed using emissions factors that reflect all control strategies for each analysis year. The controls that were modeled include: pre-1990 Federal Motor Vehicle Control Program (FMVCP), post-1990 FMVCP, summer reformulated gasoline (RFG), the East Texas Regional Low Reid Vapor Pressure (RVP) Gasoline Program, the DFW vehicle inspection and maintenance program (I/M) program, the DFW anti-tampering program (ATP), and Texas Low Emission Diesel (TxLED). The EPA finalized Tier 3 of the FMVCP in March 2014, required implementation to begin phase-in starting in 2017, and included Tier 3 in MOVES2014. The model used to develop the on-road emissions inventories for the DFW RFP SIP proposal, MOVES2010b, did not include Tier 3 of the FMVCP. A summary of the DFW on-road mobile source control strategies used for the MOVES2014 on-road emissions inventories are presented in Table 1: *Control Programs Modeled using MOVES2014 for RFP Control Scenarios*.

Table 1: Control Programs Modeled using MOVES2014 for RFP Control Scenarios

Control Program Description	Additional Information	Year Control Program Started	Creditable for RFP
Pre-1990 FMVCP	Pre-1990 control	Pre-1990	No
1992 Federal Controls on Gasoline Volatility	Pre-1990 control Collin, Dallas, Denton, and Tarrant Counties: Maximum Reid Vapor Pressure of 7.8 pounds per square inch Ellis, Johnson, Kaufman, Parker, Rockwall, and Wise: Maximum Reid Vapor Pressure of 9.0 pounds per square inch	1992	No
Anti-Tampering Program (ATP) (Dallas and Tarrant Counties only)	None	1986	Yes
I/M Program (Dallas and Tarrant Counties only)	None	1990	Yes
Tier 1, FMVCP	None	1994	Yes

Control Program Description	Additional Information	Year Control Program Started	Creditable for RFP
Reformulated Gasoline	Collin, Dallas, Denton, and Tarrant Counties only	1995 for phase one, 2000 for phase two	Yes
East Texas Regional Low RVP Gasoline Program	Ellis, Johnson, Kaufman, Parker, Rockwall, and Wise Counties	2000	Yes
National Low Emission Vehicle Program	None	2001	Yes
Expanded I/M and ATP	Expanded to Collin and Denton Counties	2002	Yes
Expanded I/M and ATP	Expanded to Ellis, Johnson, Kaufman, Parker, and Rockwall Counties	2003	Yes
Tier 2, FMVCP	Phase in from 2004 to 2009	2004	Yes
TxLED	15 parts per million maximum for sulfur. Low aromatic hydrocarbon and high cetane number to control NO _x	2006	Yes
Federal Low-Sulfur Highway Diesel	15 parts per million maximum sulfur content	2006	Yes
2007 Heavy duty FMVCP	Phase in from 2007 to 2010	2007	Yes
Tier 3, FMVCP	Not final until March 2014, Phase in from 2017 until 2025 Effects are not included in MOVES2010b. Effects not included for any MOVES2010b-based DFW RFP SIP scenarios. MOVES2014 released July 2014 includes Tier 3 effects. Included in MOVES2014 DFW RFP SIP scenarios.	2017	Yes

MOVES2014-Based Emissions Summary

The MOVES2014-based on-road mobile emissions inventories were integrated into the existing inventories that include all major anthropogenic source categories. For RFP calculation purposes, the inventories for the nine counties previously designated as nonattainment under the 1997 eight-hour ozone standard (Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant Counties) are separated from the Wise County inventory.

Summaries of the base year, uncontrolled, and post- control emissions inventories used for the MOVES2014-Based DFW RFP analysis are presented in the following tables:

- Table 2: *MOVES2014-Based Summary of the 2011 Base Year Ozone Season Weekday NO_x and VOC Emissions for Nine Previously Designated Counties (tons per day);*
- Table 3: *MOVES2014-Based Summary of the 2017 Ozone Season Weekday NO_x and VOC Emissions for the Nine Previously Designated Counties (tons per day);*
- Table 4: *MOVES2014-Based Summary of the 2018 Ozone Season Weekday NO_x and VOC Emissions for Nine Previously Designated Counties (tons per day); and*

- Table 5: MOVES2014-Based Summary of the 2011 Ozone Season Weekday NO_x and VOC Emissions for Wise County (tons per day);
- Table 6: MOVES2014-Based Summary of the 2017 Ozone Season Weekday NO_x and VOC Emissions for Wise County;
- Table 7: MOVES2014-Based Summary of the 2018 Ozone Season Weekday NO_x and VOC Emissions for Wise County.

Emissions inventory estimates for point, area, and non-road mobile sources presented below are the same as those in the proposed DFW RFP SIP revision approved by the commission on December 10, 2014. On-road mobile emissions inventory estimates, along with total uncontrolled and post-control emissions estimates, differ from those in the proposed DFW SIP revision approved by the commission on December 10, 2014, due to the availability of the on-road mobile source inventory estimates based on the MOVES2014 model.

Table 2: MOVES2014-Based Summary of the 2011 Base Year Ozone Season Weekday NO_x and VOC Emissions for Nine Previously Designated Counties (tons per day)

Emissions Inventory Source	Uncontrolled NO _x	Controlled NO _x	Uncontrolled VOC	Controlled VOC
Non-Road Mobile Sources	188.80	112.98	130.51	53.74
On-Road Mobile Sources (MOVES2014)	736.68	230.75	355.31	99.39
Emission Inventory Source	Existing Controlled NO _x (as of 2011)	Post-2011 Controlled NO _x	Existing Controlled VOC	Post-2011 Controlled VOC
Area Sources	30.48	30.48	263.30	263.30
Point Sources	31.34	31.34	27.66	27.66
Total of All Sources	987.30	405.55	776.78	444.09

Table 3: MOVES2014-Based Summary of the 2017 Ozone Season Weekday NO_x and VOC Emissions for Nine Previously Designated Counties (tons per day)

Emissions Inventory Source	Uncontrolled NO _x	Controlled NO _x	Uncontrolled VOC	Controlled VOC
Non-Road Mobile Sources	206.27	81.54	150.44	37.01
On-Road Mobile Sources (MOVES2014)	860.90	144.08	416.88	70.41
Emission Inventory Source	Existing Controlled NO _x (as of 2011)	Post-2011 Controlled NO _x	Existing Controlled VOC	Post-2011 Controlled VOC
Area Sources	30.91	30.91	266.15	266.15
Point Sources	46.71	46.71	30.84	30.84
Total of All Sources	1144.79	303.24	864.31	404.41

Table 4: MOVES2014-Based Summary of the 2018 Ozone Season Weekday NO_x and VOC Emissions for Nine Previously Designated Counties (tons per day)

Emissions Inventory Source	Uncontrolled NO _x	Controlled NO _x	Uncontrolled VOC	Controlled VOC
Non-Road Mobile Sources	206.03	76.38	152.56	36.15
On-Road Mobile Sources (MOVES2014)	881.68	129.61	427.12	66.43
Emission Inventory Source	Existing Controlled NO _x (as of 2011)	Post-2011 Controlled NO _x	Existing Controlled VOC	Post-2011 Controlled VOC
Area Sources	29.93	29.93	258.70	258.70
Point Sources	45.90	45.90	29.83	29.83
Total of All Sources	1163.54	281.82	868.21	391.11

Table 5: MOVES2014-Based Summary of the 2011 Base Year Ozone Season Weekday NO_x and VOC Emissions for Wise County (tons per day)

Emissions Inventory Source	Uncontrolled NO _x	Controlled NO _x	Uncontrolled VOC	Controlled VOC
Non-Road Mobile Sources	12.19	6.85	2.73	1.25
On-Road Mobile Sources (MOVES2014)	16.34	5.99	4.34	1.81
Emission Inventory Source	Existing Controlled NO _x (as of 2011)	Post-2011 Controlled NO _x	Existing Controlled VOC	Post-2011 Controlled VOC
Area Sources	12.14	12.14	29.18	29.18
Point Sources	8.61	8.61	2.14	2.14
Total of All Sources	49.28	33.59	38.39	34.38

Table 6: MOVES2014-Based Summary of the 2017 Ozone Season Weekday NO_x and VOC Emissions for Wise County (tons per day)

Emissions Inventory Source	Uncontrolled NO _x	Controlled NO _x	Uncontrolled VOC	Controlled VOC
Non-Road Mobile Sources	11.17	4.71	2.75	0.82
On-Road Mobile Sources (MOVES2014)	18.28	3.57	4.89	1.24
Emission Inventory Source	Existing Controlled NO _x (as of 2011)	Post-2011 Controlled NO _x	Existing Controlled VOC	Post-2011 Controlled VOC
Area Sources	9.72	9.72	23.74	23.74
Point Sources	10.21	10.21	3.41	3.41
Total of All Sources	49.38	28.21	34.79	29.21

Table 7: MOVES2014-Based Summary of the 2018 Ozone Season Weekday NO_x and VOC Emissions for Wise County (tons per day)

Emissions Inventory Source	Uncontrolled NO _x	Controlled NO _x	Uncontrolled VOC	Controlled VOC
Non-Road Mobile Sources	10.61	4.18	2.71	0.77
On-Road Mobile Sources (MOVES2014)	18.74	3.21	5.01	1.16
Emission Inventory Source	Existing Controlled NO _x (as of 2011)	Post-2011 Controlled NO _x	Existing Controlled VOC	Post-2011 Controlled VOC
Area Sources	7.44	7.44	19.17	19.17
Point Sources	9.71	9.71	2.88	2.88
Total of All Sources	46.50	24.54	29.77	23.98

MOVES2014-BASED RFP ANALYSIS

The DFW RFP analyses were recalculated using the MOVES2014-based on-road mobile emissions inventory values. Summaries of the MOVES2014-based demonstrations for 2017 and 2018 for the two DFW RFP county groups are provided in the following tables:

- Table 8: *MOVES2014-Based Summary of the 2017 DFW RFP Demonstration for the Nine Previously Designated Counties (tons per day)*,
- Table 9: *MOVES2014-Based Summary of the 2017 DFW RFP Demonstration for Wise County (tons per day)*,
- Table 10: *MOVES2014-Based Summary of the 2018 DFW RFP Demonstration for the Nine Previously Designated Counties (tons per day)*; and
- Table 11: *MOVES2014-Based Summary of the 2018 DFW RFP Demonstration for Wise County (tons per day)*.

As concluded in the final row of each of these tables, if MOVES2014-based calculations are used in the adopted DFW RFP SIP revision, the DFW area demonstrates the required RFP emission reductions for each milestone year, for both the nine previously designated counties and Wise County. All RFP calculations are documented in Attachment A: *Reasonable Further Progress Demonstration Spreadsheet with MOVES2014*.

Table 8: MOVES2014-Based Summary of the 2017 DFW RFP Demonstration for the Nine Previously Designated Counties (tons per day)

Line	Description	NO _x	VOC
Line 1	Uncontrolled or Existing Controlled 2017 emissions forecast with growth for nine previously designated counties	1144.79	864.31
Line 2	Creditable RFP control reductions, for nine previously designated counties, between 2011 and 2017	823.81	453.39
Line 3	Controlled 2017 RFP emissions forecast for nine previously designated counties (Line 1 minus Line 2)	320.98	410.92
Line 4	Amount of NO _x and VOC reduction to transfer to Wise County RFP demonstration	0.00	1.00

Line	Description	NO _x	VOC
Line 5	Amount of NO _x reduction substitution (see Sheet 3, Attachment A)	0.00	0.00
Line 6	Controlled 2017 RFP forecast for nine previously designated counties accounting for transfer and NO _x substitution (Line 3 plus Line 4 plus Line 5)	320.98	411.92
Line 7	2017 RFP target level of emissions for nine previously designated counties	363.11	426.67
Line 8	Excess (+) / Shortfall (-), (Line 7 minus Line 6)	+42.13	+14.75
Line 9	Is controlled RFP EI less than target level of emissions?	Yes	Yes

Table 9: MOVES2014-Based Summary of the 2017 DFW RFP Demonstration for Wise County (tons per day)

Line	Description	NO _x	VOC
Line 1	Uncontrolled or existing controlled 2017 emissions forecast with growth for Wise County	49.38	34.79
Line 2	Creditable RFP control reductions for Wise County between 2011 and 2017	18.96	5.30
Line 3	Controlled 2017 Wise County RFP emissions forecast (Line 1 minus Line 2)	30.42	29.49
Line 4	Amount of NO _x and VOC reduction to transfer from RFP demonstration for nine previously designated counties	0.00	-1.00
Line 5	Controlled 2017 Wise County RFP forecast accounting for transfer and NO _x substitution (Line 3 plus Line 4)	30.42	28.49
Line 6	2017 Wise County RFP target level of emissions	33.36	29.27
Line 7	Excess (+) / Shortfall (-), (Line 6 minus Line 5)	+2.94	+0.78
Line 8	Is controlled RFP EI less than target level of emissions?	Yes	Yes

Table 10: MOVES2014-Based Summary of the 2018 DFW RFP Demonstration for the Nine Previously Designated Counties (tons per day)

Line	Description	NO _x	VOC
Line 1	Uncontrolled or existing controlled 2018 emissions forecast with growth for nine previously designated counties	1163.54	868.21
Line 2	Creditable RFP control reductions between 2011 and 2017 for nine previously designated counties	823.81	453.39
Line 3	Creditable RFP control reductions between 2017 and 2018 for nine previously designated counties	22.72	19.03
Line 4	Controlled 2018 RFP emissions forecast for nine previously designated counties (Line 1 minus Line 2 minus Line 3)	317.01	395.79
Line 5	Amount of creditable reductions reserved for RFP milestone contingency for nine previously designated counties	12.07	0.00
Line 6	Controlled 2018 RFP emission forecast with milestone contingency for nine previously designated counties (Line 4 plus Line 5)	329.08	395.79

Line	Description	NO _x	VOC
Line 7	Amount of NO _x and VOC reduction to transfer to Wise County RFP demonstration	0.00	0.00
Line 8	Amount of NO _x reduction substitution (see Sheet 9, Attachment A)	0.00	0.00
Line 9	Controlled 2018 RFP forecast for nine previously designated counties, without reductions reserved for contingency, accounting for reduction transfer to Wise County, and accounting for NO _x substitution (Line 6 plus Line 7 plus Line 8)	329.08	395.79
Line 10	2018 RFP target level of emissions for nine previously designated counties	353.96	421.83
Line 11	Excess (+) / Shortfall (-), (Line 10 minus Line 9)	+24.88	+26.04
Line 12	Is controlled RFP EI less than target level of emissions?	Yes	Yes

Table 11: MOVES2014-Based Summary of the 2018 DFW RFP Demonstration for Wise County (tons per day)

Line	Description	NO _x	VOC
Line 1	Uncontrolled or existing controlled Wise County 2018 emissions forecast with growth	46.50	29.77
Line 2	Creditable Wise County RFP control reductions between 2011 and 2017	18.96	5.30
Line 3	Creditable Wise County RFP control reductions between 2017 and 2018	0.97	0.30
Line 4	Controlled 2018 Wise County RFP emissions forecast (Line 1 minus Line 2 minus Line 3)	26.57	24.17
Line 5	Amount of creditable reductions reserved for Wise County RFP milestone contingency	1.00	0.00
Line 6	Controlled Wise County RFP emission forecast with milestone contingency (Line 4 plus Line 5)	27.57	24.17
Line 7	Amount of NO _x and VOC reduction to transfer from RFP demonstration for nine previously designated counties	0.00	0.00
Line 8	Controlled 2018 Wise County RFP forecast without reductions reserved for contingency and accounting for NO _x substitution (Line 6 plus Line 7)	27.57	24.17
Line 9	2018 Wise County RFP target level of emissions	33.36	28.23
Line 10	Excess (+) / Shortfall (-), (Line 8 minus Line 7)	+5.79	+4.06
Line 11	Is controlled RFP EI less than target level of emissions?	Yes	Yes

MOVES2014-Based Contingency Analysis

RFP contingency was calculated for the RFP milestone year, 2017 to 2018; and the RFP post-attainment contingency year, 2018 to 2019. A contingency demonstration was done for the nine previously designated counties as a county group and for the newly designated Wise County. The required 3% contingency for both years and for both county groups was achieved using a 3% NO_x reduction. A summary of the contingency demonstrations is provided in Table

12: *MOVES2014-Based DFW RFP Contingency Summary*. If the TCEQ elects to use the MOVES2014 figures for the DFW RFP SIP revision, all RFP contingency requirements will be exceeded without additional emissions controls. Details of the contingency calculations may be viewed in Attachment A: *Reasonable Further Progress Demonstration Spreadsheet with MOVES2014*.

Table 12: MOVES2014-Based DFW RFP Contingency Summary

Contingency Demonstration Description	NO _x Reduction Requirement (tpd)	Available NOX Reductions (tpd)	Demonstration Status
Nine Previously Designated Counties Milestone	12.07	12.07	Requirement Met
Nine Previously Designated Counties Attainment Year	12.07	50.64	Requirement Exceeded
Wise County Milestone	1.00	1.00	Requirement Met
Wise County Attainment Year	1.00	6.69	Requirement Exceeded

Note 1: The nine previously designated counties include: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant.

MOVES2014-Based Motor Vehicle Emissions Budgets

Since the MOVES2014 emissions estimates have been recently developed, these estimates are still undergoing a quality assurance review process and are subject to change if any errors are identified. If the TCEQ elects to use the MOVES2014 estimates presented in this supplement for the adopted DFW RFP SIP revision, the 2017 RFP motor vehicle emissions budget (MVEB) for adoption would be 162.42 NO_x tons per day (tpd) and 78.82 VOC tpd. The 2018 RFP MVEB for adoption would be 146.10 NO_x tpd and 74.35 VOC tpd.

Attachments

Attachment A Reasonable Further Progress Demonstration Spreadsheet with MOVES2014

References

EPA, 1992. "Procedures for Emission Inventory Preparation, Volume IV: Mobile Sources." EPA420-R-92-009, December 1992, U.S. Environmental Protection Agency, Emission Planning and Strategies Division, Office of Mobile Sources and Technical Support Division, Office of Air Quality Planning and Standards.

EPA, 1993. "NO_x Substitution Guidance." December 1993, US Environmental Protection Agency, Office of Air Quality and Planning Standards, Research Triangle Park, NC 27711.

EPA, 1994. "Guidance on the Post-1996 Rate-of-Progress Plan and the Attainment Demonstration," Corrected Version as of February 18, 1994. U.S. Environmental Protection Agency, Ozone/Carbon Monoxide Programs Branch, Office of Air Quality Planning and Standards. Research Triangle Park, NC 27711.

EPA. "Guidance on the Adjusted Base Year Emissions Inventory and the 1996 Target for the 15 Percent Rate-of-Progress Plans." U.S. Environmental Protection Agency, Ozone/Carbon Monoxide Programs Branch, Office of Air Quality Planning and Standards. Research Triangle Park, NC 27711.

EPA. 2001. Memorandum: Texas Low Emission Diesel (LED) Fuel Benefits. To Karl Edlund, EPA, Region VI, from Robert Larson, EPA, Office of Transportation and Air Quality (OTAQ), National Vehicle and Fuel Emissions Laboratory at Ann Arbor, Michigan. September 27, 2001.

EPA. 2002. Guidance for Quality Assurance Project Plans for Modeling, EPA QA/G-5M, EPA/240/R-02/007, Office of Environmental Information. December 2002.

EPA, 2005. "Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations." EPA-454/R-05-001, Issued By: Emissions Inventory Group, Emissions, Monitoring and Analysis Division, Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency. Research Triangle Park, NC 27711, August 2005.

EPA, 2009. "Draft Motor Vehicle Emission Simulator (MOVES) 2009, Software Design and Reference Manual." Assessment and Standards Division Office of Transportation and Air Quality U.S. Environmental Protection Agency, EPA420-B-09-007 March 2009.

EPA, 2010. "Technical Guidance on the Use of MOVES2010 for Emission Inventory Preparation in State Implementation Plans and Transportation Conformity." Transportation and Regional Programs Division, Office of Transportation and Air Quality, U.S. Environmental Protection Agency, EPA420-B-10-023, April 2010.

EPA. 2012. MOVES, User Guide for MOVES2010b, EPA420-B-12-001b, Assessment and Standards Division, Office of Transportation and Air Quality. June 2012.

EPA, 2014. "Policy Guidance on the Use of MOVES2014 and Subsequent Minor Revisions for State Implementation Plan Development, Transportation Conformity, and Other Purposes." Transportation and Regional Programs Division, Office of Transportation and Air Quality, U.S. Environmental Protection Agency, EPA-420-B-14-008, July 2014.

EPA. 2014. Motor Vehicle Emission Simulator (MOVES), User Guide for MOVES2014, EPA420-B-14-055, Assessment and Standards Division, Office of Transportation and Air Quality. July 2014.

Federal Register, Monday, June 2, 2003, Part II, Environmental Protection Agency, 40 CFR Part 51, Proposed Rule To Implement the Eight-Hour Ozone National Ambient Air Quality Standard; Proposed Rule.

Federal Register, Friday, April 30, 2004, Part II, Environmental Protection Agency, 40 CFR Parts 50, 51 and 81, [OAR 2003-0079, FRL-7651-7], RIN 2060-AJ99, Final Rule To Implement the 8-Hour Ozone National Ambient Air, Quality Standard-Phase 1.

Federal Register, Tuesday, November 29, 2005, Part II, Environmental Protection Agency, 40 CFR Parts 51, 52, and 80 Final Rule To Implement the 8-Hour Ozone National Ambient Air Quality Standard; Final Rule.

Federal Register, Environmental Protection Agency, 40 CFR Part 51, Air Emissions Reporting Requirements, Final Rule, Volume 73, Number 243, pp 76539 – 76558, December 17, 2008.

Federal Register, Thursday, June 6, 2013, Part II, Environmental Protection Agency, 40 CFR Parts 50, 51, 70 et. Al. Implementation of the 2008 National Ambient Air Quality Standards for Ozone: State Implementation Plan Requirements; Proposed Rule.

Texas Transportation Institute. August 2013. TTI Emissions Inventory Estimation Utilities Using MOVES: MOVES2010bUTL User's Guide.

Texas Transportation Institute. November 2014. TTI Emissions Inventory Estimation Utilities Using MOVES: MOVES2014UTL User's Guide.

Attachment A

**Reasonable Further Progress Demonstration With MOVES2014
Spreadsheet**

Attachment A - Sheet 1

Dallas-Fort Worth Eight-Hour Ozone Nonattainment Area

Ten Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, Wise

Reasonable Further Progress Demonstration with MOVES2014 Calculation Spreadsheet

Table of Contents

Sheet Number	Sheet Name	Sheet Description
1	01 Table of Contents	Rate of Further Progress Demonstration with MOVES2014 Calculation Spreadsheet - Table of Contents
2	02 Calc 9 PDC RFP Demo 2017	2017 RFP Demonstration Analysis with MOVES2014 for 9 Previously Designated Counties
3	03 Calc 9 PDC NOX Sub 2017	2017 RFP NOX Substitution Analysis with MOVES2014
4	04 Calc 1 NDC RFP Demo 2017	2017 RFP Demonstration Analysis with MOVES2014 for 1 Newly Designated County
5	05 Calc 9 PDC RFP MS Cont	2017 Milestone Year RFP Contingency Demonstration with MOVES2014 for 9 Previously Designated Counties
6	06 Calc 1 NDC RFP MS Cont	2017 Milestone Year RFP Contingency Demonstration with MOVES2014 for 1 Newly Designated County
7	07 Calc 9 PDC RFP Demo 2018	2018 RFP Demonstration Analysis with MOVES2014 for 9 Previously Designated Counties
8	08 Calc 1 NDC RFP Demo 2018	2018 RFP Demonstration Analysis with MOVES2014 for 1 Newly Designated County
9	09 Calc 9 PDC NOx Sub 2018	2018 RFP NOX Substitution Analysis with MOVES2014
10	10 Calc 9 PDC 2019 RFP Cont	2019 Attainment Year RFP Contingency Demonstration with MOVES2014 for 9 Previously Designated Counties
11	11 Calc 1 NDC 2019 RFP Cont	2019 Attainment Year RFP Contingency Demonstration with MOVES2014 for 1 Newly Designated County
12	12 Calc 10 NAC 2019 AD Cont	2019 Attainment Demonstration Contingency Demonstration with MOVES2014 for 10 Nonattainment Counties
13	13 Calc 9 PDC 2017 RFP MVEB	2017 RFP Motor Vehicle Emissions Budgets with MOVES2014
14	14 Calc 2018 RFP MVEB	2018 RFP Motor Vehicle Emissions Budgets with MOVES2014
15	15 Calc NonCred Red	Calculation of RFP Non-Creditable Reductions from Pre-1990 FMVCP with MOVES2014
16	16 Calc Red for % Red	Calculate the Reductions to Meet the 3% Per Year And 3% Contingency Requirements with MOVES2014
17	17 Calc Targets 9 PDC	Calculation of Post-2011 Target Levels of VOC and NOX Emissions for 9 Previously Designated Counties with MOVES2014
18	18 Calc Targets 1 NDC	Calculation of Post-2011 Target Levels of VOC and NOX Emissions for 1 Newly Designated County with MOVES2014
19	19 Enter % RFP Cont & Conf SM	Enter: Percent Reductions for 3% RFP, 3% Contingency, Conformity Safety Margins and VOC Transfer
20	20 Enter Aircraft EI	Enter Aircraft EI, All Years, Controlled and Uncontrolled
21	21 Enter Area EI	Enter Area Source EI, All Years, Controlled and Uncontrolled
22	22 Enter Biogenic EI	Enter Biogenic EI, Only 2002 Base Year
23	23 Enter Drilling Rigs DE EI	Enter Oil and Gas Production, Drilling Rigs, Diesel Engines EI, All Years, Controlled and Uncontrolled
24	24 Enter GSE EI	Enter Ground Support Equipment EI, All Years, Controlled and Uncontrolled
25	25 Enter Locomotive EI	Enter Locomotive EI, All Years, Controlled and Uncontrolled
26	26 Enter NONROAD Categories EI	Enter NONROAD Model Categories EI, All Years, Controlled and Uncontrolled
27	27 Enter On-road EI	Enter On-road EI, All Years, Controlled and Uncontrolled
28	28 Enter ABY On-road EI	Enter Adjusted Base Year (ABY) On-road EI, All Years
29	29 Enter Point EI	Enter Point Source EI, All Years, Controlled and Uncontrolled
30	30 Enter Reductions 9 PDC 2017	Enter All Source Control Reductions for RFP Analysis Year 2017 for 9 Previously Designated Counties
31	31 Enter Reductions 1 NDC 2017	Enter All Source Control Reductions for RFP Analysis Year 2017 for 1 Newly Designated County
32	32 Enter Reductions 9 PDC 2018	Enter All Source Control Reductions for RFP Analysis Year 2018 for 9 Previously Designated Counties
33	33 Enter Reductions 1 NDC 2018	Enter All Source Control Reductions for RFP Analysis Year 2018 for 1 Newly Designated County
34	34 Enter Cont Reductions 9 2019	Enter All Source Control Reductions for RFP Contingency Year 2018 to 2019 for 9 Previously Designated Counties
35	35 Enter Cont Reductions 1 2019	Enter All Source Control Reductions for RFP Contingency Year 2018 to 2019 for 1 Newly Designated County
36	36 Calc 9 PDC 2011 Base Year EI	Calculation of 2011 RFP Base Year Emission Inventory for 9 Previously Designated Counties
37	37 Calc 1 NDC 2011 Base Year EI	Calculation of 2011 RFP Base Year Emission Inventory for 1 Newly Designated County
38	38 Calc 9 PDC Uncontrol 2017 EI	Calculation of Uncontrolled 2017 Forecasted RFP Emission Inventory for 9 Previously Designated Counties
39	39 Calc 1 NDC Uncontrol 2017 EI	Calculation of Uncontrolled 2017 Forecasted RFP Emission Inventory for 1 Newly Designated County
40	40 Calc 9 PDC Uncontrol 2018 EI	Calculation of Uncontrolled 2018 Forecasted RFP Emission Inventory for 9 Previously Designated Counties
41	41 Calc 1 NDC Uncontrol 2018 EI	Calculation of Uncontrolled 2018 Forecasted RFP Emission Inventory for 1 Newly Designated County
42	42 Calc ABY 9 PDC 2011	Calculation of 2011 ABY RFP Emission Inventory for 9 Previously Designated Counties
43	43 Calc ABY 1 NDC 2011	Calculation of 2011 ABY RFP Emission Inventory for 1 Newly Designated County
44	44 Calc ABY 9 PDC 2017	Calculation of 2017 ABY RFP Emission Inventory for 9 Previously Designated Counties
45	45 Calc ABY 1 NDC 2017	Calculation of 2017 ABY RFP Emission Inventory for 1 Newly Designated County
46	46 Calc ABY 9 PDC 2018	Calculation of 2018 ABY RFP Emission Inventory for 9 Previously Designated Counties
47	47 Calc ABY 1 NDC 2018	Calculation of 2018 ABY RFP Emission Inventory for 1 Newly Designated County
48	48 Calc Control 9 PDC 2017	Individual Quantification and Calculation of Total Creditable RFP Control Reductions for 9 PDC for 2017
49	49 Calc Control 1 NDC 2017	Individual Quantification and Calculation of Total Creditable RFP Control Reductions for 1 NDC for 2017
50	50 RefOnly Control Total 2017	Individual Quantification and Calculation of Total Creditable RFP Control Reductions for 10 DFW Counties for 2017
51	51 Calc Control 9 PDC 2018	Individual Quantification and Calculation of Total Creditable RFP Control Reductions for 9 PDC for 2018
52	52 Calc Control 1 NDC 2018	Individual Quantification and Calculation of Total Creditable RFP Control Reductions for 1 NDC for 2018
53	53 RefOnly Control Total 2018	Individual Quantification and Calculation of Total Creditable RFP Control Reductions for 10 DFW Counties for 2018
54	54 Calc Control 9 PDC 2019	Individual Quantification and Calculation of Total Creditable RFP Control Reductions for 9 PDC for 2019
55	55 Calc Control 1 NDC 2019	Individual Quantification and Calculation of Total Creditable RFP Control Reductions for 1 NDC for 2019
56	56 RefOnly Control Total 2019	Individual Quantification and Calculation of Total Creditable RFP Control Reductions for 10 DFW Counties for 2019
57	57 Calc OR Control 9 PDC 2017	On-road Creditable RFP Control Reductions for 9 PDC for 2017
58	58 Calc OR Control 1 NDC 2017	On-road Creditable RFP Control Reductions for 1 NDC for 2017
59	59 Calc OR Control 10 NAC 2017	On-road Creditable RFP Control Reductions for 10 DFW Counties for 2017 Used for MVEB Calculation
60	60 Calc OR Control 9 PDC 2018	On-road Creditable RFP Control Reductions for 9 PDC for 2018
61	61 Calc OR Control 1 NDC 2018	On-road Creditable RFP Control Reductions for 1 NDC for 2018

62	62 Calc OR Control 10 NAC 2018	On-road Creditable RFP Control Reductions for 10 DFW Counties for 2018 Used for MVEB Calculation
63	63 EI summary Uncontrolled NOX	Summary Uncontrolled NOX EI by Major Source Categories
64	64 EI summary Controlled NOX	Summary Controlled NOX EI by Major Source Categories
65	65 EI summary Uncontrolled VOC	Summary Uncontrolled VOC EI by Major Source Categories
66	66 EI summary Controlled VOC	Summary Controlled VOC EI by Major Source Categories
67	67 EI 2011 Summary	2011 Emissions Inventory By Category
68	68 EI 2017 Summary	2017 Emissions Inventory By Category
69	69 EI 2018 Summary	2018 Emissions Inventory By Category
70	70 Airport Summary	Summary Airport Emissions Inventory (Aircraft Plus GSE)
71	71 Total Non-Road Summary	Summary of Total Non-Road Emissions
72	72 2011NonroadCatandTot Summary	2011 Non-Road Summary by Category
73	73 2017NonroadCatandTot Summary	2017 Non-Road Summary by Category
74	74 2018NonroadCatandTot Summary	2018 Non-Road Summary by Category

Attachment A - Sheet 2

2017 RFP Demonstration Analysis with MOVES2014
DFW Eight-Hour Ozone Nonattainment Area

Nine Previously Designated Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant

2017 9 PDC RFP Demonstration Analysis with MOVES2014: To determine if the 2017 RFP requirements are met, the 2017 target level of emissions is compared to the 2017 controlled forecast inventory. The 2017 forecast inventory includes growth between the 2011 base year and the 2017 milestone year. The controlled forecast inventory has been reduced by subtracting the RFP control reductions between 2011 and 2017. If the 2011 controlled forecasted RFP emissions inventory (EI) is less than the 2011 RFP target level of emissions, then the 2011 RFP requirement is satisfied.

Line #	Description	NO _x (tpd)	VOC (tpd)
Line 1	Uncontrolled or Existing Controlled 9 PDC 2017 emissions forecast with growth	1144.79	864.31
Line 2	Creditable RFP control reductions, for 9 PDC, between 2011 and 2017	823.81	453.39
Line 3	Controlled 2017, 9 PDC RFP emissions forecast (Line 1 minus Line 2)	320.98	410.92
Line 4	Amount of NO _x and VOC reduction to transfer to 1 NDC RFP demonstration	0.00	1.00
Line 5	Amount of NO _x reduction substitution (see Sheet 3)	0.00	0.00
Line 6	Controlled 2017, 9 PDC RFP forecast accounting for transfer and NO _x substitution (Line 3 plus Line 4 plus Line 5)	320.98	411.92
Line 7	2017 9 PDC RFP target level of emissions	363.11	426.67
Line 8	Excess (+) / Shortfall (-) (Line 7 minus Line 6)	42.13	14.75
Line 9	Is controlled RFP EI less than target level of emissions?	Yes	Yes

Notes:

- 1) To calculate the RFP controlled forecast for each milestone/attainment year, the total RFP creditable control strategy reductions to date (total RFP reductions from 2011 to the current RFP milestone year) are subtracted from the total uncontrolled RFP EI.
- 2) To calculate the final excess or shortfall of for each milestone/attainment year, the controlled RFP emissions forecast is subtracted from the RFP target level of emissions. The RFP target level of emissions for all milestone years is calculated on the "Calc Targets" page.
- 3) Excess emissions reductions (Line 8) may be used to provide a transportation conformity safety margin. The safety margin must be less than or equal to the excess emissions reductions.

Spreadsheet Navigation

[Go To Table of Contents](#)

[Go To Enter % RFP Contingency, NO_x sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Enter Reductions 2017](#)

[Go To Emissions Summary NO_x Uncontrolled](#)

Attachment A - Sheet 3

2017 RFP NO_x Substitution Analysis with MOVES2014
DFW Eight-Hour Ozone Nonattainment Area

Nine Previously Designated Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant

The NO_x substitution calculation includes six steps. First, calculate the percent target reduction for both VOC and NO_x by comparing the base year and target inventories. Second, calculate the percent actual reduction by comparing the base year and the actual inventory. Third, compare the percent required reduction to the percent actual reduction. If the percent actual reduction is greater than the percent required, then there are surplus reductions. If the percent actual reduction is less than the percent target, then there is a shortfall of reductions. The difference between the percent actual and the percent target reduction (when there are surplus reductions) is the amount that is available for substitution. For the fourth step, determine the percent NO_x needed for substitution. The minimum base year VOC percentage needed is equal to the percent base year shortfall in VOC plus the smallest increment possible, or 0.01. The respective NO_x percent is calculated using the NO_x base year inventory. The percent base year NO_x transfer should not exceed the percent base year NO_x surplus. The percent NO_x available to transfer is based upon the base year because the base year is the basis for the required reduction calculations. Fifth, convert the percent base year NO_x to a percent target NO_x using the percent base year NO_x from step 5 and the relative values of the base year and target NO_x inventory. The percent NO_x transfer is derived from milestone year target values because those are the values modified by NO_x transfer. The percent NO_x transfer is a percentage of the milestone year target NO_x value that is added back into the NO_x inventory and a percentage of the milestone year target VOC that is subtracted from the VOC inventory. For the sixth step, calculate the resulting tons per day (tpd) associated with the percent NO_x transfer. For NO_x, multiply the NO_x percent transfer and the NO_x milestone year target value. For VOC, multiply the percent NO_x transfer (which is the same as the percentage of the milestone year target VOC that is subtracted from the VOC inventory) and the VOC milestone year target value. The NO_x transfer amount (in tpd) is added to the NO_x actual (in tpd) inventory in the RFP demonstration calculation, and the VOC transfer amount (in tpd) is subtracted from the VOC actual (in tpd) inventory.

Line #	Description	NO _x	VOC
Line 1	2011 base year emissions (tpd)	439.14	478.47
Line 2	2017 controlled RFP EI (tpd)	320.98	410.92
Line 3	Total actual reductions for 2011 to 2017 (Line 1 minus Line 2) (tpd)	118.16	67.55
Line 4	Percent actual reductions for 2011 to 2017 (percent Line 3 is of Line 1) (%)	26.91	14.12
Line 5	2017 target RFP EI (tpd)	363.11	426.67
Line 6	2017 total target reductions for 2011 to 2017 (Line 1 minus Line 5) (tpd)	76.03	51.80
Line 7	Percent target reductions for 2011 to 2017 (percent Line 6 is of Line 1) (%)	17.31	10.83
Line 8	Percent surplus or shortfall (percent actual minus percent target, Line 4 - Line 7) (%)	9.59	3.29
Line 9	Percent surplus to transfer (NO _x percentage should be less than Line 8) (%)	0.00	0.00
Line 10	Convert the percent surplus to transfer to tons per day (tpd)	0.00	Only NO _x Value Needed
Line 11	Calculate what percentage Line 10 is of target (this is the percentage to transfer) (%)	0.00	0.00
Line 12	Tons equivalent to percent for transfer [Line 5 times (Line 10 divided by 100)] (tpd)	0.00	0.00
Line 13	NO _x substitution amount okay? (Check to assure NO _x substitution does not exceed maximum available: Sheet 02, Line 9 must be greater than zero.)	Okay to Substitute	Okay to Substitute

Notes:

Line 7: The percent target reduction includes the 15% required reductions from 2011 through 2017, the 3% required reductions for each year after 2017, and accounts for noncreditable reductions between 2011 and the RFP milestone year; therefore, the total percent reduction may not be exactly 15 plus 3.

Spreadsheet Navigation

[Go To Table of Contents](#)

[Go To Enter % RFP Contingency, NO_x sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Enter Reductions 2017](#)

[Go To Emissions Summary NO_x Uncontrolled](#)

Attachment A - Sheet 4

2017 RFP Demonstration Analysis with MOVES2014
DFW Eight-Hour Ozone Nonattainment Area
One Newly Designated Nonattainment County: Wise

2017 1 NDC RFP Demonstration Analysis with MOVES2014: To determine if the 2017 RFP requirements are met, the 2017 target level of emissions is compared to the 2017 controlled forecast inventory. The 2017 forecast inventory includes growth between the 2011 base year and the 2017 milestone year. The controlled forecast inventory has been reduced by subtracting the RFP control reductions from 2011 to 2017. If the 2011 controlled forecasted RFP emissions inventory (EI) is less than the 2011 RFP target level of emissions, then the 2011 RFP requirement is satisfied. Since Wise County is newly designated, the entire 15% between 2011 and 2017 must be from VOC.

Line #	Description	NO _x (tpd)	VOC (tpd)
Line 1	Uncontrolled or existing controlled 1 NDC 2017 emissions forecast with growth	49.38	34.79
Line 2	Creditable RFP control reductions, for 1 NDC, between 2011 and 2017	18.96	5.30
Line 3	Controlled 2017, 1 NDC RFP emissions forecast (Line 1 minus Line 2)	30.42	29.49
Line 4	Amount of NO _x and VOC reduction to transfer from 9 PDC RFP demonstration	0.00	-1.00
Line 5	Controlled 2017, 1 NDC RFP forecast accounting for transfer and NO _x substitution (Line 3 plus Line 4)	30.42	28.49
Line 6	2017 1 NDC RFP target level of emissions	33.36	29.27
Line 7	Excess (+) / Shortfall (-) (Line 6 minus Line 5)	2.94	0.78
Line 8	Is controlled RFP EI less than target level of emissions?	Yes	Yes

Notes:

- 1) To calculate the RFP controlled forecast for each milestone/attainment year, the total RFP creditable control strategy reductions to date (total RFP reductions from 2011 to the current RFP milestone year) are subtracted from the total uncontrolled RFP EI.
- 2) To calculate the final excess or shortfall of for each milestone/attainment year, the controlled RFP emissions forecast is subtracted from the RFP target level of emissions. The RFP target level of emissions for all milestone years is calculated on the "Calc Targets" page.
- 3) Excess emissions reductions (Line 7) may be used to provide a transportation conformity safety margin. The safety margin must be less than or equal to the excess emissions reductions.

Spreadsheet Navigation

[Go To Table of Contents](#)

[Go To Enter % RFP Contingency, NO_x sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Enter Reductions 2017](#)

[Go To Emissions Summary NO_x Uncontrolled](#)

Attachment A - Sheet 5

9 PDC RFP Milestone Year Contingency Demonstration with MOVES2014
DFW Eight-Hour Ozone Nonattainment Area

Nine Previously Designated Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant

Contingency Element Description	NO_x	VOC
2018 9 PDC adjusted base year (ABY) EI	402.35	448.77
Percent for 9 PDC 2017 milestone contingency calculation (total of 3%)	3.00	0.00
2017 to 2018 9 PDC required contingency reductions (ABY EI x (contingency percent))	12.07	0.00
Control reductions to meet contingency requirements		
Reserved reductions from 9 PDC 2018 RFP demonstration	12.07	0.00
Unspecified control 1	0.00	0.00
Unspecified control 2	0.00	0.00
Total 9 PDC contingency reductions	12.07	0.00
Contingency Excess (+) or Shortfall (-)	0.00	0.00
Are contingency reductions greater than required contingency reduction?	Yes	Yes

Note: The 2017 to 2018 9 PDC contingency reductions are held in reserve for all RFP milestone years in this RFP demonstration.

[Spreadsheet Navigation](#)

[Go To Table of Contents](#)

[Go To Enter % RFP Contingency, NO_x sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Enter Reductions 2017](#)

[Go To Emissions Summary NO_x Uncontrolled](#)

Attachment A - Sheet 6

1 NDC RFP Milestone Year Contingency Demonstration with MOVES2014
DFW Eight-Hour Ozone Nonattainment Area

One Newly Designated Nonattainment County: Wise

Contingency Element Description	NO _x	VOC
2018 1 NDC adjusted base year (ABY) EI	33.36	34.43
Percent for 1 NDC 2017 milestone contingency calculation (total of 3%)	3.00	0.00
2017 to 2018 1 NDC required contingency reductions (ABY EI x (contingency percent))	1.00	0.00
Control reductions to meet contingency requirements		
Reserved reductions from 1 NDC 2018 RFP demonstration	1.00	0.00
Unspecified control 1	0.00	0.00
Unspecified control 2	0.00	0.00
Total 1 NDC contingency reductions	1.00	0.00
Contingency Excess (+) or Shortfall (-)	0.00	0.00
Are contingency reductions greater than required contingency reduction?	Yes	Yes

Note: The 2017 to 2018 1 NDC contingency reductions are held in reserve for all RFP milestone years in this RFP demonstration.

[Spreadsheet Navigation](#)

[Go To Table of Contents](#)

[Go To Enter % RFP Contingency, NO_x sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Enter Reductions 2017](#)

[Go To Emissions Summary NO_x Uncontrolled](#)

Attachment A - Sheet 7

9 PDC 2018 RFP Demonstration Analysis with MOVES2014
DFW Eight-Hour Ozone Nonattainment Area

Nine Previously Designated Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant

2018 RFP 9 PDC Demonstration Analysis with MOVES2014: To determine if the 2018 RFP requirements are met, the 2018 target level of emissions is compared to the 2018 controlled forecast inventory. The 2018 forecast inventory includes growth between the 2011 base year and the 2018 milestone year. The controlled forecast inventory has been reduced by subtracting the RFP control reductions from 2011 to 2018. If the 2018 controlled forecasted RFP EI is less than the 2018 RFP target level of emissions the 2018 RFP requirement is satisfied.

Line #	Description	NO _x (tpd)	VOC (tpd)
Line 1	Uncontrolled or existing controlled 9 PDC 2018 emissions forecast with growth	1163.54	868.21
Line 2	Creditable 9 PDC RFP control reductions between 2011 and 2017	823.81	453.39
Line 3	Creditable 9 PDC RFP control reductions between 2017 and 2018	22.72	19.03
Line 4	Controlled 2018, 9 PDC RFP emissions forecast (Line 1 minus Line 2 minus Line 3)	317.01	395.79
Line 5	Amount of creditable reductions reserved for 9 PDC RFP milestone contingency	12.07	0.00
Line 6	Controlled 2018, 9 PDC RFP emission forecast with milestone contingency (Line 4 plus Line 5)	329.08	395.79
Line 7	Amount of NO _x and VOC reduction to transfer to 1 NDC RFP demonstration	0.00	0.00
Line 8	Amount of NO _x reduction substitution (see Sheet 9)	0.00	0.00
Line 9	Controlled 2018, 9 PDC RFP forecast without reductions reserved for contingency, accounting for reduction transfer to newly designated county, and accounting for NO _x substitution (Line 6 plus Line 7 plus Line 8)	329.08	395.79
Line 10	2018 9 PDC RFP target level of emissions	353.96	421.83
Line 11	Excess (+) / Shortfall (-) (Line 10 minus Line 9)	24.88	26.04
Line 12	Is controlled RFP EI less than target level of emissions?	Yes	Yes

Notes:

- 1) To calculate the RFP controlled forecast for each milestone/attainment year, the total RFP creditable control strategy reductions to date (total RFP reductions from 2011 to the current RFP milestone year) are subtracted from the total uncontrolled RFP EI.
- 2) To calculate the final excess or shortfall for each milestone/attainment year, the controlled RFP emissions forecast is subtracted from the RFP target level of emissions. The RFP target level of emissions for all milestone years is calculated on the "Calc Targets" page.
- 3) Excess emissions reductions (Line 11) may be used to provide a transportation conformity safety margin. The safety margin must be less than or equal to the excess emissions reductions.

Spreadsheet Navigation

[Go To Table of Contents](#)

[Go To Enter % RFP Contingency, NO_x sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Enter Reductions 2017](#)

[Go To Emissions Summary NO_x Uncontrolled](#)

Attachment A - Sheet 8

1 NDC 2018 RFP Demonstration Analysis with MOVES2014

DFW Eight-Hour Ozone Nonattainment Area

One Newly Designated Nonattainment County: Wise

2018 1 NDC RFP Demonstration Analysis with MOVES2014: To determine if the 2018 RFP requirements are met, the 2018 target level of emissions is compared to the 2018 controlled forecast inventory. The 2018 forecast inventory includes growth between the 2011 base year and the 2018 milestone year. The controlled forecast inventory has been reduced by subtracting the RFP control reductions from 2011 to 2018. If the 2018 controlled forecasted RFP EI is less than the 2018 RFP target level of emissions the 2018 RFP requirement is satisfied.

Line #	Description	NO _x (tpd)	VOC (tpd)
Line 1	Uncontrolled or existing controlled 1 NDC 2018 emissions forecast with growth	46.50	29.77
Line 2	Creditable 1 NDC RFP control reductions between 2011 and 2017	18.96	5.30
Line 3	Creditable 1 NDC RFP control reductions between 2017 and 2018	0.97	0.30
Line 4	Controlled 2018 1 NDC RFP emissions forecast (Line 1 minus Line 2 minus Line 3)	26.57	24.17
Line 5	Amount of creditable reductions reserved for 1 NDC RFP milestone contingency	1.00	0.00
Line 6	Controlled 1 NDC RFP emission forecast with milestone contingency (Line 4 plus Line 5)	27.57	24.17
Line 7	Amount of NO _x and VOC reduction to transfer from 9 PDC RFP demonstration	0.00	0.00
Line 8	Controlled RFP forecast without reductions reserved for contingency and accounting for NO _x substitution (Line 6 plus Line 7)	27.57	24.17
Line 9	1 NDC 2018 RFP target level of emissions	33.36	28.23
Line 10	Excess (+) / Shortfall (-) (Line 8 minus Line 7)	5.79	4.06
Line 11	Is controlled RFP EI less than target level of emissions?	Yes	Yes

Notes:

- 1) To calculate the RFP controlled forecast for each milestone/attainment year, the total RFP creditable control strategy reductions to date (total RFP reductions from 2011 to the current RFP milestone year) are subtracted from the total uncontrolled RFP EI.
- 2) To calculate the final excess or shortfall for each milestone/attainment year, the controlled RFP emissions forecast is subtracted from the RFP target level of emissions. The RFP target level of emissions for all milestone years is calculated on the "Calc Targets" page.
- 3) Excess emissions reductions (Line 10) may be used to provide a transportation conformity safety margin. The safety margin must be less than or equal to the excess emissions reductions.

Spreadsheet Navigation

[Go To Table of Contents](#)

[Go To Enter % RFP Contingency, NO_x sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Enter Reductions 2017](#)

[Go To Emissions Summary NO_x Uncontrolled](#)

Attachment A - Sheet 9
 2018 RFP NO_x Substitution Analysis with MOVES2014
 DFW Eight-Hour Ozone Nonattainment Area

Nine Previously Designated Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant

The NO_x substitution calculation includes six steps. First, calculate the percent target reduction for both VOC and NO_x by comparing the base year and target inventories. Second, calculate the percent actual reduction by comparing the base year and the actual inventory. Third, compare the percent required reduction to the percent actual reduction. If the percent actual reduction is greater than the percent required, then there are surplus reductions. If the percent actual reduction is less than the percent target, then there is a shortfall of reductions. The difference between the percent actual and the percent target reduction (when there are surplus reductions) is the amount that is available for substitution. For the fourth step, determine the percent NO_x needed for substitution. The minimum base year VOC percentage needed is equal to the percent base year shortfall in VOC plus the smallest increment possible, or 0.01. The respective NO_x percent is calculated using the NO_x base year inventory. The percent base year NO_x transfer should not exceed the percent base year NO_x surplus. The percent NO_x available to transfer is based upon the base year because the base year is the basis for the required reduction calculations. Fifth, convert the percent base year NO_x to a percent target NO_x using the percent base year NO_x from step 5 and the relative values of the base year and target NO_x inventory. The percent NO_x transfer is derived from milestone year target values because those are the values modified by NO_x transfer. The percent NO_x transfer is a percentage of the milestone year target NO_x value that is added back into the NO_x inventory and a percentage of the milestone year target VOC that is subtracted from the VOC inventory. For the sixth step, calculate the resulting tons per day (tpd) associated with the percent NO_x transfer. For NO_x, multiply the NO_x percent transfer and the NO_x milestone year target value. For VOC, multiply the percent NO_x transfer (which is the same as the percentage of the milestone year target VOC that is subtracted from the VOC inventory) and the VOC milestone year target value. The NO_x transfer amount (in tpd) is added to the NO_x actual (in tpd) inventory in the RFP demonstration calculation, and the VOC transfer amount (in tpd) is subtracted from the VOC actual (in tpd) inventory.

Line #	Description	NO _x	VOC
Line 1	2011 9 PDC base year emissions (tpd)	405.55	444.09
Line 2	2018 9 PDC controlled RFP EI (tpd)	329.08	395.79
Line 3	Total actual reductions for 9 PDC 2011 to 2018 (Line 1 minus Line 2) (tpd)	76.47	48.30
Line 4	Percent actual reductions for 9 PDC 2011 to 2018 (percent Line 3 is of Line 1) (%)	18.86	10.88
Line 5	2018 9 PDC target RFP EI (tpd)	353.96	421.83
Line 6	9 PDC 2018 total target reductions for 2011 to 2018 (Line 1 minus Line 5) (tpd)	51.59	22.26
Line 7	Percent target reductions for 2011 to 2018 (percent Line 6 is of Line 1) (%)	12.72	5.01
Line 8	Percent surplus or shortfall (percent actual minus percent target, Line 4 minus Line 7) (%)	6.13	5.86
Line 9	Percent surplus to transfer (NO _x percentage should be less than Line 8) (%)	0.00	0.00
Line 10	Convert the percent surplus to transfer to tons per day (tpd)	0.00	Only NO _x Value Needed
Line 11	Calculate what percentage Line 10 is of target (this is the percentage to transfer) (%)	0.00	0.00
Line 12	Tons equivalent to percent for transfer [Line 5 times (Line 10 divided by 100)] (tpd)	0.00	0.00
Line 13	NO _x substitution amount okay? (Check to assure NO _x substitution does not exceed maximum available: Sheet 05, Line 10 must be greater than zero)	Okay to Substitute	Okay to Substitute

Notes:

Line 7: The percent target reduction includes the 15% required reductions from 2011 through 2017, the 3% required reductions for each year after 2017, and accounts for noncreditable reductions between 2011 and the RFP milestone year; therefore, the total percent reduction may not be exactly 15 plus 3.

Spreadsheet Navigation

[Go To Table of Contents](#)

[Go To Enter % RFP Contingency, NO_x sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Enter Reductions 2017](#)

[Go To Emissions Summary NO_x Uncontrolled](#)

Attachment A - Sheet 10

2019 Contingency Demonstration with MOVES2014 for RFP
 DFW Eight-Hour Ozone Nonattainment Area
 Nine Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant

Summary 2019 Contingency for 2018 RFP

Contingency Element Description	NO_x	VOC
9 PDC 2018 ABY EI	402.35	448.77
Percent for contingency calculation (total of 3%)	3.00	0.00
2018 to 2019 required contingency reductions (ABY EI x (contingency percent))	12.07	0.00
Control reductions to meet contingency requirements		
Excess reductions from 2018 RFP demonstration	24.88	26.04
Subtract 2018 RFP demonstration motor vehicle emissions budget (MVEB) safety margin from excess reductions from 2018 RFP demonstration	-13.28	-6.76
Federal Motor Vehicle Control Program (FMVCP), inspection and maintenance (I/M), reformulated gasoline (RFG)/East Texas Regional Low RVP, and on-road TxLED (Note: This list of controls is the complete list for the 9 DFW counties. However, RFG is required, and all control reductions are modeled with RFG, only in the 4 core counties.)	30.05	12.45
Federal non-road mobile new vehicle certification standards, non-road RFG, and non-road TxLED	9.00	4.65
Total RFP demonstration contingency reductions	50.64	36.38
Contingency Excess (+) or Shortfall (-)	38.57	36.38

If changes are made to the enter reductions page, please assure the control reduction summary values above are consistent with the table below. The enter reductions page allows for the control reduction for a row to change. The table above adds particular rows from below.

Contingency Element Description	NO_x	VOC
9 PDC 2018 ABY EI	402.35	448.77
Percent for contingency calculation (total of 3%)	3.00	0.00
2018 to 2019 9 PDC RFP required contingency reductions (ABY EI x (contingency percent))	12.07	0.00
Calculate available reductions to meet contingency requirements: add excess 2018 control reductions; subtract MVEB safety margin adjustment; and add each 2018 to 2019 control reduction		
Excess reductions from 2018 RFP demonstration	24.88	26.04
Subtract 2018 RFP MVEB safety margin from excess reductions from 2018 RFP demonstration	-13.28	-6.76
Chapter 117 NOX controls	0.00	0.00
Chapter 115 Storage Tank Rule	0.00	0.00
Coating / printing rules	0.00	0.00
Portable fuel containers	0.00	0.00
Federal Motor Vehicle Control Program (FMVCP)	35.42	14.13
Inspection and Maintenance (I/M)	-1.13	-0.58
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	-3.93	-1.10
On-road TxLED	-0.31	0.00
Tier I and II locomotive NOX standards	0.00	0.00
Small non-road spark ignition (SI) engines (Phase I)	-0.09	0.76
Heavy duty non-road engines	1.92	0.77
Tiers 2 and 3 non-road diesel engines	2.92	0.39
Small non-road SI engines (Phase II)	0.06	0.73
Large non-road SI & recreational marine	1.39	0.98
Non-road TxLED	-0.46	0.00
Non-road RFG	-0.01	0.01
Tier 4 non-road diesel engines	3.17	0.17
Diesel recreational marine	0.00	0.00

Small SI (Phase III)	0.10	0.84
Chapter 117 NOX area source engine controls	0.00	0.00
Drilling rig low emission diesel	0.00	0.00
Total 2019 9 PDC RFP contingency reductions	50.64	36.38
Contingency Excess (+) or Shortfall (-)	38.57	36.38
Are contingency reductions greater than required contingency reduction?	Yes	Yes

Note 1: The ten county DFW area includes counties with federal RFG and counties with Texas Regional Low RVP. The four counties with RGF are: Collin, Dallas Denton and Tarrant. The six counties with East Texas Regional Low RVP are: Ellis, Johnson, Kaufman, Parker, Rockwall and Wise.

Spreadsheet Navigation

[Go To Table of Contents](#)

[Go To Enter % RFP Contingency, NOx sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Enter Reductions 2017](#)

[Go To Emissions Summary NOx Uncontrolled](#)

Attachment A - Sheet 11

2019 Contingency Demonstration with MOVES2014 for RFP
DFW Eight-Hour Ozone Nonattainment Area
One Newly Designated Nonattainment County: Wise

Summary 2019 Contingency for 2018 RFP

Contingency Element Description	NO _x	VOC
1 NDC 2018 ABY EI	33.36	34.43
Percent for contingency calculation (total of 3%)	3.00	0.00
2018 to 2019 required contingency reductions (ABY EI x (contingency percent))	1.00	0.00
Calculate available reductions to meet contingency requirements: add excess 2018 control reductions; subtract MVEB safety margin adjustment; and add each 2018 to 2019 control reduction		
Excess reductions from 2018 RFP demonstration	5.79	4.06
Subtract 2018 RFP demonstration motor vehicle emissions budget (MVEB) safety margin from excess reductions from 2018 RFP demonstration	0.00	0.00
Federal Motor Vehicle Control Program (FMVCP), East Texas Regional Low RVP, and on-road TxLED	0.78	0.19
Federal non-road mobile new vehicle certification standards, non-road TxLED	0.12	0.05
Total RFP demonstration contingency reductions	6.69	4.30
Contingency Excess (+) or Shortfall (-)	5.69	4.30

If changes are made to the enter reductions page, please assure the control reduction summary values above are consistent with the table below. The enter reductions page allows for the control reduction for a row to change. The table above adds particular rows from below.

Contingency Element Description	NO _x	VOC
1 NDC 2018 ABY EI	33.36	34.43
Percent for contingency calculation (total of 3%)	3.00	0.00
2018 to 2019 1 NDC RFP required contingency reductions (ABY EI x (contingency percent))	1.00	0.00
Calculate available reductions to meet contingency requirements: add excess 2018 control reductions; subtract MVEB safety margin adjustment; and add each 2018 to 2019 control reduction		
Excess reductions from 2018 RFP demonstration	5.79	4.06
Subtract 2018 RFP MVEB safety margin from excess reductions from 2018 RFP demonstration ¹	0.00	0.00
Chapter 117 NOX controls	0.00	0.00
Chapter 115 Storage Tank Rule	0.00	0.00
Coating / printing rules	0.00	0.00
Portable fuel containers	0.00	0.00
Federal Motor Vehicle Control Program (FMVCP)	0.85	0.21
Inspection and Maintenance (I/M)	0.00	0.00
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	-0.06	-0.02
On-road TxLED	-0.01	0.00
Tier I and II locomotive NOX standards	0.00	0.00
Small non-road spark ignition (SI) engines (Phase I)	0.00	0.01
Heavy duty non-road engines	0.01	0.01
Tiers 2 and 3 non-road diesel engines	0.02	-0.01
Small non-road SI engines (Phase II)	0.00	0.00
Large non-road SI & recreational marine	0.01	0.02
Non-road TxLED	-0.01	0.00
Non-road RFG	0.00	0.00
Tier 4 non-road diesel engines	0.09	0.00
Diesel recreational marine	0.00	0.00
Small SI (Phase III)	0.00	0.02

Chapter 117 NOX area source engine controls	0.00	0.00
Drilling rig low emission diesel	0.00	0.00
Total 2019 1 NDC RFP contingency reductions	6.69	4.30
Contingency Excess (+) or Shortfall (-)	5.69	4.30
Are contingency reductions greater than required contingency reduction?	Yes	Yes

Note 1: The MVEBs are calculated for with all ten counties in one group, the 10 NAC. The entire amount reserved for the MVEB safety margin is deducted from the available reductions for the 9 PDC 2019 RFP contingency. The amount for the safety margin for the 1 NDC is therefore zero because it is accounted for in the 9 PDC calculations.

Note 2: The ten county DFW area includes counties with federal RFG and counties with Texas Regional Low RVP. The four counties with RGF are: Collin, Dallas Denton and Tarrant. The six counties with East Texas Regional Low RVP are: Ellis, Johnson, Kaufman, Parker, Rockwall and Wise.

Spreadsheet Navigation

[Go To Table of Contents](#)

[Go To Enter % RFP Contingency, NOx sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Enter Reductions 2017](#)

[Go To Emissions Summary NOx Uncontrolled](#)

Attachment A - Sheet 12

2019 Contingency Demonstration with MOVES2014 for 2018 Attainment

Ten Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, Wise

Summary 2019 Contingency for 2018 Attainment Demonstration

Contingency Element Description	NO _x	VOC
2018 10 NAC ABY EI	435.71	483.20
Percent for contingency calculation (total of 3%)	3.00	0.00
2018 to 2019 AD required contingency reductions (ABY EI x (contingency percent))	13.07	0.00
Control reductions to meet contingency requirements		
Excess reductions from 2018 attainment demonstration	0.00	0.00
Subtract reductions reserved for 2018 attainment demonstration MVEB safety margin	0.00	0.00
Federal Motor Vehicle Control Program (FMVCP), inspection and maintenance (I/M), reformulated gasoline (RFG), and on-road TxLED (Note: This list of controls is the complete list for the 9 DFW counties. However, RFG is required, and all control reductions are modeled with RFG, only in the 4 core counties.)	30.83	12.64
Federal non-road mobile new vehicle certification standards, non-road RFG, and non-road TxLED	9.12	4.70
Total attainment demonstration contingency reductions	39.95	17.34
Contingency Excess (+) or Shortfall (-)	26.88	17.34

If changes are made to the enter reductions page please assure the control reduction summary values above are consistent with the table below. The enter reductions page allows for the control reduction for a row to change. The table above adds particular rows from below.

Ten Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, Wise

Contingency Element Description	NO _x	VOC
2018 10 NAC ABY EI	435.71	483.20
Percent for AD contingency calculation (total of 3%)	3.00	0.00
2018 to 2019 required AD contingency reductions (ABY EI x (contingency percent))	13.07	0.00
Control reductions to meet contingency requirements		
Add excess reductions from 2018 attainment demonstration	0.00	0.00
Subtract 2018 attainment demonstration MVEB safety margin	0.00	0.00
Chapter 117 NOX controls	0.00	0.00
Chapter 115 Storage Tank Rule	0.00	0.00
Coating / printing rules	0.00	0.00
Portable fuel containers	0.00	0.00
Federal Motor Vehicle Control Program (FMVCP)	36.27	14.34
Inspection and Maintenance (I/M)	-1.13	-0.58
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	-3.99	-1.12
On-road TxLED	-0.32	0.00
Tier I and II locomotive NOX standards	0.00	0.00
Small non-road spark ignition (SI) engines (Phase I)	-0.09	0.77
Heavy duty non-road engines	1.93	0.78
Tiers 2 and 3 non-road diesel engines	2.94	0.38
Small non-road SI engines (Phase II)	0.06	0.73
Large non-road SI & recreational marine	1.40	1.00
Non-road TxLED	-0.47	0.00
Non-road RFG	-0.01	0.01
Tier 4 non-road diesel engines	3.26	0.17
Diesel recreational marine	0.00	0.00

Small SI (Phase III)	0.10	0.86
Chapter 117 NOX area source engine controls	0.00	0.00
Drilling rig low emission diesel	0.00	0.00
Total attainment demonstration contingency reductions	39.95	17.34
Contingency Excess (+) or Shortfall (-)	26.88	17.34

[Spreadsheet Navigation](#)

[Go To Table of Contents](#)

[Go To Enter % RFP Contingency, NOx sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Enter Reductions 2017](#)

[Go To Emissions Summary NOx Uncontrolled](#)

Attachment A - Sheet 13

Calculations: 2017 RFP MVEBs with MOVES2014

DFW Nonattainment Area Eight-Hour Ozone Season VOC and NO_x (tons per day)

Ten Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, Wise

Summary 2017 MVEB

Description	NO_x	VOC
2017 9 PDC on-road emissions projection without post-1990 FCAA controls	860.90	416.88
2017 1 NDC on-road emissions projection without post-1990 FCAA controls	18.28	4.89
2017 10 NAC on-road emissions projection without post-1990 FCAA controls	879.18	421.77
Total 2017 10 NAC on-road mobile source RFP control reductions	731.53	350.12
2017 10 NAC On-road mobile controlled inventory	147.65	71.65
Transportation conformity safety margin	14.77	7.17
Excess emissions reduction for 2017	45.07	15.54
Is excess emissions enough for safety margin?	yes	yes
2017 10 NAC MVEB with safety margin	162.42	78.82

Note: If safety margin is > than excess emission reductions modify percent safety margin input on the "Enter % for RFP Cont & Conf SM" page.

Spreadsheet Navigation

[Go To Table of Contents](#)

[Go To Enter % RFP Contingency, NO_x sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Enter Reductions 2017](#)

[Go To Emissions Summary NO_x Uncontrolled](#)

[Go To Enter O-road Emissions](#)

[Go To Calculate On-road Reductions](#)

Attachment A - Sheet 14

Calculations: 2018 RFP MVEBs with MOVES2014

DFW Nonattainment Area Eight-Hour Ozone Season VOC and NO_x (tons per day)

Ten Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, Wise

Summary 2018 MVEB

Description	NO_x	VOC
2018 9 PDC on-road emissions projection without post-1990 FCAA controls	881.68	427.12
2018 1 NDC on-road emissions projection without post-1990 FCAA controls	18.74	5.01
2018 10 NAC on-road emissions projection without post-1990 FCAA controls	900.42	432.13
Total 2018 10 NAC on-road mobile source RFP control reductions	767.60	364.54
2018 10 NAC On-road mobile controlled inventory	132.82	67.59
Transportation conformity safety margin	13.28	6.76
Excess emissions reduction for 2018	30.67	30.10
Is excess emissions enough for safety margin?	yes	yes
2018 10 NAC MVEB with safety margin	146.10	74.35

Note: If safety margin is > than excess emission reductions modify percent safety margin input on the "Enter % for RFP Cont & Conf SM" page.

Spreadsheet Navigation

[Go To Table of Contents](#)

[Go To Enter % RFP Contingency, NO_x sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Enter Reductions 2017](#)

[Go To Emissions Summary NO_x Uncontrolled](#)

[Go To Enter O-road Emissions](#)

[Go To Calculate On-road Reductions](#)

Attachment A - Sheet 15

RFP Non-creditable Reductions Calculations

DFW Nonattainment Area Eight-Hour Ozone Season VOC and NO_x

Two County Groups: Nine Nonattainment Counties; Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant; and One Nonattainment County; Wise County

9 PDC Calculation of Non-creditable NO_x and VOC Reductions

RFP Analysis Year	On-Road Mobile ABY EI NO _x	On-Road Mobile ABY EI VOC	Non-Creditable Fleet Turn Over Reductions NO _x	Non-Creditable Fleet Turn Over Reductions VOC	Non-Creditable Reduction Description
2011, 9 PDC	736.68	355.31	N/A	N/A	
2017, 9 PDC	734.59	360.35	2.09	-5.04	Pre-1990 CAA fleet turnover reduction baseline 2011 through 2017 for 9 PDC
2018, 9 PDC	733.48	359.99	1.11	0.36	Pre-1990 CAA fleet turnover reduction 2017 through 2018 for 9 PDC

1 NDC Calculation of Non-creditable NO_x and VOC Reductions

RFP Analysis Year	On-Road Mobile ABY EI NO _x	On-Road Mobile ABY EI VOC	Non-Creditable Fleet Turn Over Reductions NO _x	Non-Creditable Fleet Turn Over Reductions VOC	Non-Creditable Reduction Description
2011, 1 NDC	16.34	4.34	N/A	N/A	
2017, 1 NDC	16.11	4.40	0.23	-0.06	Pre-1990 CAA fleet turnover reduction baseline 2011 through 2017 for 1 NDC
2018, 1 NDC	16.11	4.39	0.00	0.01	Pre-1990 CAA fleet turnover reduction 2017 through 2018 for 1 NDC

Notes:

1) Non-creditable fleet turnover corrections: The reductions due to the the 1992 low RVP rule and the pre-1990 FMVCP are not creditable toward the RFP requirements. Both non-creditable rules only affect on-road mobile sources. The non-creditable reductions for each RFP milestone year are the difference between the on-road mobile ABY EI for each RFP milestone year and the on-road mobile 2011 RFP ABY EI. Since the pre-1990 FMVCP fleet turnover corrections are cumulative in the MOVES model, the noncreditable reductions from previous milestone years must be subtracted from the current milestone year to obtain the non-creditable reductions between milestone years. The FMVCP non-creditable reductions are used to calculate the target value for each RFP milestone year.

2) ABY inventories: The on-road mobile ABY inventories for each milestone/attainment year are calculated using 2011 vehicle miles traveled (VMT) and MOVES emission factors for each RFP analysis year with only the effects of pre-1990 FCAA controls turned on. The pre-1990 FCAA controls include the 1992 Reid Vapor Pressure control and the pre-1990 on-road mobile source FMVCP controls.

Spreadsheet Navigation

[Go To Table of Contents](#)

[Go To Enter On-road ABY](#)

[Go To Enter O-road Emissions](#)

[Go To Calculate On-road Reductions](#)

[Go To Enter Reductions 2017](#)

[Go To Emissions Summary NO_x Uncontrolled](#)

Attachment A - Sheet 16

Quantify the Reductions to Meet the Initial 15%, the 3% per Year and Contingency Requirements with MOVES2014

DFW Eight-Hour Ozone Nonattainment Area

Two County Groups: Nine Nonattainment Counties; Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant; and
One Nonattainment County; Wise County

The Initial 15%, the 3% per Year and Contingency Requirements: The FCAA mandates that an initial 15%, plus a 3% per year starting in year seven, VOC reduction, net of growth, occur from the baseline year 2011 through the attainment year. The reductions must be demonstrated for the six-year period from baseline 2011 through 2017, and every three years after 2017 through the attainment year, 2018. The one DFW county added to the nonattainment area under the 2008 eight-hour standard (newly designated counties (NDC)) must demonstrate an initial 15% reduction of VOC from the baseline 2011 through 2017. NO_x may be substituted for VOC for the nine DFW counties designated nonattainment under both the one-hour and 1997 eight-hour standards (previously designated counties (PDC)) from the baseline 2011 through 2017. After 2017, NO_x reductions may be substituted for VOC reductions for all ten DFW eight-hour nonattainment counties. An additional 3% reduction must be demonstrated as a contingency measure for the one-year period following the attainment year, 2019. The division of the percent reductions between VOC and NO_x are entered in the data entry sheet with tab name "Enter % for RFP Cont & Conf SM."

9 PDC Calculation of Required 15% VOC Reductions and 3% per Year NO_x and VOC Reductions

RFP Analysis Year	Total Percent Reduction Requirement	Percent NO _x	Percent VOC	RFP ABY EI NO _x (tpd)	RFP ABY EI VOC (tpd)	Required Reductions NO _x (tpd)	Required Reductions VOC (tpd)
2011	N/A	N/A	N/A	405.55	444.09	N/A	N/A
2017	15.0	10.0	5.0	403.46	449.13	40.35	22.46
2018	3.0	2.0	1.0	402.35	448.77	8.05	4.49
2019 Contingency	3.0	3.0	0.0	402.35	448.77	12.07	0.00

1 NDC Calculation of Required 15% VOC Reductions and 3% per Year NO_x and VOC Reductions

RFP Analysis Year	Total Percent Reduction Requirement	Percent NO _x	Percent VOC	RFP ABY EI NO _x (tpd)	RFP ABY EI VOC (tpd)	Required Reductions NO _x (tpd)	Required Reductions VOC (tpd)
2011	N/A	N/A	N/A	33.59	34.38	N/A	N/A
2017	15.0	N/A	15.0	33.36	34.44	N/A	5.17
2018	3.0	0.0	3.0	33.36	34.43	0.00	1.03
2019 Contingency	3.0	3.0	0.0	33.36	34.43	1.00	0.00

Notes:

1) The ABY EI is the base year (BY) emissions minus the non-creditable on-road mobile reductions. It is calculated by adding the BY EI for point, area and non-road to the ABY for on-road. When the ABY EI is multiplied by the required percent reduction, the result is the reductions required.

2) On-road mobile ABY inventories: The on-road mobile ABY inventories for each milestone/attainment year are calculated using 2011 VMT and MOVES emission factors for each RFP analysis year with only the effects of pre-1990 FCAA controls turned on. The pre-1990 FCAA controls include the 1992 Reid Vapor Pressure control and the pre-1990 on-road mobile source FMVCP controls. The on-road mobile ABY EI is equal to the on-road mobile BY EI minus the non-creditable FMVCP reductions.

Spreadsheet Navigation

[Go To Table of Contents](#)

[Go To Enter % RFP Contingency, NO_x sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To RFP Demo 2017](#)

[Go To Enter Reductions 2017](#)

[Go To Emissions Summary NO_x Uncontrolled](#)

Attachment A - Sheet 17

Target Calculations 9 PDC with MOVES2014: 2017 and 2018 9 PDC RFP Target Level of NO_x and VOC Emissions

DFW 2008 Eight-Hour Ozone Nonattainment Area

Nine Previously Designated Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant

Post-2011 target level of NO_x emissions: The NO_x target level is calculated by subtracting the reductions necessary to meet: the initial 15% from the baseline 2011 through 2017; the post-2017 3% per year; and the non-creditable fleet (FMVCP/RVP) reductions from the previous milestone/attainment year target level.

RFP Post-2011 9 PDC Target Level of NO_x Emissions				
RFP Milestone Year	Previous Target	FMVCP Non-creditable Reduction	Post-2011 Percent Reduction Requirement NO_x (tpd)	NO_x Target (tpd)
2011 Base Year, 9 PDC	N/A	N/A	N/A	405.55
2017, 9 PDC	405.55	2.09	40.35	363.11
2018, 9 PDC	363.11	1.11	8.05	353.96

Post-2011 target level of VOC emissions: The VOC target level is calculated by subtracting the reductions necessary to meet: the initial 15% from the baseline 2011 through 2017; the post-2017 3% per year; and the non-creditable fleet (FMVCP/RVP) reductions from the previous milestone/attainment year target level.

RFP Post-2011 9 PDC Target Level of VOC Emissions				
RFP Milestone Year	Previous Target	FMVCP Non-creditable Reduction	Post-2011 Percent Reduction Requirement VOC (tpd)	VOC Target (tpd)
2011 Base Year, 9 PDC	N/A	N/A	N/A	444.09
2017, 9 PDC	444.09	-5.04	22.46	426.67
2018, 9 PDC	426.67	0.36	4.49	421.83

Spreadsheet Navigation

[Go To Table of Contents](#)

[Go To Enter % RFP Contingency, NO_x sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To RFP Demo 2017](#)

[Go To Enter Reductions 2017](#)

[Go To Emissions Summary NO_x Uncontrolled](#)

Attachment A - Sheet 18

Target Calculations 1 NDC with MOVES2014: 2017 and 2018 1 NDC RFP Target Level of NO_x
and VOC Emissions

DFW 2008 Eight-Hour Ozone Nonattainment Area

One Newly Designated Nonattainment County: Wise

Post-2011 target level of NO_x emissions: The NO_x target level is calculated by subtracting the reductions necessary to meet: the initial 15% from the baseline 2011 through 2017 (for the 1 NDC the initial 15% is all from VOC); the post-2017 3% per year; and the non-creditable fleet (FMVCP/RVP) reductions from the previous milestone/attainment year target level.

RFP Post-2011 1 NDC Target Level of NO_x Emissions				
RFP Milestone Year	Previous Target	FMVCP Non-creditable Reduction	Post-2011 Percent Reduction Requirement NO_x (tpd)	NO_x Target (tpd)
2011 Base Year, 1 NDC	N/A	N/A	N/A	33.59
2017, 1 NDC	33.59	0.23	N/A	33.36
2018, 1 NDC	33.36	0.00	0.00	33.36

Post-2011 target level of VOC emissions: The VOC target level is calculated by subtracting the reductions necessary to meet: the initial 15% from the baseline 2011 through 2017 (for the 1 NDC the initial 15% is all from VOC); the post-2017 3% per year; and the non-creditable fleet (FMVCP/RVP) reductions from the previous milestone/attainment year target level.

'RFP Post-2011 1 NDC Target Level of VOC Emissions				
RFP Milestone Year	Previous Target	FMVCP Non-creditable Reduction	Post-2011 Percent Reduction Requirement VOC (tpd)	VOC Target (tpd)
2011 Base Year, 1 NDC	N/A	N/A	N/A	34.38
2017, 1 NDC	34.38	-0.06	5.17	29.27
2018, 1 NDC	29.27	0.01	1.03	28.23

Spreadsheet Navigation

[Go To Table of Contents](#)

[Go To Enter % RFP Contingency, NO_x sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To RFP Demo 2017](#)

[Go To Enter Reductions 2017](#)

[Go To Emissions Summary NO_x Uncontrolled](#)

Attachment A - Sheet 19

Enter RFP NO_x and VOC Percentage Reductions, Contingency Percents and Safety Margin

DFW Eight-Hour Ozone Nonattainment Area

Ten Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, Wise

A 15% reduction is required for DFW for the period from the baseline 2011 through 2017, with an additional 3% per year until the attainment year. The total reduction for 2017 includes an initial 15% reduction (VOC only) for the one NDC and an initial 15% reduction (NO_x may be substituted for VOC) for the nine PDCs. The total reduction for 2018 is 3% (3% times 1). Input percentage of NO_x and VOC reductions to be used to demonstrate RFP for 2017 and 2018. Only a NO_x value needs to input. The VOC percent will be calculated automatically based upon the total required and the percent NO_x to be used.

RFP NO_x and VOC Percent Reductions for Milestone and Attainment Years			
RFP Milestone Year	NO _x %	VOC %	Total Percent
2017, 1 Newly Designated County	N/A	15	15
2017, 9 Previously Designated Counties	10	5	15
2018, 1 Newly Designated County	0	3	3
2018, 9 Previously Designated Counties	2	1	3

3% 2017 to 2018 and 2018 to 2019 contingency measures reductions are required. Input only the percent of the reductions that will be from NO_x. The VOC value will be calculated automatically as 3 minus the NO_x percent. For 2018 to 2019 a 3% contingency is also required for the attainment demonstration.

RFP and Attainment Demonstration NO_x and VOC Percent Reductions for 2018 and 2019 Contingency			
Contingency Year	NO _x %	VOC %	Total Percent
9 PDC RFP Milestone Contingency	3	0	3
1 NDC RFP Milestone Contingency	3	0	3
9 PDC RFP 2018 to 2019	3	0	3
1 NDC RFP 2018 to 2019	3	0	3
AD 2018 to 2019	3	0	3

If there are excess RFP control reductions, a transportation conformity safety margin is allowed. The safety margin amount must be less than or equal to the excess reductions. Entering a percent safety margin below will update the MVEB calculation to include the percent safety margin entered. The amount of the safety margin will automatically be checked to verify it is less than the excess emissions. If not, then a "check safety margin" will appear in the MVEB calculation box.

RFP Milestone Year	Conformity Safety Margin NO _x %	Conformity Safety Margin VOC %
2017	10	10
2018	10	10

Enter the percent of the NO_x milestone year target that will be transferred to VOC. Only the NO_x percent is entered. The VOC percent is automatically equal to the NO_x percent transfer. These values are used on Sheets 03 and 06 in the NO_x transfer calculations.

NO _x Substitution	Percent of NO _x Reductions to Transfer to Percent VOC Reductions	Percent of VOC Reductions Transferred from Percent NO _x Reductions
2017	0.00	0.00
2018	0.00	0.00

Emissions Reductions to Transfer from 9 PDC to 1 NDC	Tons of NOx Reductions to Transfr from 9 PDC to 1 NDC	Tons of VOC Reductions to Transfr from 9 PDC to 1 NDC
2017	0.00	1.00
2018	0.00	0.00

Spreadsheet Navigation

[Go To Table of Contents](#)

[Go To RFP Demo 2017](#)

[Go To NOx Sub 2010](#)

[Go To RFP Demo 2018](#)

[Go To 2019 RFP Contingency](#)

[Go To MVEB 2017](#)

[Go To Enter Reductions 2017](#)

[Go To Emissions Summary NOx Uncontrolled](#)

Attachment A - Sheet 20

Enter Aircraft Emissions Inventory
DFW Eight-Hour Ozone Nonattainment Area

Nine Previously Designated Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant

'RFP Analysis Year	Uncontrolled NO _x (tpd)	Controlled NO _x (tpd)	Total Reduction NO _x (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
9 PDC 2011	9.81	9.58	0.23	2.34	3.01	3.00	0.01	0.33
9 PDC 2017	11.39	11.13	0.26	2.28	3.36	3.36	0.00	0.00
9 PDC 2018	12.02	11.77	0.25	2.08	3.62	3.53	0.09	2.49

One Newly Designated Nonattainment County: Wise

'RFP Analysis Year	Uncontrolled NO _x (tpd)	Controlled NO _x (tpd)	Total Reduction NO _x (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
1 NDC 2011	0.01	0.01	0.00	0.00	0.01	0.01	0.00	0.00
1 NDC 2017	0.01	0.01	0.00	0.00	0.01	0.01	0.00	0.00
1 NDC 2018	0.02	0.02	0.00	0.00	0.02	0.02	0.00	0.00

Total Ten Ozone Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, Wise

'RFP Analysis Year	Uncontrolled NO _x (tpd)	Controlled NO _x (tpd)	Total Reduction NO _x (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
10 County Total 2011	9.82	9.59	0.23	2.34	3.02	3.01	0.01	0.33
10 County Total 2017	11.40	11.14	0.26	2.28	3.37	3.37	0.00	0.00
10 County total 2018	12.04	11.79	0.25	2.08	3.64	3.55	0.09	2.47

Notes:

- 1) 1 NDC means the one newly designated county and indicates values are for the one county in the DFW ozone nonattainment area that was newly designated under the 2008 eight-hour ozone standard. Includes: Wise County.
- 2) 9 PDC means the nine existing nonattainment counties and indicates values are for the nine counties that had an existing designation under the one-hour ozone standard and/or under the 1997 eight-hour ozone standard. Includes: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant Counties.
- 3) 10 County Total means the values include the ten DFW area nonattainment counties designated under the 2008 eight-hour ozone standard.

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go To Enter Reductions 1 NDC 2017](#)

[Go To Enter Reductions 9 PDC 2017](#)

[Go to Calculate 9 PDC 2011 Base Year EI](#)

[Go to Calculate 1 NDC 2011 Base Year EI](#)

[Go To Emissions Summary NO_x Uncontrolled](#)

Attachment A - Sheet 21

Enter Area Source Emissions Inventory
DFW Eight-Hour Ozone Nonattainment Area

Nine Previously Designated Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant

'RFP Analysis Year	Existing Controlled Emissions (as of 2011) NOX (tpd)	Post-2011 Controlled NOX (tpd)	Total Reduction NO _x (tpd)	Percent Reduction	Existing Controlled Emissions (as of 2011) VOC (tpd)	Post-2011 Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
9 PDC 2011	30.48	30.48	0.000	0.0	263.30	263.30	0.000	0.0
9 PDC 2017	30.91	30.91	0.000	0.0	266.15	266.15	0.000	0.0
9 PDC 2018	29.93	29.93	0.000	0.0	258.70	258.70	0.000	0.0

One Newly Designated Nonattainment County: Wise

'RFP Analysis Year	Existing Controlled Emissions (as of 2011) NOX (tpd)	Post-2011 Controlled NOX (tpd)	Total Reduction NO _x (tpd)	Percent Reduction	Existing Controlled Emissions (as of 2011) VOC (tpd)	Post-2011 Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
1 NDC 2011	12.14	12.14	0.00	0.00	29.18	29.18	0.00	0.00
1 NDC 2017	9.72	9.72	0.00	0.00	23.74	23.74	0.00	0.00
1 NDC 2018	7.44	7.44	0.00	0.00	19.17	19.17	0.00	0.00

Total Ten Ozone Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, Wise

'RFP Analysis Year	Existing Controlled Emissions (as of 2011) NOX (tpd)	Post-2011 Controlled NOX (tpd)	Total Reduction NO _x (tpd)	Percent Reduction	Existing Controlled Emissions (as of 2011) VOC (tpd)	Post-2011 Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
10 County Total 2011	42.62	42.62	0.00	0.00	292.48	292.48	0.00	0.00
10 County Total 2017	40.63	40.63	0.00	0.00	289.89	289.89	0.00	0.00
10 County total 2018	37.37	37.37	0.00	0.00	277.87	277.87	0.00	0.00

Notes:

- 1) 1 NDC means the one newly designated county and indicates values are for the one county in the DFW ozone nonattainment area that was newly designated under the 2008 eight-hour ozone standard. Includes: Wise County.
- 2) 9 PDC means the nine existing nonattainment counties and indicates values are for the nine counties that had an existing designation under the one-hour ozone standard and/or under the 1997 eight-hour ozone standard. Includes: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant Counties.
- 3) 10 County Total means the values include the ten DFW area nonattainment counties designated under the 2008 eight-hour ozone standard.

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go To Enter Reductions 1 NDC 2017](#)

[Go To Enter Reductions 9 PDC 2017](#)

[Go to Calculate 9 PDC 2011 Base Year EI](#)

[Go to Calculate 1 NDC 2011 Base Year EI](#)

[Go To Emissions Summary NOx Uncontrolled](#)

Attachment A - Sheet 22

Enter Biogenic Emissions Inventory
DFW Eight-Hour Ozone Nonattainment Area

Nine Previously Designated Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant

'RFP Analysis Year	Uncontrolled NO _x (tpd)	Controlled NO _x (tpd)	Total Reduction NO _x (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
9 PDC 2011	See Note 1	N/A	N/A	N/A	See Note 1	N/A	N/A	N/A

One Newly Designated Nonattainment County: Wise

'RFP Analysis Year	Uncontrolled NO _x (tpd)	Controlled NO _x (tpd)	Total Reduction NO _x (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
1 NDC 2011	See Note 1	N/A	N/A	N/A	See Note 1	N/A	N/A	N/A

Total Ten Ozone Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, Wise

'RFP Analysis Year	Uncontrolled NO _x (tpd)	Controlled NO _x (tpd)	Total Reduction NO _x (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
10 County Total 2011	See Note 1	N/A	N/A	N/A	See Note 1	N/A	N/A	N/A

Notes:

1) Beginning with the Air Emissions Reporting Requirements (December 2008), the emissions required to be reported no longer include emissions from biogenic sources. Therefore, as of the 2011 reporting year, the comprehensive triennial emissions inventory no longer includes emissions from biogenic sources.

The RFP demonstrations are based upon the emissions from anthropogenic sources. The guidance for RFP calculations shows the first step is to subtract the emissions from biogenic sources from the total base year emissions to obtain the total anthropogenic emission inventory. As of 2011, under the AERR, the base year emissions do not include biogenic sources and already represent the total anthropogenic emissions. In this case, step one of the RFP process is not needed, and the emissions from biogenic sources is unnecessary. This RFP SIP revision: uses a base year of 2011; does not require subtraction of the biogenic emissions in Step One of the RFP calculation process; and does not include quantification of emissions from biogenic sources.

2) 1 NDC means the one newly designated county and indicates values are for the one county in the DFW ozone nonattainment area that was newly designated under the 2008 eight-hour ozone standard. Includes: Wise County.

3) 9 PDC means the nine existing nonattainment counties and indicates values are for the nine counties that had an existing designation under the one-hour ozone standard and/or under the 1997 eight-hour ozone standard. Includes: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant Counties.

4) 10 County Total means the values include the ten DFW area nonattainment counties designated under the 2008 eight-hour ozone standard.

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go To Enter Reductions 1 NDC 2017](#)

[Go To Enter Reductiuons 9 PDC 2017](#)

[Go to Calculate 9 PDC 2011 Base Year EI](#)

[Go to Calculate 1 NDC 2011 Base Year EI](#)

[Go To Emissions Summary NO_x Uncontrolled](#)

Attachment A - Sheet 23

Enter Oil and Gas Production, Drilling Rigs, Diesel Engines Emissions Inventory
DFW Eight-Hour Ozone Nonattainment Area

Nine Previously Designated Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant

'RFP Analysis Year	Uncontrolled NO _x (tpd)	Controlled NO _x (tpd)	Total Reduction NO _x (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
9 PDC 2011	23.34	12.46	10.880	46.6	2.61	0.61	2.000	76.6
9 PDC 2017	18.69	9.98	8.710	46.6	2.09	0.49	1.600	76.6
9 PDC 2018	14.19	7.57	6.620	46.7	1.59	0.37	1.220	76.7

One Newly Designated Nonattainment County: Wise

'RFP Analysis Year	Uncontrolled NO _x (tpd)	Controlled NO _x (tpd)	Total Reduction NO _x (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
1 NDC 2011	3.73	1.99	1.74	46.65	0.42	0.10	0.32	76.19
1 NDC 2017	2.90	1.55	1.35	46.55	0.33	0.08	0.25	75.76
1 NDC 2018	2.22	1.18	1.04	46.85	0.25	0.06	0.19	76.00

Total Ten Ozone Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, Wise

'RFP Analysis Year	Uncontrolled NO _x (tpd)	Controlled NO _x (tpd)	Total Reduction NO _x (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
10 County Total 2011	27.07	14.45	12.62	46.62	3.03	0.71	2.32	76.57
10 County Total 2017	21.59	11.53	10.06	46.60	2.42	0.57	1.85	76.45
10 County total 2018	16.41	8.75	7.66	46.68	1.84	0.43	1.41	76.63

Notes:

- 1) 1 NDC means the one newly designated county and indicates values are for the one county in the DFW ozone nonattainment area that was newly designated under the 2008 eight-hour ozone standard. Includes: Wise County.
- 2) 9 PDC means the nine existing nonattainment counties and indicates values are for the nine counties that had an existing designation under the one-hour ozone standard and/or under the 1997 eight-hour ozone standard. Includes: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant Counties.
- 3) 10 County Total means the values include the ten DFW area nonattainment counties designated under the 2008 eight-hour ozone standard.

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go To Enter Reductions 1 NDC 2017](#)

[Go To Enter Reductions 9 PDC 2017](#)

[Go to Calculate 9 PDC 2011 Base Year EI](#)

[Go to Calculate 1 NDC 2011 Base Year EI](#)

[Go To Emissions Summary NO_x Uncontrolled](#)

Attachment A - Sheet 24

Enter Ground Support Equipment (GSE) Emissions Inventory
DFW Eight-Hour Ozone Nonattainment Area

Nine Previously Designated Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant

'RFP Analysis Year	Uncontrolled NO _x (tpd)	Controlled NO _x (tpd)	Total Reduction NO _x (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
9 PDC 2011	1.14	0.80	0.340	29.8	0.33	0.23	0.100	30.3
9 PDC 2017	0.51	0.35	0.160	31.4	0.15	0.10	0.050	33.3
9 PDC 2018	0.30	0.21	0.090	30.0	0.09	0.08	0.010	11.1

One Newly Designated Nonattainment County: Wise

'RFP Analysis Year	Uncontrolled NO _x (tpd)	Controlled NO _x (tpd)	Total Reduction NO _x (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
1 NDC 2011	0.00	0.00	0.00	#DIV/0!	0.00	0.00	0.00	#DIV/0!
1 NDC 2017	0.00	0.00	0.00	#DIV/0!	0.00	0.00	0.00	#DIV/0!
1 NDC 2018	0.00	0.00	0.00	#DIV/0!	0.00	0.00	0.00	#DIV/0!

Total Ten Ozone Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, Wise

'RFP Analysis Year	Uncontrolled NO _x (tpd)	Controlled NO _x (tpd)	Total Reduction NO _x (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
10 County Total 2011	1.14	0.80	0.34	29.82	0.33	0.23	0.10	30.30
10 County Total 2017	0.51	0.35	0.16	31.37	0.15	0.10	0.05	33.33
10 County total 2018	0.30	0.21	0.09	30.00	0.09	0.08	0.01	11.11

Notes:

- 1) 1 NDC means the one newly designated county and indicates values are for the one county in the DFW ozone nonattainment area that was newly designated under the 2008 eight-hour ozone standard. Includes: Wise County.
- 2) 9 PDC means the nine existing nonattainment counties and indicates values are for the nine counties that had an existing designation under the one-hour ozone standard and/or under the 1997 eight-hour ozone standard. Includes: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant Counties.
- 3) 10 County Total means the values include the ten DFW area nonattainment counties designated under the 2008 eight-hour ozone standard.

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go To Enter Reductions 1 NDC 2017](#)

[Go To Enter Reductiuons 9 PDC 2017](#)

[Go to Calculate 9 PDC 2011 Base Year EI](#)

[Go to Calculate 1 NDC 2011 Base Year EI](#)

[Go To Emissions Summary NO_x Uncontrolled](#)

Attachment A - Sheet 25

Enter Locomotive Emissions Inventory
DFW Eight-Hour Ozone Nonattainment Area

Nine Previously Designated Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant

'RFP Analysis Year	Uncontrolled NO _x (tpd)	Controlled NO _x (tpd)	Total Reduction NO _x (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
9 PDC 2011	26.98	21.75	5.230	19.4	1.79	1.24	0.550	30.7
9 PDC 2017	22.34	18.01	4.330	19.4	1.27	0.88	0.390	30.7
9 PDC 2018	23.01	17.82	5.190	22.6	1.31	0.85	0.460	35.1

One Newly Designated Nonattainment County: Wise

'RFP Analysis Year	Uncontrolled NO _x (tpd)	Controlled NO _x (tpd)	Total Reduction NO _x (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
1 NDC 2011	3.27	2.51	0.76	23.24	0.22	0.14	0.08	36.36
1 NDC 2017	2.58	1.98	0.60	23.26	0.14	0.09	0.05	35.71
1 NDC 2018	2.66	1.94	0.72	27.07	0.15	0.08	0.07	46.67

Total Ten Ozone Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, Wise

'RFP Analysis Year	Uncontrolled NO _x (tpd)	Controlled NO _x (tpd)	Total Reduction NO _x (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
10 County Total 2011	30.25	24.26	5.99	19.80	2.01	1.38	0.63	31.34
10 County Total 2017	24.92	19.99	4.93	19.78	1.41	0.97	0.44	31.21
10 County total 2018	25.67	19.76	5.91	23.02	1.46	0.93	0.53	36.30

Notes:

- 1) 1 NDC means the one newly designated county and indicates values are for the one county in the DFW ozone nonattainment area that was newly designated under the 2008 eight-hour ozone standard. Includes: Wise County.
- 2) 9 PDC means the nine existing nonattainment counties and indicates values are for the nine counties that had an existing designation under the one-hour ozone standard and/or under the 1997 eight-hour ozone standard. Includes: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant Counties.
- 3) 10 County Total means the values include the ten DFW area nonattainment counties designated under the 2008 eight-hour ozone standard.

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go To Enter Reductions 1 NDC 2017](#)

[Go To Enter Reductions 9 PDC 2017](#)

[Go to Calculate 9 PDC 2011 Base Year EI](#)

[Go to Calculate 1 NDC 2011 Base Year EI](#)

[Go To Emissions Summary NO_x Uncontrolled](#)

Attachment A - Sheet 26

Enter NONROAD Categories Emissions Inventory
DFW Eight-Hour Ozone Nonattainment Area

Nine Previously Designated Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant

'RFP Analysis Year	Uncontrolled NO _x (tpd)	Controlled NO _x (tpd)	Total Reduction NO _x (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
9 PDC 2011	127.53	68.39	59.140	46.4	122.77	48.66	74.110	60.4
9 PDC 2017	153.34	42.07	111.270	72.6	143.57	32.18	111.390	77.6
9 PDC 2018	156.51	39.01	117.500	75.1	145.95	31.32	114.630	78.5

One Newly Designated Nonattainment County: Wise

'RFP Analysis Year	Uncontrolled NO _x (tpd)	Controlled NO _x (tpd)	Total Reduction NO _x (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
1 NDC 2011	5.18	2.34	2.84	54.83	2.08	1.00	1.08	51.92
1 NDC 2017	5.68	1.17	4.51	79.40	2.27	0.64	1.63	71.81
1 NDC 2018	5.71	1.04	4.67	81.79	2.29	0.61	1.68	73.36

Total Ten Ozone Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, Wise

'RFP Analysis Year	Uncontrolled NO _x (tpd)	Controlled NO _x (tpd)	Total Reduction NO _x (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
10 County Total 2011	132.71	70.73	61.98	46.70	124.85	49.66	75.19	60.22
10 County Total 2017	159.02	43.24	115.78	72.81	145.84	32.82	113.02	77.50
10 County total 2018	162.22	40.05	122.17	75.31	148.24	31.93	116.31	78.46

Notes:

- 1) 1 NDC means the one newly designated county and indicates values are for the one county in the DFW ozone nonattainment area that was newly designated under the 2008 eight-hour ozone standard. Includes: Wise County.
- 2) 9 PDC means the nine existing nonattainment counties and indicates values are for the nine counties that had an existing designation under the one-hour ozone standard and/or under the 1997 eight-hour ozone standard. Includes: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant Counties.
- 3) 10 County Total means the values include the ten DFW area nonattainment counties designated under the 2008 eight-hour ozone standard.

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go To Enter Reductions 1 NDC 2017](#)

[Go To Enter Reductiuons 9 PDC 2017](#)

[Go to Calculate 9 PDC 2011 Base Year EI](#)

[Go to Calculate 1 NDC 2011 Base Year EI](#)

[Go To Emissions Summary NOx Uncontrolled](#)

Attachment A - Sheet 27

Enter On-road Mobile Emissions Inventory
DFW Eight-Hour Ozone Nonattainment Area

Nine Previously Designated Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant

'RFP Analysis Year	Uncontrolled NO _x (tpd)	Controlled NO _x (tpd)	Total Reduction NO _x (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
9 PDC 2011	736.68	230.75	505.930	68.7	355.31	99.39	255.920	72.0
9 PDC 2017	860.90	144.08	716.820	83.3	416.88	70.41	346.470	83.1
9 PDC 2018	881.68	129.61	752.070	85.3	427.12	66.43	360.690	84.4

One Newly Designated Nonattainment County: Wise

'RFP Analysis Year	Uncontrolled NO _x (tpd)	Controlled NO _x (tpd)	Total Reduction NO _x (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
1 NDC 2011	16.34	5.99	10.35	63.34	4.34	1.81	2.53	58.29
1 NDC 2017	18.28	3.57	14.71	80.47	4.89	1.24	3.65	74.64
1 NDC 2018	18.74	3.21	15.53	82.87	5.01	1.16	3.85	76.85

Total Ten Ozone Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, Wise

'RFP Analysis Year	Uncontrolled NO _x (tpd)	Controlled NO _x (tpd)	Total Reduction NO _x (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
10 County Total 2011	753.02	236.74	516.28	68.56	359.65	101.20	258.45	71.86
10 County Total 2017	879.18	147.65	731.53	83.21	421.77	71.65	350.12	83.01
10 County total 2018	900.42	132.82	767.60	85.25	432.13	67.59	364.54	84.36

Notes:

- 1) 1 NDC means the one newly designated county and indicates values are for the one county in the DFW ozone nonattainment area that was newly designated under the 2008 eight-hour ozone standard. Includes: Wise County.
- 2) 9 PDC means the nine existing nonattainment counties and indicates values are for the nine counties that had an existing designation under the one-hour ozone standard and/or under the 1997 eight-hour ozone standard. Includes: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant Counties.
- 3) 10 County Total means the values include the ten DFW area nonattainment counties designated under the 2008 eight-hour ozone standard.

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go To Enter Reductions 1 NDC 2017](#)

[Go To Enter Reductiuons 9 PDC 2017](#)

[Go to Calculate 9 PDC 2011 Base Year EI](#)

[Go to Calculate 1 NDC 2011 Base Year EI](#)

[Go To Emissions Summary NO_x Uncontrolled](#)

Attachment A - Sheet 28

Enter ABY On-Road Mobile Emissions Inventory
DFW Eight-Hour Ozone Nonattainment Area

Nine Previously Designated Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant

RFP Analysis Year	ABY NO _x (tpd)	ABY VOC (tpd)
9 PDC 2011	736.68	355.31
9 PDC 2017	734.59	360.35
9 PDC 2018	733.48	359.99

One Newly Designated Nonattainment County: Wise

RFP Analysis Year	ABY NO _x (tpd)	ABY VOC (tpd)
1 NDC 2011	16.34	4.34
1 NDC 2017	16.11	4.40
1 NDC 2018	16.11	4.39

Total Ten Ozone Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, Wise

RFP Analysis Year	ABY NO _x (tpd)	ABY VOC (tpd)
10 NAC Total 2011	753.02	359.65
10 NAC Total 2017	750.70	364.75
10 NAC Total 2018	749.59	364.38

Notes:

- 1) 1 NDC means the one newly designated county and indicates values are for the one county in the DFW ozone nonattainment area that was newly designated under the 2008 eight-hour ozone standard. Includes: Wise County.
- 2) 9 PDC means the nine existing nonattainment counties and indicates values are for the nine counties that had an existing designation under the one-hour ozone standard and/or under the 1997 eight-hour ozone standard. Includes: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant Counties.
- 3) 10 County Total means the values include the ten DFW area nonattainment counties designated under the 2008 eight-hour ozone standard.

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go To Enter Reductions 1 NDC 2017](#)

[Go To Enter Reductiuons 9 PDC 2017](#)

[Go to Calculate 9 PDC 2011 Base Year EI](#)

[Go to Calculate 1 NDC 2011 Base Year EI](#)

[Go To Emissions Summary NOx Uncontrolled](#)

[Go To Calculate Noncreditable Reductions](#)

Attachment A - Sheet 29

Enter Point Source Emissions Inventory
DFW Eight-Hour Ozone Nonattainment Area

Nine Previously Designated Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant

'RFP Analysis Year	Existing Controlled Emissions (as of 2011) NOX (tpd)	Post-2011 Controlled NOX (tpd)	Total Reduction NO _x (tpd)	Percent Reduction	Existing Controlled Emissions (as of 2011) VOC (tpd)	Post-2011 Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
9 PDC 2011	31.34	31.34	0.00	0.0	27.66	27.66	0.00	0.0
9 PDC 2017	46.71	46.71	0.00	0.0	30.84	30.84	0.00	0.0
9 PDC 2018	45.90	45.90	0.00	0.0	29.83	29.83	0.00	0.0

One Newly Designated Nonattainment County: Wise

'RFP Analysis Year	Existing Controlled Emissions (as of 2011) NOX (tpd)	Post-2011 Controlled NOX (tpd)	Total Reduction NO _x (tpd)	Percent Reduction	Existing Controlled Emissions (as of 2011) VOC (tpd)	Post-2011 Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
1 NDC 2011	8.61	8.61	0.00	0.00	2.14	2.14	0.00	0.00
1 NDC 2017	10.21	10.21	0.00	0.00	3.41	3.41	0.00	0.00
1 NDC 2018	9.71	9.71	0.00	0.00	2.88	2.88	0.00	0.00

Total Ten Ozone Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, Wise

'RFP Analysis Year	Existing Controlled Emissions (as of 2011) NOX (tpd)	Post-2011 Controlled NOX (tpd)	Total Reduction NO _x (tpd)	Percent Reduction	Existing Controlled Emissions (as of 2011) VOC (tpd)	Post-2011 Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
10 County Total 2011	39.95	39.95	0.00	0.00	29.80	29.80	0.00	0.00
10 County Total 2017	56.92	56.92	0.00	0.00	34.25	34.25	0.00	0.00
10 County total 2018	55.61	55.61	0.00	0.00	32.71	32.71	0.00	0.00

Notes:

- 1) 1 NDC means the one newly designated county and indicates values are for the one county in the DFW ozone nonattainment area that was newly designated under the 2008 eight-hour ozone standard. Includes: Wise County.
- 2) 9 PDC means the nine existing nonattainment counties and indicates values are for the nine counties that had an existing designation under the one-hour ozone standard and/or under the 1997 eight-hour ozone standard. Includes: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant Counties.
- 3) 10 County Total means the values include the ten DFW area nonattainment counties designated under the 2008 eight-hour ozone standard.
- 4) The difference between existing post-2011 Controlled emissions (as of 2011) and Post-2011 Controlled VOC emissions represents noncreditable

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go To Enter Reductions 1 NDC 2017](#)

[Go To Enter Reductions 9 PDC 2017](#)

[Go to Calculate 9 PDC 2011 Base Year EI](#)

[Go to Calculate 1 NDC 2011 Base Year EI](#)

[Go To Emissions Summary NOx Uncontrolled](#)

Attachment A - Sheet 30

Enter 2017 Control Measure Reductions

DFW Nonattainment Area Eight-hour Ozone Season VOC and NO_x

Nine Previously Designated Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant

RFP Control Strategy Description	Source Category	Total 2011 to 2017 NO _x Emissions Reductions (tpd)	Total 2011 to 2017 VOC Emissions Reductions (tpd)	Use this control for RFP calculations? (Yes or No)	Is this an on-road mobile control that will change the MVEB? (Yes or No)
Chapter 117 NO _x controls	Point	0.00	0.00	Yes	No
Chapter 115 Storage Tank Rule	Point	0.00	0.00	Yes	No
Coating / printing rules	Point	0.00	0.00	Yes	No
Portable fuel containers	Area	0.00	0.00	Yes	No
Federal Motor Vehicle Control Program (FMVCP)	OR	648.53	313.28	Yes	Yes
Inspection and Maintenance (I/M)	OR	12.09	10.44	Yes	Yes
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	OR	52.41	22.75	Yes	Yes
On-road TxLED	OR	3.79	0.00	Yes	Yes
Tier I and II locomotive NO _x standards	NR	0.10	0.20	Yes	No
Small non-road spark ignition (SI) engines (Phase I)	NR	-3.47	32.32	Yes	No
Heavy duty non-road engines	NR	24.26	8.89	Yes	No
Tiers 2 and 3 non-road diesel engines	NR	32.26	6.22	Yes	No
Small non-road SI engines (Phase II)	NR	2.42	31.31	Yes	No
Large non-road SI & recreational marine	NR	32.72	13.82	Yes	No
Non-road TxLED	NR	2.17	0.00	Yes	No
Non-road RFG	NR	-0.53	0.00	Yes	No
Tier 4 non-road diesel engines	NR	15.03	0.81	Yes	No
Diesel recreational marine	NR	0.00	0.00	Yes	No
Small SI (Phase III)	NR	2.03	13.35	Yes	No
Chapter 117 NO _x area source engine controls	Area	0.00	0.00	Yes	No
Drilling rig low emission diesel	Area	0.00	0.00	Yes	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
Total		823.81	453.39		

Notes:

- 1) Point source Chapter 117 NO_x controls in the DFW area had compliance deadlines before 2011. The 2011 EI includes the effects of the control. No additional control beyond 2011 are claimed.
- 2) Area source Chapter 117 NO_x controls in the DFW area had compliance deadlines before 2011. The 2011 EI includes the effects of the control. No additional control beyond 2011 are claimed.
- 3) Area source Portable fuel containers controls in the DFW area had compliance deadlines before 2011. The 2011 EI includes the effects of the control. No additional control beyond 2011 are claimed.
- 4) The ten county DFW area includes counties with federal RFG and counties with Texas Regional Low RVP. The four counties with RFG are: Collin, Dallas Denton and Tarrant. The six counties with Texas Regional Low RVP are: Ellis, Johnson, Kaufman, Parker, Rockwall and Wise.
- 5) 1 NDC means the onr newly designated counties and indicates values are for the one county in the DFW ozone nonattainment area that were newly designated under the 2008 eight-hour ozone standard. Includes: Wise County
- 6) 9 PDC means the nine previously designated counties and indicates values are for the nine counties that had an existing designation under the one-hour ozone standard and were also designated under the 1997 eight-hour ozone standard. Includes: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant Counties.
- 7) 10 NAC = means the values include all ten DFW area ozone nonattainment counties designated under the 2008 ozone standards.
- 8) Inspection and Maintenance Program is only modeled for the nine previously designated counties
- 9)"This row not used for current RFP" control rows were created only to allow for planners to easily add controls for alternative scenario analyses.

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go To Enter Aircraft EI](#)

[Go To Calculate Reductions](#)

[Go To 2017 RFP Demo](#)

[Go To Enter % RFP Contingency, NOx sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Emissions Summary NOx Uncontrolled](#)

[Go To Contingency 2019](#)

Attachment A - Sheet 31

Enter 2017 Control Measure Reductions
 DFW Nonattainment Area Eight-Hour Ozone Season VOC and NO_x
 One Newly Designated Nonattainment County: Wise

RFP Control Strategy Description	Source Category	Total 2011 to 2017 NO _x Emissions Reductions (tpd)	Total 2011 to 2017 VOC Emissions Reductions (tpd)	Use this control for RFP calculations? (Yes or No)	Is this an on-road mobile control that will change the MVEB? (Yes or No)
Chapter 117 NOX controls	Point	0.00	0.00	Yes	No
Chapter 115 Storage Tank Rule	Point	0.00	0.00	Yes	No
Coating / printing rules	Point	0.00	0.00	Yes	No
Portable fuel containers	Area	0.00	0.00	Yes	No
Federal Motor Vehicle Control Program (FMVCP)	OR	13.81	3.45	Yes	Yes
Inspection and Maintenance (I/M)	OR	0.00	0.00	Yes	Yes
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	OR	0.79	0.20	Yes	Yes
On-road TxLED	OR	0.11	0.00	Yes	Yes
Tier I and II locomotive NOX standards	NR	0.01	0.02	Yes	No
Small non-road spark ignition (SI) engines (Phase I)	NR	-0.03	0.21	Yes	No
Heavy duty non-road engines	NR	1.40	0.53	Yes	No
Tiers 2 and 3 non-road diesel engines	NR	1.68	0.17	Yes	No
Small non-road SI engines (Phase II)	NR	0.02	0.21	Yes	No
Large non-road SI & recreational marine	NR	0.20	0.28	Yes	No
Non-road TxLED	NR	0.07	0.00	Yes	No
Non-road RFG	NR	0.00	0.00	Yes	No
Tier 4 non-road diesel engines	NR	0.88	0.03	Yes	No
Diesel recreational marine	NR	0.00	0.00	Yes	No
Small SI (Phase III)	NR	0.02	0.20	Yes	No
Chapter 117 NOX area source engine controls	Area	0.00	0.00	Yes	No
Drilling rig low emission diesel	Area	0.00	0.00	Yes	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
Total		18.96	5.30		

Notes

Please see notes for the control reductions on:
[Sheet 30 Enter Reductions 9 PDC 2017](#)

Spreadsheet Navigation

- [Return to Table of Contents](#)
- [Go To Enter Aircraft E](#)
- [Go To Calculate Reductions](#)
- [Go To 2017 RFP Demo](#)
- [Go To Enter % RFP Contingency, NOx sub amounts, VOC transfer amounts, Conf Safety Margin](#)
- [Go To Emissions Summary NOx Uncontrolled](#)

Attachment A - Sheet 32

Enter 2018 Control Measure Reductions

DFW Nonattainment Area Eight-hour Ozone Season VOC and NO_x

Nine Previously Designated Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant

RFP Control Strategy Description	Source Category	Total 2011 to 2018 NO_x Emissions Reductions (tpd)	Total 2011 to 2018 VOC Emissions Reductions (tpd)	Use this control for RFP demonstration? (Yes or No)	Is this an on-road mobile control that will change the MVEB? (Yes or No)
Chapter 117 NOX controls	Point	0.00	0.00	Yes	No
Chapter 115 Storage Tank Rule	Point	0.00	0.00	Yes	No
Coating / printing rules	Point	0.00	0.00	Yes	No
Portable fuel containers	Area	0.00	0.00	Yes	No
Federal Motor Vehicle Control Program (FMVCP)	OR	689.63	329.40	Yes	Yes
Inspection and Maintenance (I/M)	OR	10.69	9.93	Yes	Yes
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	OR	48.39	21.36	Yes	Yes
On-road TxLED	OR	3.36	0.00	Yes	Yes
Tier I and II locomotive NOX standards	NR	0.20	0.30	Yes	No
Small non-road spark ignition (SI) engines (Phase I)	NR	-3.52	32.86	Yes	No
Heavy duty non-road engines	NR	24.94	9.16	Yes	No
Tiers 2 and 3 non-road diesel engines	NR	33.72	6.45	Yes	No
Small non-road SI engines (Phase II)	NR	2.46	31.84	Yes	No
Large non-road SI & recreational marine	NR	34.16	14.63	Yes	No
Non-road TxLED	NR	2.38	0.00	Yes	No
Non-road RFG	NR	-0.51	1.53	Yes	No
Tier 4 non-road diesel engines	NR	17.44	0.91	Yes	No
Diesel recreational marine	NR	0.00	0.00	Yes	No
Small SI (Phase III)	NR	2.15	14.05	Yes	No
Chapter 117 NOX area source engine controls	Area	0.00	0.00	Yes	No
Drilling rig low emission diesel	Area	0.00	0.00	Yes	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
Total		865.49	472.42		

Note: Unspecified control rows were created only to allow for planners to easily add controls for alternative scenario analyses.

Notes

Please see notes for the control reductions on:

[Sheet 30 Enter Reductions 9 PDC 2017](#)

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go To Enter Aircraft EI](#)

[Go To Calculate Reductions](#)

[Go To 2017 RFP Demo](#)

[Go To Enter % RFP Contingency, NOx sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Emissions Summary NOx Uncontrolled](#)

Attachment A - Sheet 33

Enter 2018 Control Measure Reductions
DFW Nonattainment Area Eight-Hour Ozone Season VOC and NO_x
One Newly Designated Nonattainment County: Wise

RFP Control Strategy Description	Source Category	Total 2011 to 2018 NO _x Emissions Reductions (tpd)	Total 2011 to 2018 VOC Emissions Reductions (tpd)	Use this control for RFP demonstration? (Yes or No)	Is this an on-road mobile control that will change the MVEB? (Yes or No)
Chapter 117 NOX controls	Point	0.00	0.00	Yes	No
Chapter 115 Storage Tank Rule	Point	0.00	0.00	Yes	No
Coating / printing rules	Point	0.00	0.00	Yes	No
Portable fuel containers	Area	0.00	0.00	Yes	No
Federal Motor Vehicle Control Program (FMVCP)	OR	14.71	3.66	Yes	Yes
Inspection and Maintenance (I/M)	OR	0.00	0.00	Yes	Yes
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	OR	0.73	0.19	Yes	Yes
On-road TxLED	OR	0.09	0.00	Yes	Yes
Tier I and II locomotive NOX standards	NR	0.02	0.03	Yes	No
Small non-road spark ignition (SI) engines (Phase I)	NR	-0.03	0.22	Yes	No
Heavy duty non-road engines	NR	1.41	0.54	Yes	No
Tiers 2 and 3 non-road diesel engines	NR	1.70	0.18	Yes	No
Small non-road SI engines (Phase II)	NR	0.02	0.21	Yes	No
Large non-road SI & recreational marine	NR	0.20	0.30	Yes	No
Non-road TxLED	NR	0.06	0.00	Yes	No
Non-road RFG	NR	0.00	0.00	Yes	No
Tier 4 non-road diesel engines	NR	1.00	0.04	Yes	No
Diesel recreational marine	NR	0.00	0.00	Yes	No
Small SI (Phase III)	NR	0.02	0.23	Yes	No
Chapter 117 NOX area source engine controls	Area	0.00	0.00	Yes	No
Drilling rig low emission diesel	Area	0.00	0.00	Yes	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
Total		19.93	5.60		

Note: Unspecified control rows were created only to allow for planners to easily add controls for alternative scenario analyses.

Notes

Please see notes for the control reductions on:

[Sheet 30 Enter Reductions 9 PDC 2017](#)

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go To Enter Aircraft EI](#)

[Go To Calculate Reductions](#)

[Go To 2017 RFP Demo](#)

[Go To Enter % RFP Contingency, NOx sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Emissions Summary NOx Uncontrolled](#)

Attachment A - Sheet 34

Enter 2019 Contingency Measure Control Measure Reductions
DFW Nonattainment Area Eight-Hour Ozone Season VOC and NO_x

Nine Previously Designated Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant

RFP Control Strategy Description	Source Category	Total 2011 to 2019 NO _x Emissions Reductions (tpd)	Total 2011 to 2019 VOC Emissions Reductions (tpd)	Use this control for 2019 RFP contingency? (Yes or No)
Chapter 117 NOX controls	Point	0.00	0.00	No
Chapter 115 Storage Tank Rule	Point	0.00	0.00	No
Coating / printing rules	Point	0.00	0.00	No
Portable fuel containers	Area	0.00	0.00	No
Federal Motor Vehicle Control Program (FMVCP)	OR	725.05	343.53	Yes
Inspection and Maintenance (I/M)	OR	9.56	9.35	Yes
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	OR	44.46	20.26	Yes
On-road TxLED	OR	3.05	0.00	Yes
Tier I and II locomotive NOX standards	NR	0.00	0.00	No
Small non-road spark ignition (SI) engines (Phase I)	NR	-3.61	33.62	Yes
Heavy duty non-road engines	NR	26.86	9.93	Yes
Tiers 2 and 3 non-road diesel engines	NR	36.64	6.84	Yes
Small non-road SI engines (Phase II)	NR	2.52	32.57	Yes
Large non-road SI & recreational marine	NR	35.55	15.61	Yes
Non-road TxLED	NR	1.92	0.00	Yes
Non-road RFG	NR	-0.52	1.54	Yes
Tier 4 non-road diesel engines	NR	20.61	1.08	Yes
Diesel recreational marine	NR	0.00	0.00	Yes
Small SI (Phase III)	NR	2.25	14.89	Yes
Chapter 117 NOX area source engine controls	Area	0.00	0.00	No
Drilling rig low emission diesel	Area	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
Total		904.34	489.22	

Note: Unspecified control rows were created only to allow for planners to easily add controls for alternative scenario analyses.

Notes

Please see notes for the control reductions on:

[Sheet 30 Enter Reductions 9 PDC 2017](#)

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go To Enter Aircraft EI](#)

[Go To Calculate Reductions](#)

[Go To 2017 RFP Demo](#)

[Go To Enter % RFP Contingency, NOx sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Emissions Summary NOx Uncontrolled](#)

Attachment A - Sheet 35

Enter 2019 Contingency Measure Control Measure Reductions
DFW Nonattainment Area Eight-Hour Ozone Season VOC and NO_x
One Newly Designated Nonattainment County: Wise

RFP Control Strategy Description	Source Category	Total 2011 to 2019 NO _x Emissions Reductions (tpd)	Total 2011 to 2019 VOC Emissions Reductions (tpd)	Use this control for 2019 RFP contingency? (Yes or No)
Chapter 117 NOX controls	Point	0.00	0.00	No
Chapter 115 Storage Tank Rule	Point	0.00	0.00	No
Coating / printing rules	Point	0.00	0.00	No
Portable fuel containers	Area	0.00	0.00	No
Federal Motor Vehicle Control Program (FMVCP)	OR	15.56	3.87	Yes
Inspection and Maintenance (I/M)	OR	0.00	0.00	Yes
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	OR	0.67	0.17	Yes
On-road TxLED	OR	0.08	0.00	Yes
Tier I and II locomotive NOX standards	NR	0.00	0.00	No
Small non-road spark ignition (SI) engines (Phase I)	NR	-0.03	0.23	Yes
Heavy duty non-road engines	NR	1.42	0.55	Yes
Tiers 2 and 3 non-road diesel engines	NR	1.72	0.17	Yes
Small non-road SI engines (Phase II)	NR	0.02	0.21	Yes
Large non-road SI & recreational marine	NR	0.21	0.32	Yes
Non-road TxLED	NR	0.05	0.00	Yes
Non-road RFG	NR	0.00	0.00	Yes
Tier 4 non-road diesel engines	NR	1.09	0.04	Yes
Diesel recreational marine	NR	0.00	0.00	Yes
Small SI (Phase III)	NR	0.02	0.25	Yes
Chapter 117 NOX area source engine controls	Area	0.00	0.00	No
Drilling rig low emission diesel	Area	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
Total		20.81	5.81	

Note: Unspecified control rows were created only to allow for planners to easily add controls for alternative scenario analyses.

Notes

Please see notes for the control reductions on:

[Sheet 30 Enter Reductions 9 PDC 2017](#)

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go To Enter Aircraft EI](#)

[Go To Calculate Reductions](#)

[Go To 2017 RFP Demo](#)

[Go To Enter % RFP Contingency, NOx sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Emissions Summary NOx Uncontrolled](#)

[Go To Contingency 2019](#)

Attachment A - Sheet 36

Calculate 2011 RFP Base Year Emissions Inventory

(Add emissions from outside the nonattainment area that are to be included in the RFP analysis.)

DFW Eight-Hour Ozone Nonattainment Area

Nine Previously Designated Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant

The PDC 2011 Base Year Inventory	NO_x (tons/day)	VOC (tons/day)
Point Source PDC 2011 EI	31.34	27.66
Area Source PDC 2011 EI	30.48	263.30
On-road mobile PDC 2011 EI	230.75	99.39
Non-road mobile PDC 2011 EI	112.98	53.74
Biogenic PDC 2011 EI (see Note 1)	See Note 1	See Note 1
Total PDC 2011 Base Year Inventory	405.55	444.09
The PDC 2011 RFP Base Year Inventory Out of Area Adjustments	NO_x (tons/day)	VOC (tons/day)
What is the total amount of biogenic emissions from sources in the area in tons/day for PDC 2011 to be subtracted?	See Note 1	See Note 1
What is the total amount of point source emissions from outside the nonattainment to be included/excluded for PDC 2011?	0.00	0.00
What is the total amount of area source emissions from outside the nonattainment to be included/excluded for PDC 2011?	0.00	0.00
What is the total amount of on-road source emissions from outside the nonattainment to be included/excluded for PDC 2011?	0.00	0.00
What is the total amount of non-road source emissions from outside the nonattainment to be included/excluded for PDC 2011?	0.00	0.00
Total PDC 2011 RFP Base Year Adjustments	0.00	0.00
Description	NO_x (tons/day)	VOC (tons/day)
Total PDC 2011 RFP Base Year Inventory with Adjustments	405.55	444.09

Notes:

- 1) Beginning with the Air Emissions Reporting Requirements (December 2008), the emissions required to be reported no longer include emissions from biogenic sources. Therefore, as of the 2011 reporting year, the comprehensive triennial emissions inventory no longer includes emissions from biogenic sources. The RFP demonstrations are based upon the emissions from anthropogenic sources. The guidance for RFP calculations shows the first step is to subtract the emissions from biogenic sources from the total base year emissions to obtain the total anthropogenic emission inventory. As of 2011, under the AERR, the base year emissions do not include biogenic sources and already represent the total anthropogenic emissions. In this case, step one of the RFP process is not needed, and the emissions from biogenic sources is unnecessary. This RFP SIP revision: uses a base year of 2011; does not require subtraction of the biogenic emissions in Step One of the RFP calculation process; and does not include quantification of emissions from biogenic sources.
- 2) Input lines allow for input of emissions from outside the subject counties to be included in the calculation of the RFP BY emissions. Emission reductions from the included sources can then be used to meet RFP requirements.
- 3) Values in lines should be input as positive values for emissions from outside the area that need to be included in the calculations and as negative values for emissions which need to be excluded from the RFP calculations.
- 4) 4 PDC means the four existing nonattainment counties and indicates values are for the four counties that had an existing designation under the one-hour ozone standard and were also designated under the eight-hour ozone standard. Includes: Collin, Dallas, Denton, and Tarrant Counties.

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go to Enter Point EI](#)

[Go To Enter Area EI](#)

[Go to Enter On-road EI](#)

[Go to Enter NONROAD Categories EI](#)

[Go to Enter Biogenics EI](#)

[Go to EI Summary NO_x Uncontrolled](#)

Attachment A - Sheet 37

Calculate NDC 2011 RFP Base Year Emissions Inventory

(Add emissions from outside the nonattainment area that are to be included in RFP analysis.)

DFW Eight-Hour Ozone Nonattainment Area

One Newly Designated Nonattainment County: Wise

The NDC 2011 Base Year Inventory	NO_x (tons/day)	VOC (tons/day)
Point Source NDC 2011 EI	8.61	2.14
Area Source NDC 2011 EI	12.14	29.18
On-Road Mobile NDC 2011 EI	5.99	1.81
Non-Road Mobile NDC 2011 EI	6.85	1.25
Biogenic NDC 2011 EI	See Note 1	See Note 1
Total NDC 2011 Base Year Inventory	33.59	34.38
The NDC 2011 RFP Base Year Inventory Out of Area Adjustments	NO_x (tons/day)	VOC (tons/day)
What is the total amount of biogenic emissions from sources in the area in tons/day for NDC 2011 to be subtracted?	See Note 1	See Note 1
What is the total amount of point source emissions from outside the nonattainment to be included/excluded for NDC 2011?	0.00	0.00
What is the total amount of area source emissions from outside the nonattainment to be included/excluded for NDC 2011?	0.00	0.00
What is the total amount of on-road source emissions from outside the nonattainment to be included/excluded for NDC 2011?	0.00	0.00
What is the total amount of non-road source emissions from outside the nonattainment to be included/excluded for NDC 2011?	0.00	0.00
Total NDC 2011 RFP Base Year Adjustments	0.00	0.00
Description	NO_x (tons/day)	VOC (tons/day)
Total NDC 2011 RFP Base Year Inventory with Adjustments	33.59	34.38

Notes:

- 1) Beginning with the Air Emissions Reporting Requirements (December 2008), the emissions required to be reported no longer include emissions from biogenic sources. Therefore, as of the 2011 reporting year, the comprehensive triennial emissions inventory no longer includes emissions from biogenic sources. The RFP demonstrations are based upon the emissions from anthropogenic sources. The guidance for RFP calculations shows the first step is to subtract the emissions from biogenic sources from the total base year emissions to obtain the total anthropogenic emission inventory. As of 2011, under the AERR, the base year emissions do not include biogenic sources and already represent the total anthropogenic emissions. In this case, step one of the RFP process is not needed, and the emissions from biogenic sources is unnecessary. This RFP SIP revision: uses a base year of 2011; does not require subtraction of the biogenic emissions in Step One of the RFP calculation process; and does not include quantification of emissions from biogenic sources.
- 2) Input lines allow for input of emissions from outside the subject counties to be included in the calculation of the RFP 2011 BY emissions. Emission reductions from the included sources can then be used to meet RFP requirements.
- 3) Values in lines should be input as positive values for emissions from outside the area that need to be included in the calculations and as negative values for emissions which need to be excluded from the RFP calculations.
- 4) NDC means the one newly designated county and indicates values are for the one county in the DFW ozone nonattainment area that was newly designated under the 2008 eight-hour ozone standard. Includes: Wise County.

Spreadsheet Navigation

- [Return to Table of Contents](#)
- [Go to Enter Point EI](#)
- [Go To Enter Area EI](#)
- [Go to Enter On-road EI](#)
- [Go to Enter NONROAD Categories EI](#)
- [Go to Enter Biogenics EI](#)
- [Go to EI Summary NO_x Uncontrolled](#)

Attachment A - Sheet 38

2017 Forecasted Uncontrolled or Existing Control Emissions Inventory with pre-2011 Controls
DFW Nonattainment Area Eight-Hour Ozone Season VOC and NO_x

Nine Previously Designated Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman,
Parker, Rockwall, Tarrant

Uncontrolled or Existing Control EI with pre-2011 controls: These calculations sum the total Uncontrolled or Existing Control NO_x and VOC emissions (tpd) for the 2017 RFP milestone year. The totals for each source category used in these calculations were entered on enter EI sheets.

Forecasted 2017 Uncontrolled or Existing Control Emissions Inventory with pre-2011 Controls		
Emissions Description	NO _x (tpd)	VOC (tpd)
Point Source	46.71	30.84
Area Source	30.91	266.15
On-Road Mobile Source	860.90	416.88
Non-Road Mobile Source	206.27	150.44
Nine County Total	1144.79	864.31

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go to Enter Point EI](#)

[Go To Enter Area EI](#)

[Go to Enter On-road EI](#)

[Go to Enter NONROAD Categories EI](#)

[Go to Enter Biogenics EI](#)

[Go to EI Summary NO_x Uncontrolled](#)

Attachment A - Sheet 39

2017 Forecasted Uncontrolled or Existing Control Emissions Inventory with pre-2011 Controls
DFW Nonattainment Area Eight-Hour Ozone Season VOC and NO_x

One Newly Designated Nonattainment County: Wise

Uncontrolled or Existing Control EI with pre-2011 controls: These calculations sum the total Uncontrolled or Existing Control NOX and VOC emissions (tpd) for the 2017 RFP milestone year. The totals for each source category used in these calculations were entered on enter EI sheets.

Forecasted 2017 Uncontrolled Emissions Inventory with pre-2011 Controls		
Emissions Description	NO _x (tpd)	VOC (tpd)
Point Source	10.21	3.41
Area Source	9.72	23.74
On-Road Mobile Source	18.28	4.89
Non-Road Mobile Source	11.17	2.75
Nine County Total	49.38	34.79

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go to Enter Point EI](#)

[Go To Enter Area EI](#)

[Go to Enter On-road EI](#)

[Go to Enter NONROAD Categories EI](#)

[Go to Enter Biogenics EI](#)

[Go to EI Summary NOx Uncontrolled](#)

Attachment A - Sheet 40

2018 Forecasted Uncontrolled or Existing Control Emissions Inventory with pre-2011 Controls
DFW Nonattainment Area Eight-Hour Ozone Season VOC and NO_x
Nine Previously Designated Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman,
Parker, Rockwall, Tarrant

Uncontrolled or Existing Control EI with pre-2011 controls: These calculations add up to the total
Uncontrolled or Existing Control NOX and VOC emissions (tpd) for the 2018 RFP milestone year. The totals
for each source category used in these calculations were entered on enter EI sheets.

Forecasted 2018 Uncontrolled or Existing Control Emissions Inventory with pre-2011 Controls		
Emissions Description	NO _x (tpd)	VOC (tpd)
Point Source	45.90	29.83
Area Source	29.93	258.70
On-Road Mobile Source	881.68	427.12
Non-Road Mobile Source	206.03	152.56
Total	1163.54	868.21

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go to Enter Point EI](#)

[Go To Enter Area EI](#)

[Go to Enter On-road EI](#)

[Go to Enter NONROAD Categories EI](#)

[Go to Enter Biogenics EI](#)

[Go to EI Summary NOx Uncontrolled](#)

Attachment A - Sheet 41

2018 Forecasted Uncontrolled or Existing Control Emissions Inventory with pre-2011 Controls
DFW Nonattainment Area Eight-Hour Ozone Season VOC and NO_x
One Newly Designated Nonattainment County: Wise

Uncontrolled or Existing Control EI with pre-2011 controls: These calculations add up to the total Uncontrolled or Existing Control NO_x and VOC emissions (tpd) for the 2018 RFP milestone year. The totals for each source category used in these calculations were entered on enter EI sheets.

Forecasted 2018 Uncontrolled or Existing Control Emissions Inventory with pre-2011 Controls		
Emissions Description	NO _x (tpd)	VOC (tpd)
Point Source	9.71	2.88
Area Source	7.44	19.17
On-Road Mobile Source	18.74	5.01
Non-Road Mobile Source	10.61	2.71
Total	46.50	29.77

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go to Enter Point EI](#)

[Go To Enter Area EI](#)

[Go to Enter On-road EI](#)

[Go to Enter NONROAD Categories EI](#)

[Go to Enter Biogenics EI](#)

[Go to EI Summary NO_x Uncontrolled](#)

Attachment A - Sheet 42

Calculations: 9 PDC 2011 Adjusted Base Year Emissions Inventory with Pre-1990 Controls
DFW Nonattainment Area Eight-Hour Ozone Season VOC and NO_x

Nine Previously Designated Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall,
Tarrant

ABY EI with pre-1990 controls: These calculations add up to the total ABY NO_x and VOC emissions (tpd) for the 2011 RFP BY. The totals for each source category used in these calculations were entered on enter EI sheets. For on-road mobile sources, there are separate data entry sheets for the ABY inventory for each milestone year. For all other source categories, the 2011 ABY is equal to the BY because there are no non-creditable controls for point, area or non-road sources after 2011.

9 PDC 2011 RFP Adjusted Base Year Emissions Inventory with Pre-1990 Controls		
Emissions Description	NO_x (tpd)	VOC (tpd)
Point Source 2011 9 PDC BY EI	31.34	27.66
Area Source 2011 9 PDC BY EI	30.48	263.30
On-Road Mobile Source 2011 9 PDC ABY EI	230.75	99.39
Non-Road Mobile Source 2011 9 PDC BY EI	112.98	53.74
9 PDC 2011 RFP Adjusted Base Year Emissions Inventory	405.55	444.09

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go to Enter Point EI](#)

[Go To Enter Area EI](#)

[Go to Enter On-road EI](#)

[Go to Enter NONROAD Categories EI](#)

[Go to Enter Biogenics EI](#)

[Go to EI Summary NO_x Uncontrolled](#)

Attachment A - Sheet 43

Calculations: 1 NDC 2011 Adjusted Base Year Emissions Inventory with Pre-1990 Controls
DFW Nonattainment Area Eight-Hour Ozone Season VOC and NO_x
One Newly Designated Nonattainment County: Wise

ABY EI with pre-1990 controls: These calculations add up to the total ABY NOX and VOC emissions (tpd) for the 2011 RFP BY. The totals for each source category used in these calculations were entered on enter EI sheets. For on-road mobile sources, there are separate data entry sheets for the ABY inventory for each milestone year. For all other source categories, the 2011 ABY is equal to the BY because there are no non-creditable controls for point, area or non-road sources after 2011.

1 NDC 2011 RFP Adjusted Base Year Emissions Inventory with Pre-1990 Controls		
Emissions Description	NO_x (tpd)	VOC (tpd)
Point Source 1 NDC 2011 BY EI	8.61	2.14
Area Source 1 NDC 2011 BY EI	12.14	29.18
On-Road Mobile Source 1 NDC 2011 ABY EI	5.99	1.81
Non-Road Mobile Source 1 NDC 2011 BY EI	6.85	1.25
1 NDC 2011 RFP Adjusted Base Year Emissions Inventory	33.59	34.38

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go to Enter Point EI](#)

[Go To Enter Area EI](#)

[Go to Enter On-road EI](#)

[Go to Enter NONROAD Categories EI](#)

[Go to Enter Biogenics EI](#)

[Go to EI Summary NO_x Uncontrolled](#)

Attachment A - Sheet 44

Calculations: 9 PDC 2017 Adjusted Base Year Emissions Inventory with Pre-1990 Controls
DFW Nonattainment Area Eight-Hour Ozone Season VOC and NO_x

Nine Previously Designated Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker,
Rockwall, Tarrant

ABY EI with pre-1990 controls: These calculations add up to the total ABY NO_x and VOC emissions (tpd) for the 2011 RFP BY. The totals for each source category used in these calculations were entered on enter EI sheets. For on-road mobile sources, there are separate data entry sheets for the ABY inventory for each milestone year. For all other source categories, the 2011 ABY is equal to the BY because there are no non-creditable controls for point, area or non-road sources after 2011.

9 PDC 2017 RFP Adjusted Base Year Emissions Inventory with Pre-1990 Controls		
Emissions Description	NO_x (tpd)	VOC (tpd)
Point Source 2011 BY EI	31.34	27.66
Area Source 2011 BY EI	30.48	263.30
On-Road Mobile Source 2017 ABY EI	228.66	104.43
Non-Road Mobile Source 2011 BY EI	112.98	53.74
9 PDC 2017 RFP Adjusted Base Year Emissions Inventory	403.46	449.13

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go To Enter On-road ABY](#)

[Go To Calculate Contingency](#)

[Go To Calculate Noncreditable Reductions](#)

[Go to Enter Point EI](#)

[Go To Enter Area EI](#)

[Go to Enter On-road EI](#)

[Go to Enter NONROAD Categories EI](#)

[Go to Enter Biogenics EI](#)

[Go to EI Summary NO_x Uncontrolled](#)

Attachment A - Sheet 45

Calculations: 1 NDC 2017 Adjusted Base Year Emissions Inventory with Pre-1990 Controls
DFW Nonattainment Area Eight-Hour Ozone Season VOC and NO_x

One Newly Designated Nonattainment County: Wise

ABY EI with pre-1990 controls: These calculations add up to the total ABY NOX and VOC emissions (tpd) for the 2011 RFP BY. The totals for each source category used in these calculations were entered on enter EI sheets. For on-road mobile sources, there are separate data entry sheets for the ABY inventory for each milestone year. For all other source categories, the 2011 ABY is equal to the BY because there are no non-creditable controls for point, area or non-road sources after 2011.

1 NDC 2017 RFP Adjusted Base Year Emissions Inventory with Pre-1990 Controls		
Emissions Description	NO_x (tpd)	VOC (tpd)
Point Source 2011 1 NDC BY EI	8.61	2.14
Area Source 2011 1 NDC BY EI	12.14	29.18
On-Road Mobile Source 2017 ABY EI	5.76	1.87
Non-Road Mobile Source 2011 1 NDC BY EI	6.85	1.25
1 NDC 2017 RFP Adjusted Base Year Emissions Inventory	33.36	34.44

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go To Enter On-road ABY](#)

[Go To Calculate Contingency](#)

[Go To Calculate Noncreditable Reductions](#)

[Go to Enter Point EI](#)

[Go To Enter Area EI](#)

[Go to Enter On-road EI](#)

[Go to Enter NONROAD Categories EI](#)

[Go to Enter Biogenics EI](#)

[Go to EI Summary NOx Uncontrolled](#)

Attachment A - Sheet 46

Calculations: 9 PDC 2018 Adjusted Base Year Emissions Inventory with Pre-1990 Controls
DFW Nonattainment Area Eight-Hour Ozone Season VOC and NO_x

Nine Previously Designated Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker,
Rockwall, Tarrant

ABY EI with pre-1990 controls: These calculations add up to the total ABY NO_x and VOC emissions (tpd) for the 2011 RFP BY. The totals for each source category used in these calculations were entered on enter EI sheets. For on-road mobile sources, there are separate data entry sheets for the ABY inventory for each milestone year. For all other source categories, the 2011 ABY is equal to the BY because there are no non-creditable controls for point, area or non-road sources after 2011.

9 PDC 2018 RFP Adjusted Base Year Emissions Inventory with Pre-1990 Controls		
Emissions Description	NO_x (tpd)	VOC (tpd)
Point Source 2011 BY EI	31.34	27.66
Area Source 2011 BY EI	30.48	263.30
On-Road Mobile Source 2018 ABY EI	227.55	104.07
Non-Road Mobile Source 2011 BY EI	112.98	53.74
9 PDC 2018 RFP Adjusted Base Year Emissions Inventory	402.35	448.77

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go To Enter On-road ABY](#)

[Go To Calculate Contingency](#)

[Go To Calculate Noncreditable Reductions](#)

[Go to Enter Point EI](#)

[Go To Enter Area EI](#)

[Go to Enter On-road EI](#)

[Go to Enter NONROAD Categories EI](#)

[Go to Enter Biogenics EI](#)

[Go to EI Summary NO_x Uncontrolled](#)

Attachment A - Sheet 47

Calculations: 1 NDC 2018 Adjusted Base Year Emissions Inventory with Pre-1990 Controls
DFW Nonattainment Area Eight-Hour Ozone Season VOC and NO_x

One Newly Designated Nonattainment County: Wise

ABY EI with pre-1990 controls: These calculations add up to the total ABY NO_x and VOC emissions (tpd) for the 2011 RFP BY. The totals for each source category used in these calculations were entered on enter EI sheets. For on-road mobile sources, there are separate data entry sheets for the ABY inventory for each milestone year. For all other source categories, the 2011 ABY is equal to the BY because there are no non-creditable controls for point, area or non-road sources after 2011.

1 NDC 2018 RFP Adjusted Base Year Emissions Inventory with Pre-1990 Controls		
Emissions Description	NO_x (tpd)	VOC (tpd)
Point Source 2011 1 NDC BY EI	8.61	2.14
Area Source 2011 1 NDC BY EI	12.14	29.18
On-Road Mobile Source 2018 ABY EI	5.76	1.86
Non-Road Mobile Source 2011 1 NDC BY EI	6.85	1.25
1 NDC 2018 RFP Adjusted Base Year Emissions Inventory	33.36	34.43

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go To Enter On-road ABY](#)

[Go To Calculate Contingency](#)

[Go To Calculate Noncreditable Reductions](#)

[Go to Enter Point EI](#)

[Go To Enter Area EI](#)

[Go to Enter On-road EI](#)

[Go to Enter NONROAD Categories EI](#)

[Go to Enter Biogenics EI](#)

[Go to EI Summary NO_x Uncontrolled](#)

Attachment A - Sheet 50

Calculations: Combined 9 PDC and 1 NDC 2011 to 2017 Control Measures Reductions

DFW Nonattainment Area Eight-Hour Ozone Season VOC and NO_x

All Ten Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, Wise

Explanation: The control strategy name, control reduction amount, status of inclusion of the control in the RFP calculations, and whether or not the control is for on-road mobile sources were all input in sheet "26 Enter Reductions 9 PDC 2017." The reduction is the reduction that is creditable from each control between 2011 and 2017. If the control has been turned off by inputting a "No" in the "Use this control for RFP demonstration?" column, the spreadsheet will put a zero in for the reduction for that control on this sheet, even if a positive value for the control was input into the Enter Reductions 9 PDC 2017 sheet. If it was intended to have a positive reduction for the control but there is a zero, go back to the 26 Enter Reductions 9 PDC 2017 Sheet and change the No to a Yes indicating that the control will be used for RFP demonstration.

RFP Control Strategy Description	Source Category	Total 2011 to 2017 NOX Emissions Reductions (tpd)	Total 2011 to 2017 VOC Emissions Reductions (tpd)	Use this control for RFP demonstration? (Yes or No)	Is this an on-road mobile control that will change the MVEB? (Yes or No)
Chapter 117 NOX controls	Point	0.00	0.00	Yes	No
Chapter 115 Storage Tank Rule	Point	0.00	0.00	Yes	No
Coating / printing rules	Point	0.00	0.00	Yes	No
Portable fuel containers	Area	0.00	0.00	Yes	No
Federal Motor Vehicle Control Program (FMVCP)	OR	662.34	316.73	Yes	Yes
Inspection and Maintenance (I/M)	OR	12.09	10.44	Yes	Yes
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	OR	53.20	22.95	Yes	Yes
On-road TxLED	OR	3.90	0.00	Yes	Yes
Tier I and II locomotive NOX standards	NR	0.11	0.22	Yes	No
Small non-road spark ignition (SI) engines (Phase I)	NR	-3.50	32.53	Yes	No
Heavy duty non-road engines	NR	25.66	9.42	Yes	No
Tiers 2 and 3 non-road diesel engines	NR	33.94	6.39	Yes	No
Small non-road SI engines (Phase II)	NR	2.44	31.52	Yes	No
Large non-road SI & recreational marine	NR	32.92	14.10	Yes	No
Non-road TxLED	NR	2.24	0.00	Yes	No
Non-road RFG	NR	-0.53	0.00	Yes	No
Tier 4 non-road diesel engines	NR	15.91	0.84	Yes	No
Diesel recreational marine	NR	0.00	0.00	Yes	No
Small SI (Phase III)	NR	2.05	13.55	Yes	No
Chapter 117 NOX area source engine controls	Area	0.00	0.00	Yes	No
Drilling rig low emission diesel	Area	0.00	0.00	Yes	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
Total 2017 10 NAC RFP Control Reductions		842.77	458.69		

[Spreadsheet Navigation](#)

[Return to Table of Contents](#)

[Go To Enter Aircraft EI](#)

[Go To Enter Reductions](#)

[Go To 2017 RFP Demo](#)

[Go To Enter % RFP Contingency, NOx sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Emissions Summary NOx Uncontrolled](#)

[Go To Contingency 2019](#)

Attachment A - Sheet 51

Calculations: 2017 to 2018 Control Measures Reductions
DFW Nonattainment Area Eight-Hour Ozone Season VOC and NO_x

Nine Previously Designated Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant

Explanation: The control strategy name, control reduction amount, status of inclusion of the control in the RFP calculations, and whether or not the control is for on-road mobile sources were all input in sheet "26 Enter Reductions 9 PDC 2017." The reduction is the reduction that is creditable from each control between 2017 and 2018. If the control has been turned off by inputting a "No" in the "Use this control for 2018 RFP demonstration?" column, the spreadsheet will put a zero in for the reduction for that control on this sheet, even if a positive value for the control was input into the Enter Reductions 9 PDC 2018 sheet. If it was intended to have a positive reduction for the control but there is a zero, go back to the Enter Reductions9 PDC 2017 Sheet and change the No to a Yes indicating that the control will be used for RFP demonstration.

Creditable Reductions Control Strategy	Source Category	Total 2017 to 2018 NOX Emissions Reductions (tpd)	Total 2017 to 2018 VOC Emissions Reductions (tpd)	Use this control for RFP demonstration? (Yes or No)	Is this an on-road mobile control that will change the MVEB? (Yes or No)
Chapter 117 NOX controls	Point	0.00	0.00	Yes	No
Chapter 115 Storage Tank Rule	Point	0.00	0.00	Yes	No
Coating / printing rules	Point	0.00	0.00	Yes	No
Portable fuel containers	Area	0.00	0.00	Yes	No
Federal Motor Vehicle Control Program (FMVCP)	OR	27.29	16.12	Yes	Yes
Inspection and Maintenance (I/M)	OR	-1.40	-0.51	Yes	Yes
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	OR	-4.81	-1.39	Yes	Yes
On-road TxLED	OR	-0.54	0.00	Yes	Yes
Tier I and II locomotive NOX standards	NR	0.09	0.10	Yes	No
Small non-road spark ignition (SI) engines (Phase I)	NR	-0.02	0.54	Yes	No
Heavy duty non-road engines	NR	-0.72	0.27	Yes	No
Tiers 2 and 3 non-road diesel engines	NR	-0.22	0.23	Yes	No
Small non-road SI engines (Phase II)	NR	0.02	0.53	Yes	No
Large non-road SI & recreational marine	NR	1.24	0.81	Yes	No
Non-road TxLED	NR	0.14	0.00	Yes	No
Non-road RFG	NR	0.02	1.53	Yes	No
Tier 4 non-road diesel engines	NR	1.53	0.10	Yes	No
Diesel recreational marine	NR	0.00	0.00	Yes	No
Small SI (Phase III)	NR	0.10	0.70	Yes	No
Chapter 117 NOX area source engine controls	Area	0.00	0.00	Yes	No
Drilling rig low emission diesel	Area	0.00	0.00	Yes	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
Total 2018 9 PDC RFP Control Reductions		22.72	19.03		

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go To Enter Aircraft EI](#)

[Go To Enter Reductions](#)

[Go To 2017 RFP Demo](#)

[Go To Enter % RFP Contingency, NOx sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Emissions Summary NOx Uncontrolled](#)

[Go To Contingency 2019](#)

Attachment A - Sheet 52

Calculations: 2017 to 2018 Control Measures Reductions
DFW Nonattainment Area Eight-Hour Ozone Season VOC and NO_x

One Newly Designated Nonattainment County: Wise

Explanation: The control strategy name, control reduction amount, status of inclusion of the control in the RFP calculations, and whether or not the control is for on-road mobile sources were all input in sheet "26 Enter Reductions 9 PDC 2017." The reduction is the reduction that is creditable from each control between 2017 and 2018. If the control has been turned off by inputting a "No" in the "Use this control for 2018 RFP demonstration?" column, the spreadsheet will put a zero in for the reduction for that control on this sheet, even if a positive value for the control was input into the Enter Reductions 9 PDC 2018 sheet. If it was intended to have a positive reduction for the control but there is a zero, go back to the Enter Reductions 9 PDC 2017 Sheet and change the No to a Yes indicating that the control will be used for RFP demonstration.

Creditable Reductions Control Strategy	Source Category	Total 2017 to 2018 NOX Emissions Reductions (tpd)	Total 2017 to 2018 VOC Emissions Reductions (tpd)	Use this control for RFP demonstration? (Yes or No)	Is this an on-road mobile control that will change the MVEB? (Yes or No)
Chapter 117 NOX controls	Point	0.00	0.00	Yes	No
Chapter 115 Storage Tank Rule	Point	0.00	0.00	Yes	No
Coating / printing rules	Point	0.00	0.00	Yes	No
Portable fuel containers	Area	0.00	0.00	Yes	No
Federal Motor Vehicle Control Program (FMVCP)	OR	0.90	0.21	Yes	Yes
Inspection and Maintenance (I/M)	OR	0.00	0.00	Yes	Yes
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	OR	-0.06	-0.01	Yes	Yes
On-road TxLED	OR	-0.02	0.00	Yes	Yes
Tier I and II locomotive NOX standards	NR	0.01	0.01	Yes	No
Small non-road spark ignition (SI) engines (Phase I)	NR	0.00	0.01	Yes	No
Heavy duty non-road engines	NR	0.01	0.01	Yes	No
Tiers 2 and 3 non-road diesel engines	NR	0.02	0.01	Yes	No
Small non-road SI engines (Phase II)	NR	0.00	0.00	Yes	No
Large non-road SI & recreational marine	NR	0.00	0.02	Yes	No
Non-road TxLED	NR	-0.01	0.00	Yes	No
Non-road RFG	NR	0.00	0.00	Yes	No
Tier 4 non-road diesel engines	NR	0.12	0.01	Yes	No
Diesel recreational marine	NR	0.00	0.00	Yes	No
Small SI (Phase III)	NR	0.00	0.03	Yes	No
Chapter 117 NOX area source engine controls	Area	0.00	0.00	Yes	No
Drilling rig low emission diesel	Area	0.00	0.00	Yes	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
Total 2018 1 NDC RFP Control Reductions		0.97	0.30		

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go To Enter Aircraft EI](#)

[Go To Enter Reductions](#)

[Go To 2017 RFP Demo](#)

[Go To Enter % RFP Contingency, NOx sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Emissions Summary NOx Uncontrolled](#)

[Go To Contingency 2019](#)

Attachment A - Sheet 53

Calculations: Combined 9 PDC and 1 NDC 2011 to 2017 Control Measures Reductions

DFW Nonattainment Area Eight-Hour Ozone Season VOC and NO_x

All Ten Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, Wise

Explanation: The control strategy name, control reduction amount, status of inclusion of the control in the RFP calculations, and whether or not the control is for on-road mobile sources were all input in sheet "26 Enter Reductions 9 PDC 2017." The reduction is the reduction that is creditable from each control between 2017 and 2018. If the control has been turned off by inputting a "No" in the "Use this control for 2018 RFP demonstration?" column, the spreadsheet will put a zero in for the reduction for that control on this sheet, even if a positive value for the control was input into the Enter Reductions 9 PDC 2018 sheet. If it was intended to have a positive reduction for the control but there is a zero, go back to the Enter Reductions 9 PDC 2017 Sheet and change the No to a Yes indicating that the control will be used for RFP demonstration.

RFP Control Strategy Description	Source Category	Total 2011 to 2017 NOX Emissions Reductions (tpd)	Total 2011 to 2017 VOC Emissions Reductions (tpd)	Use this control for RFP demonstration? (Yes or No)	Is this an on-road mobile control that will change the MVEB? (Yes or No)
Chapter 117 NOX controls	Point	0.00	0.00	Yes	No
Chapter 115 Storage Tank Rule	Point	0.00	0.00	Yes	No
Coating / printing rules	Point	0.00	0.00	Yes	No
Portable fuel containers	Area	0.00	0.00	Yes	No
Federal Motor Vehicle Control Program (FMVCP)	OR	28.19	16.33	Yes	Yes
Inspection and Maintenance (I/M)	OR	-1.40	-0.51	Yes	Yes
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	OR	-4.87	-1.40	Yes	Yes
On-road TxLED	OR	-0.56	0.00	Yes	Yes
Tier I and II locomotive NOX standards	NR	0.10	0.11	Yes	No
Small non-road spark ignition (SI) engines (Phase I)	NR	-0.02	0.55	Yes	No
Heavy duty non-road engines	NR	-0.71	0.28	Yes	No
Tiers 2 and 3 non-road diesel engines	NR	-0.20	0.24	Yes	No
Small non-road SI engines (Phase II)	NR	0.02	0.53	Yes	No
Large non-road SI & recreational marine	NR	1.24	0.83	Yes	No
Non-road TxLED	NR	0.13	0.00	Yes	No
Non-road RFG	NR	0.02	1.53	Yes	No
Tier 4 non-road diesel engines	NR	1.65	0.11	Yes	No
Diesel recreational marine	NR	0.00	0.00	Yes	No
Small SI (Phase III)	NR	0.10	0.73	Yes	No
Chapter 117 NOX area source engine controls	Area	0.00	0.00	Yes	No
Drilling rig low emission diesel	Area	0.00	0.00	Yes	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
Total 2018 10 NAC RFP Control Reductions		23.69	19.33		

[Spreadsheet Navigation](#)

[Return to Table of Contents](#)

[Go To Enter Aircraft EI](#)

[Go To Enter Reductions](#)

[Go To 2017 RFP Demo](#)

[Go To Enter % RFP Contingency, NOx sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Emissions Summary NOx Uncontrolled](#)

[Go To Contingency 2019](#)

Attachment A - Sheet 54

Calculations: 9 PDC 2018-2019 Contingency Control Measures Reductions

DFW Nonattainment Area Eight-Hour Ozone Season VOC and NO_x

Nine Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant

Explanation: The control strategy name, control reduction amount, status of inclusion of the control in the RFP calculations, and whether or not the control is for on-road mobile sources were all input in sheet "34 Enter Reductions 9 PDC 2019." The reduction is the reduction that is creditable from each control between 2018 and 2019. If the control has been turned off by inputting a "No" in the "Use this control for 2019 RFP contingency demonstration?" column, the spreadsheet will put a zero in for the reduction for that control on this sheet, even if a positive value for the control was input into the Enter Reductions 9 PDC 2019 sheet. If it was intended to have a positive reduction for the control but there is a zero, go back to the Enter Reductions 9 PDC 2019 Sheet and change the No to a Yes indicating that the control will be used for RFP contingency demonstration.

RFP Control Strategy Description	Source Category	Total 2018 to 2019 NO _x Emissions Reductions (tpd)	Total 2018 to 2019 VOC Emissions Reductions (tpd)	Use this control for 2019 RFP contingency demonstration? (Yes or No)
Chapter 117 NOX controls	Point	0.00	0.00	No
Chapter 115 Storage Tank Rule	Point	0.00	0.00	No
Coating / printing rules	Point	0.00	0.00	No
Portable fuel containers	Area	0.00	0.00	No
Federal Motor Vehicle Control Program (FMVCP)	OR	35.42	14.13	Yes
Inspection and Maintenance (I/M)	OR	-1.13	-0.58	Yes
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	OR	-3.93	-1.10	Yes
On-road TxLED	OR	-0.31	0.00	Yes
Tier I and II locomotive NOX standards	NR	0.00	0.00	No
Small non-road spark ignition (SI) engines (Phase I)	NR	-0.09	0.76	Yes
Heavy duty non-road engines	NR	1.92	0.77	Yes
Tiers 2 and 3 non-road diesel engines	NR	2.92	0.39	Yes
Small non-road SI engines (Phase II)	NR	0.06	0.73	Yes
Large non-road SI & recreational marine	NR	1.39	0.98	Yes
Non-road TxLED	NR	-0.46	0.00	Yes
Non-road RFG	NR	-0.01	0.01	Yes
Tier 4 non-road diesel engines	NR	3.17	0.17	Yes
Diesel recreational marine	NR	0.00	0.00	Yes
Small SI (Phase III)	NR	0.10	0.84	Yes
Chapter 117 NOX area source engine controls	Area	0.00	0.00	No
Drilling rig low emission diesel	Area	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
Total 9 PDC RFP Control Reductions		39.05	17.10	

[Spreadsheet Navigation](#)

[Return to Table of Contents](#)

[Go To Enter Aircraft EI](#)

[Go To Enter Reductions](#)

[Go To 2017 RFP Demo](#)

[Go To Enter % RFP Contingency, NO_x sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Emissions Summary NO_x Uncontrolled](#)

[Go To Contingency 2019](#)

Attachment A - Sheet 55

Calculations: 1 NDC 2018-2019 Contingency Control Measures Reductions

DFW Nonattainment Area Eight-Hour Ozone Season VOC and NO_x

One Newly Designated Nonattainment County: Wise

Explanation: The control strategy name, control reduction amount, status of inclusion of the control in the RFP calculations, and whether or not the control is for on-road mobile sources were all input in sheet "34 Enter Reductions 9 PDC 2019." The reduction is the reduction that is creditable from each control between 2018 and 2019. If the control has been turned off by inputting a "No" in the "Use this control for 2019 RFP contingency demonstration?" column, the spreadsheet will put a zero in for the reduction for that control on this sheet, even if a positive value for the control was input into the Enter Reductions 1 NDC 2019 sheet. If it was intended to have a positive reduction for the control but there is a zero, go back to the Enter Reductions 9 PDC 2019 Sheet and change the No to a Yes indicating that the control will be used for RFP contingency demonstration.

RFP Control Strategy Description	Source Category	Total 2018 to 2019 NO _x Emissions Reductions (tpd)	Total 2018 to 2019 VOC Emissions Reductions (tpd)	Use this control for 2019 RFP contingency demonstration? (Yes or No)
Chapter 117 NOX controls	Point	0.00	0.00	No
Chapter 115 Storage Tank Rule	Point	0.00	0.00	No
Coating / printing rules	Point	0.00	0.00	No
Portable fuel containers	Area	0.00	0.00	No
Federal Motor Vehicle Control Program (FMVCP)	OR	0.85	0.21	Yes
Inspection and Maintenance (I/M)	OR	0.00	0.00	Yes
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	OR	-0.06	-0.02	Yes
On-road TxLED	OR	-0.01	0.00	Yes
Tier I and II locomotive NOX standards	NR	0.00	0.00	No
Small non-road spark ignition (SI) engines (Phase I)	NR	0.00	0.01	Yes
Heavy duty non-road engines	NR	0.01	0.01	Yes
Tiers 2 and 3 non-road diesel engines	NR	0.02	-0.01	Yes
Small non-road SI engines (Phase II)	NR	0.00	0.00	Yes
Large non-road SI & recreational marine	NR	0.01	0.02	Yes
Non-road TxLED	NR	-0.01	0.00	Yes
Non-road RFG	NR	0.00	0.00	Yes
Tier 4 non-road diesel engines	NR	0.09	0.00	Yes
Diesel recreational marine	NR	0.00	0.00	Yes
Small SI (Phase III)	NR	0.00	0.02	Yes
Chapter 117 NOX area source engine controls	Area	0.00	0.00	No
Drilling rig low emission diesel	Area	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
Total 1 NDC RFP Control Reductions		0.90	0.24	

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go To Enter Aircraft EI](#)

[Go To Enter Reductions](#)

[Go To 2017 RFP Demo](#)

[Go To Enter % RFP Contingency, NOx sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Emissions Summary NOx Uncontrolled](#)

[Go To Contingency 2019](#)

Attachment A - Sheet 56

Calculations: Combined 9 PDC and 1 NDC 2011 to 2017 Control Measures Reductions

DFW Nonattainment Area Eight-Hour Ozone Season VOC and NO_x

All Ten Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, Wise

Explanation: The control strategy name, control reduction amount, status of inclusion of the control in the RFP calculations, and whether or not the control is for on-road mobile sources were all input in sheet "34 Enter Reductions 9 PDC 2019." The reduction is the reduction that is creditable from each control between 2018 and 2019. If the control has been turned off by inputting a "No" in the "Use this control for 2019 RFP contingency demonstration?" column, the spreadsheet will put a zero in for the reduction for that control on this sheet, even if a positive value for the control was input into the Enter Reductions 9 PDC 2019 sheet. If it was intended to have a positive reduction for the control but there is a zero, go back to the Enter Reductions 9 PDC 2019 Sheet and change the No to a Yes indicating that the control will be used for RFP contingency demonstration.

RFP Control Strategy Description	Source Category	Total 2011 to 2017 NOX Emissions Reductions (tpd)	Total 2011 to 2017 VOC Emissions Reductions (tpd)	Use this control for 2019 RFP contingency demonstration? (Yes or No)
Chapter 117 NOX controls	Point	0.00	0.00	No
Chapter 115 Storage Tank Rule	Point	0.00	0.00	No
Coating / printing rules	Point	0.00	0.00	No
Portable fuel containers	Area	0.00	0.00	No
Federal Motor Vehicle Control Program (FMVCP)	OR	36.27	14.34	Yes
Inspection and Maintenance (I/M)	OR	-1.13	-0.58	Yes
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	OR	-3.99	-1.12	Yes
On-road TxLED	OR	-0.32	0.00	Yes
Tier I and II locomotive NOX standards	NR	0.00	0.00	No
Small non-road spark ignition (SI) engines (Phase I)	NR	-0.09	0.77	Yes
Heavy duty non-road engines	NR	1.93	0.78	Yes
Tiers 2 and 3 non-road diesel engines	NR	2.94	0.38	Yes
Small non-road SI engines (Phase II)	NR	0.06	0.73	Yes
Large non-road SI & recreational marine	NR	1.40	1.00	Yes
Non-road TxLED	NR	-0.47	0.00	Yes
Non-road RFG	NR	-0.01	0.01	Yes
Tier 4 non-road diesel engines	NR	3.26	0.17	Yes
Diesel recreational marine	NR	0.00	0.00	Yes
Small SI (Phase III)	NR	0.10	0.86	Yes
Chapter 117 NOX area source engine controls	Area	0.00	0.00	No
Drilling rig low emission diesel	Area	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
Total 2019 10 NAC RFP Control Reductions		39.95	17.34	

[Spreadsheet Navigation](#)

[Return to Table of Contents](#)

[Go To Enter Aircraft EI](#)

[Go To Enter Reductions](#)

[Go To 2017 RFP Demo](#)

[Go To Enter % RFP Contingency, NOx sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Emissions Summary NOx Uncontrolled](#)

[Go To Contingency 2019](#)

Attachment A - Sheet 57

Calculations: 2011 to 2017 On-road Control Measures Reductions

DFW Nonattainment Area Eight-Hour Ozone Season VOC and NOX

Nine Previously Designated Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant

Creditable Reductions Control Strategy	Control Used for RFP Demonstration?	On-road Mobile Source Control?	Total 2011 - 2017 'On-road Mobile NO _x Emissions Reductions (tpd)	Total 2011 - 2017 'On-road Mobile VOC Emissions Reductions (tpd)
Chapter 117 NOX controls	Yes	No	0	0
Chapter 115 Storage Tank Rule	Yes	No	0	0
Coating / printing rules	Yes	No	0	0
Portable fuel containers	Yes	No	0.00	0.00
Federal Motor Vehicle Control Program (FMVCP)	Yes	Yes	648.53	313.28
Inspection and Maintenance (I/M)	Yes	Yes	12.09	10.44
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	Yes	Yes	52.41	22.75
On-road TxLED	Yes	Yes	3.79	0
Tier I and II locomotive NOX standards	Yes	No	0	0
Small non-road spark ignition (SI) engines (Phase I)	Yes	No	0	0
Heavy duty non-road engines	Yes	No	0	0
Tiers 2 and 3 non-road diesel engines	Yes	No	0	0
Small non-road SI engines (Phase II)	Yes	No	0	0
Large non-road SI & recreational marine	Yes	No	0	0
Non-road TxLED	Yes	No	0	0
Non-road RFG	Yes	No	0	0
Tier 4 non-road diesel engines	Yes	No	0	0
Diesel recreational marine	Yes	No	0	0
Small SI (Phase III)	Yes	No	0	0
Chapter 117 NOX area source engine controls	Yes	No	0	0
Drilling rig low emission diesel	Yes	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
Total 9 PDC On-road Mobile Source RFP Control Reductions			716.82	346.47

[Spreadsheet Navigation](#)

[Return to Table of Contents](#)

[Go To Enter Aircraft EI](#)

[Go To Enter Reductions](#)

[Go To 2017 RFP Demo](#)

[Go To Calculate MVEB](#)

[Go To Enter % RFP Contingency, NOx sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Emissions Summary NOx Uncontrolled](#)

[Go To Contingency 2019](#)

Attachment A - Sheet 58

Calculations: 2011 to 2017 On-road Control Measures Reductions
 DFW Nonattainment Area Eight-Hour Ozone Season VOC and NOX
 One Newly Designated Nonattainment County: Wise

Creditable Reductions Control Strategy	Control Used for RFP Demonstration?	On-road Mobile Source Control?	Total 2011 - 2017 'On-road Mobile NO _x Emissions Reductions (tpd)	Total 2011 - 2017 'On-road Mobile VOC Emissions Reductions (tpd)
Chapter 117 NOX controls	Yes	No	0	0
Chapter 115 Storage Tank Rule	Yes	No	0	0
Coating / printing rules	Yes	No	0	0
Portable fuel containers	Yes	No	0.00	0.00
Federal Motor Vehicle Control Program (FMVCP)	Yes	Yes	13.81	3.45
Inspection and Maintenance (I/M)	Yes	Yes	0	0
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	Yes	Yes	0.79	0.2
On-road TxLED	Yes	Yes	0.11	0
Tier I and II locomotive NOX standards	Yes	No	0	0
Small non-road spark ignition (SI) engines (Phase I)	Yes	No	0	0
Heavy duty non-road engines	Yes	No	0	0
Tiers 2 and 3 non-road diesel engines	Yes	No	0	0
Small non-road SI engines (Phase II)	Yes	No	0	0
Large non-road SI & recreational marine	Yes	No	0	0
Non-road TxLED	Yes	No	0	0
Non-road RFG	Yes	No	0	0
Tier 4 non-road diesel engines	Yes	No	0	0
Diesel recreational marine	Yes	No	0	0
Small SI (Phase III)	Yes	No	0	0
Chapter 117 NOX area source engine controls	Yes	No	0	0
Drilling rig low emission diesel	Yes	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
Total 1 NDC On-road Mobile Source RFP Control Reductions			14.71	3.65

- [Spreadsheet Navigation](#)
- [Return to Table of Contents](#)
- [Go To Enter Aircraft EI](#)
- [Go To Enter Reductions](#)
- [Go To 2017 RFP Demo](#)
- [Go To Calculate MVEB](#)
- [Go To Enter % RFP Contingency, NO_x sub amounts, VOC transfer amounts, Conf Safety Margin](#)
- [Go To Emissions Summary NO_x Uncontrolled](#)
- [Go To Contingency 2019](#)

Attachment A - Sheet 59

Calculations: 2011 to 2017 On-road Control Measures Reductions

DFW Nonattainment Area Eight-Hour Ozone Season VOC and NOX

Nine Previously Designated Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant

Creditable Reductions Control Strategy	Control Used for RFP Demonstration?	On-road Mobile Source Control?	Total 2011 - 2017 'On-road Mobile NO _x Emissions Reductions (tpd)	Total 2011 - 2017 'On-road Mobile VOC Emissions Reductions (tpd)
Chapter 117 NOX controls	Yes	No	0	0
Chapter 115 Storage Tank Rule	Yes	No	0	0
Coating / printing rules	Yes	No	0	0
Portable fuel containers	Yes	No	0.00	0.00
Federal Motor Vehicle Control Program (FMVCP)	Yes	Yes	662.34	316.73
Inspection and Maintenance (I/M)	Yes	Yes	12.09	10.44
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	Yes	Yes	53.2	22.95
On-road TxLED	Yes	Yes	3.9	0
Tier I and II locomotive NOX standards	Yes	No	0	0
Small non-road spark ignition (SI) engines (Phase I)	Yes	No	0	0
Heavy duty non-road engines	Yes	No	0	0
Tiers 2 and 3 non-road diesel engines	Yes	No	0	0
Small non-road SI engines (Phase II)	Yes	No	0	0
Large non-road SI & recreational marine	Yes	No	0	0
Non-road TxLED	Yes	No	0	0
Non-road RFG	Yes	No	0	0
Tier 4 non-road diesel engines	Yes	No	0	0
Diesel recreational marine	Yes	No	0	0
Small SI (Phase III)	Yes	No	0	0
Chapter 117 NOX area source engine controls	Yes	No	0	0
Drilling rig low emission diesel	Yes	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
Total 9 PDC On-road Mobile Source RFP Control Reductions			731.53	350.12

[Spreadsheet Navigation](#)

[Return to Table of Contents](#)

[Go To Enter Aircraft EI](#)

[Go To Enter Reductions](#)

[Go To 2017 RFP Demo](#)

[Go To Calculate MVEB](#)

[Go To Enter % RFP Contingency, NOx sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Emissions Summary NOx Uncontrolled](#)

[Go To Contingency 2019](#)

Attachment A - Sheet 60

Calculations: 2011 to 2018 On-road Control Measures Reductions

DFW Nonattainment Area Eight-Hour Ozone Season VOC and NOX

Nine Previously Designated Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant

Creditable Reductions Control Strategy	Control Used for RFP Demonstration?	On-road Mobile Source Control?	Total 2011 - 2018 'On-road Mobile NO _x Emissions Reductions (tpd)	Total 2011 - 2018 'On-road Mobile VOC Emissions Reductions (tpd)
Chapter 117 NOX controls	Yes	No	0	0
Chapter 115 Storage Tank Rule	Yes	No	0	0
Coating / printing rules	Yes	No	0	0
Portable fuel containers	Yes	No	0.00	0.00
Federal Motor Vehicle Control Program (FMVCP)	Yes	Yes	689.63	329.4
Inspection and Maintenance (I/M)	Yes	Yes	10.69	9.93
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	Yes	Yes	48.39	21.36
On-road TxLED	Yes	Yes	3.36	0
Tier I and II locomotive NOX standards	Yes	No	0	0
Small non-road spark ignition (SI) engines (Phase I)	Yes	No	0	0
Heavy duty non-road engines	Yes	No	0	0
Tiers 2 and 3 non-road diesel engines	Yes	No	0	0
Small non-road SI engines (Phase II)	Yes	No	0	0
Large non-road SI & recreational marine	Yes	No	0	0
Non-road TxLED	Yes	No	0	0
Non-road RFG	Yes	No	0	0
Tier 4 non-road diesel engines	Yes	No	0	0
Diesel recreational marine	Yes	No	0	0
Small SI (Phase III)	Yes	No	0	0
Chapter 117 NOX area source engine controls	Yes	No	0	0
Drilling rig low emission diesel	Yes	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
Total 9 PDC On-road Mobile Source RFP Control Reductions			752.07	360.69

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go To Enter Aircraft EI](#)

[Go To Enter Reductions](#)

[Go To 2017 RFP Demo](#)

[Go To Calculate MVEB](#)

[Go To Enter % RFP Contingency, NOx sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Emissions Summary NOx Uncontrolled](#)

[Go To Contingency 2019](#)

Attachment A - Sheet 61

Calculations: 2011 to 2017 On-road Control Measures Reductions
 DFW Nonattainment Area Eight-Hour Ozone Season VOC and NOX
 One Newly Designated Nonattainment County: Wise

Creditable Reductions Control Strategy	Control Used for RFP Demonstration?	On-road Mobile Source Control?	Total 2011- 2018 'On-road Mobile NO _x Emissions Reductions (tpd)	Total 2011 - 2018 'On-road Mobile VOC Emissions Reductions (tpd)
Chapter 117 NOX controls	Yes	No	0	0
Chapter 115 Storage Tank Rule	Yes	No	0	0
Coating / printing rules	Yes	No	0	0
Portable fuel containers	Yes	No	0.00	0.00
Federal Motor Vehicle Control Program (FMVCP)	Yes	Yes	14.71	3.66
Inspection and Maintenance (I/M)	Yes	Yes	0	0
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	Yes	Yes	0.73	0.19
On-road TxLED	Yes	Yes	0.09	0
Tier I and II locomotive NOX standards	Yes	No	0	0
Small non-road spark ignition (SI) engines (Phase I)	Yes	No	0	0
Heavy duty non-road engines	Yes	No	0	0
Tiers 2 and 3 non-road diesel engines	Yes	No	0	0
Small non-road SI engines (Phase II)	Yes	No	0	0
Large non-road SI & recreational marine	Yes	No	0	0
Non-road TxLED	Yes	No	0	0
Non-road RFG	Yes	No	0	0
Tier 4 non-road diesel engines	Yes	No	0	0
Diesel recreational marine	Yes	No	0	0
Small SI (Phase III)	Yes	No	0	0
Chapter 117 NOX area source engine controls	Yes	No	0	0
Drilling rig low emission diesel	Yes	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
Total 1 NDC On-road Mobile Source RFP Control Reductions			15.53	3.85

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go To Enter Aircraft EI](#)

[Go To Enter Reductions](#)

[Go To 2017 RFP Demo](#)

[Go To Calculate MVEB](#)

[Go To Enter % RFP Contingency, NOx sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Emissions Summary NOx Uncontrolled](#)

[Go To Contingency 2019](#)

Attachment A - Sheet 62

Calculations: 2011 to 2017 On-road Control Measures Reductions

DFW Nonattainment Area Eight-Hour Ozone Season VOC and NOX

Nine Previously Designated Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant

Creditable Reductions Control Strategy	Control Used for RFP Demonstration?	On-road Mobile Source Control?	Total 2011 - 2018 'On-road Mobile NO _x Emissions Reductions (tpd)	Total 2011 - 2018 'On-road Mobile VOC Emissions Reductions (tpd)
Chapter 117 NOX controls	Yes	No	0	0
Chapter 115 Storage Tank Rule	Yes	No	0	0
Coating / printing rules	Yes	No	0	0
Portable fuel containers	Yes	No	0.00	0.00
Federal Motor Vehicle Control Program (FMVCP)	Yes	Yes	704.34	333.06
Inspection and Maintenance (I/M)	Yes	Yes	10.69	9.93
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	Yes	Yes	49.12	21.55
On-road TxLED	Yes	Yes	3.45	0
Tier I and II locomotive NOX standards	Yes	No	0	0
Small non-road spark ignition (SI) engines (Phase I)	Yes	No	0	0
Heavy duty non-road engines	Yes	No	0	0
Tiers 2 and 3 non-road diesel engines	Yes	No	0	0
Small non-road SI engines (Phase II)	Yes	No	0	0
Large non-road SI & recreational marine	Yes	No	0	0
Non-road TxLED	Yes	No	0	0
Non-road RFG	Yes	No	0	0
Tier 4 non-road diesel engines	Yes	No	0	0
Diesel recreational marine	Yes	No	0	0
Small SI (Phase III)	Yes	No	0	0
Chapter 117 NOX area source engine controls	Yes	No	0	0
Drilling rig low emission diesel	Yes	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
Total 9 PDC On-road Mobile Source RFP Control Reductions			767.60	364.54

[Spreadsheet Navigation](#)

[Return to Table of Contents](#)

[Go To Enter Aircraft EI](#)

[Go To Enter Reductions](#)

[Go To 2017 RFP Demo](#)

[Go To Calculate MVEB](#)

[Go To Enter % RFP Contingency, NO_x sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Emissions Summary NO_x Uncontrolled](#)

[Go To Contingency 2019](#)

Appendix 1 - Sheet 63

Summary Sheet: Uncontrolled or Existing Control NOX Emissions Inventory
 DFW Eight-Hour Ozone Nonattainment Area
 Ten Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker,
 Rockwall, Tarrant, Wise

2011 Uncontrolled or Existing Control NOX (tons per day)

RFP Analysis Year	9 PDC	1 NDC	10 NAC Total
Area Sources	30.48	12.14	42.62
Non-Road Mobile Sources	188.80	12.19	200.99
On-Road Mobile Sources	736.68	16.34	753.02
Point Sources	31.34	8.61	39.95
Total	987.30	49.28	1036.58

2017 Uncontrolled or Existing Control NOX (tons per day)

RFP Analysis Year	9 PDC	1 NDC	10 NAC Total
Area Sources	30.91	9.72	40.63
Non-Road Mobile Sources	206.27	11.17	217.44
On-Road Mobile Sources	860.90	18.28	879.18
Point Sources	46.71	10.21	56.92
Total	1,144.79	49.38	1,194.17

2018 Uncontrolled or Existing Control NOX (tons per day)

RFP Analysis Year	9 PDC	1 NDC	10 NAC Total
Area Sources	29.93	7.44	37.37
Non-Road Mobile Sources	206.03	10.61	216.64
On-Road Mobile Sources	881.68	18.74	900.42
Point Sources	45.90	9.71	55.61
Total	1,163.54	46.50	1,210.04

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go To 2017 RFP Demo](#)

[Go To Calculate MVEB](#)

[Go To Enter % RFP Contingency, NOx sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Contingency 2019](#)

[Go To Enter Aircraft EI](#)

[Go To Enter Area EI](#)

[Go to Enter Biogenics EI](#)

[Go to Enter NONROAD Categories EI](#)

[Go to Enter On-road EI](#)

[Go to Enter Point EI](#)

[Go To Enter Reductions](#)

Attachment A - Sheet 64

Summary Sheet: Controlled or Post-2011 Controlled NOx Emissions Inventory
 DFW Eight-Hour Ozone Nonattainment Area
 Ten Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker,
 Rockwall, Tarrant, Wise

Controlled or Post-2011 Controlled NOx for 2011(tons per day)

RFP Analysis Year	9 PDC	1 NDC	10 NAC Total
Area Sources	30.48	12.14	42.62
Non-Road Mobile Sources	112.98	6.85	119.83
On-Road Mobile Sources	230.75	5.99	236.74
Point Sources	31.34	8.61	39.95
Total	405.55	33.59	439.14

Controlled or Post-2011 Controlled NOx for 2017 (tons per day)

RFP Analysis Year	9 PDC	1 NDC	10 NAC Total
Area Sources	30.91	9.72	40.63
Non-Road Mobile Sources	81.54	4.71	86.25
On-Road Mobile Sources	144.08	3.57	147.65
Point Sources	46.71	10.21	56.92
Total	303.24	28.21	331.45

Controlled or Post-2011 Controlled NOx for 2018 (tons per day)

RFP Analysis Year	9 PDC	1 NDC	10 NAC Total
Area Sources	29.93	7.44	37.37
Non-Road Mobile Sources	76.38	4.18	80.56
On-Road Mobile Sources	129.61	3.21	132.82
Point Sources	45.90	9.71	55.61
Total	281.82	24.54	306.36

Note: The controlled inventory shown here includes all controls. The controlled RFP inventory may not include all controls and may therefore be a higher value than shown here.

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go To 2017 RFP Demo](#)

[Go To Calculate MVEB](#)

[Go To Enter % RFP Contingency, NOx sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Contingency 2019](#)

[Go To Enter Aircraft EI](#)

[Go To Enter Area EI](#)

[Go to Enter Biogenics EI](#)

[Go to Enter NONROAD Categories EI](#)

[Go to Enter On-road EI](#)

[Go to Enter Point EI](#)

[Go To Enter Reductions](#)

Attachment A - Sheet 65

Summary Sheet: Uncontrolled or Existing Control VOC Emissions Inventory
 DFW Eight-Hour Ozone Nonattainment Area
 Ten Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall,
 Tarrant, Wise

2011 Uncontrolled or Existing Control VOC (tons per day)

RFP Analysis Year	9 PDC	1 NDC	10 NAC Total
Area Sources	263.30	29.18	292.48
Non-Road Mobile Sources	130.51	2.73	133.24
On-Road Mobile Sources	355.31	4.34	359.65
Point Sources	27.66	2.14	29.80
Total	776.78	38.39	815.17

2017 Uncontrolled or Existing Control VOC (tons per day)

RFP Analysis Year	9 PDC	1 NDC	10 NAC Total
Area Sources	266.15	23.74	289.89
Non-Road Mobile Sources	150.44	2.75	153.19
On-Road Mobile Sources	416.88	4.89	421.77
Point Sources	30.84	3.41	34.25
Total	864.31	34.79	899.10

2018 Uncontrolled or Existing Control VOC (tons per day)

RFP Analysis Year	9 PDC	1 NDC	10 NAC Total
Area Sources	258.70	19.17	277.87
Non-Road Mobile Sources	152.56	2.71	155.27
On-Road Mobile Sources	427.12	5.01	432.13
Point Sources	29.83	2.88	32.71
Total	868.21	29.77	897.98

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go To 2017 RFP Demo](#)

[Go To Calculate MVEB](#)

[Go To Enter % RFP Contingency, NOx sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Contingency 2019](#)

[Go To Enter Aircraft EI](#)

[Go To Enter Area EI](#)

[Go to Enter Biogenics EI](#)

[Go to Enter NONROAD Categories EI](#)

[Go to Enter On-road EI](#)

[Go to Enter Point EI](#)

[Go To Enter Reductions](#)

Attachment A - Sheet 66

Summary Sheet: Controlled or Post-2011 Controlled VOC Emissions Inventory
 DFW Eight-Hour Ozone Nonattainment Area
 Ten Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker,
 Rockwall, Tarrant, Wise

Controlled or Post-2011 Controlled VOC for 2011 (tons per day)

RFP Analysis Year	9 PDC	1 NDC	10 NAC Total
Area Sources	263.30	29.18	292.48
Non-Road Mobile Sources	53.74	1.25	54.99
On-Road Mobile Sources	99.39	1.81	101.20
Point Sources	27.66	2.14	29.80
Total	444.09	34.38	478.47

Controlled or Post-2011 Controlled VOC for 2017 (tons per day)

RFP Analysis Year	9 PDC	1 NDC	10 NAC Total
Area Sources	266.15	23.74	289.89
Non-Road Mobile Sources	37.01	0.82	37.83
On-Road Mobile Sources	70.41	1.24	71.65
Point Sources	30.84	3.41	34.25
Total	404.41	29.21	433.62

Controlled or Post-2011 Controlled VOC for 2018 (tons per day)

RFP Analysis Year	9 PDC	1 NDC	10 NAC Total
Area Sources	258.70	19.17	277.87
Non-Road Mobile Sources	36.15	0.77	36.92
On-Road Mobile Sources	66.43	1.16	67.59
Point Sources	29.83	2.88	32.71
Total	391.11	23.98	415.09

Note: The controlled inventory shown here includes all controls. The controlled RFP inventory may not include all controls and may therefore be a higher value than shown here.

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go To 2017 RFP Demo](#)

[Go To Calculate MVEB](#)

[Go To Enter % RFP Contingency, NOx sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Contingency 2019](#)

[Go To Enter Aircraft EI](#)

[Go To Enter Area EI](#)

[Go to Enter Biogenics EI](#)

[Go to Enter NONROAD Categories EI](#)

[Go to Enter On-road EI](#)

[Go to Enter Point EI](#)

[Go To Enter Reductions](#)

Attachment A - Sheet 67

Summary Sheet: 2011 Emissions Inventory By Category
 DFW Eight-Hour Ozone Nonattainment Area
 Ten Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker,
 Rockwall, Tarrant, Wise

2011 9 PDC (tons per day)

Emissions Inventory Source	Uncontrolled or Existing Control NOx	Controlled or Post-2011 Controlled NOx	Uncontrolled or Existing Control VOC	Controlled or Post-2011 Controlled VOC
Area Sources	30.48	30.48	263.30	263.30
Non-Road Mobile Sources	188.80	112.98	130.51	53.74
On-Road Mobile Sources	736.68	230.75	355.31	99.39
Point Sources	31.34	31.34	27.66	27.66
Total	987.30	405.55	776.78	444.09

2011 1 NDC (tons per day)

Emissions Inventory Source	Uncontrolled or Existing Control NOx	Controlled or Post-2011 Controlled NOx	Uncontrolled or Existing Control VOC	Controlled or Post-2011 Controlled VOC
Area Sources	12.14	12.14	29.18	29.18
Non-Road Mobile Sources	12.19	6.85	2.73	1.25
On-Road Mobile Sources	16.34	5.99	4.34	1.81
Point Sources	8.61	8.61	2.14	2.14
Total	49.28	33.59	38.39	34.38

2011 10 NAC Total (tons per day)

Emissions Inventory Source	Uncontrolled or Existing Control NOx	Controlled or Post-2011 Controlled NOx	Uncontrolled or Existing Control VOC	Controlled or Post-2011 Controlled VOC
Area Sources	42.62	42.62	292.48	292.48
Non-Road Mobile Sources	200.99	119.83	133.24	54.99
On-Road Mobile Sources	753.02	236.74	359.65	101.20
Point Sources	39.95	39.95	29.80	29.80
Total	1036.58	439.14	815.17	478.47

Note: The controlled inventory shown here includes all controls. The controlled RFP inventory may not include all controls and may therefore be a higher value than shown here.

[Spreadsheet Navigation](#)

[Return to Table of Contents](#)

[Go To 2017 RFP Demo](#)

[Go To Calculate MVEB](#)

[Go To Enter % RFP Contingency, NOx sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Contingency 2019](#)

[Go To Enter Aircraft EI](#)

[Go To Enter Area EI](#)

[Go to Enter Biogenics EI](#)

[Go to Enter NONROAD Categories EI](#)

[Go to Enter On-road EI](#)

[Go to Enter Point EI](#)

[Go To Enter Reductions](#)

Attachment A - Sheet 68

Summary Sheet: 2017 Emissions Inventory By Category
 DFW Eight-Hour Ozone Nonattainment Area
 Ten Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall,
 Tarrant, Wise

2017 9 PDC (tons per day)

Emissions Inventory Source	Uncontrolled or Existing Control NOx	Controlled or Post-2011 Controlled NOx	Uncontrolled or Existing Control VOC	Controlled or Post-2011 Controlled VOC
Area Sources	30.91	30.91	266.15	266.15
Non-Road Mobile Sources	206.27	81.54	150.44	37.01
On-Road Mobile Sources	860.90	144.08	416.88	70.41
Point Sources	46.71	46.71	30.84	30.84
Total	1144.79	303.24	864.31	404.41

2017 1 NDC (tons per day)

Emissions Inventory Source	Uncontrolled or Existing Control NOx	Controlled or Post-2011 Controlled NOx	Uncontrolled or Existing Control VOC	Controlled or Post-2011 Controlled VOC
Area Sources	9.72	9.72	23.74	23.74
Non-Road Mobile Sources	11.17	4.71	2.75	0.82
On-Road Mobile Sources	18.28	3.57	4.89	1.24
Point Sources	10.21	10.21	3.41	3.41
Total	49.38	28.21	34.79	29.21

2017 10 NAC Total (tons per day)

Emissions Inventory Source	Uncontrolled or Existing Control NOx	Controlled or Post-2011 Controlled NOx	Uncontrolled or Existing Control VOC	Controlled or Post-2011 Controlled VOC
Area Sources	40.63	40.63	289.89	289.89
Non-Road Mobile Sources	217.44	86.25	153.19	37.83
On-Road Mobile Sources	879.18	147.65	421.77	71.65
Point Sources	56.92	56.92	34.25	34.25
Total	1194.17	331.45	899.10	433.62

Note: The controlled inventory shown here includes all controls. The controlled RFP inventory may not include all controls and may therefore be a higher value than shown here.

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go To 2017 RFP Demo](#)

[Go To Calculate MVEB](#)

[Go To Enter % RFP Contingency, NOx sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Contingency 2019](#)

[Go To Enter Aircraft EI](#)

[Go To Enter Area EI](#)

[Go to Enter Biogenics EI](#)

[Go to Enter NONROAD Categories EI](#)

[Go to Enter On-road EI](#)

[Go to Enter Point EI](#)

[Go To Enter Reductions](#)

Attachment A - Sheet 69

Summary Sheet: 2018 Emissions Inventory By Category

DFW Eight-Hour Ozone Nonattainment Area

Ten Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall,
Tarrant, Wise

2018 9 PDC (tons per day)

Emissions Inventory Source	Uncontrolled or Existing Control NOx	Controlled or Post-2011 Controlled NOx	Uncontrolled or Existing Control VOC	Controlled or Post-2011 Controlled VOC
Area Sources	29.93	29.93	258.70	258.70
Non-Road Mobile Sources	206.03	76.38	152.56	36.15
On-Road Mobile Sources	881.68	129.61	427.12	66.43
Point Sources	45.90	45.90	29.83	29.83
Total	1163.54	281.82	868.21	391.11

2018 1 NDC (tons per day)

Emissions Inventory Source	Uncontrolled or Existing Control NOx	Controlled or Post-2011 Controlled NOx	Uncontrolled or Existing Control VOC	Controlled or Post-2011 Controlled VOC
Area Sources	7.44	7.44	19.17	19.17
Non-Road Mobile Sources	10.61	4.18	2.71	0.77
On-Road Mobile Sources	18.74	3.21	5.01	1.16
Point Sources	9.71	9.71	2.88	2.88
Total	46.50	24.54	29.77	23.98

2018 10 NAC Total (tons per day)

Emissions Inventory Source	Uncontrolled or Existing Control NOx	Controlled or Post-2011 Controlled NOx	Uncontrolled or Existing Control VOC	Controlled or Post-2011 Controlled VOC
Area Sources	37.37	37.37	277.87	277.87
Non-Road Mobile Sources	216.64	80.56	155.27	36.92
On-Road Mobile Sources	900.42	132.82	432.13	67.59
Point Sources	55.61	55.61	32.71	32.71
Total	1210.04	306.36	897.98	415.09

Note: The controlled inventory shown here includes all controls. The controlled RFP inventory may not include all controls and may therefore be a higher value than shown here.

[Spreadsheet Navigation](#)

[Return to Table of Contents](#)

[Go To 2017 RFP Demo](#)

[Go To Calculate MVEB](#)

[Go To Enter % RFP Contingency, NOx sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Contingency 2019](#)

[Go To Enter Aircraft EI](#)

[Go To Enter Area EI](#)

[Go to Enter Biogenics EI](#)

[Go to Enter NONROAD Categories EI](#)

[Go to Enter On-road EI](#)

[Go to Enter Point EI](#)

[Go To Enter Reductions](#)

Attachment A - Sheet 70

Summary Airport Emissions Inventory (Aircraft Plus GSE)
DFW Eight-Hour Ozone Nonattainment Area

Nine Previously Designated Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant

'RFP Analysis Year	Uncontrolled NO _x (tpd)	Controlled NO _x (tpd)	Total Reduction NO _x (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
9 PDC 2011	10.95	10.38	0.57	5.21	3.34	3.23	0.11	3.29
9 PDC 2017	11.90	11.48	0.42	3.53	3.51	3.46	0.05	1.42
9 PDC 2018	12.32	11.98	0.34	2.76	3.71	3.61	0.10	2.70

One Newly Designated Nonattainment County: Wise

'RFP Analysis Year	Uncontrolled NO _x (tpd)	Controlled NO _x (tpd)	Total Reduction NO _x (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
1 NDC 2011	0.01	0.01	0.00	0.00	0.01	0.01	0.00	0.00
1 NDC 2017	0.01	0.01	0.00	0.00	0.01	0.01	0.00	0.00
1 NDC 2018	0.02	0.02	0.00	0.00	0.02	0.02	0.00	0.00

Total Ten Ozone Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, Wise

'RFP Analysis Year	Uncontrolled NO _x (tpd)	Controlled NO _x (tpd)	Total Reduction NO _x (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
10 County Total 2011	10.96	10.39	0.57	5.20	3.35	3.24	0.11	3.28
10 County Total 2017	11.91	11.49	0.42	3.53	3.52	3.47	0.05	1.42
10 County total 2018	12.34	12.00	0.34	2.76	3.73	3.63	0.10	2.68

Notes:

- 1) 1 NDC means the one newly designated county and indicates values are for the one county in the DFW ozone nonattainment area that was newly designated under the 2008 eight-hour ozone standard. Includes: Wise County.
- 2) 9 PDC means the nine existing nonattainment counties and indicates values are for the nine counties that had an existing designation under the one-hour ozone standard and/or under the 1997 eight-hour ozone standard. Includes: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant Counties.
- 3) 10 County Total means the values include the ten DFW area nonattainment counties designated under the 2008 eight-hour ozone standard.

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go To Enter Reductions 1 NDC 2017](#)

[Go To Enter Reductions 9 PDC 2017](#)

[Go to Calculate 9 PDC 2011 Base Year EI](#)

[Go to Calculate 1 NDC 2011 Base Year EI](#)

[Go To Emissions Summary NO_x Uncontrolled](#)

Attachment A - Sheet 71

Summary Total Non-Road Emissions Inventory
DFW Eight-Hour Ozone Nonattainment Area

Nine Previously Designated Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant

'RFP Analysis Year	Uncontrolled NO _x (tpd)	Controlled NO _x (tpd)	Total Reduction NO _x (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
9 PDC 2011	188.80	112.98	75.82	40.16	130.51	53.74	76.77	58.82
9 PDC 2017	206.27	81.54	124.73	60.47	150.44	37.01	113.43	75.40
9 PDC 2018	206.03	76.38	129.65	62.93	152.56	36.15	116.41	76.30

One Newly Designated Nonattainment County: Wise

'RFP Analysis Year	Uncontrolled NO _x (tpd)	Controlled NO _x (tpd)	Total Reduction NO _x (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
1 NDC 2011	12.19	6.85	5.34	43.81	2.73	1.25	1.48	54.21
1 NDC 2017	11.17	4.71	6.46	57.83	2.75	0.82	1.93	70.18
1 NDC 2018	10.61	4.18	6.43	60.60	2.71	0.77	1.94	71.59

Total Ten Ozone Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, Wise

'RFP Analysis Year	Uncontrolled NO _x (tpd)	Controlled NO _x (tpd)	Total Reduction NO _x (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
10 County Total 2011	200.99	119.83	81.16	40.38	133.24	54.99	78.25	58.73
10 County Total 2017	217.44	86.25	131.19	60.33	153.19	37.83	115.36	75.31
10 County total 2018	216.64	80.56	136.08	62.81	155.27	36.92	118.35	76.22

Notes:

- 1) 1 NDC means the one newly designated county and indicates values are for the one county in the DFW ozone nonattainment area that was newly designated under the 2008 eight-hour ozone standard. Includes: Wise County.
- 2) 9 PDC means the nine existing nonattainment counties and indicates values are for the nine counties that had an existing designation under the one-hour ozone standard and/or under the 1997 eight-hour ozone standard. Includes: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant Counties.
- 3) 10 County Total means the values include the ten DFW area nonattainment counties designated under the 2008 eight-hour ozone standard.

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go To Enter Reductions 1 NDC 2017](#)

[Go To Enter Reductions 9 PDC 2017](#)

[Go to Calculate 9 PDC 2011 Base Year Emissions](#)

[Go to Calculate 1 NDC 2011 Base Year Emissions](#)

[Go To Emissions Summary NO_x Uncontrolled](#)

Attachment A - Sheet 72

Summary Sheet: 2011 Non-Road Summary by Category
DFW Eight-Hour Ozone Nonattainment Area

Ten Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall,
Tarrant, Wise

2011 9 PDC (tons per day)

Emissions Inventory Source	Uncontrolled NOx	Controlled NOx	Uncontrolled VOC	Controlled VOC
Airport	10.95	10.38	3.34	3.23
Locomotive	26.98	21.75	1.79	1.24
Marine	0.00	0.00	0.00	0.00
NONROAD Model	127.53	68.39	122.77	48.66
Drilling Rigs	23.34	12.46	2.61	0.61
Total All	188.80	112.98	130.51	53.74
Total ALM	37.93	32.13	5.13	4.47
ALM Plus Drilling Rigs (Off-road)	61.27	44.59	7.74	5.08

2011 1 NDC (tons per day)

Emissions Inventory Source	Uncontrolled NOx	Controlled NOx	Uncontrolled VOC	Controlled VOC
Airport	0.01	0.01	0.01	0.01
Locomotive	3.27	2.51	0.22	0.14
Marine	0.00	0.00	0.00	0.00
NONROAD Model	5.18	2.34	2.08	1.00
Drilling Rigs	3.73	1.99	0.42	0.10
Total All	12.19	6.85	2.73	1.25
Total ALM	3.28	2.52	0.23	0.15
ALM Plus Drilling Rigs (Off-road)	7.01	4.51	0.65	0.25

2011 10 NAC Total (tons per day)

Emissions Inventory Source	Uncontrolled NOx	Controlled NOx	Uncontrolled VOC	Controlled VOC
Airport	10.96	10.39	3.35	3.24
Locomotive	30.25	24.26	2.01	1.38
Marine	0.00	0.00	0.00	0.00
NONROAD Model	132.71	70.73	124.85	49.66
Drilling Rigs	27.07	14.45	3.03	0.71
Total All	200.99	119.83	133.24	54.99
Total ALM	41.21	34.65	5.36	4.62
ALM Plus Drilling Rigs (Off-road)	68.28	49.10	8.39	5.33

Note: The controlled inventory shown here includes all controls. The controlled RFP inventory may not include all controls and may therefore be a higher value than shown here.

[Spreadsheet Navigation](#)

[Return to Table of Contents](#)

[Go To 2017 RFP Demo](#)

[Go To Calculate MVEB](#)

[Go To Enter % RFP Contingency, NOx sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Contingency 2019](#)

[Go To Enter Aircraft EI](#)

[Go To Enter Area EI](#)

[Go to Enter Biogenics EI](#)

[Go to Enter NONROAD Categories EI](#)

[Go to Enter On-road EI](#)

[Go to Enter Point EI](#)

[Go To Enter Reductions](#)

Attachment A - Sheet 73

Summary Sheet: 2017 Non-Road Summary by Category
DFW Eight-Hour Ozone Nonattainment Area

Ten Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, Wise

2017 9 PDC (tons per day)

Emissions Inventory Source	Uncontrolled NOx	Controlled NOx	Uncontrolled VOC	Controlled VOC
Airport	11.90	11.48	3.51	3.46
Locomotive	22.34	18.01	1.27	0.88
Marine	0.00	0.00	0.00	0.00
NONROAD Model	153.34	42.07	143.57	32.18
Drilling Rigs	18.69	9.98	2.09	0.49
Total All	206.27	81.54	150.44	37.01
Total ALM	34.24	29.49	4.78	4.34
ALM Plus Drilling Rigs (Off-road)	52.93	39.47	6.87	4.83

2017 1 NDC (tons per day)

Emissions Inventory Source	Uncontrolled NOx	Controlled NOx	Uncontrolled VOC	Controlled VOC
Airport	0.01	0.01	0.01	0.01
Locomotive	2.58	1.98	0.14	0.09
Marine	0.00	0.00	0.00	0.00
NONROAD Model	5.68	1.17	2.27	0.64
Drilling Rigs	2.90	1.55	0.33	0.08
Total All	11.17	4.71	2.75	0.82
Total ALM	2.59	1.99	0.15	0.10
ALM Plus Drilling Rigs (Off-road)	5.49	3.54	0.48	0.18

2017 10 NAC Total (tons per day)

Emissions Inventory Source	Uncontrolled NOx	Controlled NOx	Uncontrolled VOC	Controlled VOC
Airport	11.91	11.49	3.52	3.47
Locomotive	24.92	19.99	1.41	0.97
Marine	0.00	0.00	0.00	0.00
NONROAD Model	159.02	43.24	145.84	32.82
Drilling Rigs	21.59	11.53	2.42	0.57
Total All	217.44	86.25	153.19	37.83
Total ALM	36.83	31.48	4.93	4.44
ALM Plus Drilling Rigs (Off-road)	58.42	43.01	7.35	5.01

Note: The controlled inventory shown here includes all controls. The controlled RFP inventory may not include all controls and may therefore be a higher value than shown here.

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go To 2017 RFP Demo](#)

[Go To Calculate MVEB](#)

[Go To Enter % RFP Contingency, NOx sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Contingency 2019](#)

[Go To Enter Aircraft EI](#)

[Go To Enter Area EI](#)

[Go to Enter Biogenics EI](#)

[Go to Enter NONROAD Categories EI](#)

[Go to Enter On-road EI](#)

[Go to Enter Point EI](#)

[Go To Enter Reductions](#)

Attachment A - Sheet 74

Summary Sheet: 2018 Non-Road Summary by Category
DFW Eight-Hour Ozone Nonattainment Area

Ten Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant,
Wise

2018 9 PDC (tons per day)

Emissions Inventory Source	Uncontrolled NOx	Controlled NOx	Uncontrolled VOC	Controlled VOC
Airport	12.32	11.98	3.71	3.61
Locomotive	23.01	17.82	1.31	0.85
Marine	0.00	0.00	0.00	0.00
NONROAD Model	156.51	39.01	145.95	31.32
Drilling Rigs	14.19	7.57	1.59	0.37
Total All	206.03	76.38	152.56	36.15
Total ALM	35.33	29.80	5.02	4.46
ALM Plus Drilling Rigs (Off-road)	49.52	37.37	6.61	4.83

2018 1 NDC (tons per day)

Emissions Inventory Source	Uncontrolled NOx	Controlled NOx	Uncontrolled VOC	Controlled VOC
Airport	0.02	0.02	0.02	0.02
Locomotive	2.66	1.94	0.15	0.08
Marine	0.00	0.00	0.00	0.00
NONROAD Model	5.71	1.04	2.29	0.61
Drilling Rigs	2.22	1.18	0.25	0.06
Total All	10.61	4.18	2.71	0.77
Total ALM	2.68	1.96	0.17	0.10
ALM Plus Drilling Rigs (Off-road)	4.90	3.14	0.42	0.16

2018 10 NAC Total (tons per day)

Emissions Inventory Source	Uncontrolled NOx	Controlled NOx	Uncontrolled VOC	Controlled VOC
Airport	12.34	12.00	3.73	3.63
Locomotive	25.67	19.76	1.46	0.93
Marine	0.00	0.00	0.00	0.00
NONROAD Model	162.22	40.05	148.24	31.93
Drilling Rigs	16.41	8.75	1.84	0.43
Total All	216.64	80.56	155.27	36.92
Total ALM	38.01	31.76	5.19	4.56
ALM Plus Drilling Rigs (Off-road)	54.42	40.51	7.03	4.99

Note: The controlled inventory shown here includes all controls. The controlled RFP inventory may not include all controls and may therefore be a higher value than shown here.

Spreadsheet Navigation

[Return to Table of Contents](#)

[Go To 2017 RFP Demo](#)

[Go To Calculate MVEB](#)

[Go To Enter % RFP Contingency, NOx sub amounts, VOC transfer amounts, Conf Safety Margin](#)

[Go To Contingency 2019](#)

[Go To Enter Aircraft EI](#)

[Go To Enter Area EI](#)

[Go to Enter Biogenics EI](#)

[Go to Enter NONROAD Categories EI](#)

[Go to Enter On-road EI](#)

[Go to Enter Point EI](#)

[Go To Enter Reductions](#)