

APPENDIX 1

DALLAS-FORT WORTH (DFW) REASONABLE FURTHER PROGRESS (RFP) DEMONSTRATION SPREADSHEET

Dallas-Fort Worth and Houston-Galveston-Brazoria Severe
Areas Reasonable Further Progress State Implementation Plan
Revision for the 2008 Eight-Hour Ozone National Ambient Air
Quality Standard

Project Number 2023-108-SIP-NR
SFR-122/2023-108-SIP-NR

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Appendix 1 - Sheet 01

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 Calculation Spreadsheet

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Appendix 1 - Sheet 02

10 DFW 2023 RFP Demonstration Analysis

DFW Eight-Hour Ozone Nonattainment Area

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

2023 RFP 10 DFW Demonstration Analysis: To determine if the 2023 RFP requirements are met, the 2023 target level of emissions is compared to the 2023 controlled forecast inventory. The 2023 forecast inventory includes growth between the 2011 base year and the 2023 milestone year. The controlled forecast inventory has been reduced by subtracting the RFP control reductions from 2011 to 2023. If the 2023 controlled forecasted RFP EI is less than the 2023 RFP target level of emissions the 2023 RFP requirement is satisfied.

Line #	Description	NO _x (tpd)	VOC (tpd)
Line 1	Uncontrolled or existing controlled 10-county DFW 2023 emissions forecast with growth	374.49	610.10
Line 2	Creditable 10-county DFW RFP control reductions between 2011 and 2023	161.68	195.86
Line 3	Controlled 10-county DFW 2023 RFP emissions forecast (Line 1 minus Line 2)	212.81	414.24
Line 4	Amount of NO _x reduction substitution (see Sheet 3)	0.00	0.00
Line 5	Controlled 10-county DFW 2023 RFP forecast accounting for NO _x substitution (Line 3 plus Line 4)	212.81	414.24
Line 6	10-county DFW 2023 RFP target level of emissions	364.03	423.53
Line 7	Excess (+) / Shortfall (-) (Line 6 minus Line 5)	151.22	9.29
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 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 9) may be used to provide a transportation conformity safety margin. The safety margin must be less than or equal to the excess emissions reductions.

4) The most recent 8-hour implementation rule does not allow transfer of creditable emission reductions between county groups within the same nonattainment area. The line in the calculation process to account for this type of transfer has been removed. If a future implementation rule permits the transfer of creditable emissions reductions between county groups in the same nonattainment area, and a transfer is intended, the tons of NO_x and VOC for transfer would be included in the RFP calculation.

Appendix 1 - Sheet 03

2023 RFP NO_x Substitution Analysis

DFW Eight-Hour Ozone Nonattainment Area

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

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 10 DFW base year emissions (tpd)	448.08	493.56
Line 2	2023 10 DFW controlled RFP EI (tpd)	212.81	414.24
Line 3	Total actual reductions for 9 PDC 2011 to 2023 (Line 1 minus Line 2) (tpd)	235.27	79.32
Line 4	Percent actual reductions for 9 PDC 2011 to 2023 (percent Line 3 is of Line 1) (%)	52.51	16.07
Line 5	2023 10 DFW target RFP EI (tpd)	364.03	423.53
Line 6	10 DFW 2023 total target reductions for 2011 to 2023 (Line 1 minus Line 5) (tpd)	84.05	70.03
Line 7	Percent target reductions for 2011 to 2023 (percent Line 6 is of Line 1) (%)	18.76	14.19
Line 8	Percent surplus or shortfall (percent actual minus percent target, Line 4 minus Line 7) (%)	33.75	1.88
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.

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Appendix 1 - Sheet 04

10 DFW 2026 RFP Demonstration Analysis
DFW Eight-Hour Ozone Nonattainment Area

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

2026 RFP 10 DFW Demonstration Analysis: To determine if the 2026 RFP requirements are met, the 2026 target level of emissions is compared to the 2026 controlled forecast inventory. The 2026 forecast inventory includes growth between the 2011 base year and the 2026 milestone year. The controlled forecast inventory has been reduced by subtracting the RFP control reductions from 2011 to 2026. If the 2026 controlled forecasted RFP EI is less than the 2026 RFP target level of emissions the 2026 RFP requirement is satisfied.

Line #	Description	NO _x (tpd)	VOC (tpd)
Line 1	Uncontrolled or existing controlled 10-county DFW 2026 emissions forecast with growth	362.03	610.34
Line 2	Creditable 10-county DFW RFP control reductions between 2011 and 2023	161.68	195.86
Line 3	Creditable 10-county DFW RFP control reductions between 2023 and 2026	3.52	10.02
Line 4	Controlled 10-county DFW 2026 RFP emissions forecast (Line 1 minus Line 2 minus Line 3)	196.83	404.46
Line 5	Amount of NO _x reduction substitution (see Sheet 5)	0.00	0.00
Line 6	Controlled 10-county DFW 2026 RFP forecast accounting for NO _x substitution (Line 4 plus Line 5)	196.83	404.46
Line 7	10-county DFW 2026 RFP target level of emissions	332.66	413.66
Line 8	Excess (+) / Shortfall (-) (Line 7 minus Line 6)	135.83	9.20
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 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 9) may be used to provide a transportation conformity safety margin. The safety margin must be less than or equal to the excess emissions reductions.
- 4) The most recent 8-hour implementation rule does not allow transfer of creditable emission reductions between county groups within the same nonattainment area. The line in the calculation process to account for this type of transfer has been removed. If a future implementation rule permits the transfer of creditable emissions reductions between county groups in the same nonattainment area, and a transfer is intended, the tons of NO_x and VOC for transfer would be included in the RFP calculation.

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Appendix 1 - Sheet 05

2026 RFP NO_x Substitution Analysis

DFW Eight-Hour Ozone Nonattainment Area

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

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 10 DFW base year emissions (tpd)	448.08	493.56
Line 2	2026 10 DFW controlled RFP EI (tpd)	196.83	404.46
Line 3	Total actual reductions for 9 PDC 2011 to 2026 (Line 1 minus Line 2) (tpd)	251.25	89.10
Line 4	Percent actual reductions for 9 PDC 2011 to 2026 (percent Line 3 is of Line 1) (%)	56.07	18.05
Line 5	2026 10 DFW target RFP EI (tpd)	332.66	413.66
Line 6	10 DFW 2026 total target reductions for 2011 to 2020 (Line 1 minus Line 5) (tpd)	115.42	79.90
Line 7	Percent target reductions for 2011 to 2026 (percent Line 6 is of Line 1) (%)	25.76	16.19
Line 8	Percent surplus or shortfall (percent actual minus percent target, Line 4 minus Line 7) (%)	30.31	1.86
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.

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Appendix 1 - Sheet 6

Contingency Demonstration for RFP Milestone

DFW Eight-Hour Ozone Nonattainment Area

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

DFW 2008 Ozone NAAQS Nonattainment Area Severe RFP Contingency Plan as Adopted (tons per day unless otherwise noted)

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 Plan Description	NO _x (tpd)	VOC (tpd)
10-county DFW 2011 controlled base year EI	448.08	493.56
Percent for contingency calculation (total of 3%)	0.00	3.00
10-county DFW RFP required contingency reductions (Line 1 x Line 2 expressed as a percent)	0.00	14.81
Total 10-county DFW contingency reductions	0.00	18.20
Contingency Excess (+) or Shortfall (-)	0.00	3.39
Are contingency reductions greater than or equal to the required contingency reduction?	Yes	Yes

Note 1: The RFP milestone contingency controls and associated control reductions are entered on Tab 28 Enter ContReductions 10 MS.

[28 Enter ContReductions 10 MS](#)

DFW 2008 Ozone NAAQS Nonattainment Area Severe RFP Contingency Plan as Adopted and Industrial Adhesives Contingency Measure Corrections Rule (tons per day unless otherwise noted)

Contingency Plan Description	NO _x (tpd)	VOC (tpd)
10-county DFW 2011 controlled base year EI	448.08	493.56
Percent for contingency calculation (total of 3%)	0.00	3.00
10-county DFW RFP required contingency reductions (Line 1 x Line 2 expressed as a percent)	0.00	14.81
10-county DFW milestone contingency reductions adopted	0.00	18.20
10-county DFW contingency reductions from Industrial Adhesives Contingency Measures Corrections Rule	0.00	2.26
Total 10-county DFW contingency reductions (Line 4 + Line 5)	0.00	20.46
Contingency Excess (+) or Shortfall (-)	0.00	5.65
Are contingency reductions greater than or equal to required contingency reductions?	Yes	Yes

Note 2: The IACMCR milestone contingency controls and associated control reductions are entered on Tab 28a Enter ContRed 10 MS IACMCR.

[28a Enter ContRed 10 MS IACMCR](#)

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Appendix 1 - Sheet 7

Contingency Demonstration for RFP and Attainment Demonstration (AD)

DFW Eight-Hour Ozone Nonattainment Area

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

DFW 2008 Ozone NAAQS Nonattainment Area Severe RFP Contingency Plan as Adopted (tons per day unless otherwise noted)

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 Plan Description	NO_x (tpd)	VOC (tpd)
10-county DFW 2011 base year EI	448.08	493.56
Percent for contingency calculation (total of 3%)	0.00	3.00
10-county DFW required contingency reductions (Line 1 x Line 2 expressed as a percent)	0.00	14.81
Total 10-county DFW contingency reductions	0.00	18.20
Contingency Excess (+) or Shortfall (-)	0.00	3.39
Are contingency reductions greater than or equal to the required contingency reduction?	Yes	Yes

Note 1: The Attainment Year contingency controls and associated control reductions are entered on Tab 29 Enter ContReductions 10 AY.

[29 Enter ContReductions 10 AY](#)

DFW 2008 Ozone NAAQS Nonattainment Area Severe RFP Contingency Plan as Adopted and Industrial Adhesives Contingency Measure Corrections Rule (tons per day unless otherwise noted)

Contingency Plan Description	NO_x (tpd)	VOC (tpd)
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Appendix 1 - Sheet 08

Calculations: 2023 RFP MVEBs

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 2023 DFW RFP MVEB

Description	NO_x	VOC
2023 9 PDC uncontrolled on-road emissions projection	104.27	53.33
2023 1 NDC uncontrolled on-road emissions projection	2.81	0.77
2023 10 DFW uncontrolled on-road emissions projection	107.08	54.10
Total 2023 10 DFW on-road mobile source RFP control reductions	27.53	12.48
2023 10 DFW On-road mobile controlled inventory	79.55	41.62
Transportation conformity safety margin	8.01	4.18
Excess emissions reduction for 2023	151.22	9.29
Is excess emissions enough for safety margin?	yes	yes
2023 10 DFW MVEB with safety margin	87.56	45.80

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

Appendix 1 - Sheet 09

Calculations: 2026 RFP MVEBs

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 2026 DFW RFP MVEB

Description	NO_x	VOC
2026 9 PDC uncontrolled on-road emissions projection	83.73	45.81
2026 1 NDC uncontrolled on-road emissions projection	2.36	0.65
2026 10 DFW uncontrolled on-road emissions projection	86.09	46.46
Total 2026 10 DFW on-road mobile source RFP control reductions	19.37	11.07
2026 10 DFW On-road mobile controlled inventory	66.72	35.39
Transportation conformity safety margin	6.79	3.68
Excess emissions reduction for 2026	135.83	9.20
Is excess emissions enough for safety margin?	yes	yes
2026 10 DFW MVEB with safety margin	73.51	39.07

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

Appendix 1 - Sheet 11

Quantify the Reductions to Meet the Initial 15%, the 3% per Year and Contingency Requirements
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, 2026. 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. According to FCAA, §172(c)(9), the RFP contingency plan includes required emissions reductions, calculated as a 3% emissions reduction of the base year inventory, in case of failure to demonstrate progress for a milestone or attainment year. 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 BY EI NO _x (tpd)	RFP BY EI VOC (tpd)	Required Reductions NO _x (tpd)	Required Reductions VOC (tpd)
2011	N/A	N/A	N/A	414.84	459.59	N/A	N/A
2017	15.0	10.0	5.0	414.84	459.59	41.48	22.98
2020	9.0	5.0	4.0	414.84	459.59	20.74	18.38
2023	9.0	4.5	4.5	414.84	459.59	18.67	20.68
2026	9.0	7.0	2.0	414.84	459.59	29.04	9.19

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 BY EI NO _x (tpd)	RFP BY EI VOC (tpd)	Required Reductions NO _x (tpd)	Required Reductions VOC (tpd)
2011	N/A	N/A	N/A	33.24	33.97	N/A	N/A
2017	15.0	N/A	15.0	33.24	33.97	0.00	5.10
2020	9.0	5.0	4.0	33.24	33.97	1.66	1.36
2023	9.0	4.5	4.5	33.24	33.97	1.50	1.53
2026	9.0	7.0	2.0	33.24	33.97	2.33	0.68

Notes:

- 1) Column headings changed from adjusted base year (ABY) to base year (BY) to account for the current regulatory process that does not require accounting for non-creditable pre-1990 on-road mobile controls
- 2) 2008 eight-hour ozone NAAQS severe classification on-road inventories were calculated using MOVES3. For EIs calculated using pre-MOVES3 models, the 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.

Appendix 1 - Sheet 12

Target Calculations 9 PDC: 2017, 2023 and 2026 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	414.84
2017, 9 PDC	414.84	0.00	41.48	373.36
2020, 9 PDC	373.36	0.00	20.74	352.62
2023, 9 PDC	352.62	0.00	18.67	333.95
2026, 9 PDC	333.95	0.00	29.04	304.91

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	459.59
2017, 9 PDC	459.59	0.00	22.98	436.61
2020, 9 PDC	436.61	0.00	18.38	418.23
2023, 9 PDC	418.23	0.00	20.68	397.55
2026, 9 PDC	397.55	0.00	9.19	388.36

1)The EPA published the final implementation rule for the 2008 ozone NAAQS (SIP requirements rule in the Federal Register (FR) on March 6, 2015 (80 FR 12263). The final rule removed the requirement for states to account for non-creditable reductions when determining compliance with Reasonable Further Progress (RFP) emission reduction requirements. There is a toggle on Sheet 14 of this spreadsheet to turn the effects of non-creditable reductions either off or on. The default toggle is "No," which turns off the calculated effects of pre-1990 control measures. The non-creditable reductions are calculated on Sheet 11 for use in the calculation of RFP Targets above. If the effects of non-creditable reductions are turned off on Sheet 14, the values for the non-creditable reductions will still be calculated on Sheet 11, however, zeros will automatically be substituted in the target calculations above. Should there be a need to perform the RFP calculations accounting for the effects of pre-1990 control reductions, the toggle on Sheet 14 can be set to "Yes" and the values above will automatically be used in the calculation of the RFP targets.

2) A result of removing the non-creditable reductions from the RFP calculations is the RFP adjusted base year inventory (ABY) becomes equal to the RFP base year inventory. The ABY inventory is used to calculate the Post-2011 Percent Reductions used above. There is a toggle on Sheet 14 of this spreadsheet to turn the effects of non-creditable reductions either off or on. The default toggle is "No," which turns off the calculated effects of pre-1990 control measures. Should there be a need to perform the RFP calculations accounting for the effects of pre-1990 control reductions, the toggle on Sheet 14 can be set to "Yes."

Appendix 1 - Sheet 13

Target Calculations 1 NDC: 2017, 2020, 2023 and 2026 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	33.24
2017, 1 NDC	33.24	0.00	0.00	33.24
2020, 1 NDC	33.24	0.00	1.66	31.58
2023, 1 NDC	31.58	0.00	1.50	30.08
2026, 1 NDC	30.08	0.00	2.33	27.75

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	33.97
2017, 1 NDC	33.97	0.00	5.10	28.87
2020, 1 NDC	28.87	0.00	1.36	27.51
2023, 1 NDC	27.51	0.00	1.53	25.98
2026, 1 NDC	25.98	0.00	0.68	25.30

1)The EPA published the final implementation rule for the 2008 ozone NAAQS (SIP requirements rule) in the Federal Register (FR) on March 6, 2015 (80 FR 12263). The final rule removed the requirement for states to account for non-creditable reductions when determining compliance with Reasonable Further Progress (RFP) emission reduction requirements. There is a toggle on Sheet 14 of this spreadsheet to turn the effects of non-creditable reductions either off or on. The default toggle is "No," which turns off the calculated effects of pre-1990 control measures. The non-creditable reductions are calculated on Sheet 11 for use in the calculation of RFP Targets above. If the effects of non-creditable reductions are turned off on Sheet 14, the values for the non-creditable reductions will still be calculated on Sheet 11, however, zeros will automatically be substituted in the target calculations above. Should there be a need to perform the RFP calculations accounting for the effects of pre-1990 control reductions, the toggle on Sheet 14 can be set to "Yes" and the values above will automatically be used in the calculation of the RFP targets.

2) A result of removing the non-creditable reductions from the RFP calculations is the RFP adjusted base year inventory (ABY) becomes equal to the RFP base year inventory. The ABY inventory is used to calculate the Post-2011 Percent Reductions used above. There is a toggle on Sheet 14 of this spreadsheet to turn the effects of non-creditable reductions either off or on. The default toggle is "No," which turns off the calculated effects of pre-1990 control measures. Should there be a need to perform the RFP calculations accounting for the effects of pre-1990 control reductions, the toggle on Sheet 14 can be set to "Yes."

Appendix 1 - Sheet 14

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

The total reduction for 2023 is 33% which includes, the initial 15% reduction from the baseline 2011 through 2017 (VOC only for the one NDC and NO_x may be substituted for VOC for the nine PDCs); the 9% reduction between 2017 and 2020 (3% times 3 years); and the 9% reduction between 2020 and 2023 (3% times 3 years). The total reduction for 2026 is 42% which includes the 33% reduction from base year 2011 through milestone year 2023, and the 9% (3% times 3 years) incremental reduction from milestone year 2023 to attainment year 2026. Input percentage of NO_x and VOC reductions to be used to demonstrate RFP for 2023 and 2026. 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
2020, 1 Newly Designated County	5	4	9
2020, 9 Previously Designated Counties	5	4	9
2023, 1 Newly Designated County	4.5	4.5	9
2023, 9 Previously Designated Counties	4.5	4.5	9
2026, 1 Newly Designated County	7	2	9
2026, 9 Previously Designated Counties	7	2	9

A total of 3% RFP contingency measures reductions are required for the RFP milestone contingency. A 3% contingency is also required for the RFP attainment contingency. The contingency reductions can be from NO_x or VOC. Input only the percent of the contingency reductions that will be from NO_x. The VOC value will be calculated automatically as 3 minus the NO_x percent.

Contingency Reduction Percent VOC and NO _x for RFP Milestone and Attainment			
Contingency Year	NO _x %	VOC %	Total Percent
10 DFW RFP Milestone Contingency	0	3	3
10 DFW Attainment Contingency	0	3	3

If there are excess RFP control reductions, a transportation conformity safety margin is allowed. The safety margin for this SIP revision is calculated based upon a percentage of excess emissions. If a safety margin will be used, enter the percentage of excess VOC and NO_x emissions to be used below. The safety margin amount must be less than or equal to the excess reductions after demonstrating RFP. The percentage entered must be between 0 and 100. An error message will appear if a value over 100 is entered. Adjusting the safety margin below will automatically update the MVEB calculation to include the percent of excess emissions entered. For reference, the corresponding percent of the MVEB and tons per day are provided.

RFP Milestone Year	Pollutant	Transportation Conformity Safety Margin % of Excess RFP Reductions	Percent of On-road EI (For Reference)	Tons Per Day Change to On-road EI (For Reference)
2023	NO _x	5.3	10.07	8.01
	VOC	45.0	10.04	4.18
2026	NO _x	5.0	10.18	6.79
	VOC	40.0	10.40	3.68

The EPA published the final implementation rule for the 2008 ozone NAAQS (SIP requirements rule) in the *Federal Register* (FR) on March 6, 2015 (80 FR 12263). The final rule removed the requirement for states to account for non-creditable reductions when determining compliance with Reasonable Further Progress (RFP) emission reduction requirements. The Federal Clean Air Act (FCAA) §182(b)(1)(D) specifies four categories of control measures that are not creditable toward the 15% RFP requirement under FCAA §182(b)(1)(A). The EPA stated that for three of the categories, reductions from the measures were achieved many years ago, so the question of creditability is moot for RFP credits for the 2008 eight-hour ozone standard. For the one remaining category, measures related to motor vehicle exhaust or evaporative emissions promulgated by January 1, 1990, citing an assessment that at this point in history the ongoing emission reductions from pre-1990 control measures in this category are *de minimis*, the EPA finalized an approach that eliminates any obligation for states to continue to perform emission reduction calculations for the pre-1990 control measures listed under FCAA §182(b)(1)(D)(i). The "Yes/No" drop-down list in the table below allows non-creditable emission reductions to be turned on or off for this SIP revision. The default toggle is "No," which turns off the calculated effects of pre-1990 control measures. Should there be a need to perform the RFP calculations accounting for the effects of pre-1990 control reductions, the toggle can be set to "Yes."

Non-creditable Calculation	Include Non-creditable Reductions in RFP Target Calculation?
Applies to 2017, 2020, 2023, and 2026, VOC and NO _x , nine county group and one county group	No

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
2023	0.00	0.00
2026	0.00	0.00

Appendix 1 - Sheet 15

Enter Airport 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	15.33	15.33	0.00	0.00	3.79	3.79	0.00	0.00
9 PDC 2023	16.00	15.69	0.30	1.91	4.27	4.22	0.05	1.06
9 PDC 2026	18.37	18.01	0.36	1.96	4.60	4.54	0.05	1.17

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	0.02	0.02	0.00	0.00
1 NDC 2023	0.01	0.01	0.00	0.00	0.03	0.03	0.00	0.00
1 NDC 2026	0.01	0.01	0.00	0.00	0.03	0.03	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	15.34	15.34	0.00	0.00	3.81	3.81	0.00	0.00
10 County total 2023	16.01	15.70	0.30	1.90	4.29	4.25	0.05	1.05
10 County total 2026	18.38	18.02	0.36	1.96	4.63	4.57	0.05	1.17

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 airport emissions inventory includes emissions from: aircraft; aircraft auxiliary power units (APU); and, airport ground support equipment (GSE).

Appendix 1 - Sheet 16

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	37.69	37.69	0.00	0.00	262.36	262.36	0.00	0.00
9 PDC 2023	34.04	34.04	0.00	0.00	287.82	287.82	0.00	0.00
9 PDC 2026	34.40	34.40	0.00	0.00	286.99	286.99	0.00	0.00

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	13.29	13.29	0.00	0.00	28.95	28.95	0.00	0.00
1 NDC 2023	3.47	3.47	0.00	0.00	13.75	13.75	0.00	0.00
1 NDC 2026	1.82	1.82	0.00	0.00	9.26	9.26	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	50.98	50.98	0.00	0.00	291.31	291.31	0.00	0.00
10 County total 2023	37.51	37.51	0.00	0.00	301.57	301.57	0.00	0.00
10 County total 2026	36.22	36.22	0.00	0.00	296.25	296.25	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.

Appendix 1 - Sheet 17

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.

Appendix 1 - Sheet 18

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	26.82	12.45	14.370	53.6	4.32	0.60	3.720	86.1
9 PDC 2023	1.41	0.39	1.020	72.3	0.23	0.02	0.210	91.3
9 PDC 2026	1.41	0.39	1.020	72.3	0.23	0.02	0.210	91.3

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	4.28	1.99	2.29	53.50	0.69	0.10	0.59	85.51
1 NDC 2023	0.28	0.08	0.20	71.43	0.05	0.01	0.04	80.00
1 NDC 2026	0.28	0.08	0.20	71.43	0.05	0.00	0.05	100.00

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	31.10	14.44	16.66	53.57	5.01	0.70	4.31	86.03
10 County total 2023	1.69	0.47	1.22	72.19	0.28	0.03	0.25	89.29
10 County total 2026	1.69	0.47	1.22	72.19	0.28	0.02	0.26	92.86

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.

Appendix 1 - Sheet 19

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	20.48	12.09	8.388	41.0	0.71	0.71	0.000	0.0
9 PDC 2023	8.51	7.84	0.669	7.9	0.33	0.33	0.000	0.0
9 PDC 2026	7.21	6.55	0.662	9.2	0.27	0.27	0.000	0.0

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	1.42	0.98	0.44	31.26	0.06	0.06	0.00	0.00
1 NDC 2023	0.65	0.61	0.03	5.10	0.02	0.02	0.00	0.00
1 NDC 2026	0.54	0.50	0.04	6.68	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	21.90	13.07	8.83	40.33	0.77	0.77	0.00	0.00
10 County Total 2023	9.16	8.46	0.70	7.66	0.35	0.35	0.00	0.00
10 County Total 2026	7.75	7.05	0.70	9.01	0.29	0.29	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.

Appendix 1 - Sheet 20

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	109.62	60.75	48.866	44.6	171.88	59.42	112.457	65.4
9 PDC 2023	166.81	36.90	129.919	77.9	226.68	44.84	181.840	80.2
9 PDC 2026	176.02	34.15	141.864	80.6	239.58	46.36	193.216	80.6

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	2.31	1.32	0.99	42.69	1.35	0.67	0.69	50.68
1 NDC 2023	2.77	0.47	2.30	83.05	1.64	0.34	1.31	79.52
1 NDC 2026	2.42	0.39	2.03	83.74	1.67	0.32	1.35	80.67

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	111.93	62.08	49.85	44.54	173.23	60.09	113.14	65.31
10 County total 2023	169.59	37.37	132.22	77.97	228.32	45.17	183.15	80.22
10 County total 2026	178.44	34.55	143.89	80.64	241.25	46.69	194.56	80.65

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.

Appendix 1 - Sheet 21

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	245.19	245.19	0.000	0.0	105.17	105.17	0.000	0.0
9 PDC 2023	104.27	77.14	27.130	26.0	53.33	40.95	12.380	23.2
9 PDC 2026	83.73	64.56	19.170	22.9	45.81	34.83	10.980	24.0

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	7.04	7.04	0.00	0.00	1.82	1.82	0.00	0.00
1 NDC 2023	2.81	2.42	0.39	13.88	0.77	0.67	0.10	12.99
1 NDC 2026	2.36	2.16	0.20	8.47	0.65	0.56	0.09	13.85

Total 10 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	252.23	252.23	0.00	0.00	106.99	106.99	0.00	0.00
10 County total 2023	107.08	79.56	27.52	25.70	54.10	41.62	12.48	23.07
10 County total 2026	86.09	66.72	19.37	22.50	46.46	35.39	11.07	23.83

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.

Appendix 1 - Sheet 23

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	27.54	27.54	0.00	0.0
9 PDC 2023	28.21	28.21	0.00	0.0	18.72	18.72	0.00	0.0
9 PDC 2026	28.21	28.21	0.00	0.0	18.72	18.72	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	2.35	2.35	0.00	0.00
1 NDC 2023	5.25	5.25	0.00	0.00	2.46	2.46	0.00	0.00
1 NDC 2026	5.25	5.25	0.00	0.00	2.46	2.46	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	29.89	29.89	0.00	0.00
10 County total 2023	33.46	33.46	0.00	0.00	21.18	21.18	0.00	0.00
10 County total 2026	33.46	33.46	0.00	0.00	21.18	21.18	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

Appendix 1 - Sheet 24

Enter 2023 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 2023 NO _x Emissions Reductions (tpd)	Total 2011 to 2023 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 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	0.00	0.00	Yes	Yes
Reformulated Gasoline (RFG)/East Texas Regional Low RVP/Low Sulfur Gasoline/Ultra Low Sulfur Diesel	OR	24.79	7.36	Yes	Yes
Inspection and Maintenance (I/M)	OR	2.34	5.02	Yes	Yes
On-road TxLED	OR	0.00	0.00	Yes	Yes
Tier I and II locomotive NO _x standards	NR	0.67	0.00	Yes	No
Small non-road spark ignition (SI) engines (Phase I)	NR	-7.37	61.30	Yes	No
Heavy duty non-road engines	NR	0.93	3.32	Yes	No
Tiers 2 and 3 non-road diesel engines	NR	3.51	0.65	Yes	No
Small non-road SI engines (Phase II)	NR	5.28	57.65	Yes	No
Large non-road SI & recreational marine	NR	50.20	17.55	Yes	No
Non-road TxLED	NR	0.00	0.00	Yes	No
Non-road RFG	NR	-0.01	0.86	Yes	No
Tier 4 non-road diesel engines	NR	72.34	15.05	Yes	No
Diesel recreational marine	NR	0.01	0.00	Yes	No
Small SI (Phase III)	NR	5.03	25.47	Yes	No
Chapter 117 NO _x area source engine controls	Area	0.00	0.00	Yes	No
Drilling Rigs: Federal Engine Standards	NR	1.02	0.21	Yes	No
Drilling Rigs: Texas Low Emission Diesel	NR	0.00	0.00	Yes	No
Locomotive: Texas Low Emission Diesel	NR	0.00	0.00	Yes	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
Total		158.74	194.43		

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

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.
- 10) Three on-road control reduction values reflect corrections for rounding errors. The three values are: NO_x FMVCP minus 0.01; VOC FMVCP plus 0.01; and, NO_x on-road fuel programs minus 0.01.
- 11) In Feb 2023, the EPA released a new method to determine emissions reductions from TxLED. The new method reduces TxLED emissions reductions by approximately 90%.

Appendix 1 - Sheet 25

Enter 2023 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 2023 NO _x Emissions Reductions (tpd)	Total 2011 to 2023 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	0.00	0.00	Yes	Yes
Reformulated Gasoline (RFG)/East Texas Regional Low RVP/Low Sulfur Gasoline/Ultra Low Sulfur Diesel	OR	0.40	0.10	Yes	Yes
Inspection and Maintenance (I/M)	OR	0.00	0.00	Yes	Yes
On-road TxLED	OR	0.00	0.00	Yes	Yes
Tier I and II locomotive NOX standards	NR	0.03	0.00	Yes	No
Small non-road spark ignition (SI) engines (Phase I)	NR	-0.03	0.21	Yes	No
Heavy duty non-road engines	NR	0.00	0.24	Yes	No
Tiers 2 and 3 non-road diesel engines	NR	0.06	0.01	Yes	No
Small non-road SI engines (Phase II)	NR	0.02	0.17	Yes	No
Large non-road SI & recreational marine	NR	0.20	0.20	Yes	No
Non-road TxLED	NR	0.00	0.00	Yes	No
Non-road RFG	NR	0.00	0.00	Yes	No
Tier 4 non-road diesel engines	NR	2.03	0.27	Yes	No
Diesel recreational marine	NR	0.00	0.00	Yes	No
Small SI (Phase III)	NR	0.03	0.21	Yes	No
Chapter 117 NOX area source engine controls	Area	0.00	0.00	Yes	No
Drilling Rigs: Federal Engine Standards	NR	0.20	0.01	Yes	No
Drilling Rigs: Texas Low Emission Diesel	NR	0.00	0.00	Yes	No
Locomotive: Texas Low Emission Diesel	NR	0.00	0.00	Yes	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
Total		2.94	1.42		

Notes

Please see notes for the control reductions on:
[26 Enter Reductions 9 PDC 2023](#)

Appendix 1 - Sheet 26

Enter 2026 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 2026 NO _x Emissions Reductions (tpd)	Total 2011 to 2026 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 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	0.00	0.00	Yes	Yes
Reformulated Gasoline (RFG)/East Texas Regional Low RVP/Low Sulfur Gasoline/Ultra Low Sulfur Diesel	OR	17.41	5.97	Yes	Yes
Inspection and Maintenance (I/M)	OR	1.76	5.01	Yes	Yes
On-road TxLED	OR	0.00	0.00	Yes	Yes
Tier I and II locomotive NO _x standards	NR	0.67	0.00	Yes	No
Small non-road spark ignition (SI) engines (Phase I)	NR	-7.81	64.88	Yes	No
Heavy duty non-road engines	NR	0.50	3.30	Yes	No
Tiers 2 and 3 non-road diesel engines	NR	2.77	0.49	Yes	No
Small non-road SI engines (Phase II)	NR	5.59	60.74	Yes	No
Large non-road SI & recreational marine	NR	56.96	19.72	Yes	No
Non-road TxLED	NR	0.00	0.00	Yes	No
Non-road RFG	NR	-0.01	0.90	Yes	No
Tier 4 non-road diesel engines	NR	78.50	16.09	Yes	No
Diesel recreational marine	NR	0.01	0.00	Yes	No
Small SI (Phase III)	NR	5.36	27.09	Yes	No
Chapter 117 NO _x area source engine controls	Area	0.00	0.00	Yes	No
Drilling Rigs: Federal Engine Standards	NR	1.02	0.21	Yes	No
Drilling Rigs: Texas Low Emission Diesel	NR	0.00	0.00	Yes	No
Locomotive: Texas Low Emission Diesel	NR	0.00	0.00	Yes	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
Total		162.72	204.41		

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

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.
- 10) Three on-road control reduction values reflect corrections fo rounding errors. The three values are: NO_x FMVCP minus 0.01; VOC FMVCP plus 0.01; and, NO_x on-road fuel programs minus 0.01.

11) In Feb 2023, the EPA released a new method to determine emissions reductions from TxLED. The new method reduces TxLED emissions reductions by approximately 90%.

Appendix 1 - Sheet 27

Enter 2026 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 2026 NO _x Emissions Reductions (tpd)	Total 2011 to 2026 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	0.00	0.00	Yes	Yes
Reformulated Gasoline (RFG)/East Texas Regional Low RVP/Low Sulfur Gasoline/Ultra Low Sulfur Diesel	OR	0.20	0.09	Yes	Yes
Inspection and Maintenance (I/M)	OR	0.00	0.00	Yes	Yes
On-road TxLED	OR	0.00	0.00	Yes	Yes
Tier I and II locomotive NOX standards	NR	0.03	0.00	Yes	No
Small non-road spark ignition (SI) engines (Phase I)	NR	-0.03	0.22	Yes	No
Heavy duty non-road engines	NR	0.00	0.24	Yes	No
Tiers 2 and 3 non-road diesel engines	NR	0.05	0.01	Yes	No
Small non-road SI engines (Phase II)	NR	0.02	0.18	Yes	No
Large non-road SI & recreational marine	NR	0.22	0.22	Yes	No
Non-road TxLED	NR	0.00	0.00	Yes	No
Non-road RFG	NR	0.00	0.00	Yes	No
Tier 4 non-road diesel engines	NR	1.75	0.25	Yes	No
Diesel recreational marine	NR	0.00	0.00	Yes	No
Small SI (Phase III)	NR	0.03	0.22	Yes	No
Chapter 117 NOX area source engine controls	Area	0.00	0.00	Yes	No
Drilling Rigs: Federal Engine Standards	NR	0.20	0.05	Yes	No
Drilling Rigs: Texas Low Emission Diesel	NR	0.00	0.00	Yes	No
Locomotive: Texas Low Emission Diesel	NR	0.00	0.00	Yes	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
Total		2.46	1.49		

Notes

Please see notes for the control reductions on:

[26 Enter Reductions 9 PDC 2023](#)

Appendix 1 - Sheet 30

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	27.54
Area Source PDC 2011 EI	37.69	262.36
On-road mobile PDC 2011 EI	245.19	105.17
Non-road mobile PDC 2011 EI	100.62	64.52
Biogenic PDC 2011 EI (see Note 1)	See Note 1	See Note 1
Total PDC 2011 RFP Base Year Inventory with Adjustments	414.84	459.59

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.

4) 9 PDC means values are for the nine counties that had an existing designation under the one-hour or the 1997 eight hour ozone standards and were also designated under the 2008 eight-hour ozone standard. Includes: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant Counties.

Appendix 1 - Sheet 31

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	2.35
Area Source NDC 2011 EI	13.29	28.95
On-Road Mobile NDC 2011 EI	7.04	1.82
Non-Road Mobile NDC 2011 EI	4.30	0.85
Biogenic NDC 2011 EI	See Note 1	See Note 1
Total NDC 2011 RFP Base Year Inventory with Adjustments	33.24	33.97

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.

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.

Appendix 1 - Sheet 32

2023 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 2023 RFP milestone year. The totals for each source category used in these calculations were entered on enter EI sheets.

Forecasted 2023 Uncontrolled or Existing Control Emissions Inventory with pre-2011 Controls		
Emissions Description	NO _x (tpd)	VOC (tpd)
Point Source	28.21	18.72
Area Source	34.04	287.82
On-Road Mobile Source	104.27	53.33
Non-Road Mobile Source	192.73	231.51
Total	359.25	591.38

Appendix 1 - Sheet 33

2023 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 NOX and VOC emissions (tpd) for the 2023 RFP milestone year. The totals for each source category used in these calculations were entered on enter EI sheets.

Forecasted 2023 Uncontrolled or Existing Control Emissions Inventory with pre-2011 Controls		
Emissions Description	NO _x (tpd)	VOC (tpd)
Point Source	5.25	2.46
Area Source	3.47	13.75
On-Road Mobile Source	2.81	0.77
Non-Road Mobile Source	3.71	1.74
Total	15.24	18.72

Appendix 1 - Sheet 34

2026 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 2026 RFP milestone year. The totals for each source category used in these calculations were entered on enter EI sheets.

Forecasted 2026 Uncontrolled or Existing Control Emissions Inventory with pre-2011 Controls		
Emissions Description	NO _x (tpd)	VOC (tpd)
Point Source	28.21	18.72
Area Source	34.40	286.99
On-Road Mobile Source	83.73	45.81
Non-Road Mobile Source	203.01	244.68
Total	349.35	596.20

Appendix 1 - Sheet 35

2026 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 NOX and VOC emissions (tpd) for the 2026 RFP milestone year. The totals for each source category used in these calculations were entered on enter EI sheets.

Forecasted 2026 Uncontrolled or Existing Control Emissions Inventory with pre-2011 Controls		
Emissions Description	NO _x (tpd)	VOC (tpd)
Point Source	5.25	2.46
Area Source	1.82	9.26
On-Road Mobile Source	2.36	0.65
Non-Road Mobile Source	3.25	1.77
Total	12.68	14.14

Appendix 1 - Sheet 48

Calculations: Combined 9 PDC and 1 NDC 2011 to 2023 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 2023." The reduction is the reduction that is creditable from each control between 2011 and 2023. If the control has been turned off by inputting a "No" in the "Use this control for 2023 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 2023 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 2023 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 2023 NOX Emissions Reductions (tpd)	Total 2011 to 2023 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	0.00	0.00	Yes	Yes
Reformulated Gasoline (RFG)/East Texas Regional Low RVP/Low Sulfur Gasoline/Ultra Low Sulfur Diesel	OR	25.19	7.46	Yes	Yes
Inspection and Maintenance (I/M)	OR	2.34	5.02	Yes	Yes
On-road TxLED	OR	0.00	0.00	Yes	Yes
Tier I and II locomotive NOX standards	NR	0.70	0.00	Yes	No
Small non-road spark ignition (SI) engines (Phase I)	NR	-7.40	61.51	Yes	No
Heavy duty non-road engines	NR	0.93	3.56	Yes	No
Tiers 2 and 3 non-road diesel engines	NR	3.57	0.66	Yes	No
Small non-road SI engines (Phase II)	NR	5.30	57.82	Yes	No
Large non-road SI & recreational marine	NR	50.40	17.75	Yes	No
Non-road TxLED	NR	0.00	0.00	Yes	No
Non-road RFG	NR	-0.01	0.86	Yes	No
Tier 4 non-road diesel engines	NR	74.37	15.32	Yes	No
Diesel recreational marine	NR	0.01	0.00	Yes	No
Small SI (Phase III)	NR	5.06	25.68	Yes	No
Chapter 117 NOX area source engine controls	Area	0.00	0.00	Yes	No
Drilling Rigs: Federal Engine Standards	NR	1.22	0.22	Yes	No
Drilling Rigs: Texas Low Emission Diesel	NR	0.00	0.00	Yes	No
Locomotive: Texas Low Emission Diesel	NR	0.00	0.00	Yes	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
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This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
Total 2020 10 DFW RFP Control Reductions		161.68	195.86		

Appendix 1 - Sheet 49

Calculations: 2023 to 2026 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 2023." The reduction is the reduction that is creditable from each control between 2023 and 2026. If the control has been turned off by inputting a "No" in the "Use this control for 2020 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 2023 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 2023 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 2023 to 2026 NOX Emissions Reductions (tpd)	Total 2023 to 2026 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	0.00	0.00	Yes	Yes
Reformulated Gasoline (RFG)/East Texas Regional Low RVP/Low Sulfur Gasoline/Ultra Low Sulfur Diesel	OR	-7.38	-1.39	Yes	Yes
Inspection and Maintenance (I/M)	OR	-0.58	-0.01	Yes	Yes
On-road TxLED	OR	0.00	0.00	Yes	Yes
Tier I and II locomotive NOX standards	NR	0.00	0.00	Yes	No
Small non-road spark ignition (SI) engines (Phase I)	NR	-0.44	3.58	Yes	No
Heavy duty non-road engines	NR	-0.43	-0.02	Yes	No
Tiers 2 and 3 non-road diesel engines	NR	-0.74	-0.16	Yes	No
Small non-road SI engines (Phase II)	NR	0.31	3.09	Yes	No
Large non-road SI & recreational marine	NR	6.76	2.17	Yes	No
Non-road TxLED	NR	0.00	0.00	Yes	No
Non-road RFG	NR	0.00	0.04	Yes	No
Tier 4 non-road diesel engines	NR	6.16	1.04	Yes	No
Diesel recreational marine	NR	0.00	0.00	Yes	No
Small SI (Phase III)	NR	0.33	1.62	Yes	No
Chapter 117 NOX area source engine controls	Area	0.00	0.00	Yes	No
Drilling Rigs: Federal Engine Standards	NR	0.00	0.00	Yes	No
Drilling Rigs: Texas Low Emission Diesel	NR	0.00	0.00	Yes	No
Locomotive: Texas Low Emission Diesel	NR	0.00	0.00	Yes	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
Total 2020 9 PDC RFP Control Reductions		3.99	9.96		

Appendix 1 - Sheet 50

Calculations: 2023 to 2026 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 2023." The reduction is the reduction that is creditable from each control between 2023 and 2026. If the control has been turned off by inputting a "No" in the "Use this control for 2023 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 2023 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 2023 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 2023 to 2026 NOX Emissions Reductions (tpd)	Total 2023 to 2026 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	0.00	0.00	Yes	Yes
Reformulated Gasoline (RFG)/East Texas Regional Low RVP/Low Sulfur Gasoline/Ultra Low Sulfur Diesel	OR	-0.20	-0.01	Yes	Yes
Inspection and Maintenance (I/M)	OR	0.00	0.00	Yes	Yes
On-road TxLED	OR	0.00	0.00	Yes	Yes
Tier I and II locomotive NOX standards	NR	0.00	0.00	Yes	No
Small non-road spark ignition (SI) engines (Phase I)	NR	0.00	0.01	Yes	No
Heavy duty non-road engines	NR	0.00	0.00	Yes	No
Tiers 2 and 3 non-road diesel engines	NR	-0.01	0.00	Yes	No
Small non-road SI engines (Phase II)	NR	0.00	0.01	Yes	No
Large non-road SI & recreational marine	NR	0.02	0.02	Yes	No
Non-road TxLED	NR	0.00	0.00	Yes	No
Non-road RFG	NR	0.00	0.00	Yes	No
Tier 4 non-road diesel engines	NR	-0.28	-0.02	Yes	No
Diesel recreational marine	NR	0.00	0.00	Yes	No
Small SI (Phase III)	NR	0.00	0.01	Yes	No
Chapter 117 NOX area source engine controls	Area	0.00	0.00	Yes	No
Drilling Rigs: Federal Engine Standards	NR	0.00	0.04	Yes	No
Drilling Rigs: Texas Low Emission Diesel	NR	0.00	0.00	Yes	No
Locomotive: Texas Low Emission Diesel	NR	0.00	0.00	Yes	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
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This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
Total 2020 1 NDC RFP Control Reductions		-0.47	0.06		

Appendix 1 - Sheet 51

Calculations: Combined 9 PDC and 1 NDC 2023 to 2026 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 2023." The reduction is the reduction that is creditable from each control between 2023 and 2026. If the control has been turned off by inputting a "No" in the "Use this control for 2023 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 2023 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 2023 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 2023 to 2026 NOX Emissions Reductions (tpd)	Total 2023 to 2026 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	0.00	0.00	Yes	Yes
Reformulated Gasoline (RFG)/East Texas Regional Low RVP/Low Sulfur Gasoline/Ultra Low Sulfur Diesel	OR	-7.58	-1.40	Yes	Yes
Inspection and Maintenance (I/M)	OR	-0.58	-0.01	Yes	Yes
On-road TxLED	OR	0.00	0.00	Yes	Yes
Tier I and II locomotive NOX standards	NR	0.00	0.00	Yes	No
Small non-road spark ignition (SI) engines (Phase I)	NR	-0.44	3.59	Yes	No
Heavy duty non-road engines	NR	-0.43	-0.02	Yes	No
Tiers 2 and 3 non-road diesel engines	NR	-0.75	-0.16	Yes	No
Small non-road SI engines (Phase II)	NR	0.31	3.10	Yes	No
Large non-road SI & recreational marine	NR	6.78	2.19	Yes	No
Non-road TxLED	NR	0.00	0.00	Yes	No
Non-road RFG	NR	0.00	0.04	Yes	No
Tier 4 non-road diesel engines	NR	5.88	1.02	Yes	No
Diesel recreational marine	NR	0.00	0.00	Yes	No
Small SI (Phase III)	NR	0.33	1.63	Yes	No
Chapter 117 NOX area source engine controls	Area	0.00	0.00	Yes	No
Drilling Rigs: Federal Engine Standards	NR	0.00	0.04	Yes	No
Drilling Rigs: Texas Low Emission Diesel	NR	0.00	0.00	Yes	No
Locomotive: Texas Low Emission Diesel	NR	0.00	0.00	Yes	No
This row not used for current RFP	N/A	0.00	0.00	No	No
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This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
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This row not used for current RFP	N/A	0.00	0.00	No	No
This row not used for current RFP	N/A	0.00	0.00	No	No
Total 2020 10 DFW RFP Control Reductions		3.52	10.02		

Appendix 1 - Sheet 52

Calculations: 2011 to 2023 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 to 2023 'On-road Mobile NO_x Emissions Reductions (tpd)	Total 2011 to 2023 'On-road Mobile VOC Emissions Reductions (tpd)
Chapter 117 NOX controls	Yes	No	0.00	0.00
Chapter 115 Storage Tank Rule	Yes	No	0.00	0.00
Coating / printing rules	Yes	No	0.00	0.00
Portable fuel containers	Yes	No	0.00	0.00
Federal Motor Vehicle Control Program (FMVCP)	Yes	Yes	0.00	0.00
Reformulated Gasoline (RFG)/East Texas Regional Low RVP/Low Sulfur Gasoline/Ultra Low Sulfur Diesel	Yes	Yes	24.79	7.36
Inspection and Maintenance (I/M)	Yes	Yes	2.34	5.02
On-road TxLED	Yes	Yes	0.00	0.00
Tier I and II locomotive NOX standards	Yes	No	0.00	0.00
Small non-road spark ignition (SI) engines (Phase I)	Yes	No	0.00	0.00
Heavy duty non-road engines	Yes	No	0.00	0.00
Tiers 2 and 3 non-road diesel engines	Yes	No	0.00	0.00
Small non-road SI engines (Phase II)	Yes	No	0.00	0.00
Large non-road SI & recreational marine	Yes	No	0.00	0.00
Non-road TxLED	Yes	No	0.00	0.00
Non-road RFG	Yes	No	0.00	0.00
Tier 4 non-road diesel engines	Yes	No	0.00	0.00
Diesel recreational marine	Yes	No	0.00	0.00
Small SI (Phase III)	Yes	No	0.00	0.00
Chapter 117 NOX area source engine controls	Yes	No	0.00	0.00
Drilling Rigs: Federal Engine Standards	Yes	No	0.00	0.00
Drilling Rigs: Texas Low Emission Diesel	Yes	No	0.00	0.00
Locomotive: Texas Low Emission Diesel	Yes	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
Total 9 PDC On-road Mobile Source RFP Control Reductions			27.13	12.38

Appendix 1 - Sheet 53

Calculations: 2011 to 2023 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 to 2023 'On-road Mobile NO _x Emissions Reductions (tpd)	Total 2011 to 2023 'On-road Mobile VOC Emissions Reductions (tpd)
Chapter 117 NOX controls	Yes	No	0.00	0.00
Chapter 115 Storage Tank Rule	Yes	No	0.00	0.00
Coating / printing rules	Yes	No	0.00	0.00
Portable fuel containers	Yes	No	0.00	0.00
Federal Motor Vehicle Control Program (FMVCP)	Yes	Yes	0.00	0.00
Reformulated Gasoline (RFG)/East Texas Regional Low RVP/Low Sulfur Gasoline/Ultra Low Sulfur Diesel	Yes	Yes	0.40	0.10
Inspection and Maintenance (I/M)	Yes	Yes	0.00	0.00
On-road TxLED	Yes	Yes	0.00	0.00
Tier I and II locomotive NOX standards	Yes	No	0.00	0.00
Small non-road spark ignition (SI) engines (Phase I)	Yes	No	0.00	0.00
Heavy duty non-road engines	Yes	No	0.00	0.00
Tiers 2 and 3 non-road diesel engines	Yes	No	0.00	0.00
Small non-road SI engines (Phase II)	Yes	No	0.00	0.00
Large non-road SI & recreational marine	Yes	No	0.00	0.00
Non-road TxLED	Yes	No	0.00	0.00
Non-road RFG	Yes	No	0.00	0.00
Tier 4 non-road diesel engines	Yes	No	0.00	0.00
Diesel recreational marine	Yes	No	0.00	0.00
Small SI (Phase III)	Yes	No	0.00	0.00
Chapter 117 NOX area source engine controls	Yes	No	0.00	0.00
Drilling Rigs: Federal Engine Standards	Yes	No	0.00	0.00
Drilling Rigs: Texas Low Emission Diesel	Yes	No	0.00	0.00
Locomotive: Texas Low Emission Diesel	Yes	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
Total 1 NDC On-road Mobile Source RFP Control Reductions			0.40	0.10

Appendix 1 - Sheet 54

Calculations: 2011 to 2023 On-road Control Measures Reductions

DFW Nonattainment Area Eight-Hour Ozone Season VOC and NOX

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

Creditable Reductions Control Strategy	Control Used for RFP Demonstration?	On-road Mobile Source Control?	Total 2011 to 2023 On-road Mobile NO _x Emissions Reductions (tpd)	Total 2011 to 2023 On-road Mobile VOC Emissions Reductions (tpd)
Chapter 117 NOX controls	Yes	No	0.00	0.00
Chapter 115 Storage Tank Rule	Yes	No	0.00	0.00
Coating / printing rules	Yes	No	0.00	0.00
Portable fuel containers	Yes	No	0.00	0.00
Federal Motor Vehicle Control Program (FMVCP)	Yes	Yes	0.00	0.00
Reformulated Gasoline (RFG)/East Texas Regional Low RVP/Low Sulfur Gasoline/Ultra Low Sulfur Diesel	Yes	Yes	25.19	7.46
Inspection and Maintenance (I/M)	Yes	Yes	2.34	5.02
On-road TxLED	Yes	Yes	0.00	0.00
Tier I and II locomotive NOX standards	Yes	No	0.00	0.00
Small non-road spark ignition (SI) engines (Phase I)	Yes	No	0.00	0.00
Heavy duty non-road engines	Yes	No	0.00	0.00
Tiers 2 and 3 non-road diesel engines	Yes	No	0.00	0.00
Small non-road SI engines (Phase II)	Yes	No	0.00	0.00
Large non-road SI & recreational marine	Yes	No	0.00	0.00
Non-road TxLED	Yes	No	0.00	0.00
Non-road RFG	Yes	No	0.00	0.00
Tier 4 non-road diesel engines	Yes	No	0.00	0.00
Diesel recreational marine	Yes	No	0.00	0.00
Small SI (Phase III)	Yes	No	0.00	0.00
Chapter 117 NOX area source engine controls	Yes	No	0.00	0.00
Drilling Rigs: Federal Engine Standards	Yes	No	0.00	0.00
Drilling Rigs: Texas Low Emission Diesel	Yes	No	0.00	0.00
Locomotive: Texas Low Emission Diesel	Yes	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
Total 9 PDC On-road Mobile Source RFP Control Reductions			27.53	12.48

Appendix 1 - Sheet 55

Calculations: 2011 to 2026 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 to 2026 'On-road Mobile NO_x Emissions Reductions (tpd)	Total 2011 to 2026 'On-road Mobile VOC Emissions Reductions (tpd)
Chapter 117 NOX controls	Yes	No	0.00	0.00
Chapter 115 Storage Tank Rule	Yes	No	0.00	0.00
Coating / printing rules	Yes	No	0.00	0.00
Portable fuel containers	Yes	No	0.00	0.00
Federal Motor Vehicle Control Program (FMVCP)	Yes	Yes	0.00	0.00
Reformulated Gasoline (RFG)/East Texas Regional Low RVP/Low Sulfur Gasoline/Ultra Low Sulfur Diesel	Yes	Yes	17.41	5.97
Inspection and Maintenance (I/M)	Yes	Yes	1.76	5.01
On-road TxLED	Yes	Yes	0.00	0.00
Tier I and II locomotive NOX standards	Yes	No	0.00	0.00
Small non-road spark ignition (SI) engines (Phase I)	Yes	No	0.00	0.00
Heavy duty non-road engines	Yes	No	0.00	0.00
Tiers 2 and 3 non-road diesel engines	Yes	No	0.00	0.00
Small non-road SI engines (Phase II)	Yes	No	0.00	0.00
Large non-road SI & recreational marine	Yes	No	0.00	0.00
Non-road TxLED	Yes	No	0.00	0.00
Non-road RFG	Yes	No	0.00	0.00
Tier 4 non-road diesel engines	Yes	No	0.00	0.00
Diesel recreational marine	Yes	No	0.00	0.00
Small SI (Phase III)	Yes	No	0.00	0.00
Chapter 117 NOX area source engine controls	Yes	No	0.00	0.00
Drilling Rigs: Federal Engine Standards	Yes	No	0.00	0.00
Drilling Rigs: Texas Low Emission Diesel	Yes	No	0.00	0.00
Locomotive: Texas Low Emission Diesel	Yes	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
Total 9 PDC On-road Mobile Source RFP Control Reductions			19.17	10.98

Appendix 1 - Sheet 56

Calculations: 2011 to 2026 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 to 2026 'On-road Mobile NO _x Emissions Reductions (tpd)	Total 2011 to 2026 'On-road Mobile VOC Emissions Reductions (tpd)
Chapter 117 NOX controls	Yes	No	0.00	0.00
Chapter 115 Storage Tank Rule	Yes	No	0.00	0.00
Coating / printing rules	Yes	No	0.00	0.00
Portable fuel containers	Yes	No	0.00	0.00
Federal Motor Vehicle Control Program (FMVCP)	Yes	Yes	0.00	0.00
Reformulated Gasoline (RFG)/East Texas Regional Low RVP/Low Sulfur Gasoline/Ultra Low Sulfur Diesel	Yes	Yes	0.20	0.09
Inspection and Maintenance (I/M)	Yes	Yes	0.00	0.00
On-road TxLED	Yes	Yes	0.00	0.00
Tier I and II locomotive NOX standards	Yes	No	0.00	0.00
Small non-road spark ignition (SI) engines (Phase I)	Yes	No	0.00	0.00
Heavy duty non-road engines	Yes	No	0.00	0.00
Tiers 2 and 3 non-road diesel engines	Yes	No	0.00	0.00
Small non-road SI engines (Phase II)	Yes	No	0.00	0.00
Large non-road SI & recreational marine	Yes	No	0.00	0.00
Non-road TxLED	Yes	No	0.00	0.00
Non-road RFG	Yes	No	0.00	0.00
Tier 4 non-road diesel engines	Yes	No	0.00	0.00
Diesel recreational marine	Yes	No	0.00	0.00
Small SI (Phase III)	Yes	No	0.00	0.00
Chapter 117 NOX area source engine controls	Yes	No	0.00	0.00
Drilling Rigs: Federal Engine Standards	Yes	No	0.00	0.00
Drilling Rigs: Texas Low Emission Diesel	Yes	No	0.00	0.00
Locomotive: Texas Low Emission Diesel	Yes	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
Total 1 NDC On-road Mobile Source RFP Control Reductions			0.20	0.09

Appendix 1 - Sheet 57

Calculations: 2011 to 2026 On-road Control Measures Reductions

DFW Nonattainment Area Eight-Hour Ozone Season VOC and NOx

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

Creditable Reductions Control Strategy	Control Used for RFP Demonstration?	On-road Mobile Source Control?	Total 2011 to 2026 On-road Mobile NO _x Emissions Reductions (tpd)	Total 2011 to 2026 On-road Mobile VOC Emissions Reductions (tpd)
Chapter 117 NOX controls	Yes	No	0.00	0.00
Chapter 115 Storage Tank Rule	Yes	No	0.00	0.00
Coating / printing rules	Yes	No	0.00	0.00
Portable fuel containers	Yes	No	0.00	0.00
Federal Motor Vehicle Control Program (FMVCP)	Yes	Yes	0.00	0.00
Reformulated Gasoline (RFG)/East Texas Regional Low RVP/Low Sulfur Gasoline/Ultra Low Sulfur Diesel	Yes	Yes	17.61	6.06
Inspection and Maintenance (I/M)	Yes	Yes	1.76	5.01
On-road TxLED	Yes	Yes	0.00	0.00
Tier I and II locomotive NOX standards	Yes	No	0.00	0.00
Small non-road spark ignition (SI) engines (Phase I)	Yes	No	0.00	0.00
Heavy duty non-road engines	Yes	No	0.00	0.00
Tiers 2 and 3 non-road diesel engines	Yes	No	0.00	0.00
Small non-road SI engines (Phase II)	Yes	No	0.00	0.00
Large non-road SI & recreational marine	Yes	No	0.00	0.00
Non-road TxLED	Yes	No	0.00	0.00
Non-road RFG	Yes	No	0.00	0.00
Tier 4 non-road diesel engines	Yes	No	0.00	0.00
Diesel recreational marine	Yes	No	0.00	0.00
Small SI (Phase III)	Yes	No	0.00	0.00
Chapter 117 NOX area source engine controls	Yes	No	0.00	0.00
Drilling Rigs: Federal Engine Standards	Yes	No	0.00	0.00
Drilling Rigs: Texas Low Emission Diesel	Yes	No	0.00	0.00
Locomotive: Texas Low Emission Diesel	Yes	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
This row not used for current RFP	No	No	0.00	0.00
Total 9 PDC On-road Mobile Source RFP Control Reductions			19.37	11.07

Appendix 1 - Sheet 58

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	37.69	13.29	50.98
Non-Road Mobile Sources	172.25	8.02	180.27
On-Road Mobile Sources	245.19	7.04	252.23
Point Sources	31.34	8.61	39.95
Total	486.47	36.96	523.43

2023 Uncontrolled or Existing Control NOX (tons per day)

RFP Analysis Year	9 PDC	1 NDC	10 NAC Total
Area Sources	34.04	3.47	37.51
Non-Road Mobile Sources	192.73	3.71	196.44
On-Road Mobile Sources	104.27	2.81	107.08
Point Sources	28.21	5.25	33.46
Total	359.25	15.24	374.49

2026 Uncontrolled or Existing Control NOX (tons per day)

RFP Analysis Year	9 PDC	1 NDC	10 NAC Total
Area Sources	34.40	1.82	36.22
Non-Road Mobile Sources	203.01	3.25	206.26
On-Road Mobile Sources	83.73	2.36	86.09
Point Sources	28.21	5.25	33.46
Total	349.35	12.68	362.03

Appendix 1 - Sheet 59

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	37.69	13.29	50.98
Non-Road Mobile Sources	100.62	4.30	104.92
On-Road Mobile Sources	245.19	7.04	252.23
Point Sources	31.34	8.61	39.95
Total	414.84	33.24	448.08

Controlled or Post-2011 Controlled NOX for 2023 (tons per day)

RFP Analysis Year	9 PDC	1 NDC	10 NAC Total
Area Sources	34.04	3.47	37.51
Non-Road Mobile Sources	60.82	1.17	61.99
On-Road Mobile Sources	77.14	2.42	79.56
Point Sources	28.21	5.25	33.46
Total	200.21	12.31	212.52

Controlled or Post-2011 Controlled NOX for 2026 (tons per day)

RFP Analysis Year	9 PDC	1 NDC	10 NAC Total
Area Sources	34.40	1.82	36.22
Non-Road Mobile Sources	59.10	0.98	60.08
On-Road Mobile Sources	64.56	2.16	66.72
Point Sources	28.21	5.25	33.46
Total	186.27	10.21	196.48

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.

Appendix 1 - Sheet 60

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	262.36	28.95	291.31
Non-Road Mobile Sources	180.70	2.12	182.82
On-Road Mobile Sources	105.17	1.82	106.99
Point Sources	27.54	2.35	29.89
Total	575.77	35.24	611.01

2023 Uncontrolled or Existing Control VOC (tons per day)

RFP Analysis Year	9 PDC	1 NDC	10 NAC Total
Area Sources	287.82	13.75	301.57
Non-Road Mobile Sources	231.51	1.74	233.25
On-Road Mobile Sources	53.33	0.77	54.10
Point Sources	18.72	2.46	21.18
Total	591.38	18.72	610.10

2026 Uncontrolled or Existing Control VOC (tons per day)

RFP Analysis Year	9 PDC	1 NDC	10 NAC Total
Area Sources	286.99	9.26	296.25
Non-Road Mobile Sources	244.68	1.77	246.45
On-Road Mobile Sources	45.81	0.65	46.46
Point Sources	18.72	2.46	21.18
Total	596.20	14.14	610.34

Appendix 1 - Sheet 61

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	262.36	28.95	291.31
Non-Road Mobile Sources	64.52	0.85	65.37
On-Road Mobile Sources	105.17	1.82	106.99
Point Sources	27.54	2.35	29.89
Total	459.59	33.97	493.56

Controlled or Post-2011 Controlled VOC for 2023 (tons per day)

RFP Analysis Year	9 PDC	1 NDC	10 NAC Total
Area Sources	287.82	13.75	301.57
Non-Road Mobile Sources	49.41	0.40	49.81
On-Road Mobile Sources	40.95	0.67	41.62
Point Sources	18.72	2.46	21.18
Total	396.90	17.28	414.18

Controlled or Post-2011 Controlled VOC for 2026 (tons per day)

RFP Analysis Year	9 PDC	1 NDC	10 NAC Total
Area Sources	286.99	9.26	296.25
Non-Road Mobile Sources	51.19	0.37	51.56
On-Road Mobile Sources	34.83	0.56	35.39
Point Sources	18.72	2.46	21.18
Total	391.73	12.65	404.38

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.

Appendix 1 - Sheet 62

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	37.69	37.69	262.36	262.36
Non-Road Mobile Sources	172.25	100.62	180.70	64.52
On-Road Mobile Sources	245.19	245.19	105.17	105.17
Point Sources	31.34	31.34	27.54	27.54
Total	486.47	414.84	575.77	459.59

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	13.29	13.29	28.95	28.95
Non-Road Mobile Sources	8.02	4.30	2.12	0.85
On-Road Mobile Sources	7.04	7.04	1.82	1.82
Point Sources	8.61	8.61	2.35	2.35
Total	36.96	33.24	35.24	33.97

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	50.98	50.98	291.31	291.31
Non-Road Mobile Sources	180.27	104.92	182.82	65.37
On-Road Mobile Sources	252.23	252.23	106.99	106.99
Point Sources	39.95	39.95	29.89	29.89
Total	523.43	448.08	611.01	493.56

10-County DFW RFP Summary of the 2011 Base Year Average Summer Weekday NOx and VOC Emissions

Emissions Inventory Source	Uncontrolled or Existing Controlled NO _x	Controlled NO _x	Uncontrolled or Existing Controlled VOC	Controlled VOC
Non-Road Mobile Sources	180.27	104.92	182.82	65.37
On-Road Mobile Sources	252.23	252.23	106.99	106.99
Area Sources	50.98	50.98	291.31	291.31
Point Sources	39.95	39.95	29.89	29.89
Total of All Sources	523.43	448.08	611.01	493.56

Note 1): DFW 2008 ozone NAAQS nonattainment area uncontrolled on-road EI values for 2011 reflect controls in place up to 2008.
Note 2) : The controlled inventory shown here includes all controls. The controlled RFP inventory may not include all controls.

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Summary Sheet: 2023 Emissions Inventory By Category
DFW Eight-Hour Ozone Nonattainment Area

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

2023 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	34.04	34.04	287.82	287.82
Non-Road Mobile Sources	192.73	60.82	231.51	49.41
On-Road Mobile Sources	104.27	77.14	53.33	40.95
Point Sources	28.21	28.21	18.72	18.72
Total	359.25	200.21	591.38	396.90

2023 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	3.47	3.47	13.75	13.75
Non-Road Mobile Sources	3.71	1.17	1.74	0.40
On-Road Mobile Sources	2.81	2.42	0.77	0.67
Point Sources	5.25	5.25	2.46	2.46
Total	15.24	12.31	18.72	17.28

2023 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	37.51	37.51	301.57	301.57
Non-Road Mobile Sources	196.44	61.99	233.25	49.81
On-Road Mobile Sources	107.08	79.56	54.10	41.62
Point Sources	33.46	33.46	21.18	21.18
Total	374.49	212.52	610.10	414.18

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.

DFW RFP Summary of the 2023 Average Summer Weekday NOx and VOC Emissions (tons per day)

Emissions Inventory Source	Uncontrolled or Existing Controlled	Controlled NO _x	Uncontrolled or Existing Controlled	Controlled VOC
Non-Road Mobile Sources	196.44	61.99	233.25	49.81
On-Road Mobile Sources	107.08	79.56	54.10	41.62
Area Sources	37.51	37.51	301.57	301.57
Point Sources	33.46	33.46	21.18	21.18
Total of All Sources	374.49	212.52	610.10	414.18

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.

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Summary Sheet: 2026 Emissions Inventory By Category
DFW Eight-Hour Ozone Nonattainment Area

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

2026 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	34.40	34.40	286.99	286.99
Non-Road Mobile Sources	203.01	59.10	244.68	51.19
On-Road Mobile Sources	83.73	64.56	45.81	34.83
Point Sources	28.21	28.21	18.72	18.72
Total	349.35	186.27	596.20	391.73

2026 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	1.82	1.82	9.26	9.26
Non-Road Mobile Sources	3.25	0.98	1.77	0.37
On-Road Mobile Sources	2.36	2.16	0.65	0.56
Point Sources	5.25	5.25	2.46	2.46
Total	12.68	10.21	14.14	12.65

2026 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	36.22	36.22	296.25	296.25
Non-Road Mobile Sources	206.26	60.08	246.45	51.56
On-Road Mobile Sources	86.09	66.72	46.46	35.39
Point Sources	33.46	33.46	21.18	21.18
Total	362.03	196.48	610.34	404.38

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.

DFW RFP Summary of the 2026 Average Summer Weekday NOx and VOC Emissions (tons per day)

Emissions Inventory Source	Uncontrolled or Existing Controlled	Controlled NO _x	Uncontrolled or Existing Controlled	Controlled VOC
Non-Road Mobile Sources	206.26	60.08	246.45	51.56
On-Road Mobile Sources	86.09	66.72	46.46	35.39
Area Sources	36.22	36.22	296.25	296.25
Point Sources	33.46	33.46	21.18	21.18
Total of All Sources	362.03	196.48	610.34	404.38

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.

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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	172.25	100.63	71.62	41.58	180.70	64.52	116.18	64.29
9 PDC 2023	192.73	60.82	131.91	68.44	231.50	49.40	182.10	78.66
9 PDC 2026	203.01	59.10	143.91	70.89	244.68	51.20	193.48	79.07

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	8.02	4.30	3.72	46.40	2.12	0.84	1.28	60.20
1 NDC 2023	3.71	1.18	2.54	68.34	1.75	0.40	1.35	77.11
1 NDC 2026	3.25	0.99	2.27	69.70	1.77	0.37	1.40	78.98

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	180.27	104.93	75.35	41.80	182.82	65.37	117.45	64.25
10 County Total 2023	196.44	61.99	134.45	68.44	233.24	49.80	183.44	78.65
10 County Total 2026	206.26	60.09	146.17	70.87	246.45	51.57	194.88	79.07

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.

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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	15.33	15.33	3.79	3.79
Locomotive	20.48	12.09	0.71	0.71
Marine	0.00	0.00	0.00	0.00
NONROAD Model	109.62	60.75	171.88	59.42
Drilling Rigs	26.82	12.45	4.32	0.60
Total All	172.25	100.63	180.70	64.52
Total ALM	35.81	27.43	4.50	4.50
ALM Plus Drilling Rigs (Off-road)	62.63	39.88	8.82	5.10

2011 1 NDC (tons per day)

Emissions Inventory Source	Uncontrolled NOx	Controlled NOx	Uncontrolled VOC	Controlled VOC
Airport	0.01	0.01	0.02	0.02
Locomotive	1.42	0.98	0.06	0.06
Marine	0.00	0.00	0.00	0.00
NONROAD Model	2.31	1.32	1.35	0.67
Drilling Rigs	4.28	1.99	0.69	0.10
Total All	8.02	4.30	2.12	0.84
Total ALM	1.43	0.98	0.08	0.08
ALM Plus Drilling Rigs (Off-road)	5.71	2.97	0.77	0.18

2011 10 NAC Total (tons per day)

Emissions Inventory Source	Uncontrolled NOx	Controlled NOx	Uncontrolled VOC	Controlled VOC
Airport	15.34	15.34	3.81	3.81
Locomotive	21.90	13.07	0.77	0.77
Marine	0.00	0.00	0.00	0.00
NONROAD Model	111.93	62.08	173.23	60.09
Drilling Rigs	31.10	14.44	5.01	0.70
Total All	180.27	104.93	182.82	65.37
Total ALM	37.24	28.41	4.57	4.57
ALM Plus Drilling Rigs (Off-road)	68.34	42.85	9.58	5.27

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.

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Summary Sheet: 2023 Non-Road Summary by Category

DFW Eight-Hour Ozone Nonattainment Area

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

2023 9 PDC (tons per day)

Emissions Inventory Source	Uncontrolled NOx	Controlled NOx	Uncontrolled VOC	Controlled VOC
Airport	16.00	15.69	4.27	4.22
Locomotive	8.51	7.84	0.33	0.33
Marine	0.00	0.00	0.00	0.00
NONROAD Model	166.81	36.90	226.68	44.84
Drilling Rigs	1.41	0.39	0.23	0.02
Total All	192.73	60.82	231.50	49.40
Total ALM	24.51	23.53	4.59	4.55
ALM Plus Drilling Rigs (Off-road)	25.92	23.92	4.82	4.57

2023 1 NDC (tons per day)

Emissions Inventory Source	Uncontrolled NOx	Controlled NOx	Uncontrolled VOC	Controlled VOC
Airport	0.01	0.01	0.03	0.03
Locomotive	0.65	0.61	0.02	0.02
Marine	0.00	0.00	0.00	0.00
NONROAD Model	2.77	0.47	1.64	0.34
Drilling Rigs	0.28	0.08	0.05	0.01
Total All	3.71	1.18	1.75	0.40
Total ALM	0.66	0.63	0.05	0.05
ALM Plus Drilling Rigs (Off-road)	0.94	0.71	0.10	0.06

2023 10 NAC Total (tons per day)

Emissions Inventory Source	Uncontrolled NOx	Controlled NOx	Uncontrolled VOC	Controlled VOC
Airport	16.01	15.70	4.29	4.25
Locomotive	9.16	8.46	0.35	0.35
Marine	0.00	0.00	0.00	0.00
NONROAD Model	169.59	37.37	228.32	45.17
Drilling Rigs	1.69	0.47	0.28	0.03
Total All	196.44	61.99	233.24	49.80
Total ALM	25.17	24.16	4.65	4.60
ALM Plus Drilling Rigs (Off-road)	26.86	24.63	4.93	4.63

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.

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Summary Sheet: 2026 Non-Road Summary by Category

DFW Eight-Hour Ozone Nonattainment Area

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

2026 9 PDC (tons per day)

Emissions Inventory Source	Uncontrolled NOx	Controlled NOx	Uncontrolled VOC	Controlled VOC
Airport	18.37	18.01	4.60	4.54
Locomotive	7.21	6.55	0.27	0.27
Marine	0.00	0.00	0.00	0.00
NONROAD Model	176.02	34.15	239.58	46.36
Drilling Rigs	1.41	0.39	0.23	0.02
Total All	203.01	59.10	244.68	51.20
Total ALM	25.58	24.56	4.87	4.82
ALM Plus Drilling Rigs (Off-road)	26.99	24.95	5.10	4.84

2026 1 NDC (tons per day)

Emissions Inventory Source	Uncontrolled NOx	Controlled NOx	Uncontrolled VOC	Controlled VOC
Airport	0.01	0.01	0.03	0.03
Locomotive	0.54	0.50	0.02	0.02
Marine	0.00	0.00	0.00	0.00
NONROAD Model	2.42	0.39	1.67	0.32
Drilling Rigs	0.28	0.08	0.05	0.00
Total All	3.25	0.99	1.77	0.37
Total ALM	0.55	0.51	0.05	0.05
ALM Plus Drilling Rigs (Off-road)	0.83	0.59	0.10	0.05

2026 10 NAC Total (tons per day)

Emissions Inventory Source	Uncontrolled NOx	Controlled NOx	Uncontrolled VOC	Controlled VOC
Airport	18.38	18.02	4.63	4.57
Locomotive	7.75	7.05	0.29	0.29
Marine	0.00	0.00	0.00	0.00
NONROAD Model	178.44	34.55	241.25	46.69
Drilling Rigs	1.69	0.47	0.28	0.02
Total All	206.26	60.09	246.45	51.57
Total ALM	26.13	25.07	4.92	4.87
ALM Plus Drilling Rigs (Off-road)	27.82	25.54	5.20	4.89

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.

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Summary Sheet: 2011, 2023 and 2026 On-Road Summaries

DFW Eight-Hour Ozone Nonattainment Area

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

DFW 10 County RFP Ozone Season Weekday On-Road Mobile Source NO_x Emissions

RFP Analysis Year Inventory	Uncontrolled NO _x (tons per day)	Controlled NO _x (tons per day)
2011 Base Year	252.23	252.23
2023 Milestone Year	107.08	79.56
2026 Attainment Year	86.09	66.72

Note: DFW 2008 ozone NAAQS nonattainment area uncontrolled on-road EI values for 2011 reflect controls in place up to 2011, no post-2011 controls included

DFW 10 County RFP Ozone Season Weekday On-Road Mobile Source VOC Emissions

RFP Analysis Year Inventory	Uncontrolled VOC (tons per day)	Controlled VOC (tons per day)
2011 Base Year	106.99	106.99
2023 Milestone Year	54.10	41.62
2026 Attainment Year	46.46	35.39

Note: DFW 2008 ozone NAAQS nonattainment area uncontrolled on-road EI values for 2011 reflect controls in place up to 2011, no post-2011 controls included

2023 DFW 10 County RFP Ozone Season Weekday On-Road Mobile Source NO_x and VOC Emissions and Control Strategy Reductions

RFP Analysis Year and Inventory of On-Road Mobile Emissions Inventory Strategies	NO _x (tons per day)	VOC (tons per day)
2023 Uncontrolled Inventory	107.08	54.10
Federal Motor Vehicle Control Program (FMVCP)	0.00	0.00
Reformulated Gasoline (RFG)/East Texas Regional Low RVP/Low Sulfur Gasoline/Ultra Low Sulfur Diesel	25.19	7.46
Inspection and Maintenance (I/M)	2.34	5.02
On-road TxLED	0.00	0.00
2023 Controlled Inventory	79.56	41.62

2026 DFW 10 County RFP Ozone Season Weekday On-Road Mobile Source NO_x and VOC Emissions and Control Strategy Reductions

RFP Analysis Year and Inventory of On-Road Mobile Emissions Inventory Strategies	NO _x (tons per day)	VOC (tons per day)
2026 Uncontrolled Inventory	86.09	46.46
Federal Motor Vehicle Control Program (FMVCP)	0.00	0.00
Reformulated Gasoline (RFG)/East Texas Regional Low RVP/Low Sulfur Gasoline/Ultra Low Sulfur Diesel	17.61	6.06
Inspection and Maintenance (I/M)	1.76	5.01
On-road TxLED	0.00	0.00
2026 Controlled Inventory	66.72	35.39

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Summary Sheet: Calculation Process for 2023 Target Levels of Emissions
DFW Eight-Hour Ozone Nonattainment Area

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

Targets are calculated for the one newly designated county and the nine previously designated counties separately, then added together

Summary of the Calculation Process for 2023 DFW RFP Target Levels

Line	Description	NO _x	VOC
Line 1	2011 base year (BY) emissions inventory for 1 DFW newly designated county	33.24	33.97
Line 2	15% VOC to meet 15% VOC reduction requirement for 2012 through 2017 for newly designated county	N/A	15.00
Line 3	Percent of NO _x (PN) and VOC (PV) to meet 9% reduction requirement for 2018 through 2020 for newly designated county, (PN + PV = 9)	5.00	4.00
Line 4	PN and PV to meet 9% reduction requirement for 2021 through 2023 for newly designated county	4.50	4.50
Line 5	Total percent of NOX (PN) and VOC (PV) to meet 2023 reduction requirement for newly designated county (Line 2 + Line 3 + Line 4)	9.50	23.50
Line 6	Calculate the 33% NOX and VOC reduction requirement between 2011 and 2023 for newly designated county (Line 1 multiplied by Line 5)	3.16	7.99
Line 7	Calculate the 2023 target level of emissions for newly designated county (Line 1 minus Line 6)	30.08	25.98
Line 8	2011 base year (BY) emissions inventory for nine DFW previously designated counties	414.84	459.59
Line 9	PN and PV to meet 15% reduction requirement for 2012 through 2017 for nine previously designated counties	10.00	5.00
Line 10	PN and PV to meet 9% reduction requirement for 2018 through 2020 for nine previously designated counties	5.00	4.00
Line 11	PN and PV to meet 9% reduction requirement for 2021 through 2023 for nine previously designated counties	4.50	4.50
Line 12	Total percent of NOX (PN) and VOC (PV) to meet 2023 reduction requirement for nine previously designated counties (Line 9 + Line 10 + Line 11)	19.50	13.50
Line 13	Calculate the 33% NOX and VOC reduction requirement between 2011 and 2023 for nine previously designated counties (Line 8 multiplied by Line 12)	80.89	62.04
Line 14	Calculate the 2023 target level of emissions for nine previously designated counties (Line 8 minus Line 13)	333.95	397.55
Line 14	Calculate the 2023 target level of emissions for all ten DFW counties (Line 7 plus Line 14)	364.03	423.53

Notes:

- 1) No emissions from outside the nonattainment area being used in the RFP analysis.
- 2) The final implementation rule for the 2008 ozone standard does not require adjustment for non-creditable on-road reductions. The reductions from the non-creditable reductions have been determined to be de minimus.

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Summary Sheet: Calculation Process for 2026 Target Levels of Emissions
DFW Eight-Hour Ozone Nonattainment Area

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

Targets are calculated for the one newly designated county and the nine previously designated counties separately, then added together

Summary of the Calculation Process for 2026 DFW RFP Target Levels

Line	Description	NO _x	VOC
Line 1	2011 base year (BY) emissions inventory for 1 DFW newly designated county	33.24	33.97
Line 2	15% VOC to meet 15% VOC reduction requirement for 2012 through 2017 for newly designated county	N/A	15.00
Line 3	Percent of NO _x (PN) and VOC (PV) to meet 9% reduction requirement for 2018 through 2020 for newly designated county, (PN + PV = 9)	5.00	4.00
Line 4	PN and PV to meet 9% reduction requirement for 2021 through 2023 for newly designated county	4.50	4.50
Line 5	PN and PV to meet 9% reduction requirement for 2024 through 2026 for newly designated county	7.00	2.00
Line 6	Total percent of NOX (PN) and VOC (PV) to meet 2026 reduction requirement for newly designated county (Line 2 + Line 3 + Line 4 + Line 5)	16.50	25.50
Line 7	Calculate the 42% NOX and VOC reduction requirement between 2011 and 2026 for newly designated county (Line 1 multiplied by Line 6)	5.49	8.67
Line 8	Calculate the 2026 target level of emissions for newly designated county (Line 1 minus Line 7)	27.75	25.30
Line 9	2011 base year (BY) emissions inventory for nine DFW previously designated counties	414.84	459.59
Line 10	PN and PV to meet 15% reduction requirement for 2012 through 2017 for nine previously designated counties	10.00	5.00
Line 11	PN and PV to meet 9% reduction requirement for 2018 through 2020 for nine previously designated counties	5.00	4.00
Line 12	PN and PV to meet 9% reduction requirement for 2021 through 2023 for nine previously designated counties	4.50	4.50
Line 13	PN and PV to meet 9% reduction requirement for 2024 through 2026 for nine previously designated counties	7.00	2.00
Line 14	Total percent of NOX (PN) and VOC (PV) to meet 2026 reduction requirement for nine previously designated counties (Line 10 + Line 11 + Line 12 + Line 13)	26.50	15.50
Line 15	Calculate the 42% NOX and VOC reduction requirement between 2011 and 2026 for nine previously designated counties (Line 8 multiplied by Line 12)	109.93	71.23
Line 16	Calculate the 2026 target level of emissions for nine previously designated counties (Line 9 minus Line 15)	304.91	388.36
Line 17	Calculate the 2026 target level of emissions for all ten DFW counties (Line 8 plus Line 16)	332.66	413.66

Notes:

- 1) No emissions from outside the nonattainment area being used in the RFP analysis.
- 2) The final implementation rule for the 2008 ozone standard does not require adjustment for non-creditable on-road reductions. The reductions from the non-creditable reductions have been determined to be de minimus.

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Appendix 1 - Sheet 72

Summary Sheet: 2011 to 2023 Total RFP Emissions Reductions (Chapter 4 table)

DFW Eight-Hour Ozone Nonattainment Area

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

Control Strategy Description	Source Category	NO _x Reductions	VOC Reductions
Chapter 117 NOX controls	Point	0.00	0.00
Chapter 115 Storage Tank Rule	Point	0.00	0.00
Coating / printing rules	Point	0.00	0.00
Portable fuel containers	Area	0.00	0.00
Federal Motor Vehicle Control Program (FMVCP)	OR	0.00	0.00
Reformulated Gasoline (RFG)/East Texas Regional Low RVP/Low Sulfur Gasoline/Ultra Low Sulfur Diesel	OR	25.19	7.46
Inspection and Maintenance (I/M)	OR	2.34	5.02
On-road TxLED	OR	0.00	0.00
Tier I and II locomotive NOX standards	NR	0.70	0.00
Small non-road spark ignition (SI) engines (Phase I)	NR	-7.40	61.51
Heavy duty non-road engines	NR	0.93	3.56
Tiers 2 and 3 non-road diesel engines	NR	3.57	0.66
Small non-road SI engines (Phase II)	NR	5.30	57.82
Large non-road SI & recreational marine	NR	50.40	17.75
Non-road TxLED	NR	0.00	0.00
Non-road RFG	NR	-0.01	0.86
Tier 4 non-road diesel engines	NR	74.37	15.32
Diesel recreational marine	NR	0.01	0.00
Small SI (Phase III)	NR	5.06	25.68
Chapter 117 NOX area source engine controls	Area	0.00	0.00
Drilling Rigs: Federal Engine Standards	NR	1.22	0.22
Drilling Rigs: Texas Low Emission Diesel	NR	0.00	0.00
Locomotive: Texas Low Emission Diesel	NR	0.00	0.00
Total:		161.68	195.86

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Appendix 1 - Sheet 73

Summary Sheet: 2011 to 2026 Total RFP Emissions Reductions (Chapter 4 table)

DFW Eight-Hour Ozone Nonattainment Area

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

Control Strategy Description	Source Category	NO _x Reductions	VOC Reductions
Chapter 117 NOX controls	Point	0.00	0.00
Chapter 115 Storage Tank Rule	Point	0.00	0.00
Coating / printing rules	Point	0.00	0.00
Portable fuel containers	Area	0.00	0.00
Federal Motor Vehicle Control Program (FMVCP)	OR	0.00	0.00
Reformulated Gasoline (RFG)/East Texas Regional Low RVP/Low Sulfur Gasoline/Ultra Low Sulfur Diesel	OR	17.61	6.06
Inspection and Maintenance (I/M)	OR	1.76	5.01
On-road TxLED	OR	0.00	0.00
Tier I and II locomotive NOX standards	NR	0.70	0.00
Small non-road spark ignition (SI) engines (Phase I)	NR	-7.84	65.10
Heavy duty non-road engines	NR	0.50	3.54
Tiers 2 and 3 non-road diesel engines	NR	2.82	0.50
Small non-road SI engines (Phase II)	NR	5.61	60.92
Large non-road SI & recreational marine	NR	57.18	19.94
Non-road TxLED	NR	0.00	0.00
Non-road RFG	NR	-0.01	0.90
Tier 4 non-road diesel engines	NR	80.25	16.34
Diesel recreational marine	NR	0.01	0.00
Small SI (Phase III)	NR	5.39	27.31
Chapter 117 NOX area source engine controls	Area	0.00	0.00
Drilling Rigs: Federal Engine Standards	NR	1.22	0.26
Drilling Rigs: Texas Low Emission Diesel	NR	0.00	0.00
Locomotive: Texas Low Emission Diesel	NR	0.00	0.00
Total:		165.20	205.88

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Appendix 1 - Sheet 74

Summary Sheet: 2023 Point Source RFP Emissions Reductions

DFW Eight-Hour Ozone Nonattainment Area

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

Emissions	NO _x	VOC
Existing Controlled Emissions (as of 2011)	33.46	21.18
RFP Point Source Reductions	0.00	0.00
RFP Post-2011 Controlled Emissions	33.46	21.18

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Appendix 1 - Sheet 75

Summary Sheet: 2026 Point Source RFP Emissions Reductions

DFW Eight-Hour Ozone Nonattainment Area

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

Emissions	NO _x	VOC
Existing Controlled Emissions (as of 2011)	33.46	21.18
RFP Point Source Reductions	0.00	0.00
RFP Post-2011 Controlled Emissions	33.46	21.18

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Appendix 1 - Sheet 76

Summary Sheet: 2023 Area Source RFP Emissions Reductions

DFW Eight-Hour Ozone Nonattainment Area

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

Emissions	NO _x	VOC
Existing Controlled Emissions (as of 2011)	37.51	301.57
RFP Area Source Reductions	0.00	0.00
RFP Post-2011 Controlled Emissions	37.51	301.57

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Summary Sheet: 2026 Area Source RFP Emissions Reductions

DFW Eight-Hour Ozone Nonattainment Area

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

Emissions	NO _x	VOC
Existing Controlled Emissions (as of 2011)	36.22	296.25
RFP Area Source Reductions	0.00	0.00
RFP Post-2011 Controlled Emissions	36.22	296.25

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Appendix 1 - Sheet 78

Summary Sheet: 2023 Non-Road Source RFP Emissions Reductions

DFW Eight-Hour Ozone Nonattainment Area

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

Emissions	NO _x	VOC
Existing Controlled Emissions (as of 2011)	196.45	233.24
RFP Non-Road Source Reductions	134.15	183.38
RFP Post-2011 Controlled Emissions	62.30	49.86

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Summary Sheet: 2026 Non-Road Source RFP Emissions Reductions

DFW Eight-Hour Ozone Nonattainment Area

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

Emissions	NO _x	VOC
Existing Controlled Emissions (as of 2011)	206.26	246.45
RFP Non-Road Source Reductions	145.83	194.81
RFP Post-2011 Controlled Emissions	60.43	51.64

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Appendix 1 - Sheet 80

Summary Sheet: 2023 On-Road Source RFP Emissions Reductions

DFW Eight-Hour Ozone Nonattainment Area

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

Emissions	NO _x	VOC
Existing Controlled Emissions (as of 2011)	107.08	54.10
RFP On-Road Source Reductions	27.53	12.48
RFP Post-2011 Controlled Emissions	79.55	41.62

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Appendix 1 - Sheet 81

Summary Sheet: 2026 On-Road Source RFP Emissions Reductions

DFW Eight-Hour Ozone Nonattainment Area

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

Emissions	NO _x	VOC
Existing Controlled Emissions (as of 2011)	86.09	46.46
RFP On-Road Source Reductions	19.37	11.07
RFP Post-2011 Controlled Emissions	66.72	35.39

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Appendix 1 - Sheet 82
Adjusted Base Year (ABY) Note Sheet
DFW Eight-Hour Ozone Nonattainment Area
Ten Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, Wise

For on-road EIs, ABY inventories can no longer be calculated with the release of the MOVES3 model in 2020.

To maintain the flow of the RFP demonstration, the following sheets used to calculate the ABY inventories remain but are hidden since the ABY can no longer be calculated with MOVES3.

Sheet Number	Sheet Name	Sheet Description
10	10 Calc NonCred Red	Calculation of RFP Non-Creditable Reductions from Pre-1990 FMVCP
22	22 Enter ABY On-road EI	Enter Adjusted Base Year (ABY) On-road EI, All Years
36	36 Calc ABY 9 DFW 2011	Calculation of 2011 ABY RFP Emission Inventory for 9 Previously Designated Counties
37	37 Calc ABY 1 DFW 2011	Calculation of 2011 ABY RFP Emission Inventory for 1 Newly Designated County
38	38 Calc ABY 9 DFW 2017	Calculation of 2017 ABY RFP Emission Inventory for 9 Previously Designated Counties
39	39 Calc ABY 1 DFW 2017	Calculation of 2017 ABY RFP Emission Inventory for 1 Newly Designated County
40	40 Calc ABY 9 DFW 2020	Calculation of 2020 ABY RFP Emission Inventory for 9 Previously Designated Counties
41	41 Calc ABY 1 DFW 2020	Calculation of 2020 ABY RFP Emission Inventory for 1 Newly Designated County
42	42 Calc ABY 9 DFW 2023	Calculation of 2023 ABY RFP Emission Inventory for 9 Previously Designated Counties
43	43 Calc ABY 1 DFW 2023	Calculation of 2023 ABY RFP Emission Inventory for 1 Newly Designated County
44	44 Calc ABY 9 DFW 2026	Calculation of 2026 ABY RFP Emission Inventory for 9 Previously Designated Counties
45	45 Calc ABY 1 DFW 2026	Calculation of 2026 ABY RFP Emission Inventory for 1 Newly Designated County