

APPENDIX 1

REASONABLE FURTHER PROGRESS DEMONSTRATION SPREADSHEET

Appendix 1 - Sheet 1

Dallas-Fort Worth Eight-Hour Ozone Nonattainment Area

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

Reasonable Further Progress Demonstration Calculation Spreadsheet

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Appendix 1 - Sheet 2
 2017 RFP Demonstration Analysis
 DFW Eight-Hour Ozone Nonattainment Area

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

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

Line #	Description	NO _x (tpd)	VOC (tpd)
Line 1	Uncontrolled or Existing Controlled 9 PDC 2017 emissions forecast with growth	1185.55	799.61
Line 2	Creditable RFP control reductions, for 9 PDC, between 2011 and 2017	864.23	389.22
Line 3	Controlled 2017, 9 PDC RFP emissions forecast (Line 1 minus Line 2)	321.32	410.39
Line 4	Amount of NO _x and VOC reduction to transfer to 1 NDC RFP demonstration	0.00	1.00
Line 5	Amount of NO _x reduction substitution (see Sheet 3)	0.00	0.00
Line 6	Controlled 2017, 9 PDC RFP forecast accounting for transfer and NO _x substitution (Line 3 plus Line 4 plus Line 5)	321.32	411.39
Line 7	2017 9 PDC RFP target level of emissions	372.10	425.41
Line 8	Excess (+) / Shortfall (-) (Line 7 minus Line 6)	50.78	14.02
Line 9	Is controlled RFP EI less than target level of emissions?	Yes	Yes

Notes:

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

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Appendix 1 - Sheet 3

2017 RFP NO_x Substitution Analysis

DFW Eight-Hour Ozone Nonattainment Area

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

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

Line #	Description	NO _x	VOC
Line 1	2011 base year emissions (tpd)	440.91	479.59
Line 2	2017 controlled RFP EI (tpd)	321.32	410.39
Line 3	Total actual reductions for 2011 to 2017 (Line 1 minus Line 2) (tpd)	119.59	69.20
Line 4	Percent actual reductions for 2011 to 2017 (percent Line 3 is of Line 1) (%)	27.12	14.43
Line 5	2017 target RFP EI (tpd)	372.10	425.41
Line 6	2017 total target reductions for 2011 to 2017 (Line 1 minus Line 5) (tpd)	68.81	54.18
Line 7	Percent target reductions for 2011 to 2017 (percent Line 6 is of Line 1) (%)	15.61	11.30
Line 8	Percent surplus or shortfall (percent actual minus percent target, Line 4 - Line 7) (%)	11.52	3.13
Line 9	Percent surplus to transfer (NO _x percentage should be less than Line 8) (%)	0.00	0.00
Line 10	Convert the percent surplus to transfer to tons per day (tpd)	0.00	Only NO _x Value Needed
Line 11	Calculate what percentage Line 10 is of target (this is the percentage to transfer) (%)	0.00	0.00
Line 12	Tons equivalent to percent for transfer [Line 5 times (Line 10 divided by 100)] (tpd)	0.00	0.00
Line 13	NO _x substitution amount okay? (Check to assure NO _x substitution does not exceed maximum available: Sheet 02, Line 9 must be greater than zero.)	Okay to Substitute	Okay to Substitute

Notes:

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

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2017 RFP Demonstration Analysis
DFW Eight-Hour Ozone Nonattainment Area

One Newly Designated Nonattainment County: Wise

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

Line #	Description	NO _x (tpd)	VOC (tpd)
Line 1	Uncontrolled or existing controlled 1 NDC 2017 emissions forecast with growth	54.11	35.72
Line 2	Creditable RFP control reductions, for 1 NDC, between 2011 and 2017	23.14	6.15
Line 3	Controlled 2017, 1 NDC RFP emissions forecast (Line 1 minus Line 2)	30.97	29.57
Line 4	Amount of NO _x and VOC reduction to transfer from 9 PDC RFP demonstration	0.00	-1.00
Line 5	Controlled 2017, 1 NDC RFP forecast accounting for transfer and NO _x substitution (Line 3 plus Line 4)	30.97	28.57
Line 6	2017 1 NDC RFP target level of emissions	34.17	29.33
Line 7	Excess (+) / Shortfall (-) (Line 6 minus Line 5)	3.20	0.76
Line 8	Is controlled RFP EI less than target level of emissions?	Yes	Yes

Notes:

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

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Appendix 1 - Sheet 5

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

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

Contingency Element Description	NO_x	VOC
2018 9 PDC adjusted base year (ABY) EI	413.40	447.75
Percent for 9 PDC 2017 milestone contingency calculation (total of 3%)	2.00	1.00
2017 to 2018 9 PDC required contingency reductions (ABY EI x (contingency percent))	8.27	4.48
Control reductions to meet contingency requirements		
Reserved reductions from 9 PDC 2018 RFP demonstration	8.27	4.48
Unspecified control 1	0.00	0.00
Unspecified control 2	0.00	0.00
Total 9 PDC contingency reductions	8.27	4.48
Contingency Excess (+) or Shortfall (-)	0.00	0.00
Are contingency reductions greater than required contingency reduction?	Yes	Yes

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

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Appendix 1 - Sheet 6

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

One Newly Designated Nonattainment County: Wise

Contingency Element Description	NO_x	VOC
2018 1 NDC adjusted base year (ABY) EI	34.16	34.51
Percent for 1 NDC 2017 milestone contingency calculation (total of 3%)	2.00	1.00
2017 to 2018 1 NDC required contingency reductions (ABY EI x (contingency percent))	0.68	0.35
Control reductions to meet contingency requirements		
Reserved reductions from 1 NDC 2018 RFP demonstration	0.68	0.35
Unspecified control 1	0.00	0.00
Unspecified control 2	0.00	0.00
Total 1 NDC contingency reductions	0.68	0.35
Contingency Excess (+) or Shortfall (-)	0.00	0.00
Are contingency reductions greater than required contingency reduction?	Yes	Yes

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

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Appendix 1 - Sheet 7

9 PDC 2018 RFP Demonstration Analysis

DFW Eight-Hour Ozone Nonattainment Area

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

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

Line #	Description	NO _x (tpd)	VOC (tpd)
Line 1	Uncontrolled or existing controlled 9 PDC 2018 emissions forecast with growth	1204.12	801.79
Line 2	Creditable 9 PDC RFP control reductions between 2011 and 2017	864.23	389.22
Line 3	Creditable 9 PDC RFP control reductions between 2017 and 2018	14.42	15.91
Line 4	Controlled 2018, 9 PDC RFP emissions forecast (Line 1 minus Line 2 minus Line 3)	325.47	396.66
Line 5	Amount of creditable reductions reserved for 9 PDC RFP milestone contingency	8.27	4.48
Line 6	Controlled 2018, 9 PDC RFP emission forecast with milestone contingency (Line 4 plus Line 5)	333.74	401.14
Line 7	Amount of NO _x and VOC reduction to transfer to 1 NDC RFP demonstration	0.00	0.00
Line 8	Amount of NO _x reduction substitution (see Sheet 9)	0.00	0.00
Line 9	Controlled 2018, 9 PDC RFP forecast without reductions reserved for contingency, accounting for reduction transfer to newly designated county, and accounting for NO _x substitution (Line 6 plus Line 7 plus Line 8)	333.74	401.14
Line 10	2018 9 PDC RFP target level of emissions	363.79	420.88
Line 11	Excess (+) / Shortfall (-) (Line 10 minus Line 9)	30.05	19.75
Line 12	Is controlled RFP EI less than target level of emissions?	Yes	Yes

Notes:

1) To calculate the RFP controlled forecast for each milestone/attainment year, the total RFP creditable control strategy reductions to date (total RFP reductions from 2011 to the current RFP milestone year) are subtracted from the total uncontrolled RFP EI.

2) To calculate the final excess or shortfall for each milestone/attainment year, the controlled RFP emissions forecast is subtracted from the RFP target level of emissions. The RFP target level of emissions for all milestone years is calculated on the "Calc Targets" page.

3) Excess emissions reductions (Line 11) may be used to provide a transportation conformity safety margin. The safety margin must be less than or equal to the excess emissions reductions.

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Appendix 1 - Sheet 8

1 NDC 2018 RFP Demonstration Analysis
DFW Eight-Hour Ozone Nonattainment Area
One Newly Designated Nonattainment County: Wise

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

Line #	Description	NO _x (tpd)	VOC (tpd)
Line 1	Uncontrolled or existing controlled 1 NDC 2018 emissions forecast with growth	51.46	30.76
Line 2	Creditable 1 NDC RFP control reductions between 2011 and 2017	23.14	6.15
Line 3	Creditable 1 NDC RFP control reductions between 2017 and 2018	1.12	0.34
Line 4	Controlled 2018 1 NDC RFP emissions forecast (Line 1 minus Line 2 minus Line 3)	27.20	24.27
Line 5	Amount of creditable reductions reserved for 1 NDC RFP milestone contingency	0.68	0.35
Line 6	Controlled 1 NDC RFP emission forecast with milestone contingency (Line 4 plus Line 5)	27.88	24.62
Line 7	Amount of NO _x and VOC reduction to transfer from 9 PDC RFP demonstration	0.00	0.00
Line 8	Controlled RFP forecast without reductions reserved for contingency and accounting for NO _x substitution (Line 6 plus Line 7)	27.88	24.62
Line 9	1 NDC 2018 RFP target level of emissions	34.16	28.30
Line 10	Excess (+) / Shortfall (-) (Line 8 minus Line 9)	6.28	3.68
Line 11	Is controlled RFP EI less than target level of emissions?	Yes	Yes

Notes:

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

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Appendix 1 - Sheet 9
 2018 RFP NO_x Substitution Analysis
 DFW Eight-Hour Ozone Nonattainment Area

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

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

Line #	Description	NO _x	VOC
Line 1	2011 9 PDC base year emissions (tpd)	406.95	445.12
Line 2	2018 9 PDC controlled RFP EI (tpd)	333.74	401.14
Line 3	Total actual reductions for 9 PDC 2011 to 2018 (Line 1 minus Line 2) (tpd)	73.21	43.98
Line 4	Percent actual reductions for 9 PDC 2011 to 2018 (percent Line 3 is of Line 1) (%)	17.99	9.88
Line 5	2018 9 PDC target RFP EI (tpd)	363.79	420.88
Line 6	9 PDC 2018 total target reductions for 2011 to 2018 (Line 1 minus Line 5) (tpd)	43.16	24.24
Line 7	Percent target reductions for 2011 to 2018 (percent Line 6 is of Line 1) (%)	10.61	5.45
Line 8	Percent surplus or shortfall (percent actual minus percent target, Line 4 minus Line 7) (%)	7.38	4.44
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 10

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

Summary 2019 Contingency for 2018 RFP

Contingency Element Description	NO_x	VOC
9 PDC 2018 ABY EI	413.40	447.75
Percent for contingency calculation (total of 3%)	2.00	1.00
2018 to 2019 required contingency reductions (ABY EI x (contingency percent))	8.27	4.48
Control reductions to meet contingency requirements		
Excess reductions from 2018 RFP demonstration	30.05	19.75
Subtract 2018 RFP demonstration motor vehicle emissions budget (MVEB) safety margin from excess reductions from 2018 RFP demonstration	-13.77	-6.86
Federal Motor Vehicle Control Program (FMVCP), inspection and maintenance (I/M), reformulated gasoline (RFG)/East Texas Regional Low RVP, and on-road TxLED (Note: This list of controls is the complete list for the 9 DFW counties. However, RFG is required, and all control reductions are modeled with RFG, only in the 4 core counties.)	30.47	11.03
Federal non-road mobile new vehicle certification standards, non-road RFG, and non-road TxLED	9.00	4.65
Total RFP demonstration contingency reductions	55.75	28.57
Contingency Excess (+) or Shortfall (-)	47.48	24.09

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

Contingency Element Description	NO_x	VOC
9 PDC 2018 ABY EI	413.40	447.75
Percent for contingency calculation (total of 3%)	2.00	1.00
2018 to 2019 9 PDC RFP required contingency reductions (ABY EI x (contingency percent))	8.27	4.48
Calculate available reductions to meet contingency requirements: add excess 2018 control reductions; subtract MVEB safety margin adjustment; and add each 2018 to 2019 control reduction		
Excess reductions from 2018 RFP demonstration	30.05	19.75
Subtract 2018 RFP MVEB safety margin from excess reductions from 2018 RFP demonstration	-13.77	-6.86
Chapter 117 NOX controls	0.00	0.00
Chapter 115 Storage Tank Rule	0.00	0.00
Coating / printing rules	0.00	0.00
Portable fuel containers	0.00	0.00
Federal Motor Vehicle Control Program (FMVCP)	36.14	11.93
Inspection and Maintenance (I/M)	-1.05	-0.38
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	-4.40	-0.51
On-road TxLED	-0.22	-0.01
Tier I and II locomotive NOX standards	0.00	0.00
Small non-road spark ignition (SI) engines (Phase I)	-0.09	0.76
Heavy duty non-road engines	1.92	0.77
Tiers 2 and 3 non-road diesel engines	2.92	0.39
Small non-road SI engines (Phase II)	0.06	0.73
Large non-road SI & recreational marine	1.39	0.98
Non-road TxLED	-0.46	0.00
Non-road RFG	-0.01	0.01

Tier 4 non-road diesel engines	3.17	0.17
Diesel recreational marine	0.00	0.00
Small SI (Phase III)	0.10	0.84
Chapter 117 NOX area source engine controls	0.00	0.00
Drilling rig low emission diesel	0.00	0.00
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This row not used for current RFP	0.00	0.00
Total 2019 9 PDC RFP contingency reductions	55.75	28.57
Contingency Excess (+) or Shortfall (-)	47.48	24.09
Are contingency reductions greater than required contingency reduction?	Yes	Yes

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

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Appendix 1 - Sheet 11

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

Summary 2019 Contingency for 2018 RFP

Contingency Element Description	NO_x	VOC
1 NDC 2018 ABY EI	34.16	34.51
Percent for contingency calculation (total of 3%)	2.00	1.00
2018 to 2019 required contingency reductions (ABY EI x (contingency percent))	0.68	0.35
Calculate available reductions to meet contingency requirements: add excess 2018 control reductions; subtract MVEB safety margin adjustment; and add each 2018 to 2019 control reduction		
Excess reductions from 2018 RFP demonstration	6.28	3.68
Subtract 2018 RFP demonstration motor vehicle emissions budget (MVEB) safety margin from excess reductions from 2018 RFP demonstration	0.00	0.00
Federal Motor Vehicle Control Program (FMVCP), East Texas Regional Low RVP, and on-road TxLED	0.91	0.21
Federal non-road mobile new vehicle certification standards, non-road TxLED	0.12	0.05
Total RFP demonstration contingency reductions	7.31	3.94
Contingency Excess (+) or Shortfall (-)	6.63	3.59

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

Contingency Element Description	NO_x	VOC
1 NDC 2018 ABY EI	34.16	34.51
Percent for contingency calculation (total of 3%)	2.00	1.00
2018 to 2019 1 NDC RFP required contingency reductions (ABY EI x (contingency percent))	0.68	0.35
Calculate available reductions to meet contingency requirements: add excess 2018 control reductions; subtract MVEB safety margin adjustment; and add each 2018 to 2019 control reduction		
Excess reductions from 2018 RFP demonstration	6.28	3.68
Subtract 2018 RFP MVEB safety margin from excess reductions from 2018 RFP demonstration ¹	0.00	0.00
Chapter 117 NOX controls	0.00	0.00
Chapter 115 Storage Tank Rule	0.00	0.00
Coating / printing rules	0.00	0.00
Portable fuel containers	0.00	0.00
Federal Motor Vehicle Control Program (FMVCP)	1.00	0.23
Inspection and Maintenance (I/M)	0.00	0.00
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	-0.08	-0.02
On-road TxLED	-0.01	0.00
Tier I and II locomotive NOX standards	0.00	0.00
Small non-road spark ignition (SI) engines (Phase I)	0.00	0.01
Heavy duty non-road engines	0.01	0.01
Tiers 2 and 3 non-road diesel engines	0.02	-0.01
Small non-road SI engines (Phase II)	0.00	0.00
Large non-road SI & recreational marine	0.01	0.02
Non-road TxLED	-0.01	0.00
Non-road RFG	0.00	0.00
Tier 4 non-road diesel engines	0.09	0.00

Diesel recreational marine	0.00	0.00
Small SI (Phase III)	0.00	0.02
Chapter 117 NOX area source engine controls	0.00	0.00
Drilling rig low emission diesel	0.00	0.00
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This row not used for current RFP	0.00	0.00
Total 2019 1 NDC RFP contingency reductions	7.31	3.94
Contingency Excess (+) or Shortfall (-)	6.63	3.59
Are contingency reductions greater than required contingency reduction?	Yes	Yes

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

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

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Appendix 1 - Sheet 12

2019 Contingency Demonstration for 2018 Attainment

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

Summary 2019 Contingency for 2018 Attainment Demonstration

Contingency Element Description	NO _x	VOC
2018 10 NAC ABY EI	447.56	482.26
Percent for contingency calculation (total of 3%)	3.00	0.00
2018 to 2019 AD required contingency reductions (ABY EI x (contingency percent))	13.43	0.00
Control reductions to meet contingency requirements		
Excess reductions from 2018 attainment demonstration	0.00	0.00
Subtract reductions reserved for 2018 attainment demonstration MVEB safety margin	0.00	0.00
Federal Motor Vehicle Control Program (FMVCP), inspection and maintenance (I/M), reformulated gasoline (RFG), and on-road TxLED (Note: This list of controls is the complete list for the 9 DFW counties. However, RFG is required, and all control reductions are modeled with RFG, only in the 4 core counties.)	31.38	11.24
Federal non-road mobile new vehicle certification standards, non-road RFG, and non-road TxLED	9.12	4.70
Total attainment demonstration contingency reductions	40.50	15.94
Contingency Excess (+) or Shortfall (-)	27.07	15.94

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

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

Contingency Element Description	NO _x	VOC
2018 10 NAC ABY EI	447.56	482.26
Percent for AD contingency calculation (total of 3%)	3.00	0.00
2018 to 2019 required AD contingency reductions (ABY EI x (contingency percent))	13.43	0.00
Control reductions to meet contingency requirements		
Add excess reductions from 2018 attainment demonstration	0.00	0.00
Subtract 2018 attainment demonstration MVEB safety margin	0.00	0.00
Chapter 117 NOX controls	0.00	0.00
Chapter 115 Storage Tank Rule	0.00	0.00
Coating / printing rules	0.00	0.00
Portable fuel containers	0.00	0.00
Federal Motor Vehicle Control Program (FMVCP)	37.14	12.16
Inspection and Maintenance (I/M)	-1.05	-0.38
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	-4.48	-0.53
On-road TxLED	-0.23	-0.01
Tier I and II locomotive NOX standards	0.00	0.00
Small non-road spark ignition (SI) engines (Phase I)	-0.09	0.77
Heavy duty non-road engines	1.93	0.78
Tiers 2 and 3 non-road diesel engines	2.94	0.38
Small non-road SI engines (Phase II)	0.06	0.73
Large non-road SI & recreational marine	1.40	1.00
Non-road TxLED	-0.47	0.00
Non-road RFG	-0.01	0.01

Tier 4 non-road diesel engines	3.26	0.17
Diesel recreational marine	0.00	0.00
Small SI (Phase III)	0.10	0.86
Chapter 117 NOX area source engine controls	0.00	0.00
Drilling rig low emission diesel	0.00	0.00
This row not used for current RFP	0.00	0.00
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Total attainment demonstration contingency reductions	40.50	15.94
Contingency Excess (+) or Shortfall (-)	27.07	15.94

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Appendix 1 - Sheet 13

Calculations: 2017 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 2017 MVEB

Description	NO_x	VOC
2017 9 PDC on-road emissions projection without post-1990 FCAA controls	901.66	352.18
2017 1 NDC on-road emissions projection without post-1990 FCAA controls	23.01	5.82
2017 10 NAC on-road emissions projection without post-1990 FCAA controls	924.67	358.00
Total 2017 10 NAC on-road mobile source RFP control reductions	776.13	286.80
2017 10 NAC On-road mobile controlled inventory	148.54	71.20
Transportation conformity safety margin	14.85	7.12
Excess emissions reduction for 2017	53.98	14.78
Is excess emissions enough for safety margin?	yes	yes
2017 10 NAC MVEB with safety margin	163.39	78.32

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

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Calculations: 2018 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 2018 MVEB

Description	NO_x	VOC
2018 9 PDC on-road emissions projection without post-1990 FCAA controls	922.26	360.70
2018 1 NDC on-road emissions projection without post-1990 FCAA controls	23.70	6.00
2018 10 NAC on-road emissions projection without post-1990 FCAA controls	945.96	366.70
Total 2018 10 NAC on-road mobile source RFP control reductions	808.23	298.14
2018 10 NAC On-road mobile controlled inventory	137.73	68.56
Transportation conformity safety margin	13.77	6.86
Excess emissions reduction for 2018	36.33	23.43
Is excess emissions enough for safety margin?	yes	yes
2018 10 NAC MVEB with safety margin	151.50	75.42

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

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Appendix 1 - Sheet 15

RFP Non-creditable Reductions Calculations
DFW Nonattainment Area Eight-Hour Ozone Season VOC and NO_x

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

9 PDC Calculation of Non-creditable NO_x and VOC Reductions

RFP Analysis Year	On-Road Mobile ABY EI NO _x	On-Road Mobile ABY EI VOC	Non-Creditable Fleet Turn Over Reductions NO _x	Non-Creditable Fleet Turn Over Reductions VOC	Non-Creditable Reduction Description
2011, 9 PDC	746.03	295.91	N/A	N/A	
2017, 9 PDC	752.52	298.59	-6.49	-2.68	Pre-1990 CAA fleet turnover reduction baseline 2011 through 2017 for 9 PDC
2018, 9 PDC	752.48	298.54	0.04	0.05	Pre-1990 CAA fleet turnover reduction 2017 through 2018 for 9 PDC

1 NDC Calculation of Non-creditable NO_x and VOC Reductions

RFP Analysis Year	On-Road Mobile ABY EI NO _x	On-Road Mobile ABY EI VOC	Non-Creditable Fleet Turn Over Reductions NO _x	Non-Creditable Fleet Turn Over Reductions VOC	Non-Creditable Reduction Description
2011, 1 NDC	18.30	4.78	N/A	N/A	
2017, 1 NDC	18.51	4.82	-0.21	-0.04	Pre-1990 CAA fleet turnover reduction baseline 2011 through 2017 for 1 NDC
2018, 1 NDC	18.50	4.82	0.01	0.00	Pre-1990 CAA fleet turnover reduction 2017 through 2018 for 1 NDC

Notes:

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

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

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Appendix 1 - Sheet 16

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

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

RFP Analysis Year	Total Percent Reduction Requirement	Percent NO _x	Percent VOC	RFP ABY EI NO _x (tpd)	RFP ABY EI VOC (tpd)	Required Reductions NO _x (tpd)	Required Reductions VOC (tpd)
2011	N/A	N/A	N/A	406.95	445.12	N/A	N/A
2017	15.0	10.0	5.0	413.44	447.80	41.34	22.39
2018	3.0	2.0	1.0	413.40	447.75	8.27	4.48
2019 Contingency	3.0	2.0	1.0	413.40	447.75	8.27	4.48

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

RFP Analysis Year	Total Percent Reduction Requirement	Percent NO _x	Percent VOC	RFP ABY EI NO _x (tpd)	RFP ABY EI VOC (tpd)	Required Reductions NO _x (tpd)	Required Reductions VOC (tpd)
2011	N/A	N/A	N/A	33.96	34.47	N/A	N/A
2017	15.0	N/A	15.0	34.17	34.51	N/A	5.18
2018	3.0	0.0	3.0	34.16	34.51	0.00	1.04
2019 Contingency	3.0	2.0	1.0	34.16	34.51	0.68	0.35

Notes:

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

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

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Appendix 1 - Sheet 17

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

DFW 2008 Eight-Hour Ozone Nonattainment Area

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

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

RFP Post-2011 9 PDC Target Level of NO_x Emissions				
RFP Milestone Year	Previous Target	FMVCP Non-creditable Reduction	Post-2011 Percent Reduction Requirement NO_x (tpd)	NO_x Target (tpd)
2011 Base Year, 9 PDC	N/A	N/A	N/A	406.95
2017, 9 PDC	406.95	-6.49	41.34	372.10
2018, 9 PDC	372.10	0.04	8.27	363.79

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	445.12
2017, 9 PDC	445.12	-2.68	22.39	425.41
2018, 9 PDC	425.41	0.05	4.48	420.88

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Appendix 1 - Sheet 18

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

DFW 2008 Eight-Hour Ozone Nonattainment Area

One Newly Designated Nonattainment County: Wise

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

RFP Post-2011 1 NDC Target Level of NO_x Emissions				
RFP Milestone Year	Previous Target	FMVCP Non-creditable Reduction	Post-2011 Percent Reduction Requirement NO_x (tpd)	NO_x Target (tpd)
2011 Base Year, 1 NDC	N/A	N/A	N/A	33.96
2017, 1 NDC	33.96	-0.21	N/A	34.17
2018, 1 NDC	34.17	0.01	0.00	34.16

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

'RFP Post-2011 1 NDC Target Level of VOC Emissions				
RFP Milestone Year	Previous Target	FMVCP Non-creditable Reduction	Post-2011 Percent Reduction Requirement VOC (tpd)	VOC Target (tpd)
2011 Base Year, 1 NDC	N/A	N/A	N/A	34.47
2017, 1 NDC	34.47	-0.04	5.18	29.33
2018, 1 NDC	29.33	0.00	1.04	28.30

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Appendix 1 - Sheet 19

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

DFW Eight-Hour Ozone Nonattainment Area

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

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

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

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

RFP and Attainment Demonstration NO_x and VOC Percent Reductions for 2018 and 2019 Contingency			
Contingency Year	NO _x %	VOC %	Total Percent
9 PDC RFP Milestone Contingency	2	1	3
1 NDC RFP Milestone Contingency	2	1	3
9 PDC RFP 2018 to 2019	2	1	3
1 NDC RFP 2018 to 2019	2	1	3
AD 2018 to 2019	3	0	3

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

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

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

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

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

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Appendix 1 - Sheet 20

Enter Aircraft Emissions Inventory
DFW Eight-Hour Ozone Nonattainment Area

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

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

One Newly Designated Nonattainment County: Wise

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

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

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

Notes:

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

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Appendix 1 - Sheet 21

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

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

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

One Newly Designated Nonattainment County: Wise

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

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

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

Notes:

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

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Appendix 1 - Sheet 22

Enter Biogenic Emissions Inventory
DFW Eight-Hour Ozone Nonattainment Area

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

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

One Newly Designated Nonattainment County: Wise

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

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

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

Notes:

1) Beginning with the Air Emissions Reporting Requirements (December 2008), the emissions required to be reported no longer include emissions from biogenic sources. Therefore, as of the 2011 reporting year, the comprehensive triennial emissions inventory no longer includes emissions from biogenic sources. The RFP demonstrations are based upon the emissions from anthropogenic sources. The guidance for RFP calculations shows the first step is to subtract the emissions from biogenic sources from the total base year emissions to obtain the total anthropogenic emission inventory. As of 2011, under the AERR, the base year emissions do not include biogenic sources and already represent the total anthropogenic emissions. In this case, step one of the RFP process is not needed, and the emissions from biogenic sources is unnecessary. This RFP SIP revision: uses a base year of 2011; does not require subtraction of the biogenic emissions in Step One of the RFP calculation process; and does not include quantification of emissions from biogenic sources.

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

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

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

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Appendix 1 - Sheet 23

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

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

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

One Newly Designated Nonattainment County: Wise

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

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

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

Notes:

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

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Appendix 1 - Sheet 24

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

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

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

One Newly Designated Nonattainment County: Wise

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

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

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

Notes:

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

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Appendix 1 - Sheet 25

Enter Locomotive Emissions Inventory
DFW Eight-Hour Ozone Nonattainment Area

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

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

One Newly Designated Nonattainment County: Wise

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

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

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

Notes:

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

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Appendix 1 - Sheet 26

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

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

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

One Newly Designated Nonattainment County: Wise

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

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

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

Notes:

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

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Appendix 1 - Sheet 27

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

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

'RFP Analysis Year	Uncontrolled NO _x (tpd)	Controlled NO _x (tpd)	Total Reduction NO _x (tpd)	Percent Reduction	Uncontrolled VOC (tpd)	Controlled VOC (tpd)	Total Reduction VOC (tpd)	Percent Reduction
9 PDC 2011	746.03	232.15	513.880	68.9	295.91	100.42	195.490	66.1
9 PDC 2017	901.66	144.42	757.240	84.0	352.18	69.88	282.300	80.2
9 PDC 2018	922.26	133.89	788.370	85.5	360.70	67.30	293.400	81.3

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	18.30	6.36	11.94	65.25	4.78	1.90	2.88	60.25
1 NDC 2017	23.01	4.12	18.89	82.09	5.82	1.32	4.50	77.32
1 NDC 2018	23.70	3.84	19.86	83.80	6.00	1.26	4.74	79.00

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	764.33	238.51	525.82	68.79	300.69	102.32	198.37	65.97
10 County Total 2017	924.67	148.54	776.13	83.94	358.00	71.20	286.80	80.11
10 County total 2018	945.96	137.73	808.23	85.44	366.70	68.56	298.14	81.30

Notes:

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

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Appendix 1 - Sheet 28

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

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

RFP Analysis Year	ABY NO _x (tpd)	ABY VOC (tpd)
9 PDC 2011	746.03	295.91
9 PDC 2017	752.52	298.59
9 PDC 2018	752.48	298.54

One Newly Designated Nonattainment County: Wise

RFP Analysis Year	ABY NO _x (tpd)	ABY VOC (tpd)
1 NDC 2011	18.30	4.78
1 NDC 2017	18.51	4.82
1 NDC 2018	18.50	4.82

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

RFP Analysis Year	ABY NO _x (tpd)	ABY VOC (tpd)
10 NAC Total 2011	764.33	300.69
10 NAC Total 2017	771.03	303.41
10 NAC Total 2018	770.98	303.36

Notes:

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

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Appendix 1 - Sheet 29

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

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

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

One Newly Designated Nonattainment County: Wise

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

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

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

Notes:

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

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Appendix 1 - Sheet 30

Enter 2017 Control Measure Reductions

DFW Nonattainment Area Eight-hour Ozone Season VOC and NO_x

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

RFP Control Strategy Description	Source Category	Total 2011 to 2017 NO _x Emissions Reductions (tpd)	Total 2011 to 2017 VOC Emissions Reductions (tpd)	Use this control for RFP calculations? (Yes or No)	Is this an on-road mobile control that will change the MVEB? (Yes or No)
Chapter 117 NO _x controls	Point	0.00	0.00	Yes	No
Chapter 115 Storage Tank Rule	Point	0.00	0.00	Yes	No
Coating / printing rules	Point	0.00	0.00	Yes	No
Portable fuel containers	Area	0.00	0.00	Yes	No
Federal Motor Vehicle Control Program (FMVCP)	OR	650.42	259.65	Yes	Yes
Inspection and Maintenance (I/M)	OR	10.84	9.63	Yes	Yes
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	OR	92.50	13.02	Yes	Yes
On-road TxLED	OR	3.48	0.00	Yes	Yes
Tier I and II locomotive NO _x standards	NR	0.10	0.20	Yes	No
Small non-road spark ignition (SI) engines (Phase I)	NR	-3.47	32.32	Yes	No
Heavy duty non-road engines	NR	24.26	8.89	Yes	No
Tiers 2 and 3 non-road diesel engines	NR	32.26	6.22	Yes	No
Small non-road SI engines (Phase II)	NR	2.42	31.31	Yes	No
Large non-road SI & recreational marine	NR	32.72	13.82	Yes	No
Non-road TxLED	NR	2.17	0.00	Yes	No
Non-road RFG	NR	-0.53	0.00	Yes	No
Tier 4 non-road diesel engines	NR	15.03	0.81	Yes	No
Diesel recreational marine	NR	0.00	0.00	Yes	No
Small SI (Phase III)	NR	2.03	13.35	Yes	No
Chapter 117 NO _x area source engine controls	Area	0.00	0.00	Yes	No
Drilling rig low emission diesel	Area	0.00	0.00	Yes	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
Total		864.23	389.22		

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.

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Appendix 1 - Sheet 31

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

RFP Control Strategy Description	Source Category	Total 2011 to 2017 NO _x Emissions Reductions (tpd)	Total 2011 to 2017 VOC Emissions Reductions (tpd)	Use this control for RFP calculations? (Yes or No)	Is this an on-road mobile control that will change the MVEB? (Yes or No)
Chapter 117 NOX controls	Point	0.00	0.00	Yes	No
Chapter 115 Storage Tank Rule	Point	0.00	0.00	Yes	No
Coating / printing rules	Point	0.00	0.00	Yes	No
Portable fuel containers	Area	0.00	0.00	Yes	No
Federal Motor Vehicle Control Program (FMVCP)	OR	16.77	4.17	Yes	Yes
Inspection and Maintenance (I/M)	OR	0.00	0.00	Yes	Yes
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	OR	2.00	0.33	Yes	Yes
On-road TxLED	OR	0.12	0.00	Yes	Yes
Tier I and II locomotive NOX standards	NR	0.01	0.02	Yes	No
Small non-road spark ignition (SI) engines (Phase I)	NR	-0.03	0.21	Yes	No
Heavy duty non-road engines	NR	1.40	0.53	Yes	No
Tiers 2 and 3 non-road diesel engines	NR	1.68	0.17	Yes	No
Small non-road SI engines (Phase II)	NR	0.02	0.21	Yes	No
Large non-road SI & recreational marine	NR	0.20	0.28	Yes	No
Non-road TxLED	NR	0.07	0.00	Yes	No
Non-road RFG	NR	0.00	0.00	Yes	No
Tier 4 non-road diesel engines	NR	0.88	0.03	Yes	No
Diesel recreational marine	NR	0.00	0.00	Yes	No
Small SI (Phase III)	NR	0.02	0.20	Yes	No
Chapter 117 NOX area source engine controls	Area	0.00	0.00	Yes	No
Drilling rig low emission diesel	Area	0.00	0.00	Yes	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
Total		23.14	6.15		

Notes

Please see notes for the control reductions on:
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Appendix 1 - Sheet 32

Enter 2018 Control Measure Reductions

DFW Nonattainment Area Eight-hour Ozone Season VOC and NO_x

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

RFP Control Strategy Description	Source Category	Total 2011 to 2018 NO_x Emissions Reductions (tpd)	Total 2011 to 2018 VOC Emissions Reductions (tpd)	Use this control for RFP demonstration? (Yes or No)	Is this an on-road mobile control that will change the MVEB? (Yes or No)
Chapter 117 NOX controls	Point	0.00	0.00	Yes	No
Chapter 115 Storage Tank Rule	Point	0.00	0.00	Yes	No
Coating / printing rules	Point	0.00	0.00	Yes	No
Portable fuel containers	Area	0.00	0.00	Yes	No
Federal Motor Vehicle Control Program (FMVCP)	OR	688.79	271.66	Yes	Yes
Inspection and Maintenance (I/M)	OR	9.62	9.30	Yes	Yes
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	OR	86.79	12.44	Yes	Yes
On-road TxLED	OR	3.17	0.00	Yes	Yes
Tier I and II locomotive NOX standards	NR	0.20	0.30	Yes	No
Small non-road spark ignition (SI) engines (Phase I)	NR	-3.52	32.86	Yes	No
Heavy duty non-road engines	NR	24.94	9.16	Yes	No
Tiers 2 and 3 non-road diesel engines	NR	33.72	6.45	Yes	No
Small non-road SI engines (Phase II)	NR	2.46	31.84	Yes	No
Large non-road SI & recreational marine	NR	34.16	14.63	Yes	No
Non-road TxLED	NR	2.38	0.00	Yes	No
Non-road RFG	NR	-0.51	1.53	Yes	No
Tier 4 non-road diesel engines	NR	17.44	0.91	Yes	No
Diesel recreational marine	NR	0.00	0.00	Yes	No
Small SI (Phase III)	NR	2.15	14.05	Yes	No
Chapter 117 NOX area source engine controls	Area	0.00	0.00	Yes	No
Drilling rig low emission diesel	Area	0.00	0.00	Yes	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
Total		901.79	405.13		

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

Notes

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Appendix 1 - Sheet 33

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

RFP Control Strategy Description	Source Category	Total 2011 to 2018 NO _x Emissions Reductions (tpd)	Total 2011 to 2018 VOC Emissions Reductions (tpd)	Use this control for RFP demonstration? (Yes or No)	Is this an on-road mobile control that will change the MVEB? (Yes or No)
Chapter 117 NOX controls	Point	0.00	0.00	Yes	No
Chapter 115 Storage Tank Rule	Point	0.00	0.00	Yes	No
Coating / printing rules	Point	0.00	0.00	Yes	No
Portable fuel containers	Area	0.00	0.00	Yes	No
Federal Motor Vehicle Control Program (FMVCP)	OR	17.87	4.43	Yes	Yes
Inspection and Maintenance (I/M)	OR	0.00	0.00	Yes	Yes
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	OR	1.88	0.31	Yes	Yes
On-road TxLED	OR	0.11	0.00	Yes	Yes
Tier I and II locomotive NOX standards	NR	0.02	0.03	Yes	No
Small non-road spark ignition (SI) engines (Phase I)	NR	-0.03	0.22	Yes	No
Heavy duty non-road engines	NR	1.41	0.54	Yes	No
Tiers 2 and 3 non-road diesel engines	NR	1.70	0.18	Yes	No
Small non-road SI engines (Phase II)	NR	0.02	0.21	Yes	No
Large non-road SI & recreational marine	NR	0.20	0.30	Yes	No
Non-road TxLED	NR	0.06	0.00	Yes	No
Non-road RFG	NR	0.00	0.00	Yes	No
Tier 4 non-road diesel engines	NR	1.00	0.04	Yes	No
Diesel recreational marine	NR	0.00	0.00	Yes	No
Small SI (Phase III)	NR	0.02	0.23	Yes	No
Chapter 117 NOX area source engine controls	Area	0.00	0.00	Yes	No
Drilling rig low emission diesel	Area	0.00	0.00	Yes	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
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This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
Total		24.26	6.49		

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

Notes

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

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

RFP Control Strategy Description	Source Category	Total 2011 to 2019 NO _x Emissions Reductions (tpd)	Total 2011 to 2019 VOC Emissions Reductions (tpd)	Use this control for 2019 RFP contingency? (Yes or No)
Chapter 117 NOX controls	Point	0.00	0.00	No
Chapter 115 Storage Tank Rule	Point	0.00	0.00	No
Coating / printing rules	Point	0.00	0.00	No
Portable fuel containers	Area	0.00	0.00	No
Federal Motor Vehicle Control Program (FMVCP)	OR	724.93	283.59	Yes
Inspection and Maintenance (I/M)	OR	8.57	8.92	Yes
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	OR	82.39	11.93	Yes
On-road TxLED	OR	2.95	-0.01	Yes
Tier I and II locomotive NOX standards	NR	0.00	0.00	No
Small non-road spark ignition (SI) engines (Phase I)	NR	-3.61	33.62	Yes
Heavy duty non-road engines	NR	26.86	9.93	Yes
Tiers 2 and 3 non-road diesel engines	NR	36.64	6.84	Yes
Small non-road SI engines (Phase II)	NR	2.52	32.57	Yes
Large non-road SI & recreational marine	NR	35.55	15.61	Yes
Non-road TxLED	NR	1.92	0.00	Yes
Non-road RFG	NR	-0.52	1.54	Yes
Tier 4 non-road diesel engines	NR	20.61	1.08	Yes
Diesel recreational marine	NR	0.00	0.00	Yes
Small SI (Phase III)	NR	2.25	14.89	Yes
Chapter 117 NOX area source engine controls	Area	0.00	0.00	No
Drilling rig low emission diesel	Area	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
Total		941.06	420.51	

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

Notes

Please see notes for the control reductions on:

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Appendix 1 - Sheet 35

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

RFP Control Strategy Description	Source Category	Total 2011 to 2019 NO _x Emissions Reductions (tpd)	Total 2011 to 2019 VOC Emissions Reductions (tpd)	Use this control for 2019 RFP contingency? (Yes or No)
Chapter 117 NOX controls	Point	0.00	0.00	No
Chapter 115 Storage Tank Rule	Point	0.00	0.00	No
Coating / printing rules	Point	0.00	0.00	No
Portable fuel containers	Area	0.00	0.00	No
Federal Motor Vehicle Control Program (FMVCP)	OR	18.87	4.66	Yes
Inspection and Maintenance (I/M)	OR	0.00	0.00	Yes
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	OR	1.80	0.29	Yes
On-road TxLED	OR	0.10	0.00	Yes
Tier I and II locomotive NOX standards	NR	0.00	0.00	No
Small non-road spark ignition (SI) engines (Phase I)	NR	-0.03	0.23	Yes
Heavy duty non-road engines	NR	1.42	0.55	Yes
Tiers 2 and 3 non-road diesel engines	NR	1.72	0.17	Yes
Small non-road SI engines (Phase II)	NR	0.02	0.21	Yes
Large non-road SI & recreational marine	NR	0.21	0.32	Yes
Non-road TxLED	NR	0.05	0.00	Yes
Non-road RFG	NR	0.00	0.00	Yes
Tier 4 non-road diesel engines	NR	1.09	0.04	Yes
Diesel recreational marine	NR	0.00	0.00	Yes
Small SI (Phase III)	NR	0.02	0.25	Yes
Chapter 117 NOX area source engine controls	Area	0.00	0.00	No
Drilling rig low emission diesel	Area	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
Total		25.27	6.72	

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

Notes

Please see notes for the control reductions on:

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

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Appendix 1 - Sheet 36

Calculate 2011 RFP Base Year Emissions Inventory
(Add emissions from outside the nonattainment area that are to be included in the RFP analysis.)

DFW Eight-Hour Ozone Nonattainment Area

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

The PDC 2011 Base Year Inventory	NO_x (tons/day)	VOC (tons/day)
Point Source PDC 2011 EI	31.34	27.66
Area Source PDC 2011 EI	30.48	263.30
On-road mobile PDC 2011 EI	232.15	100.42
Non-road mobile PDC 2011 EI	112.98	53.74
Biogenic PDC 2011 EI (see Note 1)	See Note 1	See Note 1
Total PDC 2011 Base Year Inventory	406.95	445.12
The PDC 2011 RFP Base Year Inventory Out of Area Adjustments	NO_x (tons/day)	VOC (tons/day)
What is the total amount of biogenic emissions from sources in the area in tons/day for PDC 2011 to be subtracted?	See Note 1	See Note 1
What is the total amount of point source emissions from outside the nonattainment to be included/excluded for PDC 2011?	0.00	0.00
What is the total amount of area source emissions from outside the nonattainment to be included/excluded for PDC 2011?	0.00	0.00
What is the total amount of on-road source emissions from outside the nonattainment to be included/excluded for PDC 2011?	0.00	0.00
What is the total amount of non-road source emissions from outside the nonattainment to be included/excluded for PDC 2011?	0.00	0.00
Total PDC 2011 RFP Base Year Adjustments	0.00	0.00
Description	NO_x (tons/day)	VOC (tons/day)
Total PDC 2011 RFP Base Year Inventory with Adjustments	406.95	445.12

Notes:

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

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Appendix 1 - Sheet 37

Calculate NDC 2011 RFP Base Year Emissions Inventory

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

DFW Eight-Hour Ozone Nonattainment Area

One Newly Designated Nonattainment County: Wise

The NDC 2011 Base Year Inventory	NO_x (tons/day)	VOC (tons/day)
Point Source NDC 2011 EI	8.61	2.14
Area Source NDC 2011 EI	12.14	29.18
On-Road Mobile NDC 2011 EI	6.36	1.90
Non-Road Mobile NDC 2011 EI	6.85	1.25
Biogenic NDC 2011 EI	See Note 1	See Note 1
Total NDC 2011 Base Year Inventory	33.96	34.47
The NDC 2011 RFP Base Year Inventory Out of Area Adjustments	NO_x (tons/day)	VOC (tons/day)
What is the total amount of biogenic emissions from sources in the area in tons/day for NDC 2011 to be subtracted?	See Note 1	See Note 1
What is the total amount of point source emissions from outside the nonattainment to be included/excluded for NDC 2011?	0.00	0.00
What is the total amount of area source emissions from outside the nonattainment to be included/excluded for NDC 2011?	0.00	0.00
What is the total amount of on-road source emissions from outside the nonattainment to be included/excluded for NDC 2011?	0.00	0.00
What is the total amount of non-road source emissions from outside the nonattainment to be included/excluded for NDC 2011?	0.00	0.00
Total NDC 2011 RFP Base Year Adjustments	0.00	0.00
Description	NO_x (tons/day)	VOC (tons/day)
Total NDC 2011 RFP Base Year Inventory with Adjustments	33.96	34.47

Notes:

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

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Appendix 1 - Sheet 38

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

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

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

Forecasted 2017 Uncontrolled or Existing Control Emissions Inventory with pre-2011 Controls		
Emissions Description	NO _x (tpd)	VOC (tpd)
Point Source	46.71	30.84
Area Source	30.91	266.15
On-Road Mobile Source	901.66	352.18
Non-Road Mobile Source	206.27	150.44
Nine County Total	1185.55	799.61

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Appendix 1 - Sheet 39

2017 Forecasted Uncontrolled or Existing Control Emissions Inventory with pre-2011 Controls

DFW Nonattainment Area Eight-Hour Ozone Season VOC and NO_x

One Newly Designated Nonattainment County: Wise

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

Forecasted 2017 Uncontrolled Emissions Inventory with pre-2011 Controls		
Emissions Description	NO _x (tpd)	VOC (tpd)
Point Source	10.21	3.41
Area Source	9.72	23.74
On-Road Mobile Source	23.01	5.82
Non-Road Mobile Source	11.17	2.75
Nine County Total	54.11	35.72

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Appendix 1 - Sheet 40

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

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

Forecasted 2018 Uncontrolled or Existing Control Emissions Inventory with pre-2011 Controls		
Emissions Description	NO _x (tpd)	VOC (tpd)
Point Source	45.90	29.83
Area Source	29.93	258.70
On-Road Mobile Source	922.26	360.70
Non-Road Mobile Source	206.03	152.56
Total	1204.12	801.79

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Appendix 1 - Sheet 41

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

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

Forecasted 2018 Uncontrolled or Existing Control Emissions Inventory with pre-2011 Controls		
Emissions Description	NO _x (tpd)	VOC (tpd)
Point Source	9.71	2.88
Area Source	7.44	19.17
On-Road Mobile Source	23.70	6.00
Non-Road Mobile Source	10.61	2.71
Total	51.46	30.76

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Appendix 9 - Sheet 42

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

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

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

9 PDC 2011 RFP Adjusted Base Year Emissions Inventory with Pre-1990 Controls		
Emissions Description	NO _x (tpd)	VOC (tpd)
Point Source 2011 9 PDC BY EI	31.34	27.66
Area Source 2011 9 PDC BY EI	30.48	263.30
On-Road Mobile Source 2011 9 PDC ABY EI	232.15	100.42
Non-Road Mobile Source 2011 9 PDC BY EI	112.98	53.74
9 PDC 2011 RFP Adjusted Base Year Emissions Inventory	406.95	445.12

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Appendix 1 - Sheet 43

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

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

1 NDC 2011 RFP Adjusted Base Year Emissions Inventory with Pre-1990 Controls		
Emissions Description	NO_x (tpd)	VOC (tpd)
Point Source 1 NDC 2011 BY EI	8.61	2.14
Area Source 1 NDC 2011 BY EI	12.14	29.18
On-Road Mobile Source 1 NDC 2011 ABY EI	6.36	1.90
Non-Road Mobile Source 1 NDC 2011 BY EI	6.85	1.25
1 NDC 2011 RFP Adjusted Base Year Emissions Inventory	33.96	34.47

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Appendix 1 - Sheet 44

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

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

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

9 PDC 2017 RFP Adjusted Base Year Emissions Inventory with Pre-1990 Controls		
Emissions Description	NO _x (tpd)	VOC (tpd)
Point Source 2011 BY EI	31.34	27.66
Area Source 2011 BY EI	30.48	263.30
On-Road Mobile Source 2017 ABY EI	238.64	103.10
Non-Road Mobile Source 2011 BY EI	112.98	53.74
9 PDC 2017 RFP Adjusted Base Year Emissions Inventory	413.44	447.80

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Appendix 1 - Sheet 45

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

One Newly Designated Nonattainment County: Wise

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

1 NDC 2017 RFP Adjusted Base Year Emissions Inventory with Pre-1990 Controls		
Emissions Description	NO _x (tpd)	VOC (tpd)
Point Source 2011 1 NDC BY EI	8.61	2.14
Area Source 2011 1 NDC BY EI	12.14	29.18
On-Road Mobile Source 2017 ABY EI	6.57	1.94
Non-Road Mobile Source 2011 1 NDC BY EI	6.85	1.25
1 NDC 2017 RFP Adjusted Base Year Emissions Inventory	34.17	34.51

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Appendix 1 - Sheet 46

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

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

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

9 PDC 2018 RFP Adjusted Base Year Emissions Inventory with Pre-1990 Controls		
Emissions Description	NO _x (tpd)	VOC (tpd)
Point Source 2011 BY EI	31.34	27.66
Area Source 2011 BY EI	30.48	263.30
On-Road Mobile Source 2018 ABY EI	238.60	103.05
Non-Road Mobile Source 2011 BY EI	112.98	53.74
9 PDC 2018 RFP Adjusted Base Year Emissions Inventory	413.40	447.75

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Appendix 1 - Sheet 47

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

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

1 NDC 2018 RFP Adjusted Base Year Emissions Inventory with Pre-1990 Controls		
Emissions Description	NO _x (tpd)	VOC (tpd)
Point Source 2011 1 NDC BY EI	8.61	2.14
Area Source 2011 1 NDC BY EI	12.14	29.18
On-Road Mobile Source 2018 ABY EI	6.56	1.94
Non-Road Mobile Source 2011 1 NDC BY EI	6.85	1.25
1 NDC 2018 RFP Adjusted Base Year Emissions Inventory	34.16	34.51

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Appendix 1 - Sheet 48

Calculations: 9 PDC 2011 to 2017 Control Measures Reductions
DFW Nonattainment Area Eight-Hour Ozone Season VOC and NO_x

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

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

RFP Control Strategy Description	Source Category	Total 2011 to 2017 NOX Emissions Reductions (tpd)	Total 2011 to 2017 VOC Emissions Reductions (tpd)	Use this control for RFP demonstration? (Yes or No)	Is this an on-road mobile control that will change the MVEB? (Yes or No)
Chapter 117 NOX controls	Point	0.00	0.00	Yes	No
Chapter 115 Storage Tank Rule	Point	0.00	0.00	Yes	No
Coating / printing rules	Point	0.00	0.00	Yes	No
Portable fuel containers	Area	0.00	0.00	Yes	No
Federal Motor Vehicle Control Program (FMVCP)	OR	650.42	259.65	Yes	Yes
Inspection and Maintenance (I/M)	OR	10.84	9.63	Yes	Yes
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	OR	92.50	13.02	Yes	Yes
On-road TxLED	OR	3.48	0.00	Yes	Yes
Tier I and II locomotive NOX standards	NR	0.10	0.20	Yes	No
Small non-road spark ignition (SI) engines (Phase I)	NR	-3.47	32.32	Yes	No
Heavy duty non-road engines	NR	24.26	8.89	Yes	No
Tiers 2 and 3 non-road diesel engines	NR	32.26	6.22	Yes	No
Small non-road SI engines (Phase II)	NR	2.42	31.31	Yes	No
Large non-road SI & recreational marine	NR	32.72	13.82	Yes	No
Non-road TxLED	NR	2.17	0.00	Yes	No
Non-road RFG	NR	-0.53	0.00	Yes	No
Tier 4 non-road diesel engines	NR	15.03	0.81	Yes	No
Diesel recreational marine	NR	0.00	0.00	Yes	No
Small SI (Phase III)	NR	2.03	13.35	Yes	No
Chapter 117 NOX area source engine controls	Area	0.00	0.00	Yes	No
Drilling rig low emission diesel	Area	0.00	0.00	Yes	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
This row not used for current RFP	UK	0.00	0.00	No	No
Total 2017 9 PDC RFP Control Reductions		864.23	389.22		

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Appendix 1 - Sheet 55

Calculations: 1 NDC 2018-2019 Contingency Control Measures Reductions
 DFW Nonattainment Area Eight-Hour Ozone Season VOC and NO_x
 One Newly Designated Nonattainment County: Wise

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

RFP Control Strategy Description	Source Category	Total 2018 to 2019 NO_x Emissions Reductions (tpd)	Total 2018 to 2019 VOC Emissions Reductions (tpd)	Use this control for 2019 RFP contingency demonstration? (Yes or No)
Chapter 117 NOX controls	Point	0.00	0.00	No
Chapter 115 Storage Tank Rule	Point	0.00	0.00	No
Coating / printing rules	Point	0.00	0.00	No
Portable fuel containers	Area	0.00	0.00	No
Federal Motor Vehicle Control Program (FMVCP)	OR	1.00	0.23	Yes
Inspection and Maintenance (I/M)	OR	0.00	0.00	Yes
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	OR	-0.08	-0.02	Yes
On-road TxLED	OR	-0.01	0.00	Yes
Tier I and II locomotive NOX standards	NR	0.00	0.00	No
Small non-road spark ignition (SI) engines (Phase I)	NR	0.00	0.01	Yes
Heavy duty non-road engines	NR	0.01	0.01	Yes
Tiers 2 and 3 non-road diesel engines	NR	0.02	-0.01	Yes
Small non-road SI engines (Phase II)	NR	0.00	0.00	Yes
Large non-road SI & recreational marine	NR	0.01	0.02	Yes
Non-road TxLED	NR	-0.01	0.00	Yes
Non-road RFG	NR	0.00	0.00	Yes
Tier 4 non-road diesel engines	NR	0.09	0.00	Yes
Diesel recreational marine	NR	0.00	0.00	Yes
Small SI (Phase III)	NR	0.00	0.02	Yes
Chapter 117 NOX area source engine controls	Area	0.00	0.00	No
Drilling rig low emission diesel	Area	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
This row not used for current RFP	UK	0.00	0.00	No
Total 1 NDC RFP Control Reductions		1.03	0.26	

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Appendix 1 - Sheet 57

Calculations: 2011 to 2017 On-road Control Measures Reductions

DFW Nonattainment Area Eight-Hour Ozone Season VOC and NOX

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

Creditable Reductions Control Strategy	Control Used for RFP Demonstration?	On-road Mobile Source Control?	Total 2011 - 2017 'On-road Mobile NO _x Emissions Reductions (tpd)	Total 2011 - 2017 'On-road Mobile VOC Emissions Reductions (tpd)
Chapter 117 NOX controls	Yes	No	0	0
Chapter 115 Storage Tank Rule	Yes	No	0	0
Coating / printing rules	Yes	No	0	0
Portable fuel containers	Yes	No	0.00	0.00
Federal Motor Vehicle Control Program (FMVCP)	Yes	Yes	650.42	259.65
Inspection and Maintenance (I/M)	Yes	Yes	10.84	9.63
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	Yes	Yes	92.5	13.02
On-road TxLED	Yes	Yes	3.48	0
Tier I and II locomotive NOX standards	Yes	No	0	0
Small non-road spark ignition (SI) engines (Phase I)	Yes	No	0	0
Heavy duty non-road engines	Yes	No	0	0
Tiers 2 and 3 non-road diesel engines	Yes	No	0	0
Small non-road SI engines (Phase II)	Yes	No	0	0
Large non-road SI & recreational marine	Yes	No	0	0
Non-road TxLED	Yes	No	0	0
Non-road RFG	Yes	No	0	0
Tier 4 non-road diesel engines	Yes	No	0	0
Diesel recreational marine	Yes	No	0	0
Small SI (Phase III)	Yes	No	0	0
Chapter 117 NOX area source engine controls	Yes	No	0	0
Drilling rig low emission diesel	Yes	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
Total 9 PDC On-road Mobile Source RFP Control Reductions			757.24	282.30

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Appendix 1 - Sheet 58

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

Creditable Reductions Control Strategy	Control Used for RFP Demonstration?	On-road Mobile Source Control?	Total 2011 - 2017 'On-road Mobile NO _x Emissions Reductions (tpd)	Total 2011 - 2017 'On-road Mobile VOC Emissions Reductions (tpd)
Chapter 117 NOX controls	Yes	No	0	0
Chapter 115 Storage Tank Rule	Yes	No	0	0
Coating / printing rules	Yes	No	0	0
Portable fuel containers	Yes	No	0.00	0.00
Federal Motor Vehicle Control Program (FMVCP)	Yes	Yes	16.77	4.17
Inspection and Maintenance (I/M)	Yes	Yes	0	0
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	Yes	Yes	2	0.33
On-road TxLED	Yes	Yes	0.12	0
Tier I and II locomotive NOX standards	Yes	No	0	0
Small non-road spark ignition (SI) engines (Phase I)	Yes	No	0	0
Heavy duty non-road engines	Yes	No	0	0
Tiers 2 and 3 non-road diesel engines	Yes	No	0	0
Small non-road SI engines (Phase II)	Yes	No	0	0
Large non-road SI & recreational marine	Yes	No	0	0
Non-road TxLED	Yes	No	0	0
Non-road RFG	Yes	No	0	0
Tier 4 non-road diesel engines	Yes	No	0	0
Diesel recreational marine	Yes	No	0	0
Small SI (Phase III)	Yes	No	0	0
Chapter 117 NOX area source engine controls	Yes	No	0	0
Drilling rig low emission diesel	Yes	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
Total 1 NDC On-road Mobile Source RFP Control Reductions			18.89	4.50

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Appendix 1 - Sheet 59

Calculations: 2011 to 2017 On-road Control Measures Reductions

DFW Nonattainment Area Eight-Hour Ozone Season VOC and NOX

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

Creditable Reductions Control Strategy	Control Used for RFP Demonstration?	On-road Mobile Source Control?	Total 2011 - 2017 'On-road Mobile NO _x Emissions Reductions (tpd)	Total 2011 - 2017 'On-road Mobile VOC Emissions Reductions (tpd)
Chapter 117 NOX controls	Yes	No	0	0
Chapter 115 Storage Tank Rule	Yes	No	0	0
Coating / printing rules	Yes	No	0	0
Portable fuel containers	Yes	No	0.00	0.00
Federal Motor Vehicle Control Program (FMVCP)	Yes	Yes	667.19	263.82
Inspection and Maintenance (I/M)	Yes	Yes	10.84	9.63
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	Yes	Yes	94.5	13.35
On-road TxLED	Yes	Yes	3.6	0
Tier I and II locomotive NOX standards	Yes	No	0	0
Small non-road spark ignition (SI) engines (Phase I)	Yes	No	0	0
Heavy duty non-road engines	Yes	No	0	0
Tiers 2 and 3 non-road diesel engines	Yes	No	0	0
Small non-road SI engines (Phase II)	Yes	No	0	0
Large non-road SI & recreational marine	Yes	No	0	0
Non-road TxLED	Yes	No	0	0
Non-road RFG	Yes	No	0	0
Tier 4 non-road diesel engines	Yes	No	0	0
Diesel recreational marine	Yes	No	0	0
Small SI (Phase III)	Yes	No	0	0
Chapter 117 NOX area source engine controls	Yes	No	0	0
Drilling rig low emission diesel	Yes	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
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This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
Total 9 PDC On-road Mobile Source RFP Control Reductions			776.13	286.80

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Appendix 1 - Sheet 60

Calculations: 2011 to 2018 On-road Control Measures Reductions

DFW Nonattainment Area Eight-Hour Ozone Season VOC and NOX

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

Creditable Reductions Control Strategy	Control Used for RFP Demonstration?	On-road Mobile Source Control?	Total 2011 - 2018 'On-road Mobile NO _x Emissions Reductions (tpd)	Total 2011 - 2018 'On-road Mobile VOC Emissions Reductions (tpd)
Chapter 117 NOX controls	Yes	No	0	0
Chapter 115 Storage Tank Rule	Yes	No	0	0
Coating / printing rules	Yes	No	0	0
Portable fuel containers	Yes	No	0.00	0.00
Federal Motor Vehicle Control Program (FMVCP)	Yes	Yes	688.79	271.66
Inspection and Maintenance (I/M)	Yes	Yes	9.62	9.3
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	Yes	Yes	86.79	12.44
On-road TxLED	Yes	Yes	3.17	0
Tier I and II locomotive NOX standards	Yes	No	0	0
Small non-road spark ignition (SI) engines (Phase I)	Yes	No	0	0
Heavy duty non-road engines	Yes	No	0	0
Tiers 2 and 3 non-road diesel engines	Yes	No	0	0
Small non-road SI engines (Phase II)	Yes	No	0	0
Large non-road SI & recreational marine	Yes	No	0	0
Non-road TxLED	Yes	No	0	0
Non-road RFG	Yes	No	0	0
Tier 4 non-road diesel engines	Yes	No	0	0
Diesel recreational marine	Yes	No	0	0
Small SI (Phase III)	Yes	No	0	0
Chapter 117 NOX area source engine controls	Yes	No	0	0
Drilling rig low emission diesel	Yes	No	0	0
This row not used for current RFP	No	No	0	0
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This row not used for current RFP	No	No	0	0
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This row not used for current RFP	No	No	0	0
Total 9 PDC On-road Mobile Source RFP Control Reductions			788.37	293.40

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Appendix 1 - Sheet 61

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

Creditable Reductions Control Strategy	Control Used for RFP Demonstration?	On-road Mobile Source Control?	Total 2011- 2018 'On-road Mobile NO _x Emissions Reductions (tpd)	Total 2011 - 2018 'On-road Mobile VOC Emissions Reductions (tpd)
Chapter 117 NOX controls	Yes	No	0	0
Chapter 115 Storage Tank Rule	Yes	No	0	0
Coating / printing rules	Yes	No	0	0
Portable fuel containers	Yes	No	0.00	0.00
Federal Motor Vehicle Control Program (FMVCP)	Yes	Yes	17.87	4.43
Inspection and Maintenance (I/M)	Yes	Yes	0	0
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	Yes	Yes	1.88	0.31
On-road TxLED	Yes	Yes	0.11	0
Tier I and II locomotive NOX standards	Yes	No	0	0
Small non-road spark ignition (SI) engines (Phase I)	Yes	No	0	0
Heavy duty non-road engines	Yes	No	0	0
Tiers 2 and 3 non-road diesel engines	Yes	No	0	0
Small non-road SI engines (Phase II)	Yes	No	0	0
Large non-road SI & recreational marine	Yes	No	0	0
Non-road TxLED	Yes	No	0	0
Non-road RFG	Yes	No	0	0
Tier 4 non-road diesel engines	Yes	No	0	0
Diesel recreational marine	Yes	No	0	0
Small SI (Phase III)	Yes	No	0	0
Chapter 117 NOX area source engine controls	Yes	No	0	0
Drilling rig low emission diesel	Yes	No	0	0
This row not used for current RFP	No	No	0	0
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This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
Total 1 NDC On-road Mobile Source RFP Control Reductions			19.86	4.74

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Appendix 1 - Sheet 62

Calculations: 2011 to 2017 On-road Control Measures Reductions

DFW Nonattainment Area Eight-Hour Ozone Season VOC and NOX

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

Creditable Reductions Control Strategy	Control Used for RFP Demonstration?	On-road Mobile Source Control?	Total 2011 - 2018 'On-road Mobile NO _x Emissions Reductions (tpd)	Total 2011 - 2018 'On-road Mobile VOC Emissions Reductions (tpd)
Chapter 117 NOX controls	Yes	No	0	0
Chapter 115 Storage Tank Rule	Yes	No	0	0
Coating / printing rules	Yes	No	0	0
Portable fuel containers	Yes	No	0.00	0.00
Federal Motor Vehicle Control Program (FMVCP)	Yes	Yes	706.66	276.09
Inspection and Maintenance (I/M)	Yes	Yes	9.62	9.3
Reformulated Gasoline (RFG)/East Texas Regional Low RVP	Yes	Yes	88.67	12.75
On-road TxLED	Yes	Yes	3.28	0
Tier I and II locomotive NOX standards	Yes	No	0	0
Small non-road spark ignition (SI) engines (Phase I)	Yes	No	0	0
Heavy duty non-road engines	Yes	No	0	0
Tiers 2 and 3 non-road diesel engines	Yes	No	0	0
Small non-road SI engines (Phase II)	Yes	No	0	0
Large non-road SI & recreational marine	Yes	No	0	0
Non-road TxLED	Yes	No	0	0
Non-road RFG	Yes	No	0	0
Tier 4 non-road diesel engines	Yes	No	0	0
Diesel recreational marine	Yes	No	0	0
Small SI (Phase III)	Yes	No	0	0
Chapter 117 NOX area source engine controls	Yes	No	0	0
Drilling rig low emission diesel	Yes	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
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This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
This row not used for current RFP	No	No	0	0
Total 9 PDC On-road Mobile Source RFP Control Reductions			808.23	298.14

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Appendix 1 - Sheet 63

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

2011 Uncontrolled or Existing Control NOX (tons per day)

RFP Analysis Year	9 PDC	1 NDC	10 NAC Total
Area Sources	30.48	12.14	42.62
Non-Road Mobile Sources	188.80	12.19	200.99
On-Road Mobile Sources	746.03	18.30	764.33
Point Sources	31.34	8.61	39.95
Total	996.65	51.24	1047.89

2017 Uncontrolled or Existing Control NOX (tons per day)

RFP Analysis Year	9 PDC	1 NDC	10 NAC Total
Area Sources	30.91	9.72	40.63
Non-Road Mobile Sources	206.27	11.17	217.44
On-Road Mobile Sources	901.66	23.01	924.67
Point Sources	46.71	10.21	56.92
Total	1,185.55	54.11	1,239.66

2018 Uncontrolled or Existing Control NOX (tons per day)

RFP Analysis Year	9 PDC	1 NDC	10 NAC Total
Area Sources	29.93	7.44	37.37
Non-Road Mobile Sources	206.03	10.61	216.64
On-Road Mobile Sources	922.26	23.70	945.96
Point Sources	45.90	9.71	55.61
Total	1,204.12	51.46	1,255.58

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Appendix 1 - Sheet 64

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

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

RFP Analysis Year	9 PDC	1 NDC	10 NAC Total
Area Sources	30.48	12.14	42.62
Non-Road Mobile Sources	112.98	6.85	119.83
On-Road Mobile Sources	232.15	6.36	238.51
Point Sources	31.34	8.61	39.95
Total	406.95	33.96	440.91

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

RFP Analysis Year	9 PDC	1 NDC	10 NAC Total
Area Sources	30.91	9.72	40.63
Non-Road Mobile Sources	81.54	4.71	86.25
On-Road Mobile Sources	144.42	4.12	148.54
Point Sources	46.71	10.21	56.92
Total	303.58	28.76	332.34

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

RFP Analysis Year	9 PDC	1 NDC	10 NAC Total
Area Sources	29.93	7.44	37.37
Non-Road Mobile Sources	76.38	4.18	80.56
On-Road Mobile Sources	133.89	3.84	137.73
Point Sources	45.90	9.71	55.61
Total	286.10	25.17	311.27

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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Appendix 1 - Sheet 65

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

2011 Uncontrolled or Existing Control VOC (tons per day)

RFP Analysis Year	9 PDC	1 NDC	10 NAC Total
Area Sources	263.30	29.18	292.48
Non-Road Mobile Sources	130.51	2.73	133.24
On-Road Mobile Sources	295.91	4.78	300.69
Point Sources	27.66	2.14	29.80
Total	717.38	38.83	756.21

2017 Uncontrolled or Existing Control VOC (tons per day)

RFP Analysis Year	9 PDC	1 NDC	10 NAC Total
Area Sources	266.15	23.74	289.89
Non-Road Mobile Sources	150.44	2.75	153.19
On-Road Mobile Sources	352.18	5.82	358.00
Point Sources	30.84	3.41	34.25
Total	799.61	35.72	835.33

2018 Uncontrolled or Existing Control VOC (tons per day)

RFP Analysis Year	9 PDC	1 NDC	10 NAC Total
Area Sources	258.70	19.17	277.87
Non-Road Mobile Sources	152.56	2.71	155.27
On-Road Mobile Sources	360.70	6.00	366.70
Point Sources	29.83	2.88	32.71
Total	801.79	30.76	832.55

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Appendix 1 - Sheet 66

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

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

RFP Analysis Year	9 PDC	1 NDC	10 NAC Total
Area Sources	263.30	29.18	292.48
Non-Road Mobile Sources	53.74	1.25	54.99
On-Road Mobile Sources	100.42	1.90	102.32
Point Sources	27.66	2.14	29.80
Total	445.12	34.47	479.59

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

RFP Analysis Year	9 PDC	1 NDC	10 NAC Total
Area Sources	266.15	23.74	289.89
Non-Road Mobile Sources	37.01	0.82	37.83
On-Road Mobile Sources	69.88	1.32	71.20
Point Sources	30.84	3.41	34.25
Total	403.88	29.29	433.17

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

RFP Analysis Year	9 PDC	1 NDC	10 NAC Total
Area Sources	258.70	19.17	277.87
Non-Road Mobile Sources	36.15	0.77	36.92
On-Road Mobile Sources	67.30	1.26	68.56
Point Sources	29.83	2.88	32.71
Total	391.98	24.08	416.06

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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Appendix 1 - Sheet 67

Summary Sheet: 2011 Emissions Inventory By Category

DFW Eight-Hour Ozone Nonattainment Area

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

2011 9 PDC (tons per day)

Emissions Inventory Source	Uncontrolled or Existing Control NOx	Controlled or Post-2011 Controlled NOx	Uncontrolled or Existing Control VOC	Controlled or Post-2011 Controlled VOC
Area Sources	30.48	30.48	263.30	263.30
Non-Road Mobile Sources	188.80	112.98	130.51	53.74
On-Road Mobile Sources	746.03	232.15	295.91	100.42
Point Sources	31.34	31.34	27.66	27.66
Total	996.65	406.95	717.38	445.12

2011 1 NDC (tons per day)

Emissions Inventory Source	Uncontrolled or Existing Control NOx	Controlled or Post-2011 Controlled NOx	Uncontrolled or Existing Control VOC	Controlled or Post-2011 Controlled VOC
Area Sources	12.14	12.14	29.18	29.18
Non-Road Mobile Sources	12.19	6.85	2.73	1.25
On-Road Mobile Sources	18.30	6.36	4.78	1.90
Point Sources	8.61	8.61	2.14	2.14
Total	51.24	33.96	38.83	34.47

2011 10 NAC Total (tons per day)

Emissions Inventory Source	Uncontrolled or Existing Control NOx	Controlled or Post-2011 Controlled NOx	Uncontrolled or Existing Control VOC	Controlled or Post-2011 Controlled VOC
Area Sources	42.62	42.62	292.48	292.48
Non-Road Mobile Sources	200.99	119.83	133.24	54.99
On-Road Mobile Sources	764.33	238.51	300.69	102.32
Point Sources	39.95	39.95	29.80	29.80
Total	1047.89	440.91	756.21	479.59

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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Appendix 1 - Sheet 68

Summary Sheet: 2017 Emissions Inventory By Category

DFW Eight-Hour Ozone Nonattainment Area

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

2017 9 PDC (tons per day)

Emissions Inventory Source	Uncontrolled or Existing Control NOx	Controlled or Post-2011 Controlled NOx	Uncontrolled or Existing Control VOC	Controlled or Post-2011 Controlled VOC
Area Sources	30.91	30.91	266.15	266.15
Non-Road Mobile Sources	206.27	81.54	150.44	37.01
On-Road Mobile Sources	901.66	144.42	352.18	69.88
Point Sources	46.71	46.71	30.84	30.84
Total	1185.55	303.58	799.61	403.88

2017 1 NDC (tons per day)

Emissions Inventory Source	Uncontrolled or Existing Control NOx	Controlled or Post-2011 Controlled NOx	Uncontrolled or Existing Control VOC	Controlled or Post-2011 Controlled VOC
Area Sources	9.72	9.72	23.74	23.74
Non-Road Mobile Sources	11.17	4.71	2.75	0.82
On-Road Mobile Sources	23.01	4.12	5.82	1.32
Point Sources	10.21	10.21	3.41	3.41
Total	54.11	28.76	35.72	29.29

2017 10 NAC Total (tons per day)

Emissions Inventory Source	Uncontrolled or Existing Control NOx	Controlled or Post-2011 Controlled NOx	Uncontrolled or Existing Control VOC	Controlled or Post-2011 Controlled VOC
Area Sources	40.63	40.63	289.89	289.89
Non-Road Mobile Sources	217.44	86.25	153.19	37.83
On-Road Mobile Sources	924.67	148.54	358.00	71.20
Point Sources	56.92	56.92	34.25	34.25
Total	1239.66	332.34	835.33	433.17

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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Appendix 1 - Sheet 69

Summary Sheet: 2018 Emissions Inventory By Category
 DFW Eight-Hour Ozone Nonattainment Area
 Ten Nonattainment Counties: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall,
 Tarrant, Wise

2018 9 PDC (tons per day)

Emissions Inventory Source	Uncontrolled or Existing Control NOx	Controlled or Post-2011 Controlled NOx	Uncontrolled or Existing Control VOC	Controlled or Post-2011 Controlled VOC
Area Sources	29.93	29.93	258.70	258.70
Non-Road Mobile Sources	206.03	76.38	152.56	36.15
On-Road Mobile Sources	922.26	133.89	360.70	67.30
Point Sources	45.90	45.90	29.83	29.83
Total	1204.12	286.10	801.79	391.98

2018 1 NDC (tons per day)

Emissions Inventory Source	Uncontrolled or Existing Control NOx	Controlled or Post-2011 Controlled NOx	Uncontrolled or Existing Control VOC	Controlled or Post-2011 Controlled VOC
Area Sources	7.44	7.44	19.17	19.17
Non-Road Mobile Sources	10.61	4.18	2.71	0.77
On-Road Mobile Sources	23.70	3.84	6.00	1.26
Point Sources	9.71	9.71	2.88	2.88
Total	51.46	25.17	30.76	24.08

2018 10 NAC Total (tons per day)

Emissions Inventory Source	Uncontrolled or Existing Control NOx	Controlled or Post-2011 Controlled NOx	Uncontrolled or Existing Control VOC	Controlled or Post-2011 Controlled VOC
Area Sources	37.37	37.37	277.87	277.87
Non-Road Mobile Sources	216.64	80.56	155.27	36.92
On-Road Mobile Sources	945.96	137.73	366.70	68.56
Point Sources	55.61	55.61	32.71	32.71
Total	1255.58	311.27	832.55	416.06

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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Appendix 1 - Sheet 70

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

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

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

One Newly Designated Nonattainment County: Wise

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

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

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

Notes:

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

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Appendix 1 - Sheet 71

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

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

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

One Newly Designated Nonattainment County: Wise

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

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

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

Notes:

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

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Appendix 1 - Sheet 72

Summary Sheet: 2011 Non-Road Summary by Category

DFW Eight-Hour Ozone Nonattainment Area

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

2011 9 PDC (tons per day)

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

2011 1 NDC (tons per day)

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

2011 10 NAC Total (tons per day)

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

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

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Appendix 1 - Sheet 73

Summary Sheet: 2017 Non-Road Summary by Category

DFW Eight-Hour Ozone Nonattainment Area

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

2017 9 PDC (tons per day)

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

2017 1 NDC (tons per day)

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

2017 10 NAC Total (tons per day)

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

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

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Appendix 1 - Sheet 74

Summary Sheet: 2018 Non-Road Summary by Category

DFW Eight-Hour Ozone Nonattainment Area

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

2018 9 PDC (tons per day)

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

2018 1 NDC (tons per day)

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

2018 10 NAC Total (tons per day)

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

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

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