

APPENDIX D

REASONABLY AVAILABLE CONTROL TECHNOLOGY ANALYSIS

Dallas-Fort Worth Moderate Area Attainment Demonstration
State Implementation Plan Revision for the 2015 Eight-Hour
Ozone National Ambient Air Quality Standard

Project Number 2022-021-SIP-NR
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1 INTRODUCTION

Under the 2015 eight-hour ozone National Ambient Air Quality Standard (NAAQS), the Dallas-Fort Worth (DFW) 2015 eight-hour ozone nonattainment area, consisting of Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Tarrant, and Wise Counties, was designated as a marginal nonattainment area with an August 3, 2021 attainment date (83 *Federal Register* (FR) 25776, June 4, 2018). Rockwall County was not included in the nonattainment area for the 2015 eight-hour ozone NAAQS, resulting in a nine-county ozone nonattainment area. Based on 2018, 2019, 2020 monitoring data, the DFW area did not attain the 2015 eight-hour ozone NAAQS in 2020¹ and did not qualify for a one-year attainment date extension in accordance with federal Clean Air Act (FCAA), §181(a)(5). On April 13, 2022, the United States Environmental Protection Agency (EPA) proposed to reclassify the DFW area to moderate nonattainment for the 2015 eight-hour ozone NAAQS (87 FR 21842). On October 7, 2022, the EPA published the final reclassification notice, effective November 7, 2022.

Nonattainment areas classified as moderate and above are required to meet the mandates of the FCAA under §172(c)(1) and §182(b)(2) and (f). According to the EPA's implementation rule for the 2015 eight-hour ozone NAAQS (83 FR 62998, December 6, 2018), states containing areas classified as moderate ozone nonattainment or higher must submit a state implementation plan (SIP) revision to fulfill the reasonably available control technology (RACT) requirements for all control techniques guidelines (CTG) emission source categories and all non-CTG major sources of NO_x and VOC (83 *Federal Register* (FR) 62998). Further, this SIP revision contains adopted RACT regulations, certifications where appropriate that existing provisions are RACT, and/or negative declarations that there are no sources in the nonattainment area covered by a specific CTG source category.

For this RACT analysis, the TCEQ is relying on the RACT analysis from the DFW Serious Classification Attainment Demonstration for the 2008 Ozone NAAQS, adopted by the commission on March 4, 2020. The major source threshold for moderate nonattainment areas is a potential to emit 100 tons per year (tpy) of either NO_x or VOC. Sources in the DFW 10-county nonattainment area were previously evaluated for RACT at a 50 tpy major source threshold because of a serious classification under the 2008 ozone NAAQS. The use of the 50 tpy threshold for the RACT analysis is more stringent than required for the 2015 ozone standard with a moderate classification; as a result, the previous RACT analysis conducted using 50 tpy major source threshold satisfies the requirement to conduct a RACT analysis at the threshold of 100 tpy. This appendix provides the TCEQ's analysis of the sources and the applicable rules to demonstrate that the state is fulfilling the RACT requirements for the DFW area.

RACT is defined as the lowest emissions limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility (44 FR 53762, September 17, 1979). RACT requirements for moderate and higher classification nonattainment areas are included in the FCAA to ensure that significant source categories are controlled to a reasonable extent, but not necessarily to best available control technology (BACT) levels expected of new sources or to maximum achievable control technology (MACT) levels required for major sources of hazardous air pollutants.

¹ The attainment year ozone season is the ozone season immediately preceding a nonattainment area's attainment date.

While RACT and reasonably available control measures (RACM) have similar consideration factors like technological and economic feasibility, there is a significant distinction between RACT and RACM. A control measure must advance attainment of the area towards the meeting the NAAQS for that measure to be considered RACM. Advancing attainment of the area is not a factor of consideration when evaluating RACT because the benefit of implementing RACT is presumed under the FCAA.

2 RACT EVALUATION APPROACH

2.1 General Discussion

The TCEQ demonstrates that the RACT requirements are being fulfilled in the DFW area by:

- identifying all CTG source categories of VOC emissions and submitting negative declarations for categories where there are no emission sources within the DFW area;
- identifying all alternative control techniques (ACT) source categories of NO_x emissions;
- identifying all non-CTG major sources of NO_x and VOC emissions; and
- identifying the state regulation that implements or exceeds RACT for each applicable CTG source category or non-CTG major emission source; and describing the basis for concluding that these regulations fulfill RACT.

2.2 Identification of CTG and Non-CTG Emission Sources

The EPA has issued CTG documents defining RACT for existing facilities. The EPA has also issued ACT documents that describe available control technologies but do not define presumptive RACT levels. The TCEQ reviewed the EPA's CTG and ACT documents to identify all source categories of NO_x and VOC emissions that require RACT. RACT determinations for non-major VOC emission sources are not required if there are no facilities in the DFW area that are subject to a CTG or ACT document. A negative declaration can be provided for source categories described within the EPA guidance documents that do not exist in the DFW area.

Under the EPA's 2008 eight-hour ozone regulations for serious ozone nonattainment areas, the threshold for major stationary sources is a potential to emit (PTE) of 50 tpy of either NO_x or VOC emissions, while the threshold for major sources classified as moderate nonattainment under the 2015 ozone NAAQS is 100 tpy of NO_x or VOC. Because the major source threshold under the 2008 serious classification is more stringent than the major source threshold under the moderate classification, the analysis performed for the serious classification SIP revision for the 2008 ozone NAAQS satisfies the requirements for the current SIP revision addressing the moderate classification for the 2015 ozone NAAQS. The TCEQ reviewed the point source emissions inventory and Title V databases to identify all major sources of NO_x or VOC emissions. Sources added to the Title V database since the 2015 DFW 2008 Eight-Hour Ozone Attainment Demonstration SIP Revision and those sources previously listed and determined to still be a major source for NO_x or VOC emissions were included in that RACT analysis. Since the point source emissions inventory database reports actual emissions rather than potential to emit, the TCEQ also included in this RACT analysis sources that reported actual emissions as low as 25 tpy of NO_x or VOC to account for the difference between actual and potential emissions.

2.3 Identifying State Regulations Implemented to Fulfill RACT Requirements

In 2008, the EPA approved the DFW NO_x rules in 30 Texas Administrative Code (TAC) Chapter 117 under the 1997 eight-hour ozone NAAQS (73 FR 73562, December 3, 2008) and in 2017, the EPA fully approved the Chapter 117 NO_x rules for the DFW moderate ozone nonattainment area as satisfying FCAA RACT under the 2008 eight-hour ozone NAAQS (82 FR 44320, September 22, 2017). In 2019, the EPA approved Agreed Order No. 2017-1648-SIP as satisfying the state's NO_x RACT requirements for the Texas Industries, Inc. (TXI) cement kiln (84 FR 5601, February 22, 2019). The EPA approved the DFW VOC rules in 30 Texas Administrative Code (TAC) Chapter 115 as meeting FCAA RACT for the one-hour NAAQS in 2009 (74 FR 1903, January 14, 2009). Between 2006 and 2008, the EPA issued 11 CTG documents with recommendations for VOC controls on a variety of consumer and commercial products and approved the 30 TAC Chapter 115 rules addressing these CTGs in 2014 for offset lithographic printing (79 FR 45105, August 4, 2014) and in 2015 for the remaining CTGs in addition to approving the DFW RACT analysis as meeting the FCAA RACT requirements for all affected VOC and NO_x sources under the 1997 eight-hour ozone NAAQS (80 FR 16291, March 27, 2015). In 2017, the EPA approved the 30 TAC Chapter 115 rules as meeting FCAA RACT for the area's moderate nonattainment classification under the 2008 eight-hour ozone NAAQS (82 FR 60546, December 21, 2017).

In 2014, the EPA approved the 30 TAC Chapter 115 rules for VOC storage tanks as meeting the FCAA RACT requirements (79 FR 53299, September 9, 2014). State regulations in 30 TAC Chapter 115 that implement the controls recommended in CTG or ACT documents or that implement equivalent or superior emission control strategies were determined to fulfill RACT requirements for any CTG or ACT documents issued prior to 2006 for the nine-county DFW 1997 eight-hour ozone nonattainment area. A SIP revision applying NO_x and VOC RACT to major sources in Wise County was submitted to the EPA on May 13, 2020.

TCEQ rules that are consistent with or more stringent than controls implemented in other nonattainment areas were also determined to fulfill RACT requirements. Federally approved state rules and rule approval dates can be found in 40 CFR §52.2270(c), EPA Approved Regulations in the Texas SIP.

BACT is an emission standard that is based on the maximum degree of emission reduction achievable and is at least as stringent as the emission standards set by any applicable FCAA provisions. MACT is an emission standard that requires the maximum reduction of hazardous emissions and is at least as stringent as the average emission level achieved by controls on the top 12% of existing sources in the applicable source category. Therefore, emission sources subject to the more stringent BACT or MACT requirements were determined to also fulfill RACT requirements.

The TCEQ reviewed the emission sources in the DFW area and the applicable TCEQ rules to verify that all CTG or ACT emission source categories and non-CTG or non-ACT major emission sources in the DFW area were subject to requirements that meet or exceed the applicable RACT requirements, or that further emission controls on the sources were either not economically feasible or not technologically feasible.

3 RACT DETERMINATION AND DISCUSSION

3.1 General Discussion

While the adopted 2020 RACT analysis used for this current analysis relied on a 2017 base year and this current attainment demonstration SIP revision uses a 2019 base year, the TCEQ expects that the 2017 base year is adequate for RACT purposes of this SIP revision given the narrow difference in base years. While the TCEQ does not anticipate any new sources began operation in the interim two-year period that would not be covered by the TCEQ's RACT requirements discussed in this appendix, the upcoming SIP revision for the severe classification under the 2008 ozone NAAQS will address any additional RACT requirements that may be required.

The EPA previously approved the VOC RACT analysis as submitted in the May 2007 DFW Eight-Hour Ozone Attainment Demonstration SIP Revision (74 FR 1903, January 14, 2009). In 2017, the EPA approved the VOC and NO_x RACT analyses as submitted in the 2015 DFW 2008 Eight-Hour Ozone Attainment Demonstration SIP Revision for the DFW moderate ozone nonattainment area (82 FR 60546, December 21, 2017).

This analysis demonstrates that all CTG emission source categories addressed by CTG documents issued prior to 2022 and all major VOC and NO_x emission sources in the DFW area are subject to rules in 30 TAC Chapters 115 and 117, respectively, or other federally enforceable measures, that meet or exceed the applicable RACT requirements, or that further emission controls on the sources are either not technologically or economically feasible.

Tables D-1 through D-5 show the results of the RACT analysis.

Table D-1: *State Rules Addressing NO_x RACT Requirements in ACT Reference Documents* provides the emission source categories, the ACT reference documents, and the state rules addressing the RACT requirements for sources in the NO_x ACT documents.

Table D-2: *State Rules Addressing VOC RACT Requirements in CTG Reference Documents* provides the emission source categories, the CTG reference documents, and the state rules addressing the RACT requirements for sources in the VOC CTG documents.

Table D-3: *State Rules Addressing VOC RACT Requirements in ACT Reference Documents* provides the emission source categories, the ACT reference documents, and the state rules addressing the RACT requirements for sources in the VOC ACT documents. A negative declaration is provided for emission source categories that based on information available to the TCEQ either do not exist in the DFW area or exist but do not meet the applicability criteria recommended for controls, e.g., sources with a potential to emit less than the recommended exemption thresholds.

Table D-4: *State Rules Addressing NO_x RACT Requirements for Major Emission Sources in the 10-county DFW Area* lists the major stationary emission sources with actual or potential NO_x emissions exceeding the PTE 50 tpy major source threshold in Collin, Dallas, NO_x, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, and Wise Counties.

Table D-5: *State Rules Addressing VOC RACT Requirements for Major Emission Sources in the 10-county DFW Area* lists the major stationary emission sources with actual or potential VOC emissions exceeding the PTE 50 tpy major source threshold in Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, and Wise Counties.

The major source tables provide the emission source regulated entity number (RN), account number, company and site name, county, standard industrial classification (SIC) code, a brief description of the source, and the reported annual emissions (in tpy). The tables also include either the state rules satisfying the RACT requirements, the permit requirements that limit emissions, or the reasoned justification for why controlling the emissions is not considered RACT.

3.2 NO_x RACT Determination

3.2.1 Chapter 117 NO_x Rules

The Chapter 117 rules represent one of the most comprehensive NO_x control strategies in the nation. The TCEQ reviewed the 2017 point source emissions inventory to verify that the NO_x controls and reductions implemented through Chapter 117 for the 10-county DFW ozone nonattainment continue to address RACT for the 2008 eight-hour ozone standard. The current EPA-approved Chapter 117 rules continue to fulfill RACT requirements for ACT NO_x source categories that exist in the 10-county DFW ozone nonattainment area and all NO_x major sources in the DFW 2008 eight-hour ozone nonattainment area, except Wise County. A SIP revision applying NO_x RACT to major sources in Wise County was submitted to the EPA on May 13, 2020. The need for any updates or additional NO_x control measures will be assessed in the upcoming SIP submittal for the DFW 10-county severe nonattainment area for the 2008 ozone NAAQS.

Table D-1 provides additional details on the ACT source categories. For non-ACT major NO_x emission sources for which NO_x controls are technologically and economically feasible, RACT is fulfilled by existing source-specific rules in Chapter 117, other federally enforceable measures, and by concurrent revisions to Chapter 117.

Additional NO_x controls on certain major sources were determined to be either not economically feasible or not technologically feasible. Table D-4 provides additional detail on the non-ACT major emission sources.

3.2.1.1 Major Sources

While RACT was previously in place through the existing 30 TAC Chapter 117 NO_x rules for nine of the DFW area counties, rulemaking in 2020 was necessary to ensure RACT is in place for all major sources in Wise County. A SIP revision satisfying major source NO_x RACT requirements for Wise County, at a major source threshold of 50 tpy NO_x, was submitted to EPA on May 13, 2020. Given that the major source threshold under the 2015 ozone NAAQS is 100 tpy, the May 13, 2020 analysis was more stringent than necessary to satisfy the major source requirements for Wise County. The other counties in the 9-county nonattainment DFW ozone nonattainment area were also previously evaluated at a major source threshold of 50 tpy, again satisfying the requirements for a major source analysis under the moderate classification for the 2015 standard.

3.2.1.2 Ellis County Cement Kilns

The cement kilns located in Ellis County are subject to the requirements of 30 TAC Chapter 117, Subchapter E, Division 2, and in 2009, the EPA approved these rules as meeting the FCAA RACT requirements for these sources (74 FR 1927, January 14, 2009). Again in 2017, the EPA approved the 30 TAC Chapter 117 rules as meeting FCAA RACT for the same cement kilns, except for the TXI Operations, LP (TXI) cement kiln, which received conditional approval (82 FR 44320, September 22, 2017).

Three companies currently operate four kilns in Ellis County. These kilns have been operating well under their §117.3123 ozone season NO_x source cap due to low product demand and replacement of higher-emitting wet kilns with dry kilns. Since 2015, no sites are using wet kilns.

Ash Grove Cement Company (Ash Grove) operated three kilns in Ellis County. However, a 2013 consent decree with the EPA required by September 10, 2014 shutdown of two kilns and reconstruction of kiln #3 with selective noncatalytic reduction (SNCR) with an emission limit of 1.5 pounds of NO_x per ton of clinker (lb NO_x /ton of clinker) and a 12-month rolling tonnage limit for NO_x of 975 tpy. The reconstructed kiln is a dry kiln with year-round SNCR operation and is subject to the 1.5 lb NO_x /ton of clinker emission standards in the New Source Performance Standards (NSPS) for Portland Cement Plants. The TCEQ has the delegated authority to enforce this standard through the agency's general NSPS delegation and the NSPS satisfies RACT for Ash Grove.

Holcim U.S., Inc. (Holcim) currently has two dry preheater/precalciner (PH/PC) kilns equipped with SNCR. The current §117.3123 source cap of 5.3 tpd NO_x for Holcim satisfies RACT, as previously approved by the EPA.

TXI currently operates one dry (PH/PC) kiln (TXI #5). The permitted capacity of this kiln is 2,800,000 tons of clinker per year, and it has a permitted emissions factor of 1.95 lb NO_x /ton of clinker. Based on these permit limits, this kiln is therefore limited to a maximum of 7.48 tpd NO_x, compared to the current §117.3123 source cap of 7.9 tpd NO_x. Kiln #5 typically operates well below the source cap, at an average emission factor below 1.5 lb NO_x /ton of clinker. To address the EPA's conditional approval of the NO_x RACT analysis in the DFW 2008 Eight-Hour Ozone NAAQS AD SIP revision (2013-015- SIP-NR), the TCEQ entered into an Agreed Order with TXI to include the 1.95 lb NO_x /ton of clinker permit limit as a federally enforceable addition to the Texas SIP. The EPA approved this limit as RACT on February 22, 2019 (84 FR 5601).

3.3 VOC RACT Determination

3.3.1 Chapter 115 VOC Rules

In the 10 counties that were previously classified serious nonattainment under the 2008 eight-hour NAAQS, all VOC emission source categories addressed by CTG and ACT documents that exist in the area are controlled by existing rules in 30 TAC Chapter 115 or other EPA-approved regulations that fulfill RACT requirements. Tables F-2 and F-3 provide additional details on the CTG and ACT source categories. This 10-county analysis of RACT requirements for CTG and ACT source categories for the 2008 ozone NAAQS serious SIP revision satisfies the requirement to evaluate RACT for all CTG and ACT source categories for the nine-county moderate nonattainment classification under the 2015 ozone NAAQS.

On June 30, 2021, Texas adopted revisions to 30 TAC Chapter 115 Rule Project No. 2020-038-115-AI) and the SIP addressing the requirements in the EPA's 2016 CTG for the Oil and Natural Gas industry. The corresponding SIP revision was submitted to the EPA on July 20, 2021.

The TCEQ previously submitted negative declarations for the following CTG source categories for the 10-county DFW 2008 eight-hour ozone nonattainment area, and is resubmitting these negative declarations as part of this SIP revision for the nine-county moderate nonattainment RACT analysis under the 2015 ozone NAAQS:

- Fiberglass Boat Manufacturing Materials;
- Graphic Arts—Rotogravure and Flexography (Wise County only);
- Flexible Package Printing (Wise County only);
- Refinery Vacuum Producing Systems and Process Unit Turnarounds (Wise County only);
- Manufacture of Pneumatic Rubber Tires;
- Shipbuilding and Ship Repair Surface Coating Operations;
- Flat Wood Paneling Coatings, Group II issued in 2006;
- Letterpress Printing;
- Wood furniture Manufacturing (Wise County only); and
- Manufacture of Synthesized Pharmaceutical Products (Wise County only).

For all non-CTG and non-ACT major VOC emission sources for which VOC controls are technologically and economically feasible, RACT is fulfilled by existing 30 TAC Chapter 115 rules and other federally enforceable measures. Additional VOC controls on certain major sources were determined to be either not economically feasible or not technologically feasible. Table D-5 provides additional detail on the non-CTG and non-ACT major emission sources.

3.3.1.1 Wise County Major Source RACT

The March 4, 2020 rulemaking and SIP satisfies VOC RACT requirements for Wise County under the serious classification for the 2008 ozone NAAQS. Previous SIP submittals addressed VOC RACT at a 50 tpy major source threshold for the other nine counties under the serious classification for the 2008 ozone NAAQS. These SIP revisions are more stringent than necessary to satisfy major source VOC RACT for the nine-county moderate nonattainment classification under the ozone NAAQS.

Table D-1: State Rules Addressing NO_x RACT Requirements in ACT Reference Documents

Emission Source Category	ACT Reference Document	State Regulations Fulfilling RACT Requirements
Cement Manufacturing	NO _x Emissions from Cement Manufacturing (EPA-453/R-94-004, March 1994) and NO _x Control Technologies for the Cement Industry: Final Report (EPA-457/R-00-002, September 2000)	§117.3100 - §117.3145
Glass Manufacturing	NO _x Emissions from Glass Manufacturing (EPA-453/R-94-037, June 1994)	§117.400 - §117.456
Industrial, Commercial, and Institutional Boilers	NO _x Emissions from Industrial, Commercial and Institutional Boilers (EPA-453/R-94-022, March 1994)	§117.400 - §117.456
Iron and Steel Mills	NO _x Emissions from Iron and Steel Mills (EPA-453/R-94-065, September 1994)	§117.400 - §117.456

Table D-3: State Rules Addressing VOC RACT Requirements in ACT Reference Documents

Emission Source Category	ACT Reference Document	State Regulations Fulfilling RACT Requirements
Agricultural Pesticides	Control of Volatile Organic Compound Emissions from the Application of Agricultural Pesticides (EPA-453/R-92-011, March 1993)	The TCEQ does not regulate the use of agricultural pesticides and this ACT document does not give presumptive controls; therefore, no RACT determination is required for this source category.
Batch Processes	Alternative Control Techniques Document: Control of Volatile Organic Compound Emissions from Batch Processes (EPA-453/R-93-017 or EPA-453/R-93-020, February 1994)	One major source and RACT-level controls are already in place.
Cleaning Solvents	Alternative Control Techniques Document: Industrial Cleaning Solvents (EPA-453/R-94-015, February 1994)	§115.412 - §115.419 §115.420 - §115.429
Commercial Bakeries	Alternative Control Techniques Document: Bakery Ovens (EPA-453/R- 92-017, December 1992)	§115.120 - §115.129
Ethylene Oxide Sterilization/Fumigation Operations	Alternative Control Techniques Document: Ethylene Oxide Sterilization/Fumigation Operations (EPA-450/3-89-007, March 1989)	Emissions from this source category are regulated by MACT per §113.200.
Graphic Arts	Alternative Control Techniques Document: Offset Lithographic Printing (EPA-453/R-94-054, June 1994) and Control of Volatile Organic Compound Emissions from Offset Lithographic Printing (EPA-453/D-95- 001, September 1993)	§115.4 §115.449
Industrial Wastewater	Industrial Wastewater Alternative Control Techniques (Draft CTG, EPA- 453/D-93-056, September 1992, was not finalized by issued as ACT in April 1994, and consists of cover memo with option tables and draft CTG)	§115.140 - §115.149
Leather Tanning and Finishing Operations	Alternative Control Technology Document: Leather Tanning and Finishing Operations (EPA-453/R-93-025)	No existing major sources in DFW area (SIC 3111).
Petroleum Liquid Storage	Alternative Control Techniques Document: Volatile Organic Liquid Storage in Floating and Fixed Roof Tanks (EPA-453/R-94-001, January 1994)	§115.110 - §115.119

Emission Source Category	ACT Reference Document	State Regulations Fulfilling RACT Requirements
Plywood Veneer Dryers	Control Techniques for Organic Emissions from Plywood Veneer Dryers (EPA-450/3-83-012, May 1983)	No existing major sources in DFW area (SIC 2435 and 2436).
Process Vents	Alternative Control Technology Document: Organic Waste Process Vents (EPA-450/3-91-007, December 1990)	§115.120 - §115.129
Solvent Cleaning	Alternative Control Technology Document: Halogenated Solvent Cleaners (EPA-450/3-89-030, August 1989)	§115.412 - §115.419
Surface Coating	Reduction of Volatile Organic Compound Emissions from the Application of Traffic Markings (EPA- 450/3-88-007, August 1988). The Architectural and Industrial Maintenance coatings national rule issued in 1998 includes limits for traffic coatings and superseded the ACT.	Emissions from this source category are regulated by the Architectural and Industrial Maintenance National Rule.
Surface Coating	Reduction of Volatile Organic Compound Emissions from Automobile Refinishing (EPA-450/3- 88-009, October 1988, NTIS No PB-89-148-282)	§115.420 - §115.429
Surface Coating	Alternative Control Techniques Document: Surface Coating of Automotive/Transportation and Business Machine Plastic Parts (EPA-453/R-94-017, February 1994)	§115.450 - §115.459
Surface Coating	Alternative Control Technology Document: Surface Coating Operations at Shipbuilding and Ship Repair Facilities (EPA-453/R-94-032, April 1994)	No existing sources in DFW area (SIC 3731).
Surface Coating	Alternative Control Techniques Document: Automobile Body Refinishing (EPA-453/R-94-031, April 1994) (Note: a national rule for auto- body refinishing was issued in 1998 after the ACT)	§115.420 - §115.429
Synthetic Organic Chemical Manufacturing Industry	Control of VOC Emissions from Polystyrene Foam Manufacturing (EPA-450/3-90-020, September 1990)	§115.120 - §115.129

Table D-4: State Rules Addressing NO_x RACT Requirements for Major Emission Sources in the 10-County DFW Area⁴

RN	Account	Company	County	SIC	SIC Description	2017 Actual tpy	Rules Addressing RACT	Notes
RN100219203	CP0026M	City of Garland Power and Light - Ray Olinger Plant	Collin	4911	Electric Services	4.29	§117.1300 - §117.1356	Title V permit, NO _x major source.
RN100218080	DB1073N	Dal Tile Corporation - Sunnyvale Plant	Dallas	3253	Ceramic Wall and Floor Tile	92.39	§117.400 - §117.456	
RN100219963	DB1494I	Solar Turbines Inc - DeSoto Overhaul Facility	Dallas	3511	Turbines and Turbine Generator	85.90	NA	Engine testing, turbine. Additional control of NO _x emissions not technologically feasible.
RN100225291	DB0632E	Owens Corning Roofing and Asphalt LLC - Irving	Dallas	2952	Asphalt Felts and Coatings	30.80	§117.400 - §117.456	
RN100673490	DB0249H	Luminant Generation Co LLC - Ray Hubbard	Dallas	4911	Electric Services	35.64	§117.1300 - §117.1356	
RN101559235	DB0252S	Mountain Creek Power LLC - Mt Creek Steam Electric Station	Dallas	4911	Electric Services	71.97	§117.1300 - §117.1356	
RN102505195	DB0820B	Texas Instruments Inc - Central Expressway Site	Dallas	3674	Semiconductors and Related Devices	65.28	§117.400 - §117.456	

⁴ Rules addressing RACT for crude oil and natural gas facilities subject to the EPA oil and natural gas CTG are in §115.170 - §115.183, but are not specifically listed in Table D-5

RN	Account	Company	County	SIC	SIC Description	2017 Actual tpy	Rules Addressing RACT	Notes
RN100210046	DF0001B	ACME Brick Co - Denton Plant	Denton	3251	Brick and Structural Clay Tile	32.07	§117.400 - §117.456	
RN100542257	DF0223E	Waste Management of North Texas - DFW Recycling and Disposal	Denton	4953	Refuse Systems	89.73	§117.400 - §117.456	
RN102934692	DFA170N	SWG Pipeline LLC - Justin Compressor	Denton	1311	Crude Petroleum and Natural Gas	25.92	§117.400 - §117.456	
RN105071435	DFA178V	Atmos Energy - Central Compressor	Denton	1311	Crude Petroleum and Natural Gas	15.18	§117.400 - §117.456	Title V permits, NO _x major source.
RN105670764	DFA175S	Cowtown Pipeline Partners LP - Alliance Compressor	Denton	1311	Crude Petroleum and Natural Gas	30.74	§117.400 - §117.456	
RN106160260	DFA235A	SWG Pipeline LLC - Ponder Compressor	Denton	1311	Crude Petroleum and Natural Gas	33.07	§117.400 - §117.456	
RN100212430	ED0347N	Ennis Power Company LLC - Ennis Elec Gen Plant	Ellis	4911	Electric Services	88.17	§117.1300 - §117.1356	
RN100213479	ED0018M	Elk Corporation of Texas	Ellis	2952	Asphalt Felts and Coatings	72.53	§117.400 - §117.456	
RN100213537	ED0168P	Dartco of Texas LP - Waxahachie	Ellis	3089	Plastics Products, NEC	24.16	§117.400 - §117.456	Title V permit, NO _x major source.

RN	Account	Company	County	SIC	SIC Description	2017 Actual tpy	Rules Addressing RACT	Notes
RN100216472	ED0011D	Chaparral Steel Midlothian LP	Ellis	3312	Blast Furnaces and Steel Mills	281.87	§117.400 - §117.456	
RN100217199	ED0066B	TXI Operations LP - Midlothian	Ellis	3241	Cement, Hydraulic	1185.82	§117.3100 - §117.3145	Agreed Order with 1.95 lb NO _x /ton of clinker limit.
RN100219286	ED0099J	Holcim Texas LP - Midlothian	Ellis	3241	Cement, Hydraulic	1057.47	§117.3100 - §117.3145	
RN100223585	ED0051O	Owens Corning Insulating Systems LLC - Waxahachie	Ellis	3296	Mineral Wool	102.89	§117.400 - §117.456	
RN100225978	ED0034O	Ash Grove Cement Company - Midlothian	Ellis	3241	Cement, Hydraulic	453.46	§117.3100 - §117.3145	Reconstructed kiln #3 is subject to the NSPS for Portland Cement Plants.
RN100542232	ED0240J	Waste Management of North Texas - Skyline Recycling and Disposal	Ellis	4953	Refuse Systems	57.89	§117.400 - §117.456	
RN100542588	ED0238T	Atmos Energy Corp - Howard Compressor	Ellis	4922	Natural Gas Transmission	59.17	§117.400 - §117.456	
RN102596400	ED0332D	Midlothian Energy LLC - Midlothian Energy Facility	Ellis	4911	Electric Services	171.76	§117.1300 - §117.1356	
RN102903432	EDA001A	Energy Transfer Fuel LP - Maypearl Compressor	Ellis	4922	Natural Gas Transmission	9.04	§117.400 - §117.456	Title V permit, NO _x major

RN	Account	Company	County	SIC	SIC Description	2017 Actual tpy	Rules Addressing RACT	Notes
RN100746007	DB4914J	Trend Offset Printing Services Inc.	Dallas	2752	Commercial Printing Lithograph	27.33	§115.440 - §115.449	
RN101559235	DB0252S	Mountain Creek Power LLC - Mt. Creek Steam Electric Station	Dallas	4911	Electric Services	6.36	NA	VOC emissions from combustion sources. Additional control for RACT is not economically feasible. Title V permit, VOC, NO _x major source.
RN102302007	DB3613K	Western Cabinets Inc. - Cedar Hill Plant	Dallas	2434	Wood Kitchen Cabinets	51.50	§115.420 - §115.429 §115.470 - §115.479	
RN102505195	DB0820B	Texas Instruments Inc. - Central Expressway North Campus	Dallas	3674	Semiconductors and Related Devices	54.09	§115.110 - §115.119 §115.412 - §115.419 §115.211 - §115.219	
RN102593894	DB0838F	Masco Cabinetry LLC - Duncanville	Dallas	2434	Wood Kitchen Cabinets	11.23	§115.420 - §115.429	Title V permit, VOC major source.
RN102660909	DB0482W	General Dynamics Ordnance and Tactical Systems Inc. - Garland	Dallas	3483	Ammunition, Except for Small Arm	17.35	§115.450 - §115.459	Title V permit, VOC major source.
RN105071427	DBA014N	Overwraps Packaging Inc	Dallas	2759	Commercial Printing NEC	25.39	§115.430 - §115.439	
RN100211762	DF0051J	Paccar, Inc. - Peterbilt Denton	Denton	3711	Motor Vehicles and Car Bodies	147.88	§115.450 - §115.459	

RN	Account	Company	County	SIC	SIC Description	2017 Actual tpy	Rules Addressing RACT	Notes
RN100215441	DF0042K	Safety Kleen Systems Inc. - Denton Recycle Center	Denton	7389	Business Services NEC	5.03	§115.110 - §115.119 §115.120 - §115.129 §115.211 - §115.219 §115.234 - §115.239	Title V permits, VOC major source.
RN102615747	DF0089H	Tetra Pak Materials LP - Denton	Denton	2656	Sanitary Food Containers	37.45	§115.430 - §115.439	
RN102934692	DFA170N	SWG Pipeline, LLC - Justin Compressor	Denton	1311	Crude Petroleum and Natural Gas	35.93	§115.110 - §115.119 §115.120 - §115.129 §115.211 - §115.219	Additional compressor station VOC emissions from combustion sources. Additional control for RCAT is not economically feasible.
RN109678086	DFA254T	Amazon Comm K YDC LLC - Woot Svcs Carrollton	Denton	2759	Commercial Printing NEC	45.17	§115.120 - §115.129	
RN100212166	ED0141M	Sherwin-Williams Co - Ennis Plant	Ellis	2851	Paints and Allied Products	13.99	§115.110 - §115.119 §115.120 - §115.129 §115.211 - §115.219	Title V permit, VOC major source.
RN100213479	ED0018M	Elk Corporation of Texas	Ellis	2952	Asphalt Felts and Coatings	36.23	§115.110 - §115.119	
RN100213537	ED0168P	Dartco of Texas LLC - Waxahachie	Ellis	3089	Plastic Products, NEC	702.55	§115.211 - §115.219	

RN	Account	Company	County	SIC	SIC Description	2017 Actual tpy	Rules Addressing RACT	Notes
RN100216472	ED0011D	Chaparral Steel Midloathian LP	Ellis	3312	Blast Furnaces and Steel Mills	286.13	§115.211 - §115.219	VOC emissions from other operations are controlled per BACT in NSR Permit Nos. 1635, 3026, 5983, 8097, and 8099. Further control may also be required by MACT. Additional control for RACT is not economically feasible.
RN1002171799	ED0066B	TXI Operations LP - Midlothian	Ellis	3241	Cement, Hydraulic	42.15	§115.211 - §115.219	Additional control for RACT is not economically feasible.
RN100219286	ED0099J	Holcim Texas LP - Midlothian	Ellis	3241	Cement, Hydraulic	207.51	§115.211 - §115.219	Additional control for RACT is not economically feasible.

RN	Account	Company	County	SIC	SIC Description	2017 Actual tpy	Rules Addressing RACT	Notes
RN100223585	ED0051O	Owens Corning Insulating Systems LLC - Waxahachi	Ellis	3296	Mineral Wool	80.59	§113.710 §113.930 §115.110 - §115.119 §115.120 - §115.129 §115.211 - §115.219	VOC controls from organic HAP MACT controls in 40 CFR 63 Subparts NNN and JJJJ are incorporated via §113.710 and §113.930. Additional control for RACT is not economically feasible.
RN100225978	ED0034O	Ash Grove Texas LP - Midlothian	Ellis	3241	Cement, Hydraulic	26.44	§115.110 - §115.119 §115.412 - §115.419	
RN100749035	ED0032S	GS Roofing Products Co	Ellis	2952	Asphalt Felts and Coatings	39.50	§115.110 - §115.119 §115.120 - §115.129 §115.450 - §115.459	
RN102539145	ED0013W	Praxis Co LLC - Koral Industries	Ellis	3088	Plastics, Plumbing Fixtures	45.22	§115.450 - §115.459	
RN102596400	ED0332D	Midlothian Energy LP - Midlothian Energy Facility	Ellis	4911	Electric Power Generation	11.87	§115.211 - §115.219 §115.234 - §115.239	Majority of VOC emissions from combustion sources. Additional control for RACT is not economically feasible. Title V permit, VOC, NO _x major source.

RN	Account	Company	County	SIC	SIC Description	2017 Actual tpy	Rules Addressing RACT	Notes
RN100213719	JH0025O	Johns Manville International Inc.	Johnson	3296	Mineral Wool	142.76	§115.120 - §115.129 §115.450 - §115.459	VOC controls from organic HAP MACT controls in 40 CFR 63 Subparts NNN and JJJ are incorporated via §113.710 and §113.930. Vent gas streams meet applicable exemptions in §115.127. VOC emissions meet exemption in §115.427. Additional control for RACT is not economically feasible.
RN100773381	JH0376F	Technical Chemical Co	Johnson	2899	Chemical Preparations, NEC	32.36	§115.110 - §115.119 §115.120 - §115.129	

RN	Account	Company	County	SIC	SIC Description	2017 Actual tpy	Rules Addressing RACT	Notes
RN104962634	JHA028B	Barnett Gathering LP-Lilian Compressor Station	Johnson	1311	Crude Petroleum and Natural Gas	27.78	§115.110 - §115.119 §115.120 - §115.129 §115.211 - §115.219	Additional compressor station VOC emissions from stationary internal combustion engines with lean burn technology. Additional control for RACT is not technologically or economically feasible.
RN106239783	JHA122R	Standard Paints, Inc - Fence Picket Staining	Johnson	2491	Wood Preserving	29.12	§115.120 - §115.129 §115.450 - §115.459	
RN100213420	KB0176S	Luminant Generation Co LLC - Forney Power Plant	Kaufman	4911	Electric Services	9.30	NA	Most VOC emissions from combustion sources. Additional VOC control for RACT is not technologically or economically feasible. Title V VOC major source.
RN102183449	PC0011B	Magellan Pipeline Terminals LP - Aledo Terminal	Parker	4613	Refined Petroleum Pipelines	30.66	§115.110 - §115.119 §115.131 - §115.139 §115.211 - §115.219	

RN	Account	Company	County	SIC	SIC Description	2017 Actual tpy	Rules Addressing RACT	Notes
RN104891825	PCA006F	Enlink Texas Processing LP - Goforth Processing Plant	Parker	4922	Natural Gas Transmission	30.73	§115.110 - §115.119 §115.120 - §115.129 §115.211 - §115.219 §115.352 - §115.359	Additional VOC control for RACT not technologically or economically feasible.
RN105010797	PCA008H	Barnett Gathering LLC- West Walsh Compressor Station	Parker	1311	Crude Petroleum and Natural Gas	83.73	§115.110 - §115.119 §115.120 - §115.129 §115.211 - §115.219	Additional VOC control for RACT not technologically or economically feasible.
RN105072516	PCA020T	Enlink North Texas Gathering LP- Kemp Compressor Station	Parker	4922	Natural Gas Transmission	23.88	§115.110 - §115.119 §115.120 - §115.129 §115.211 - §115.219	Additional VOC emissions from combustion sources. Additional VOC control for RACT not technologically or economically feasible. Title V major for VOC, PTE > 50 tpy.
RN105225734	PCA032F	Enlink North Texas Gathering LP- White Settlement Compressor Station	Parker	4922	Natural Gas Transmission	18.61	§115.110 - §115.119 §115.120 - §115.129 §115.211 -- §115.219	Additional VOC control for RACT is not technologically or economically feasible. Title V major for VOC, PTE > 50 tpy.
RN107310161	PCA064L	Bosque Disposal Systems - Bosque 1 SWD	Parker	1389	Oil and Gas Field Services NEC	25.10	§115.110 - §115.119	

RN	Account	Company	County	SIC	SIC Description	2017 Actual tpy	Rules Addressing RACT	Notes
RN100211291	TA0282E	Printpack Inc.	Tarrant	2671	Paper Coated and Laminated Packaging	19.89	§115.412 - §115.419 §115.420 - §115.429 §115.430 - §115.439 §115.450 - §115.459	Tile V permit, VOC major source.
RN100212356	TA0156K	Lockheed Martin Corporation - Air Force Plant 4	Tarrant	3721	Aircraft	46.36	§115.110 - §115.119 §115.120 - §115.129 §115.131 - §115.139 §115.211 - §115.219 §115.234 - §115.239 §115.412 - §115.419 §115.420 - §115.429	
RN100216548	TA0345F	Motiva Enterprises LLC- Fort Worth Terminal	Tarrant	5171	Petroleum Bulk Stations and Terminals	28.14	§115.110 - §115.119 §115.211 - §115.219 §115.234 - §115.239	
RN100219344	TA0172M	Fort Dearborn Co. - Fort Worth	Tarrant	2752	Commercial Printing Lithograph	30.49	§115.440 - §115.449	
RN100222488	TA0054T	Bell Helicopter Textron Inc. - Plant 1	Tarrant	3721	Aircraft	35.12	§115.110 - §115.119 §115.120 - §115.129 §115.131 - §115.139 §115.412 - §115.419 §115.420 - §115.429 §115.450 - §115.459	
RN100225440	TA0236L	Ball Metal Beverage Container Corp.	Tarrant	3411	Metal Cans	52.80	§115.420 - §115.429	
RN100236041	TA0274D	Direct Fuels LLC - Euless Terminal	Tarrant	5171	Petroleum Bulk Stations and Terminals	28.86	§115.110 - §115.119 §115.211 - §115.219 §115.234 - §115.239	

RN	Account	Company	County	SIC	SIC Description	2017 Actual tpy	Rules Addressing RACT	Notes
RN100602507	TAA062J	Parker-Hannifin Corp - Mansfield Hose	Tarrant	3052	Rubber & Plastics Hose and Belting	38.89	\$115.120 - \$115.129 \$115.450 - \$115.459	
RN100809847	TAA004D	Marco Display Specialists GPLC	Tarrant	2449	Wood Containers, NEC	42.43	\$115.420 - \$115.429	
RN101649317	TA0102K	Magellan Pipeline Terminals LP- Magellan Southlake Terminal	Tarrant	4613	Refined Petroleum Pipelines	39.54	\$115.110 - \$115.119 \$115.211 - \$115.219 \$115.234 - \$115.239	
RN102216819	TA0051C	Bell Helicopter Textron Inc. - Plant 5A	Tarrant	3721	Aircraft	25.03	\$115.110 - \$115.119 \$115.120 - \$115.129 \$115.412 - \$115.419 \$115.420 - \$115.429	
RN102418563	TA0285V	Trinityrail Maintenance Services Inc.- Railcar Repair Division Plant No. 25	Tarrant	4789	Transportation Services, NEC	12.83	\$115.450 - \$115.459	Title V permit VOC major source.
RN102496684	TA1222P	Flint Hills Resources Corpus Christi LLC - Fort Worth Terminal	Tarrant	5171	Petroleum Bulk Stations and Terminals	48.68	\$115.110 - \$115.119 \$115.211 - \$115.219 \$115.234 - \$115.239	
RN102505963	TA01571	General Motors Corp. Arlington Assembly Plant	Tarrant	3711	Motor Vehicles and Car Bodies	409.61	\$115.110 - \$115.119 \$115.450 - \$115.459	
RN102560067	TA0508B	Nustar Logistics LP - Southlake Terminal	Tarrant	5171	Petroleum Bulk Stations and Terminals	27.51	\$115.110 - \$115.119 \$115.211 - \$115.219 \$115.131 - \$115.139 \$115.234 - \$115.239	Title V permit VOC major source.

RN	Account	Company	County	SIC	SIC Description	2017 Actual tpy	Rules Addressing RACT	Notes
RN102572682	TA0685B	Film Pak Inc. - Plastic Bags	Tarrant	3089	Plastics Products, NEC	42.40	\$115.430 - \$115.439	
RN102649399	TA0235N	Miller Coors LLC - Fort Worth Brewery	Tarrant	2082	Malt Beverages	99.90	\$115.110 - \$115.119 \$115.120 - \$115.129	Vent gas streams meet applicable exemptions in §115.127. 75% of VOC emissions are fugitive emissions from product loss. Additional control for RACT is not technologically or economically feasible.
RN102939626	TAA008H	Enlink North Texas Gathering LP- Jarvis Compressor Station and Treating Plant	Tarrant	1311	Crude Petroleum and Natural Gas	36.04	\$115.110 - \$115.119 \$115.120 - \$115.129 \$115.211 - \$115.219	Additional VOC control for RACT is not technologically or economically feasible.
RN104787478	TAA014N	Barnett Gathering LP- TRWD Plant	Tarrant	1311	Crude Petroleum and Natural Gas	39.36	\$115.110 - \$115.119 \$115.120 - \$115.129 \$115.211 - \$115.219	
RN105010714	TAA021U	Barnett Gathering LP- Rendon Compressor Station	Tarrant	1311	Crude Petroleum and Natural Gas	33.06	\$115.110 - \$115.119 \$115.120 - \$115.129 \$115.211 - \$115.219	
RN105064356	TAA023W	Energy Transfer Fuel LP- Cantwell Compressor Station	Tarrant	1311	Crude Petroleum and Natural Gas	26.38	\$115.110 - \$115.119 \$115.120 - \$115.129 \$115.211 - \$115.219	

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RN105227763	TAA024X	Cowtown Pipeline Partners LP	Tarrant	1311	Crude Petroleum and Natural Gas	30.5	§115.110 - §115.119 §115.120 - §115.129 §115.211 - §115.219	Additional VOC emissions from stationary internal combustion engines already equipped with oxidative catalyst or lean burn technology. Additional VOC control for RACT is not technologically or economically feasible.
RN105304521	TAA035II	Barnett Gathering LP- Cotton Cove Plant	Tarrant	1311	Crude Petroleum and Natural Gas	34.59	§115.110 - §115.119 §115.120 - §115.129 §115.211 - §115.219	Additional VOC emissions from stationary internal combustion engines already equipped with oxidative catalyst or lean burn technology. Additional VOC control for RACT is not technologically or economically feasible.
RN105560973	TAA044R	Barnett Gathering - Johnson Ranch Compressor	Tarrant	1311	Crude Petroleum and Natural Gas	25.33	§115.110 - §115.119 §115.120 - §115.129 §115.211 - §115.219	Additional VOC control for RACT is not technologically or economically feasible.

RN	Account	Company	County	SIC	SIC Description	2017 Actual tpy	Rules Addressing RACT	Notes
RN107161960	TAA071S	Starrfoam Manufacturing	Tarrant	3086	Plastics and Foam Products	29.46	\$115.120 - \$115.129	
RN100212539	WN0217K	SWG Pipeline LLC -East Rhome Compressor Station	Wise	1311	Crude Petroleum and Natural Gas	28.66	\$115.110 - \$115.119 \$115.120 - \$115.129 \$115.131 - \$115.139 \$115.211 - \$115.219 \$115.234 - \$115.239	
RN100223619	WN0021G	Enlink Midstream Services LLC - Bridgeport Gas Plant	Wise	1321	Natural Gas Liquids	148.60	\$115.110 - \$115.119 \$115.120 - \$115.129 \$115.211 - \$115.219 \$115.234 - \$115.239 \$115.352 - \$115.359	
RN100238716	WN0005E	Targa Midstream Services LLC - Dynege Chico Gas Plant	Wise	1321	Natural Gas Liquids	54.73	\$115.110 - \$115.119 \$115.120 - \$115.129 \$115.131 - \$115.139 \$115.211 - \$115.219 \$115.234 - \$115.239 \$115.352 - \$115.359	
RN101330959	WN0231Q	Enlink Midstream Services LLC - Lateral A Compressor Station	Wise	1311	Crude Petroleum and Natural Gas	15.20	\$115.110 - \$115.119 \$115.211 - \$115.219 \$115.234 - \$115.239	VOC PTE 62 tpy NO _x PTE 52 tpy Major for VOC, NO _x
RN102552387	WN0042V	Targa Midstream Services LLC - East Chico Compressor	Wise	1311	Crude Petroleum and Natural Gas	28.84	\$115.110 - \$115.119 \$115.120 - \$115.129 \$115.211 - \$115.219	
RN102694478	WN0094C	Enlink Midstream Services LLC - Lateral C Compressor	Wise	1321	Natural Gas Liquids	29.65	\$115.110 - \$115.119 \$115.120 - \$115.129 \$115.211 - \$115.219	

RN	Account	Company	County	SIC	SIC Description	2017 Actual tpy	Rules Addressing RACT	Notes
RN102772944	WN0040C	Enlink Midstream Services LLC - Lateral E Compressor	Wise	1311	Crude Petroleum and Natural Gas	25.29	§115.110 - §115.119 §115.120 - §115.129 §115.211 - §115.219	
RN102913225	WN0234K	Enlink Midstream Services LLC - Allison Compressor	Wise	1311	Crude Petroleum and Natural Gas	36.35	§115.110 - §115.119 §115.120 - §115.129 §115.211 - §115.219	
RN106644255	WNA226V	Enervest Operating - Waggoner Crystelle 7H Site	Wise	1311	Crude Petroleum and Natural Gas	33.11	§115.110 - §115.119	