

DEPARTMENT OF ENERGY AND ENVIRONMENT**NOTICE OF FINAL RULEMAKING****Reasonably Available Control Technology for Major Stationary Sources of the Oxides of Nitrogen Regulations**

The Director of the Department of Energy and Environment (DOEE or Department), pursuant to the authority set forth in Sections 5 and 6 of the District of Columbia Air Pollution Control Act of 1984 (the Act), effective March 15, 1985 (D.C. Law 5-165; D.C. Official Code §§ 8-101.05 and 8-101.06 (2013 Repl. & 2018 Supp.)), as amended by title I of the Air Quality Amendment Act of 2014 (the Amendment Act), effective September 9, 2014 (D.C. Law 20-0135; 61 DCR 9968); Section 107(4) of the District Department of the Environment Establishment Act of 2005, effective February 15, 2006 (D.C. Law 16-51; D.C. Official Code § 8-151.07(4) (2013 Repl.)); and Mayor's Order 2006-61, dated June 14, 2006; hereby gives notice of the adoption of the following amendments to Chapter 8 (Air Quality – Asbestos, Sulfur, Nitrogen Oxides, and Lead) of Title 20 (Environment) of the District of Columbia Municipal Regulations (DCMR).

Reasonably Available Control Technology

On October 26, 2015, the U.S. Environmental Protection Agency (EPA) promulgated revised 8-hour primary and secondary ozone National Ambient Air Quality Standards (NAAQS). 80 Fed. Reg. 65292 (October 26, 2015). Under the Clean Air Act (CAA), states with areas designated as nonattainment for the revised ozone NAAQS and states located in the Ozone Transport Region (OTR) are required to submit, for the approval of EPA, revisions to the relevant state implementation plan (SIP) to ensure that the SIP complies with all applicable statutory and regulatory requirements. 42 U.S.C. § 7502(b). The District is a part of the OTR and was designated as being in marginal nonattainment for the 2015 Ozone NAAQS. 83 Fed. Reg. 25776, 25795 (June 4, 2018). Since the District is located within the OTR, it must comply with the EPA's Reasonably Available Control Technology (RACT) requirements (40 C.F.R. Part 51, Subpart X).

The requirement to update RACT standards in response to the 2015 ozone NAAQS applies to the two precursor pollutants of ozone, nitrogen oxides (NOx) and volatile organic compounds (VOC). As part of this requirement, the District must review its regulations and determine if it is necessary to update the existing RACT standards for stationary source categories under its jurisdiction.

EPA has defined RACT as “the lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility... In evaluating economic feasibility for RACT determinations, the EPA gives significant weight to economic efficiency and relative cost effectiveness.” 83 Fed. Reg. 62998, 63007, FN 16 (December 6, 2018).

The Department is also considering current ozone levels in its evaluation of RACT. The Washington, DC-MD-VA nonattainment area is required under its marginal ozone classification to achieve a design value at or below 0.070 parts per million (ppm) by August 3, 2021.

Examining both the 2017-2019 and 2018-2020 design value, ozone levels at the lead monitor in the District (McMillan Reservoir) are 0.071 ppm and 0.069 ppm, respectively, and at the lead monitor in the Washington, DC-MD-VA nonattainment area (Beltsville, MD) are 0.072 and 0.071 ppm, respectively. Decisions concerning RACT standards must be made in light of the fact that the nonattainment area is still not compliant with the 2015 Ozone NAAQS. Further, exceptionally low ozone levels were experienced in the nonattainment area in 2020 due to the Covid-19 health emergency, so the current ozone levels as most recently measured are not indicative of long-term ozone trends in the region.

Summary of Final Rulemaking

This rulemaking amends 20 DCMR Chapter 8 to: include a presumptive NO_x RACT for fuel burning equipment (e.g., institutional and commercial boilers, water heaters) sized down to five million (5,000,000) BTU per hour; lower the emission limits that constitute presumptive NO_x RACT for fuel burning equipment sized twenty-five million (25,000,000) BTU per hour or greater; lower the emissions limit for combustion turbines sized fifty million (50,000,000) BTU per hour or greater when burning fuel oil; and, implement presumptive NO_x RACT for non-emergency stationary engines.

It also establishes an alternative compliance mechanism for fuel burning equipment to encourage sources to switch from fossil-fuel powered boilers to low or zero emission alternatives, such as electric heat pumps, which corresponds to other environmental priorities in the District, such as those specified in the August 27, 2018 Clean Energy DC plan. The Department finds this to be a cost-effective compliance method that both achieves the goal of the RACT program and provides for co-pollutant emission reductions.

Additionally, the Department is amending the “Alternative RACT” process to integrate it with the 20 DCMR Chapter 2 permitting process. It also revises the “Alternative RACT” process to meet all of the CAA requirements, including deadlines for emission reductions and the necessity for EPA approval of a case-by-case RACT application in the SIP, while also making efforts to streamline and simplify the case-by-case RACT process.

Finally, the rulemaking provides more specific regulations regarding testing, record keeping, and maintenance, and adds related definitions and abbreviations to both 20 DCMR § 199 and 20 DCMR § 899.

Through analysis of technology regularly available and feasible in general and a comparison of regulations adopted as RACT by economically similar nonattainment areas, the Department finds that this regulation constitutes presumptive RACT for fuel burning equipment, combustion turbines, asphaltic production equipment, and non-emergency stationary generators. These

emission limits are also, with one exception,¹ equivalent to model regulations developed by the Ozone Transport Commission (OTC) in 2006 and 2010.

DOEE also finds that the inclusion of an “Alternative RACT” program allows for the flexibility of setting a technology feasible and economically reasonable control level for particularly unique sources that, due to any number of reasons, may not be able to implement measures that are generally reasonably available. This approach has been found to be appropriate in the recent court case Sierra Club v. EPA (972 F.3d 290 (3d Cir. 2020)), which examined Pennsylvania’s RACT program.

Further information about DOEE’s analysis is available in the final State Implementation Plan (SIP) certification for this program.

Discussion of Public Comments

Three comment letters were received during the public comment period. No commenters spoke at the public hearing held on May 24, 2021. DOEE carefully considered each comment and responds below. This rulemaking was published in parallel with a proposed certification of the presumptive emission limits. Some of the comments dealt with specific technical issues in the certification document and are addressed in the final SIP certification rather than here in the final rule.

Two commenters expressed concern that the emissions limits were not supported by an economic analysis. The RACT program requires controls be supported by technological feasibility and economic reasonableness. After review, DOEE finds that its initial analysis is supported by the evidence it provided, though the analysis in the final SIP certification clarifies this position. DOEE also provided two ways to determine whether RACT was met for NOx emitting sources-- “presumptive RACT” and what in the District we term “Alternative RACT” (also termed “case-by-case RACT”). DOEE has provided a presumptive RACT emission limit based on generally applicable technologies and economic factors, while also providing “Alternative RACT” in order to evaluate “the lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technologies and economic feasibility” at a specific source. Presumptive RACT cannot be set at a level that the worst-case unit can meet, since that would require many sources to take actions to clean the air to a level that were less than reasonable. This approach is supported in Sierra Club v. EPA (972 F.3d 290, 296 (3d Cir. 2020)) where the court writes of Pennsylvania’s RACT regulations:

“A plant is also permitted under section 129.99 of the RACT II Rule to request an alternative RACT limit that applies only to its own facility. These are called “source-

¹ Emission limits for fuel burning equipment powered by oil with an energy input capacity of twenty-five million (25,000,000) BTU per hour or greater and less than one hundred million (100,000,000) BTU per hour are being proposed at nine hundredths pound (0.09 lb) per million BTU, whereas the 2006 OTC model rule for this type of equipment called for an emissions limit of eight hundredths pound (0.08 lb) per million BTU, which the Department finds is not reasonably available.

specific RACT limits.” It is important to stress that the overall RACT limit is therefore not a hard cap if certain older plants could not otherwise satisfy the requirements.”

Two commenters were concerned that the emissions limits were not supported by a complete technological analysis.

DOEE relied on data sources available from the U.S. EPA in making its assessment. The U.S. EPA is the preeminent institution in the nation for environmental data collection. No other organization has more readily available data for analysis of available emission control technologies. Furthermore, neither commenter provided other sources of technological data that should be used in lieu of the U.S. EPA data sources.

The commenters challenged the inclusion of Lowest Achievable Emission Reduction (LAER) and Best Available Control Technology (BACT) information in the technological analysis. In Sierra Club v. EPA (972 F.3d 290, 295 (3d Cir. 2020)), the court found that RACT “is a technology-forcing mechanism,” so inclusion of LAER and BACT permits in DOEE’s analysis is not inappropriate. Because of advances in technology, technology that was previously considered LAER may now be reasonably available technology to install as RACT. In addition, over time, ozone NAAQS have become more stringent, further changing what must be considered reasonable. DOEE did not rely on extreme values when determining presumptive RACT emissions limits, but instead relied on the median in the data sets, thereby designing its analysis in a manner that will not force facilities to adopt unreasonable emission limits. By choosing the median, DOEE set a balance so that presumptive RACT was both technologically feasible and economically reasonable.

Comments were also received regarding the inclusion of controls on new sources. EPA makes no distinction in either WebFire (EPA’s repository of emission rates for inventory calculations) or RBLC (EPA’s repository of air quality operating permits) between installations on new sources or retrofit installations. This would support DOEE’s approach of considering emission limits to be similar when installing modern emission control technologies in either situation. WebFire, in particular, relies on conservative estimates of emission factors, which reinforces DOEE’s approach. Given that EPA does not make such a distinction between new and retrofit installations and that the WebFire system is particularly conservative in this regard, DOEE sees no reason to change its approach.

Two commenters recommended applying a single daily RACT emission limit to boilers that burn a combination of natural gas/fuel oil regardless of which fuels were actually burned on a particular day, or alternatively a daily emission limit that varies based solely on whether fuel oil was burned on a particular day, regardless of whether natural gas was also burned. The District’s NOx RACT regulation has historically applied emission limits that vary daily depending on the type of fuel burned, or combination of fuels burned; DOEE is continuing the existing regulatory structure with these amendments. Commenters did not provide sufficient evidence to explain why they are no longer able to comply with the longstanding requirement; therefore no changes to the rulemaking are justified.

Two commenters expressed concern about having a separate higher emissions limit for burning fuel oil when fuel oil was burned only during natural gas curtailment. DOEE believes that having slightly higher emissions limits when units are only permitted to burn oil during natural gas curtailment instances is justifiable for economic reasons. Given the limited number of hours that burning of oil would occur during curtailment, the cost of control per ton reduced is likely to be more substantial and, therefore, less economically reasonable. This is the same approach that DOEE takes when regulating non-emergency versus emergency stationary generators.

One commenter expressed concern with DOEE's analysis of combustion turbines. DOEE conducted an updated, refined analysis based on the comments, in particular by limiting the size of units analyzed. This analysis, presented in detail in DOEE's final SIP certification, strongly supports the adjustment DOEE made to the emissions limit for combustion turbines firing oil. Thus, DOEE is maintaining the same emissions limit as proposed.

One commenter expressed concerns with the emission rates for their units as they were displayed in the proposed SIP certification analysis. The calculations were reviewed and one error was found. Corrected values are now included in the final SIP certification analysis, as well as a more detailed description as to the approach taken to calculate the emission rates.

Two commenters expressed concerns with basing emission limits for fuel burning equipment on the installation of low-NOx burners, in particular since some existing units already have low-NOx burners installed. Sources with a low-NOx burner system installed that cannot meet the proposed emissions limits may have to upgrade their low-NOx burner system for a variety of reasons. For instance, a system may have out-lived its useful life, which would be expected to occur after 10 – 15 years in the case of low-NOx burners according to EPA's COST Manual. The RACT program does not prohibit requiring a control technology to be replaced with the modern equivalent after a piece of equipment has reached the end of its useful life. A 15-year-old low-NOx burner may not be able to meet the emission rates of a modern system due to some combination of technology standards and equipment age and the expectation is that such systems must be modernized.

Three commenters expressed concern with the proposed effective date of the regulations. The effective date is based on a date required by Clean Air Act §182(b)(2) and clarified by US EPA in the 2015 NAAQS Ozone SIP Implementation Rule (83 Fed. Reg. 62998, 63012 (December 6, 2018)):

“CAA section 182(b)(2) establishes that a state shall submit a SIP revision to provide for implementation of RACT by 2 years after November 15, 1990, and provide for RACT implementation as expeditiously as practicable, but no later than May 31, 1995 (approximately 54 months from the enactment date of the 1990 CAA Amendments). As codified for the 2008 ozone NAAQS at 40 CFR 51.1112, the EPA interpreted this CAA timeframe to require submittal of RACT SIP revisions no later than 24 months after the effective date of initial area designations, and implementation of the RACT SIP revisions no later than January 1 of the fifth year after the effective date of initial designations.”

Given that 2023 is the fifth year following the 2018 effective date of initial designation, DOEE cannot change the implementation deadline.

Two commenters sought to have an alternative monitoring program as part of the Alternative RACT program. DOEE makes few changes to its monitoring requirements in this rulemaking. In fact, DOEE is allowing more flexibility with regards to using procedures set forth in 40 CFR 60 Appendix B or 40 CFR 75 in lieu of 40 CFR 60 Appendix B. Sources should already be complying with the existing monitoring requirements and, therefore, DOEE has not adopted this comment.

Two commenters stated that DOEE should clarify that RACT will be evaluated based on technical and economic feasibility and using a top-down approach. DOEE clarified the language in § 805.2 to make it clear that it will evaluate Alternative RACT based on technical and economic feasibility. By providing the technical alternatives and justification of RACT in accordance with § 805.2, the regulation effectively already requires a top-down approach.

Two commenters requested that guidance be provided for Alternative RACT. Given the case-by-case nature of the Alternative RACT program, DOEE must evaluate the specific needs of each source, therefore specific guidance cannot be provided. However, DOEE does provide specific information on types of control options that must be evaluated under § 805.2(c).

Three commenters expressed concerns with the timeline for the Alternative RACT program and two of them requested a “regulatory shield” if their submissions are timely but not approved by the deadline. DOEE cannot extend the final implementation deadline beyond January 1, 2023 because of the specific deadlines set forth in the Clean Air Act. DOEE has, however, extended the deadline for submission of Alternative RACT requests to March 1, 2022.

One commenter expressed concern as to how DOEE considers ozone levels for purposes of establishing RACT limits. RACT limits are based solely on technological and economic reasonability, though current ozone compliance status can play a role in the latter. For the 2008 NAAQS, since the District was monitoring in attainment, only a limited level of economic impact from additional controls was considered reasonable. Now, a higher level of control is warranted given the District’s nonattainment status. In its final SIP certification analysis, DOEE reviewed RACT controls in place in areas with nonattainment statuses under the 2008 Ozone NAAQS that were similar to the District’s status for the 2015 Ozone NAAQS. DOEE relied on a comparison to these specific jurisdictions as a basis for determining the economic reasonableness of the RACT limits in the District.

One commenter asked whether a valid Chapter 2 permit was needed prior to implementing necessary changes to existing emissions units to meet new RACT emissions limitations. Many actions that may be undertaken to comply with this section, such as the installation of an emission control system, would require a permit under the Chapter 2 program. Section 200.1 states “[a] permit from the Department shall be obtained before any person shall cause, suffer, or allow the construction of a new stationary source, the modification of an existing stationary source, or the installation or modification of any air pollution control device on a stationary source.”

One commenter asked if there was an emissions limit for a stationary combustion turbine with a heat input rating less than or equal to ten million (10,000,000) BTU per hour that is fired exclusively on natural gas. There is no presumptive emissions rate for a unit of this size. The only specific requirement is found under § 805.4(a)(7). Section 805.4(a)(4)(B) also provides further clarification as to whether heat input rating is considered correctly. DOEE did find that the exemption for units sized 10,000,000 BTU and under as written in § 805.4(a)(3)(i) was unclear, and has made an alteration to § 805.4(a)(3) to clarify how units sized 10,000,000 BTU and under were regulated.

One commenter asked if the deadline for tuning boilers could be extended to December 31st for each year. Since the heating season will be well underway by December 31st, DOEE believes an extension until this date is not reasonable, but it has extended the deadline to November 1st in this final rule.

One commenter expressed concern that while monitoring requirements go into effect on January 1, 2022, emission limits do not go into effect until January 1, 2023. There are two reasons for this. Since the combustion process adjustment requirements of § 805.5 (b) go into effect on January 1, 2022, the monitoring and reporting requirements must also go into effect on January 1, 2022, even if other aspects of the rule do not, such as the emissions limitations. Additionally, compliance with the monitoring and testing requirements is also needed to comply with the existing requirements in § 805.5 (a) and § 805.5 (c). In reviewing the effective dates in § 805.10 after receiving this comment, DOEE realized that this section should go into effect upon the promulgation of the rule. DOEE also found that § 805.10 (a)(2)(C)(iii) needed clarification so that the requirements to conduct tests by certain dates were clearer. Both of these changes were made in this final rule.

One commenter expressed confusion over how combined heat and power (*i.e.*, cogeneration) systems were regulated due to their inclusion in the list of zero emissions alternative compliance approaches for fuel burning equipment. The commenter also requested a definition for zero on-site emission technology. DOEE agrees that the inclusion of cogeneration under § 805.5 (g)(1)(A) is unclear when considered in concert with § 805.4. Therefore, DOEE has removed cogeneration from the list of zero emission alternative compliance approaches. Given the vast array of technologies that produce zero emissions on site (e.g., fuel cells, air source heat pumps, solar water heating, etc.), DOEE has chosen not to provide a specific definition for zero on-site emission technology, as it also is a generally used descriptive term. DOEE has also extended the deadline to submit a plan under § 805.5 (g) (1) (A) since the proposed deadline of August 1, 2021 has passed.

One commenter was concerned that DOEE did not properly consider existing emissions units in the District. When setting a presumptive emission limit, DOEE did not rely primarily on emission rates at existing sources since that would go against the purpose of RACT as a technology forcing program. DOEE did rely on emission rates from multiple, reliable, transparent data sources for setting its presumptive NOx RACT emission rates. US EPA is the preeminent source of readily available data on the emissions controls, typically provides conservative estimates of emission rates, and supports its data with solid documentation. DOEE

provided multiple transparent sources of data to support its technological assessment, including information in WebFire and the RACT/BACT/LAER clearinghouse. If specific sources in the District cannot meet the presumptive NO_x RACT emission rates due to unique engineering challenges, they can seek compliance through the Alternative RACT program. Presumptive NO_x RACT is not intended to be established based upon whether units currently meet a particular emission limit, but instead is to be set based on what technology is technologically feasible and economically reasonable.

Finally, DOEE has also made an unrelated technical correction to § 805.9(b)(1), which contained an incorrect reference.

More detailed analysis of comments and the Final SIP Revision is available on <https://doee.dc.gov/node/9682>

This rulemaking was proposed in DC Register on April 23, 2021 at 68 DCR 4337. These rules are adopted as final on November 17, 2021 and become effective upon publication in the DC Register.

Chapter 1, AIR QUALITY — GENERAL RULES, of Title 20 DCMR, ENVIRONMENT, is amended as follows:

Section 199, DEFINITIONS, is amended by adding the following definition:

Stationary engine – any compression or spark ignition internal combustion engine which converts heat energy into mechanical work and is not a nonroad engine as defined in 40 CFR § 1068.30.

Chapter 8, AIR QUALITY — ASBESTOS, SULFUR, NITROGEN OXIDES, AND LEAD, of Title 20 DCMR, ENVIRONMENT, is amended as follows:

Section 805 REASONABLY AVAILABLE CONTROL TECHNOLOGY FOR MAJOR STATIONARY SOURCES OF THE OXIDES OF NITROGEN is amended to read as follows:

805 REASONABLY AVAILABLE CONTROL TECHNOLOGY FOR MAJOR STATIONARY SOURCES OF THE OXIDES OF NITROGEN

805.1 Applicability. The requirements of § 805 shall apply to any person pursuant to the following provisions:

- (a) Any person owning, leasing, operating, or controlling any major stationary source having the potential to emit twenty-five (25) tons per year or greater of oxides of nitrogen shall comply with the requirements of § 805, excepting those specified in § 805.1(c).

- (b) Any person owning, leasing, operating, or controlling a stationary source that is or was at any time subject to § 805 shall continue to comply with all requirements of § 805, even if emissions from the subject stationary source no longer exceed the twenty-five (25) ton per year applicability requirement of § 805.
- (c) The requirements of § 805 shall not apply to:
 - (1) Any person subject to § 805 who is able to demonstrate to the Department that, since January 1, 1990, the major stationary source has not emitted, before the application of air pollution control equipment, twenty five (25) tons per year or greater of NO_x in any year provided that:
 - (A) The person obtains a permit pursuant to 20 DCMR § 200.7 that limits the potential to emit to less than twenty-five (25) tons per year; and
 - (B) The permit is transmitted to and approved by EPA as a revision to the District's State Implementation Plan;
 - (2) Any fuel burning equipment having a heat input capacity of less than five million (5,000,000) BTU per hour;
 - (3) Any stationary engine having a maximum rated mechanical power output of less than fifty (50) horsepower;
 - (4) Any individual emission unit at a major stationary source of NO_x having the potential to emit less than one (1) ton per year of NO_x, except those emission units with specific requirements listed in §§ 805.4 - 805.7; and
 - (5) Emergency standby engines operated during any twelve (12) consecutive month period:
 - (A) Less than five hundred (500) hours for any purpose; and
 - (B) Less than one hundred (100) hours for maintenance and testing.

805.2 Alternative RACT. Any person regulated under § 805 may apply to the Department for an alternative emission limitation for a source-specific Reasonably Available Control Technology (alternative RACT).

- (a) Any person may apply for an alternative RACT when submitting an application pursuant to § 200 for initial permitting of a new emissions unit or modification of an existing emissions unit.
- (b) Any person operating an existing unit on the effective date of this regulation and seeking an alternative RACT shall apply to the Department by March 1, 2022.
- (c) All applications for an alternative RACT shall:
 - (1) Demonstrate to the Department that it is not technologically or economically feasible for that emissions unit to comply with the applicable emission limitation;
 - (2) Provide to the Department a study of the capability of the emissions unit to apply the following NO_x control options, their expected effectiveness, and their technological and economical feasibility:
 - (A) Low-NO_x burners;
 - (B) Overfire air;
 - (C) Flue gas recirculation;
 - (D) Burners out of service;
 - (E) Selective non-catalytic reduction;
 - (F) Selective catalytic reduction; and
 - (G) Other control options required for evaluation by the Department; and
 - (3) Determine an emission limitation reflecting the application of RACT.
- (d) Any alternative RACT emissions limitation must be approved by EPA through an amendment to the State Implementation Plan.

805.3 Permit Requirements. Any person subject to § 805 shall maintain a valid permit issued pursuant to § 200 of this title, which shall include the following:

- (a) For all units subject to § 805:

- (1) Emissions limits that are at least as stringent as those in §§ 805.4 - 805.7;
 - (2) Any alternative compliance plan submitted in accordance with § 805.5(g); or
 - (3) Emissions limits that are at least as stringent as those found to be reasonable under § 805.2; and
- (b) Any requirements necessary to comply with §§ 805.9 through 805.11.

805.4 Stationary combustion turbines. Any person owning, leasing, operating, or controlling any stationary combustion turbine subject to § 805 shall comply with the following:

- (a) Emission and operational requirements as follows:
- (1) For any stationary combustion turbine that most recently commenced construction, modification, or reconstruction (as these terms are defined in 40 CFR §§ 60.2 and 60.15 as in effect on July 1, 2018) after February 18, 2005, and has a heat input rating greater than fifty million (50,000,000) BTU per hour, based on the higher heating value of the fuel:
 - (A) Emissions, with any supplemental duct burner firing, shall not be greater than:
 - (i) When fired on any combination of gaseous fuels, twenty-five parts per million by volume dry basis (25 ppmvd), corrected to fifteen percent (15%) O₂; and
 - (ii) When fired on any combination of liquid fuels:
 - (I) On or after July 23, 2018, seventy-four (74) ppmvd, corrected to fifteen percent (15%) O₂; and
 - (II) On or after January 1, 2023, forty-two (42) ppmvd, corrected to fifteen percent (15%) O₂;
 - (B) Only the peak heat input rating of the stationary combustion turbine shall be included when determining whether § 805.4(a)(1) is applicable. Any additional heat input to associated heat recovery steam generators or duct

burners shall not be included when determining the peak heat input to the stationary combustion turbine; and

- (C) When fifty percent (50%) or more of the total heat input is from gaseous fuels, the emission limitation in § 805.4(a)(1)(A)(i) applies. Otherwise, the emission limitation in § 805.4(a)(1)(A)(ii) applies;
- (2) For any stationary combustion turbine that most recently commenced construction, modification, or reconstruction (as these terms are defined in 40 CFR §§ 60.2 and 60.15 as in effect on July 1, 2018) on or before February 18, 2005, and has a heat input rating greater than fifty million (50,000,000) BTU per hour, based on the higher heating value of the fuel:
- (A) Emissions from a stationary combustion turbine alone shall not be greater than:
 - (i) When fired on any combination of gaseous fuels, twenty-five (25) ppmvd, corrected to fifteen percent (15%) O₂; and
 - (ii) When fired on any combination of liquid fuels, except as provided in § 805.4(a)(2)(D):
 - (I) On or after July 23, 2018, seventy-four (74) ppmvd, corrected to fifteen percent (15%) O₂; and
 - (II) On or after January 1, 2023, forty-two (42) ppmvd, corrected to fifteen percent (15%) O₂;
 - (B) Emissions from a stationary combustion turbine and all duct burners combined shall not be greater than twenty hundredths (0.20) pounds per million BTU, based on a calendar day average, when fired on any fuel or combination of fuels;
 - (C) Only the peak heat input rating of the stationary combustion turbine shall be included when determining whether § 805.4(a)(2) is applicable. Any additional heat input to associated heat recovery steam generators or duct burners shall not be included when determining the peak heat input to the stationary combustion turbine; and

- (D) Any stationary combustion turbine being fired on liquid fuel, or any combination of gaseous and liquid fuels such that more than fifty percent (50%) of the total heat input is from liquid fuels, is not required to comply with the maximum allowable NO_x emission rate in § 805.4(a)(2)(A)(ii) if it meets the following requirements:
- (i) The only liquid fuel used is Number two (No. 2) fuel oil that does not contain sulfur in excess of fifteen parts per million (15 ppm) by weight, as determined in accordance with 20 DCMR § 502.6;
 - (ii) The turbine burns liquid fuel only during periods of natural gas curtailment, natural gas supply interruption, startups, or periodic testing on liquid fuel when such periodic testing does not exceed a combined total of forty-eight (48) hours during any calendar year;
 - (iii) The owner or operator maintains records of all instances of operation using liquid fuel, including the fuel used, the date and duration of the fuel use, the reason for operating using that fuel, and all notifications received from the natural gas supplier notifying the owner or operator of the beginning or end of a natural gas interruption; and
 - (iv) The owner or operator maintains a running calendar year sum of the duration of all liquid fuel use each year for purposes of periodic testing;
- (3) For any stationary combustion turbine with a heat input rating less than or equal to fifty million (50,000,000) BTU per hour and greater than ten million (10,000,000) BTU per hour, based on the higher heating value of the fuel:
- (A) With any supplemental duct burner firing, emissions shall not be greater than:
 - (i) When fired on any combination of gaseous fuels, twenty-five (25) ppmvd, corrected to fifteen percent (15%) O₂; and
 - (ii) When fired on any combination of liquid fuels, forty-two (42) ppmvd, corrected to fifteen percent (15%) O₂;

- (B) Only the peak heat input rating of the stationary combustion turbine shall be included when determining whether or not § 805.4(a)(3) is applicable. Any additional heat input to associated heat recovery steam generators or duct burners shall not be included when determining the peak heat input to the stationary combustion turbine; and
 - (C) When fifty percent (50 %) or more of the total heat input is from gaseous fuels, the emission limitation in § 805.4(a)(3)(A)(i) applies, but when more than fifty percent (50 %) of the total heat input is from liquid fuels, the emission limitation in § 805.4(a)(3)(A)(ii) applies;
- (4) For any stationary combustion turbine with a heat input rating less than or equal to ten million (10,000,000) BTU per hour and fired exclusively on natural gas:
- (A) Compliance with § 805.4(a)(7) shall be maintained; and
 - (B) Only the peak heat input rating of the stationary combustion turbine shall be included when determining whether or not § 805.4(a)(4) is applicable. Any additional heat input to associated heat recovery steam generators or duct burners shall not be included when determining the peak heat input to the stationary combustion turbine;
- (5) No combustion turbine shall be fired on coal or a synthetic fuel derived from coal;
- (6) Any stationary combustion turbine designed to be fired on any solid fuel other than coal or synthetic fuel derived from any other solid than coal shall comply with the requirements of §§ 805.4(a)(7) and 805.8;
- (7) Any duct burner servicing a stationary combustion turbine regulated under § 805.4 is exempt from the requirements of § 805.5; and
- (8) Any stationary combustion turbine subject to § 805 shall be maintained and operated in a manner consistent with good air pollution control practices for minimizing emissions at all times, including during startup, shutdown, and malfunction, and shall be maintained in accordance with one of the following:

- (A) The manufacturer's emission-related written instructions;
or
 - (B) An alternate written maintenance plan approved in writing
by the Department;
- (b) Any person required to comply with § 805.4 shall maintain continuous compliance through:
- (1) Installation and operation of a continuous emissions monitoring system as specified in § 805.10(a)(1); or
 - (2) By testing as specified in § 805.10(a)(2) once within one hundred and eighty (180) days of either initial start-up of the unit or the date of the applicability of § 805 to the unit, whichever is later, and conducting subsequent testing as follows:
 - (A) For units with heat input ratings greater than ten million (10,000,000) BTU per hour, based on the higher heating value of the fuel, subsequent tests shall be performed once each calendar year and no more than fourteen (14) calendar months following the previous performance test, unless the previous performance test results show emissions are less than or equal to seventy-five percent (75%) of the applicable emission limit, in which case the subsequent test must be performed once during the next two calendar years and no more than twenty-six (26) calendar months following the previous performance test; and
 - (B) For units with heat input ratings less than or equal to ten million (10,000,000) BTU per hour, based on the higher heating value of the fuel, and subject to a maximum allowable NOx emission rate in § 805.4, subsequent tests shall be performed once every five (5) calendar years and no more than sixty-two (62) months after the previous performance test; and
- (c) Any person required to comply with § 805.4 shall keep records as specified in § 805.11.

805.5 Fuel burning equipment. Any person owning, leasing, operating, or controlling any fuel burning equipment subject to § 805:

- (a) After May 31, 1995, and ending December 31, 2021, for any fossil-fuel-fired steam-generating unit with a heat input capacity of twenty million

(20,000,000) BTU per hour or greater shall, prior to May 1st of every year, adjust the combustion process in accordance with the procedure for doing so set forth at § 805.9;

- (b) Beginning January 1, 2022, for any fuel burning equipment with a heat input capacity of five million (5,000,000) BTU per hour or greater shall, prior to November 1st of each year, adjust the combustion process in accordance with the procedure for doing so set forth at § 805.9; and
- (c) After May 31, 1995, and ending December 31, 2022, any tangential- or face-fired, fossil-fuel-fired steam-generating unit powered exclusively by oil with a heat input capacity of fifty million (50,000,000) BTU per hour or greater and less than one hundred million (100,000,000) BTU per hour, shall not emit NO_x at a rate greater than thirty-hundredths pound (0.30 lb) per million BTU, based on a calendar day average;
- (d) After May 31, 1995, and ending December 31, 2022, any fossil-fuel-fired steam-generating unit with a heat input capacity of one hundred million (100,000,000) BTU per hour or greater, shall not emit NO_x at an emission rate greater than the following maximum allowable NO_x emission rate:
 - (1) For dry bottom coal-fired fossil-fuel-fired steam-generating units:
 - (A) Forty-three hundredths pound (0.43 lb) per million BTU, based on a calendar day average, for tangential or face-fired units; and
 - (B) Forty-three hundredths pound (0.43 lb) per million BTU, based on a calendar day average, for stoker-fired units;
 - (2) For non-coal fired fossil-fuel-fired steam-generating units:
 - (A) Twenty-five hundredths pound (0.25 lb) per million BTU, based on a calendar day average, for units powered by fuel oil or a combination of fuel oil and natural gas; and
 - (B) Twenty hundredths pound (0.20 lb) per million BTU, based on a calendar day average, for units powered exclusively by natural gas;
- (e) Beginning January 1, 2023, fuel burning equipment with a heat input capacity of twenty-five million (25,000,000) BTU per hour or greater shall not emit NO_x at an emission rate greater than the following maximum allowable NO_x emission rate, unless an alternative compliance plan developed in accordance with § 805.5(g) has been approved by the Department prior to January 1, 2023:

- (1) For dry bottom coal-fired fuel burning equipment:
 - (A) Twelve hundredths pound (0.12 lb) per million BTU, based on a calendar day average, for tangential- or face-fired equipment; and
 - (B) Twelve hundredths pound (0.12 lb) per million BTU, based on a calendar day average, for stoker-fired equipment;
- (2) For non-coal-fired fuel burning equipment with a heat input capacity of one hundred million (100,000,000) BTU per hour or greater:
 - (A) Twelve hundredths pound (0.12 lb) per million BTU, based on a calendar day average, on days when the equipment is powered by fuel oil or a combination of fuel oil and natural gas; and
 - (B) Five hundredths pound (0.05 lb) per million BTU, based on a calendar day average, on days when the equipment is powered exclusively by natural gas;
- (3) For non-coal-fired fuel burning equipment with a heat input capacity of twenty-five million (25,000,000) BTU per hour or greater and less than one hundred million (100,000,000) BTU per hour:
 - (A) Nine hundredths pound (0.09 lb) per million BTU, based on a calendar day average, on days when:
 - (i) the equipment is powered by fuel oil or a combination of fuel oil and natural gas; and,
 - (ii) the unit is not limited through a permit pursuant to § 200 to only burn fuel oil or a combination of fuel oil and natural gas during periods of gas curtailment, gas supply interruption, startups, or for periodic testing, maintenance, or operator training on liquid fuel;
 - (B) Twelve hundredths pound (0.12 lb) per million BTU, based on a calendar day average, on days when;

- (i) the equipment is powered by fuel oil or a combination of fuel oil and natural gas; and,
 - (ii) the unit is limited through a permit pursuant to § 200 to burn only fuel oil or a combination of fuel oil and natural gas during periods of gas curtailment, gas supply interruption, startups, or for periodic testing, maintenance, or operator training on liquid fuel; and
 - (C) Five hundredths pound (0.05 lb) per million BTU, based on a calendar day average, on days when the equipment is powered exclusively by natural gas;
- (f) Any person required to comply with § 805.5 shall maintain continuous compliance according to the following:
- (1) For fuel burning equipment subject to § 805.5(a) or § 805.5(b), compliance will be determined by record keeping as detailed in § 805.9;
 - (2) For fuel burning equipment subject to § 805.5(d) or § 805.5(e) and with a heat input capacity of equal to or greater than one hundred million (100,000,000) BTU per hour, compliance shall be demonstrated by:
 - (A) installing a continuous emission monitoring system as specified in § 805.10(a)(1); and,
 - (B) record keeping as specified in § 805.11; and
 - (3) For fuel burning equipment subject to § 805.5(c) or § 805.5(e) and of a size smaller than one hundred million (100,000,000) BTU per hour, compliance shall be demonstrated by:
 - (A) testing as specified in § 805.10(a)(2), except that such sources may opt to comply with § 805.10(a)(1) in lieu of § 805.10(a)(2); and,
 - (B) record keeping as specified in § 805.11.
- (g) Alternative compliance with the requirements of § 805.5 can be demonstrated through the following:

- (1) Submittal by January 1, 2022, to the Department by the person owning, leasing, operating, or controlling those units of a plan to replace specific units subject to § 805.5 that:
 - (A) Implement the emissions limits in § 805.5(g)(1)(C) by replacement with an electrically-powered heat pump or technology with zero on-site emissions, approved by the Department;
 - (B) Provide additional capacity needed to provide heat to the buildings powered by the unit that is being replaced with either zero emissions technology or equipment that complies with the emission limits in § 805.5(g)(1)(C); and
 - (C) Implement the following emission limits if the unit is not replaced in accordance with the plan:
 - (i) For dry bottom coal-fired fuel burning equipment, eight hundredths pound (0.08 lb) per million BTU, based on a calendar day average;
 - (ii) For fuel burning equipment with a heat input capacity of one hundred million (100,000,000) BTU per hour or greater powered by fuel oil or a combination of fuel oil and natural gas, eight hundredths pound (0.08 lb) per million BTU, based on a calendar day average;
 - (iii) For fuel burning equipment with a heat input capacity of twenty -five million (25,000,000) BTU per hour or greater and less than one hundred million (100,000,000) BTU per hour powered exclusively by natural gas, thirty-five thousandths pound (0.035 lb) per million BTU, based on a calendar day average;
- (2) Approval by the Department, by June 1, 2022, of the plan and incorporation of requirements committed to in the plan into a permit issued pursuant to § 200 of this title; and
- (3) Implementation of the approved plan by January 1, 2023.

805.6 Asphaltic concrete production. Any person owning, leasing, operating, or controlling any asphaltic concrete production equipment subject to § 805:

- (a) After January 1, 2005, equipment that has the potential to emit twenty-five (25) tons per year of NO_x or greater, shall not emit NO_x at a rate greater than one hundred fifty (150) ppmvd at seven percent (7%) O₂ and carbon monoxide to a level of five hundred (500) ppmvd at seven percent (7%) O₂; and
- (b) If required to comply with § 805.6, shall maintain continuous compliance, which shall be demonstrated by:
 - (1) installing and operating a continuous emissions monitoring system as specified in § 805.10(a)(1); or,
 - (2) testing as specified in § 805.10(a)(2), and record keeping as specified in § 805.11.

805.7 Stationary engines. Any person owning, leasing, operating or controlling any stationary engine subject to § 805:

- (a) After August 3, 2022, for a stationary engine unit with a maximum rated power output of fifty (50) horsepower or greater, shall not emit NO_x at an emission rate greater than the following:
 - (1) For rich burn units fueled by gaseous or liquid fuels, seven tenths (0.7) grams per brake-horsepower hour;
 - (2) For lean burn units fueled by gaseous fuels, seven tenths (0.7) grams per brake-horsepower hour;
 - (3) For lean burn units fueled by liquid or dual fuels:
 - (A) With an approved permit pursuant to § 200 issued before August 3, 2023, six and five tenths (6.5) grams per brake-horsepower hour; and
 - (B) For which a permit pursuant to § 200 has been applied for, or for which an initial or modified permit pursuant to § 200 has been issued on or after August 3, 2023, two and three tenths (2.3) grams per brake-horsepower hour; and
 - (4) For units fueled by waste, landfill, or digester gases, six tenths (0.6) grams per brake-horsepower hour;
- (b) If post-combustion controls are applied to the stationary engine in order to comply with the emission limits in § 805.7(a), emission controls shall be operating at full effectiveness as soon as possible, but not later than:

- (1) the amount of time to achieve the manufacturer-recommended control device operating conditions, including but not limited to temperature, or
 - (2) an alternative time limit specified in a permit pursuant to § 200; and
- (c) Any person subject to § 805.7 shall maintain the unit in accordance with the following requirements:
- (1) All stationary engines must have an installed non-resettable hour meter prior to the startup of the engine. For stationary engines installed before promulgation of this regulation a non-resettable hour meter must be installed by August 3, 2023;
 - (2) The stationary engine and any after-treatment control device shall be operated and maintained in accordance with:
 - (A) the manufacturer's emission-related written instructions: or,
 - (B) a self-developed maintenance plan that, to the extent practicable, is consistent with good air pollution control practice for minimizing emissions; and
 - (3) Any person operating an existing non-black start compression ignition engine greater than or equal to 300 horsepower that is not equipped with a closed crankcase ventilation system shall:
 - (A) Follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters; and
 - (B) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates and metals; and
 - (4) The following maintenance tasks must be performed in accordance with manufacturer's recommended schedules, or in accordance with the requirements of 40 CFR Part 63, Subpart ZZZZ, whichever is more frequent:
 - (A) Change oil and filter;

- (B) For compression ignition engines, inspect the air cleaner;
 - (C) For spark ignition engines, inspect the spark plugs; and
 - (D) Inspect all hoses and belts.
- (d) Any person subject to § 805.7 shall maintain continuous compliance and demonstrate compliance by record keeping in § 805.11 and:
- (1) For engines seven (7) model years old or less and for which a manufacturer's certification is available, maintaining documentation that the manufacturer has certified that the engine will meet the emissions limits specified in § 805.7 (a); or
 - (2) For all engines older than seven (7) model years or any engine without a manufacturer's certification that meets the requirements of § 805.7(d)(1), testing as specified in § 805.10(a)(2), with the first test being required during the first year that this requirement is applicable to the engine, and record keeping as specified in § 805.11. Tests shall be conducted at the highest achievable steady-state load, which may require use of a load bank, but without creating an unsafe condition.

805.8 Other equipment. Any person owning, leasing, operating or controlling any major stationary source or part of a major stationary source subject to § 805, other than those particular types of emitting units addressed by §§ 805.4 through 805.7, shall:

- (a) Apply to the Department for an emission limitation, through implementation of alternative RACT, as specified in § 805.2;
- (b) Install and operate a continuous emissions monitoring system specified in § 805.10(a)(1) or conduct testing as specified in § 805.10(a)(2), and keep records as specified in § 805.11.
- (c) If required to implement RACT, upon request of the Department, perform or have performed tests to demonstrate compliance in accordance with methods approved by the Department and EPA.

805.9 Tuning. Any person required to tune the combustion process of any major stationary source subject to the provisions of this section, excepting stationary engines subject to § 805.7, shall do so according to the following provisions:

- (a) Persons performing tune-ups shall, at a minimum:

- (1) As applicable, inspect the burner, and clean or replace any components of the burner as necessary for proper operation;
 - (2) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;
 - (3) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly;
 - (4) Optimize total emissions of NO_x, and to the extent possible, CO. This optimization should be consistent with the manufacturer's specifications, if available, and shall be consistent with any NO_x and CO requirements to which the unit is subject; and
 - (5) Measure the concentrations in the effluent stream of CO and NO_x in ppmvd and O₂ in percent by volume dry basis, before and after the adjustments are made. Measurements may be taken using a portable analyzer;
- (b) Tune-ups shall be conducted every calendar year, not to exceed 13 months from the date of the last tune-up, or within 30 days of start up for any unit not operating on the required date for the tune-up, except in the following cases:
- (1) Tune-ups shall be conducted every two (2) years, not to exceed twenty-five (25) months from the date of the last tune-up, for any fuel burning equipment of a size smaller than twenty million (20,000,000) BTU per hour; and
 - (2) Notwithstanding § 805.9 (b)(1), tune-ups may be conducted every five (5) years, not to exceed sixty-one (61) months from the date of the last tune-up, for the following:
 - (A) Boilers with an oxygen trim system that maintains an optimum air-to-fuel ratio;
 - (B) Seasonal boilers; and
 - (C) Limited-use boilers; and
- (c) Any person required to tune the combustion process of any major stationary source subject to this section shall maintain, in a permanently bound log book or another format approved in writing by the Department, the following information:

- (1) The date on which the combustion process was last tuned-up;
- (2) The name, title, and affiliation of the person who performed the tune-up;
- (3) The NO_x concentrations in the effluent stream, in ppmvd, measured at high fire or typical operating load, before and after the tune-up;
- (4) The CO concentrations in the effluent stream, in ppmvd, measured at high fire or typical operating load, before and after the tune-up;
- (5) The CO₂ concentrations in the effluent stream, in percent by volume dry basis, measured at high fire or typical operating load, before and after the tune-up;
- (6) The O₂ concentrations in the effluent stream, in percent by volume dry basis, measured at high fire or typical operating load, before and after the tune-up;
- (7) A description of any corrective actions taken as a part of the tune-up of the unit;
- (8) The type and amount of fuel used over the 12 months prior to the tune-up of the unit, but only if the unit was physically and legally capable of using more than one type of fuel during that period, except that units sharing a fuel meter may estimate the fuel use by each unit; and
- (9) Any other information that the Department may require.

805.10 Monitoring and testing.

- (a) Any person required under § 805 to use emissions monitoring systems or testing to determine compliance with emissions limits shall:
 - (1) For an emissions monitoring system:
 - (A) Follow the procedures set forth in 40 CFR 60 Appendix B as applicable to NO_x monitoring. Facilities which are required to comply with § 306 or § 1002 of this title, may follow the procedures set forth in 40 CFR 75 in lieu of 40 CFR 60 Appendix B;
 - (B) Continuously monitor the NO_x emission rate from the major stationary source;

- (C) Continuously record the NOx emission rate from the major stationary source;
 - (D) Install and operate the system in a manner approved by the Department and acceptable to EPA; and
 - (E) Demonstrate that the NOx, emission rate does not exceed the RACT emission limitations as applicable to the unit under § 805 and contained in the permit issued pursuant to § 200 of this title;
- (2) For testing:
- (A) Conduct testing using methods approved by the Department and acceptable to EPA;
 - (B) Demonstrate that the NOx emission rate does not exceed the RACT emission limitations as applicable to the unit under § 805 and contained in the permit issued pursuant to § 200 of this title; and
 - (C) Conduct testing on the following schedules:
 - (i) For asphaltic concrete production equipment subject to § 805.6, testing shall be conducted before May 1st of each year;
 - (ii) For stationary combustion turbines subject to § 805.4, testing shall be conducted as follows:
 - (I) Once within one hundred and eighty (180) days of either initial start-up of the unit or the date of the applicability of § 805 to the unit, whichever is later;
 - (II) For units with heat input ratings greater than ten million (10,000,000) BTU per hour, based on the higher heating value of the fuel, and subject to a maximum allowable NOx emission rate in § 805.4, subsequent tests shall be performed once each calendar year and no more than fourteen (14) calendar months following the previous performance test, unless the performance

test results show emissions are less than or equal to seventy-five percent (75%) of the applicable emission limit, in which case the subsequent test must be performed once during the next two calendar years and no more than twenty-six (26) calendar months following the previous performance test; and

(III) For units with heat input ratings less than or equal to ten million (10,000,000) BTU per hour, based on the higher heating value of the fuel, and subject to a maximum allowable NOx emission rate in § 805.4, subsequent tests shall be performed once every five (5) calendar years and no more than sixty-two (62) months after the previous performance test.

(iii) For all other units subject to § 805, before December 31st of every fifth year, counting from December 31, 2021 or a date stipulated in a permit issued pursuant to § 200, whichever is earlier, unless the Department requires a more frequent testing schedule in a permit issued pursuant to § 200; and

- (b) Any person required to implement RACT shall, upon request of the Department, perform or have performed tests to demonstrate compliance with emission limits in accordance with methods approved by the Department and EPA; and
- (c) Testing performed to verify compliance with emission limits shall be based on a period during which the emission unit or air pollution control equipment is used and operated under conditions acceptable to the Department and the EPA, and consistent with the operational parameters and limits set forth in any permit issued pursuant to § 200 of this title.

805.11 Record keeping. Any person required to implement RACT shall:

- (a) Prepare and maintain records sufficient to demonstrate compliance consistent with the applicable standard;
- (b) Keep these records on-site for five (5) years; and

- (c) Make these records available to representatives of the Department and EPA in accordance with the requirements in any permit issued pursuant to § 200 of this title or upon request.

Section 899, DEFINITIONS , is amended by adding the following definitions:

Black start engine – an engine whose only purpose is to start up a combustion turbine.

Limited-use boiler – any boiler that burns any amount of solid or liquid fuels and has a federally enforceable annual capacity factor of no more than 10 percent (10%).

Seasonal boiler – any boiler that undergoes a shutdown for a period of at least 210 consecutive days each 12-month period due to seasonal conditions, except for periodic testing.

Temporary boiler – any gaseous or liquid fuel boiler that is designed to, and is capable of, being carried or moved from one location to another by any means including, for example, wheels, skids, carrying handles, dollies, trailers, or platforms.