



ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R05-OAR-2025-0032; FRL-13008-01-R5]

**Air Plan Approval; Ohio; Source-Specific non-CTG RACT and SIP
Strengthening for Ohio**

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to approve source-specific State Implementation Plan (SIP) revisions submitted by Ohio. These revisions address major source volatile organic compound (VOC) and nitrogen oxide (NO_x) reasonably available control technology (RACT) requirements for the Cleveland, OH Moderate nonattainment area under the 2015 ozone National Ambient Air Quality Standard (NAAQS or standard). The affected facilities include PPG Industries Ohio, Inc. (PPG), Owens Corning, Akron Paint and Varnish, Charter Steel, U. S. Steel Tubular Lorain, Carmeuse Lime, and Ross Incineration. The EPA is also proposing to approve source-specific SIP revisions for General Electric Aviation Evendale and Tyson Foods for the Cincinnati maintenance area under the 2015 ozone standard. Finally, the EPA is proposing to rescind the source-specific VOC RACT rule for Formica Corporation since it is subject to an equivalent CTG-based rule in the Ohio Administrative Code (OAC).

DATES: Comments must be received on or before **[INSERT DATE 30
DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA-R05-OAR-2025-0032 at <https://www.regulations.gov>, or via email to arra.sarah@epa.gov. For comments submitted at [Regulations.gov](https://www.regulations.gov), follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from the docket. The EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI), Proprietary Business Information (PBI), or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (i.e. on the web, cloud, or other file sharing system). For additional submission methods, please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section. For the full EPA public comment policy, information about CBI, PBI, or multimedia submissions, and general guidance on making effective comments, please visit <https://www.epa.gov/dockets/commenting-epa-dockets>.

FOR FURTHER INFORMATION CONTACT: Katie Caskey, Air and Radiation Division (AR18J), Environmental Protection Agency, Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604, (312)353-3490, caskey.kathleen@epa.gov. The EPA Region 5 office is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding Federal

holidays.

SUPPLEMENTARY INFORMATION: Throughout this document whenever “we,” “us,” or “our” is used, we mean the EPA.

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I. RACT Requirements

VOCs and NO_x contribute to the production of ground-level ozone, or smog, which harms human health and the environment. The EPA defines RACT as the lowest emission limit that a

particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility.¹

Sections 182(b)(2) and 182(f) of the Clean Air Act (CAA), when taken together, require States to implement RACT for VOC and NO_x in ozone nonattainment areas classified as Moderate (and higher). Specifically, these areas are required to implement RACT for all sources covered by a Control Techniques Guideline (CTG)² document, and for all major sources of VOCs and NO_x in the area. For the purpose of RACT in Moderate ozone nonattainment areas, major sources of VOCs and NO_x are those not covered by the applicability criteria in the CTGs (non-CTG) with the potential to emit (PTE) at least 100 tons per year.

To address non-CTG RACT requirements, Ohio adopted OAC rules 3745-21-11 and 3745-110-03(J), which require major VOC and NO_x sources that are not covered by a CTG to submit detailed source-specific RACT studies analyzing the technological and economic feasibility of each available control measure. The purpose of these RACT studies is to provide technical support for Ohio's RACT determinations. Ohio EPA evaluated the information provided in the required studies, made a RACT determination for each major source, and submitted the RACT determinations to the EPA for incorporation into the Ohio SIP.

¹ See Memorandum from Roger Strelow, Assistant Administrator for Air and Waste Management, U.S. EPA, to Regional Administrators, U.S. EPA, "Guidance for Determining Acceptability of SIP Regulations in Non-Attainment Areas" (Dec. 9, 1976); see also 44 FR 53761, 53762 (September 17, 1979).

² CTGs provide recommendations to inform State, local, and Tribal air agencies as to what constitutes RACT for categories of VOC sources.

II. History of Cleveland and Cincinnati Nonattainment Areas under the 2015 Ozone NAAQS

On June 4, 2018 (83 FR 25776), the EPA designated the Cleveland, OH nonattainment area and the Ohio portion of the Cincinnati, OH-KY nonattainment area as Marginal nonattainment areas for the 2015 ozone NAAQS. The Cleveland, OH nonattainment area consists of Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, and Summit counties while the Ohio portion of the Cincinnati, OH-KY nonattainment area consists of Butler, Clermont, Hamilton, and Warren counties. On April 13, 2022 (87 FR 21849), pursuant to section 181(b)(2) of the CAA, the EPA proposed to determine that the Cleveland, OH nonattainment area failed to attain the 2015 ozone NAAQS by the August 3, 2021, Marginal area attainment deadline and thus proposed to reclassify the area from Marginal to Moderate nonattainment. In that action, the EPA proposed to establish January 1, 2023, as the due date for the State to submit all Moderate area nonattainment plan SIP requirements applicable to newly reclassified areas. The Ohio portion of the Cincinnati OH-KY 2015 ozone nonattainment area attained the 2015 ozone standard based on the 2019-2021 design value, and the area was redesignated to attainment effective June 9, 2022 (87 FR 35104).

III. History of Ohio's VOC and NO_x RACT regulations

Ohio has adopted regulations to address the NO_x and VOC RACT requirements that apply to Moderate ozone nonattainment areas. Ohio has also voluntarily adopted rules for the Cincinnati

Maintenance area as SIP strengthening measures, since planning efforts were underway to address Moderate RACT requirements for the 2015 ozone standard in Cleveland. The NO_x RACT rules, in Chapter 3745-110 of the Ohio Administrative Code (OAC), effective March 25, 2022, apply to existing boilers, stationary combustion turbines, stationary internal combustion engines, reheat furnaces, and other sources at facilities that have an uncontrolled potential to emit 100 tpy or more of NO_x. These rules apply to sources located in both the Cleveland nonattainment area (the EPA approved as RACT) and the Cincinnati maintenance area (the EPA approved as SIP strengthening) under the 2015 ozone standard.

Similarly, the VOC RACT rules, in Chapter 3745-21 of the OAC, effective March 27, 2022, apply to various VOC source categories in both the Cleveland nonattainment area and the Cincinnati maintenance area under the 2015 ozone standard. These rules cover both CTG sources and non-CTG major sources with an uncontrolled potential to emit 100 tons per year or more of VOCs.

Ohio EPA also adopted OAC Rules 3745-21-11 and 3745-110-03(J) and submitted them to the EPA for inclusion in the SIP. These rules require major non-CTG VOC and NO_x sources located in ozone nonattainment areas classified as Moderate or higher to submit RACT studies to Ohio within one year of the rule's effective date. These RACT studies contain information on the technical and economic feasibility of VOC and NO_x emission

control measures to inform Ohio's RACT determinations for each major source.

On January 20, 2026 (91 FR 2308), the EPA approved portions of OAC Chapters 3745-21 and 3745-110 as satisfying certain Moderate VOC RACT and NO_x RACT requirements for the Cleveland, OH nonattainment area under the 2015 ozone standard. The EPA also approved OAC 3745-21-11 and 3745-110-03(J) as SIP strengthening measures for the Cleveland nonattainment area under the 2015 ozone standard. Finally, the EPA approved OAC Chapter 3745-21 and 3745-110-03(J) as SIP strengthening for the Cincinnati Maintenance area under the 2015 ozone standard.

As a result, Ohio will be implementing NO_x RACT in both Cleveland and Cincinnati, and NO_x RACT will be federally enforceable in Cleveland. These rules will be SIP strengthening and go beyond what is required in the Cincinnati Maintenance Area at the Federal level, achieving additional emission reductions and contributing to maintenance of the ozone standard in this area.

IV. What is the EPA proposing?

The EPA is proposing to approve the RACT determinations submitted by Ohio for major sources in the Cleveland nonattainment area as meeting RACT requirements and to approve the SIP revisions submitted by Ohio for major sources in the Cincinnati maintenance area as SIP strengthening measures.

V. PPG Industries Ohio, Inc.

PPG Industries, Inc. (PPG) operates an automotive coatings

manufacturing plant in Cleveland, Ohio. This facility is a major VOC source that is not covered by a CTG and has existing source-specific RACT established in OAC rule 3745-21-09(MM) under a previous ozone standard for VOC emissions from its paint manufacturing and associated paint laboratory operations (59 FR 23789). Ohio submitted this VOC RACT determination to the EPA on March 11, 2024. To control VOC emissions, the plant employs extensive capture systems and a large regenerative thermal oxidizer (RTO) system that treats emissions from entire buildings or groups of buildings. This setup ensures that all operations within these controlled buildings including the paint laboratory operations (K201) and paint manufacturing operations (P201), are subject to emission reduction measures. VOC emissions from the paint production equipment (P202) are not required to be routed to the RTO because the VOC emissions are low and VOC content is low or zero.

Under previously approved RACT requirements in OAC rule 3745-21-09(MM), VOC emissions from the paint laboratory (K201) must be vented to the RTO control system, which must achieve at least 90% control efficiency by weight or a maximum outlet VOC concentration of 20 parts per million by volume, dry (ppmvd). Also, paint manufacturing (P201) emissions must be vented to the RTO with a minimum control efficiency of 98% by weight, a maximum outlet VOC concentration of 20 ppmvd, or a minimum incineration temperature of one 1500 degrees Fahrenheit. The water-based paint production (P202) emissions unit is not

required to have control equipment due to its low emissions levels, which are about one ton per year.

PPG conducted a VOC RACT analysis for this facility in accordance with OAC 3745-21-11. PPG evaluated the effectiveness of various alternative control technologies for the paint lab and manufacturing operations, including a carbon adsorber, thermal incinerator, catalytic incinerator, condenser, and scrubber, and found no technically feasible options that would achieve greater emission reductions than the existing RTO system. As a result, no cost-effectiveness estimates are provided.

For the paint lab operations, while it is technically feasible for an RTO to achieve a higher control efficiency than 90%, it is not technically feasible at this facility because the complex layout of approximately 260 pieces of equipment in nine paint laboratory buildings prevent PPG from achieving a higher capture efficiency. The entire building exhaust is routed to the RTO as opposed to controlling individual pollutant-emitting pieces of equipment.

For the water-based paint production unit, implementing a capture system is economically unreasonable given its low emission levels (1 tpy of VOC) and low VOC content (less than or equal to 12% VOC by weight), so RACT is continued compliance with OAC 3745-21-09(MM) (4). PPG's RACT study is available in docket for this action.

The EPA agrees that the existing RTO system is the most

effective method for reducing VOC emissions at this facility. Therefore, the EPA concurs with Ohio's RACT determination and is proposing that for this facility, RACT is continued compliance with OAC 3745-21-09(MM).

VI. Formica Corporation

The Formica Corporation facility in Evendale, Ohio, is located within the Cincinnati maintenance area under the 2015 ozone standard. The facility previously operated under a source-specific VOC RACT requirement in OAC 3745-21-09(PP) for its resin paper coaters/treaters (K003, K013, and K016). When the initial source-specific RACT for Formica was established, these units were not subject to the OAC rule 3745-21-09(F), which is based on the EPA's 2007 "Control Techniques Guidelines for Paper, Film, and Foil Coatings," because the coatings were applied by dipping - an application method not then included in Ohio's definition of paper coating.

Since that time, Ohio has revised its definition to include dipping, making these units subject to the presumptive VOC RACT limits in OAC 3745-21-09(F). Although Cincinnati is in a maintenance area and not subject to RACT, OAC 3745-21-09(F) still applies, as its applicability includes Butler, Clermont, Hamilton, and Warren counties. As such, on April 23, 2024, Ohio submitted to the EPA a SIP revision seeking to remove the source-specific VOC RACT requirement for this facility and replace it with application of the presumptive rule as SIP strengthening.

The existing SIP approved source-specific VOC limit in OAC 3745-21-09(PP) is 0.9 lb VOC/gal of coating (excluding water and exempt solvents), while the VOC limit in OAC 3745-21-09(F) is 0.08 lb VOC/lb of coating.

Formica conducted a demonstration summarizing all resins used on the treaters and determined that all coatings comply with both the VOC limit in OAC 3745-21-09(F) (2) and the existing source-specific limit in OAC 3745-21-09(PP). This demonstration is available in the docket for this action.

Direct comparison of the limits in OAC 3745-21-09(PP) and OAC 3745-21-09(F) (2) is challenging because results depend on the coatings' water or solids content. However, in its demonstration, Formica also evaluated several coating formulations and found that those meeting the limit of 0.08 lb VOC/lb coating are equivalent to or more stringent than the existing source-specific limit of 0.9 lb VOC/gal (minus water).

Based on Formica's analysis, Ohio determined that this revision does not constitute backsliding because both limits achieve equivalent VOC reductions and actual emissions will not increase. The EPA concurs with Ohio's evaluation and is proposing to approve the removal of the site-specific VOC RACT rule for Formica in OAC 3745-21-09(PP), as these units are now regulated under the equivalent OAC 3745-21-09(F). The EPA has determined that this SIP revision will not interfere with attainment or maintenance of the NAAQS in accordance with section 110(l) of the CAA.

VII. Owens Corning

Owens Corning Roofing and Asphalt, LLC is a major non-CTG VOC source and operates a roofing and asphalt plant in the Cleveland nonattainment area under the 2015 ozone standard. Ohio submitted this VOC RACT determination to the EPA on January 22, 2025. Owens Corning's RACT study, which is available in the docket for this action, supports production limits, a vapor pressure limit for asphalt storage, and the continued use of an RTO and incinerators as satisfying RACT.

The plant manufactures asphalt shingles, with VOC emissions primarily generated from asphalt fumes during the roofing line coating processes. The uncontrolled VOC sources are the Laminate (3-wide) Roofing Line, Strip (4-wide) Roofing Line, and Asphalt Plant.

Owens Corning evaluated several add-on VOC control technologies for asphalt fumes, including thermal and catalytic incinerators, carbon adsorption, condensers, and scrubbers. Of these, only thermal incineration was found to be technically feasible.

Catalytic incinerators are not suitable because condensable portions of asphalt fumes foul and poison the catalyst, leading to extremely high replacement costs due to the presence of sulfur compounds. Carbon adsorption, while effective in removing low VOC concentrations, is infeasible because asphalt fumes would foul the carbon beds, reducing capacity, shortening bed life, and posing a fire hazard. Condensers are also

technically infeasible because the high particulate content of asphalt fume exhaust would foul or plug the condenser tubes. Moreover, refrigerated condensers are only effective for exhaust streams with VOC concentrations above 5,000 ppm, while asphalt fume exhaust concentrations at this source are approximately 10 ppm.

Scrubbers are ineffective because many organic compounds in asphalt vapors are not water-soluble and would pass through untreated. Additionally, scrubber systems generate hazardous wastewater requiring off-site treatment. For these reasons, scrubbers are not used in practice to control asphalt fumes.

Based on this evaluation, thermal incineration was the only identified technically feasible add-on control technology for asphalt fume emissions. This conclusion is consistent with the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Area Sources: Asphalt Processing and Asphalt Roofing Manufacturing (40 CFR 63, subpart AAAAAA), which identifies thermal oxidation as the applicable control device for particulate matter and polycyclic aromatic hydrocarbons (PAHs), which are also VOCs.

Existing VOC-controlled units—such as asphalt converters (Units P003, P004, P011, P012, P006/P013), storage tanks (Units T031, T032, T033), and loading racks (Units J001, J002, J003, J005)—are already controlled by incinerators or an RTO control device. The asphalt loading racks and storage tanks are already regulated by an RTO with a 95% control efficiency, required by

Best Achievable Technology (BAT)³ and NSPS for certain sources routed to the RTO. The asphalt converters are regulated by an incinerator with a 95% control efficiency, which are required by BAT and by the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Asphalt Processing and Asphalt Roofing Manufacturing, 40 CFR 63, subpart 7A.

From a preliminary design analysis based on plant layout and process considerations of the Laminate (3-wide) Roofing Line and Strip (4-wide) Roofing Line and Asphalt Storage Tank, a minimum of four separate RTOs would be required to control all roofing lines. Installation of four RTOs is economically infeasible, with cost-effectiveness estimates ranging from \$36,632 to \$750,881 per ton of VOC removed.

Based on the analysis above, Ohio determined the following RACT Requirements for Owens Corning:

- Laminate (3-wide) Roofing Line (Units P906, P917, P911, P912, P913, P104):
 - Asphalt throughput limit: 96,911.2 tons
 - Shingle production limit: 492,080.4 tons
 - Limits based on a rolling 12-month total
 - Limits support existing synthetic minor and/or BACT permit limits
- Strip (4-wide) Roofing Line (Units P907, P908, P915, P910):
 - Asphalt throughput limit: 165,325.1 tons
 - Shingle production limit: 797,115.0 tons

³ BAT is defined in OAC 3745-31-01(B) (6)

- o Limits based on a rolling 12-month total
- o Limits support existing synthetic minor and/or BACT permit limits
- Asphalt Storage Tank (Unit T034):
 - o Store only asphalt with a maximum true vapor pressure of less than 0.75 psia (OAC 3745-21-21(D)(2)(b) threshold for RACT applicability)
- Asphalt Loading Racks and Storage Tanks (Units J001, J002, J003, J005, T031, T032, T033):
 - o Continue use of the existing RTO with 95% VOC destruction efficiency
 - o Control required under BAT, RACT, and NSPS for applicable sources routed to the RTO
- Converters (Units P003, P004, P011, P012, P006/P013):
 - o Continue use of the existing incinerators with 95% VOC destruction efficiency
 - o Control required under BAT and 40 CFR 63, subpart 7A

The EPA evaluated the study provided by Ohio (available in the docket) and concurs with Ohio's RACT determination. The alternative control technologies assessed are not technically feasible, and the existing controls and emission limits are sufficient to meet RACT requirements.

Therefore, the EPA is proposing to incorporate by reference the above RACT requirements from the following sections of permit number P0137247 (effective date: 01/06/2025)- B(11), B(12), B(13), B(14), C(1)(b)(1)(b), C(1)(c), C(1)(d),

C(1) (e) (2), C(2) (b) (1) (b), C(2) (c), C(2) (d) (1), C(2) (e) (2),
C(3) (b) (1) (b), C(3) (c), C(3) (d) (1), C(3) (e) (2), C(4) (b) (1) (b),
C(4) (c), C(4) (d), C(4) (e) (2), C(5) (b) (1) (b), C(5) (c),
C(5) (d) (3), C(5) (e) (2), C(6) (b) (1) (c), C(6) (d) (1), C(6) (e) (2),
C(6) (f) (3), C(7) (b) (1) (b), C(7) (d) (1), C(7) (e) (2), C(7) (f) (2),
C(8) (b) (1) (b), C(8) (c), C(8) (d) (1), C(8) (e) (2), C(9) (b) (1) (c),
C(9) (c), C(9) (d) (1), C(9) (e) (2), C(10) (b) (1) (b), C(10) (d) (1),
C(10) (e) (2), and C(10) (f) (2). See permit number P0137247
available in the docket for this action.

VIII. General Electric Aviation, Evendale Plant

The General Electric Company, through its GE Aerospace business unit (GEA), operates a major industrial facility in Evendale, Ohio (Hamilton County). This facility is located in the Cincinnati 2015 ozone maintenance area so is not subject to RACT. Ohio submitted this SIP revision to the EPA on February 13, 2025.

The Evendale facility serves as GEA's headquarters and primary research and development (R&D) center, where it assembles and tests aircraft turbines (including military), aero-derivative turbines, and gas turbines. R&D operations include combustor technology test cells and various turbine and component tests for both commercial and military applications.

GEA has six robotic spray booths (K037-K042) and the EPA is proposing to approve a SIP revision from the State mandating that these six Robotic Coating Units (K037 through K042) comply with the VOC content limits in OAC rule 3745-21-19, which is

based on the VOC CTG for Aerospace Manufacturing and Rework Facilities, as a SIP strengthening measure. Specifically, the EPA is proposing to approve a SIP revision requiring that these units comply with paragraphs (B), (D) (1), (D) (3), (D) (4), (D) (5), (E), (H), (J), and (K) of OAC rule 3745-21-19. Also, the EPA is proposing to approve a SIP strengthening revision that consists of good combustion practices for heating units (boilers) and operating under engineering test plans that minimize fuel use for turbine and component testing and ancillary operations.

The EPA is proposing to incorporate by reference the following sections of permit number P0136500 (effective date: 01/30/2025)- B(2), C(1) (b) (1) (c), C(1) (b) (2) (a), C(1) (c) (1), C(1) (d) (1), C(1) (e) (2); the EPA is also proposing to incorporate by reference the following sections of permit number P0136501 (effective date: 01/30/2025)- B(2), C(1) (b) (1) (f), C(1) (c) (2), C(1) (d) (2), C(1) (e) (3), C(2) (b) (1) (f), C(2) (c) (2), C(2) (d) (2), and C(2) (e) (3).

IX. Akron Paint and Varnish

Akron Paint and Varnish (APV) is in the Cleveland, OH nonattainment area for the 2015 ozone standard and is a major non-CTG VOC source subject to RACT. Ohio submitted this VOC RACT determination to the EPA on January 15, 2025. APV manufactures custom-formulated paints and coatings, with most VOC emissions generated from mixing operations.

To control these VOC emissions, APV uses mixer covers that

achieve over 99% VOC control efficiency. The mixers remain covered at all times except when loading materials. These covers significantly reduce solvent evaporation and fugitive VOC emissions.

APV evaluated several alternative VOC control technologies, including carbon adsorbers, catalytic incinerators, condensers, scrubbers, and thermal oxidizers. Carbon adsorbers are technically infeasible because they operate effectively only at VOC concentrations between 500 and 2,000 ppm, while APV's VOC concentrations are well below this range. Even under ideal conditions, carbon adsorbers typically achieve between 95 and 99% VOC control efficiency, which is lower than the over 99% control already achieved by the mixer covers in use.

Catalytic incinerators are also technically infeasible due to their sensitivity to variable inlet conditions and their tendency for catalyst fouling and deactivation by contaminants such as heavy metals, sulfur, phosphorus, and halogens. Condensers are not technically feasible because they are best suited for single organic compounds rather than the diverse VOC mixtures at APV. They also generate NO_x emissions and would require additional NO_x controls.

Scrubbers are not technically feasible due to their highly variable collection efficiency range (70-99%), generation of liquid waste, high maintenance requirements, and potential for plugging caused by particulate buildup. Thermal oxidizers are technically feasible and could achieve up to 98% VOC destruction

efficiency, but are not economically reasonable, with an estimated cost-effectiveness of \$123,385 per ton of VOC removed.

APV operates multiple production buildings equipped with several portable mixers that are relocated as needed to meet changing production demands. Installing a stationary control device, such as a thermal oxidizer, would eliminate the operational flexibility essential for APV's custom-batch manufacturing process, which involves varying product formulations and production volumes.

APV operates with good housekeeping practices, including keeping mixing and blending tanks covered except during necessary operations, cleaning them while enclosed to minimize VOC emissions, and maintaining a preventative maintenance program with regular equipment inspections. These practices also include promptly cleaning spills, storing waste in closed containers, and minimizing manual solvent transfers through hard piping.

Based on these considerations, Ohio has determined that APV's existing mixer covers are RACT. Because of the large number and mobility of mixers, it is not practical to enforce production limits on individual units. Therefore, Ohio has determined that VOC emissions controlled through facility-wide limits established in APV's Final Permit-to-Install and Operate (P0136483, effective December 11, 2024), which sets a total VOC emission limit of 99.9 tons per year, is an appropriate additional RACT limit.

The EPA concurs with Ohio's RACT determination and is proposing that APV's existing mixer covers, facility-wide 99.9 tpy limit of VOC, and good housekeeping practices satisfy RACT. These RACT requirements are contained in the following sections of Permit Number P0136483 (effective date: 12/11/2024), which the EPA is proposing to incorporate by reference into the Ohio SIP: B(8), C(3)(b)(1)(b), C(3)(c), C(3)(d)(4), C(3)(e)(4), C(3)(f)(2), C(4)(b)(1)(c), C(4)(c), C(4)(d)(1), C(4)(e)(6), C(4)(f)(2), C(5)(b)(1)(c), C(5)(c), C(5)(d)(1), C(5)(e)(6), and C(5)(f)(2).

X. Tyson Foods

Tyson Foods, Inc. is located in the Cincinnati, OH 2015 ozone maintenance area so is not currently subject to RACT. Ohio submitted this SIP revision to the EPA on June 24, 2025. Tyson operates a food processing facility that produces various cooked meat products. VOC emissions are generated from several processes, including boilers, heaters, emergency engines, and cooking lines-with the cooking lines being the primary source of VOC emissions.

In order to reduce VOC emissions from the cooking lines at this facility, Tyson's study recommends installing a new VOC emissions control system that includes multiple devices operating in series: First, each process line will be equipped with a mist eliminator; the exhaust from these units will be combined and routed through a secondary mist eliminator to further remove grease; finally, the combined exhaust will be

controlled by an RTO. Ohio has submitted the requirement for this control system to be incorporated into the Ohio SIP.

The EPA agrees with Ohio's determination that the control system recommendation above is appropriate and is proposing to approve a SIP strengthening revision that consists of the installation of this combined mist eliminator and RTO system to control VOC emissions. The combined mist eliminator and RTO system is expected to achieve an overall VOC control efficiency of 98%. The EPA is proposing to incorporate by reference the following provisions of permit number P0137384 (effective date: 6/11/2025): B(3), C(1)(b)(1)(d), C(1)(c)(3), C(1)(d)(4), C(1)(e)(3), C(1)(f)(3), C(2)(b)(1)(d), C(2)(b)(1)(d), C(2)(c)(3), C(2)(d)(4), C(2)(e)(3), C(2)(f)(3), C(3)(b)(1)(d), C(3)(c)(2), C(3)(d)(5), C(3)(e)(3), C(3)(f)(3), C(4)(b)(1)(d), C(4)(c)(3), C(4)(d)(5), C(4)(e)(3), C(4)(f)(3), C(5)(b)(1)(d), C(5)(c)(3), C(5)(d)(5), C(5)(e)(3), C(5)(f)(3), C(6)(b)(1)(d), C(6)(c)(3), C(6)(d)(4), C(6)(e)(3), C(6)(f)(3), C(7)(b)(1)(d), C(7)(c)(3), C(7)(d)(4), C(7)(e)(3), and C(7)(f)(3).

XI. U.S. Steel Tubular Lorain

U.S. Steel Seamless Tubular Operations, LLC - Lorain is a fully integrated tubular products manufacturing facility in Lorain County, located within the Cleveland 2015 ozone nonattainment area. The facility produces high-quality seamless pipe for the oil and gas and construction industries. It is a major source of NO_x emissions and is therefore subject to RACT

requirements under OAC 3745-110-03(J). Ohio submitted this NO_x RACT determination to the EPA on March 28, 2024.

The facility operates under source-specific emission limits for NO_x emissions from its tempering, rotary, and reheat furnaces as specified in OAC 3745-110-03(P), which is effective at the State level and the EPA is proposing to approve into the SIP. The applicable NO_x emission limits are as follows: P003-0.068 lb/MMbtu, P035- 0.12 lb/MMbtu, P037: 0.15 lb/MMbtu, P039-0.08 lb/MMbtu, P040-0.15 lb/MMbtu. U.S. Steel conducted a RACT analysis for emission units P003, P035, P037, P039, and P040. The No. 3 Seamless Mill rotary furnace (P035), No. 4 Seamless Mill rotary furnace (P039), and No. 4 Seamless Mill reheat furnace (P040) are recuperative furnaces. U.S. Steel evaluated selective catalytic reduction (SCR), selective non-catalytic reduction (SNCR), and low-NO_x burners (LNBS) for these units. U.S. Steel submitted a detailed cost calculation contained in a Confidential Business Information document, which the EPA relied on for its RACT analysis.

The existing control technology for P035, P039, and P040 is LNBS. U.S. Steel assessed the economic feasibility of replacing the existing burners with newer LNBS capable of achieving 0.09 lb/MMBtu or less. The total cost-effectiveness ranged from \$14,387 to \$18,934 per ton of NO_x removed, which is not economically feasible.

U.S. Steel also evaluated SCR installation on each recuperative furnace. The cost-effectiveness ranged from

\$20,285 to \$38,871 per ton of NO_x removed, which is not economically feasible.

SCR is also technically infeasible for these furnaces because their batch operation causes significant exhaust temperature fluctuations due to frequent door openings and closings. These variations prevent consistent SCR performance.

U.S. Steel also determined SNCR to be technically infeasible. Effective SNCR operation requires stable flue gas temperatures between 1600°F and 2100°F, while the recuperative furnaces operate at 600-1100°F. Increasing temperatures to the required range would require significant natural gas use, resulting in high fuel costs and additional NO_x emissions.

Because no other technically or economically feasible control options exist, Ohio determined that continued operation of the existing LNBs in compliance with OAC 3745-110-03(P) meets NO_x RACT for the recuperative furnaces.

U.S. Steel also evaluated NO_x controls for the No. 3 Seamless Mill Q&T tempering furnace (P003) and the No. 3 Seamless Mill No. 2 reheat furnace (P037), which are natural gas-fired, non-recuperative furnaces subject to NO_x emission limits under OAC 3745-110-03(P). U.S. Steel examined SCR, SNCR, and LNBs for these units. The EPA is proposing to determine that OAC 3745-110-03(P) meets RACT requirements for U.S. Steel for the 2015 ozone NAAQS.

SCR and SNCR are both technically infeasible for these furnaces because exhaust temperatures are not within the

effective operating ranges. The flue gas temperature for P003 (1300°F) is below the required SNCR range of 1600–2100°F and would require reheating, which would increase NO_x formation. Although P037 exhaust temperatures are near the lower end of the SNCR range (~1600°F), achieving optimal NO_x removal would still require additional reheating. Furthermore, the low uncontrolled NO_x concentrations in these exhaust streams (approximately 19 ppm for P003 and 45 ppm for P037) would result in low overall removal efficiency, making SNCR technically infeasible.

LNBS are the existing control technology for both P003 and P037. U.S. Steel evaluated replacing the burners in P037 with newer LNBS capable of achieving 0.09 lb/MMBtu. P003 was not evaluated because it already meets this level. The cost-effectiveness for replacing the burners in P037 was \$22,975 per ton of NO_x removed, which is not economically feasible.

Given the absence of feasible alternatives, Ohio determined that continued operation of the existing LNBS meets NO_x RACT for the non-recuperative furnaces. Ohio also determined that maintaining compliance with the limits in OAC 3745-110-03(P) for these units meets RACT for this source.

Therefore, the existing LNBS remain the only technically and economically feasible control option for both the recuperative and non-recuperative furnaces. Ohio determined that U.S. Steel's Lorain facility complies with the limits in OAC 3745-110-03(P), and the EPA concurs that this constitutes RACT under the 2015 ozone standard. The U.S. Steel RACT study

is available in the docket for this action.

XII. Charter Steel

Charter Steel, located in Cuyahoga Heights, is located within the Cleveland 2015 ozone nonattainment area. The facility is a major source of NO_x emissions and is therefore subject to RACT. Ohio submitted this NO_x RACT determination to the EPA on December 5, 2023. Charter Steel's bar mill reheat furnace currently has a source-specific NO_x limit of 0.11 lb/MMBtu established in OAC 3745-110-03(Q). This rule is not currently in the SIP and the EPA is proposing to determine that it meets RACT requirements for Charter Steel.

In accordance with OAC 3745-110-03(J), Charter Steel conducted a NO_x RACT study for its bar mill reheat furnace (P029). The furnace uses natural gas burners to heat steel billets so they can be formed into steel rods or bars. Existing NO_x combustion controls include LNBS that utilize staged combustion, exhaust gas recirculation, and low excess air to reduce peak flame temperatures and limit NO_x formation.

As part of the study, Charter Steel evaluated the technical feasibility of various add-on NO_x control technologies including SCR, SNCR, and NSCR. The reaction temperature required for SNCR is typically between 1,600°F and 2,000°F, while the furnace exhaust temperature is approximately 1,100°F. Reheating the exhaust gases to the required temperature would result in additional NO_x generation, negating the benefit of control and making SNCR technically infeasible. NSCR, which is used in

rich-burn engines for the reduction of CO, VOCs, and NO_x, is not applicable to low-excess-air natural gas burners and is therefore also not technically feasible. SCR is effective at temperatures between 650°F and 800°F, but the furnace exhaust gases are approximately 1,100°F. Installing SCR before the heat recuperator would require cooling the gases to 800°F and then reheating them, while installing it after the recuperator would require reheating the gases to 650°F. Both options would increase natural gas combustion and NO_x emissions, making SCR technically infeasible as well.

Because these alternative control technologies are highly temperature-dependent, none are technically feasible for the bar mill reheat furnace. The exhaust gas temperature of 1,100°F is too low for SNCR and NSCR and too high for SCR. Consequently, Ohio determined that the existing low-NO_x burners represent the most effective and practical method for controlling NO_x emissions at this facility.

Based on the results of the NO_x RACT study, the EPA concurs with Ohio's RACT determination and is proposing that operation of low- NO_x burners, in compliance with OAC 3745-110-03(Q), constitutes RACT for the bar mill reheat furnace at Charter Steel. These existing controls represent the most effective means of reducing NO_x emissions at this source. The Charter Steel RACT study is available in the docket for this action.

XIII. Carmeuse Lime, Inc. - Grand River Operations

Carmeuse Lime, Inc. operates a lime manufacturing facility

in Grand River, Ohio, within the Cleveland 2015 ozone nonattainment area. The facility is a major source of NO_x and is subject to RACT. Ohio submitted this NO_x RACT determination to the EPA on July 28, 2025. Its primary NO_x emissions come from two rotary lime kilns (P001 and P002), currently limited under OAC 3745-110-03(S) to 6.0 lb NO_x per ton of lime produced, which is effective at the State level. Carmeuse conducted a NO_x RACT study in accordance with OAC 3745-110-03(J), included in the docket for this action.

Carmeuse evaluated several control technologies, including SCR, SNCR, mid-kiln firing, mid-kiln air injection, and low-NO_x burners. SCR is infeasible due to high particulate and calcium in the exhaust, risk of catalyst poisoning, and flue gas temperatures (400-450°F) below the optimal 700°F, which would require costly reheating. SNCR is infeasible because the variable kiln temperature prevents maintaining the precise conditions needed for effective NO_x reduction. Mid-kiln firing is unsuitable because the kilns operate at ~2,500°F, far above the 1,100-1,650°F required, and staged fuel feeding could increase CO emissions. Mid-kiln air injection could increase sulfur content in the product, and low-NO_x burners would reduce calcining efficiency, increase fuel use, and provide minimal additional NO_x reduction beyond current operations. Carmeuse's RACT study determined that the technically and economically feasible control method is proper kiln operation and good combustion practices, including minimizing excess air,

controlling fuel injection, and maintaining optimal kiln temperatures. The facility monitors fuel usage, combustion air, burner zone temperatures, and oxygen to ensure efficient operation.

Based on stack testing, Carmeuse calculated a revised NO_x limit of 4.6 lb per ton of lime for P001 and P002, representing the highest value from five stack tests plus a 20% contingency factor. This limit is more stringent than the existing 6.0 lb/ton limit in OAC 3745-110-03(S). Ohio determined that RACT is achieved through compliance with the 54.5 tons/hr maximum process weight rate and the 4.6 lb/ton NO_x limit. The EPA concurs with Ohio's RACT determination and is proposing that the 4.6 lb/ton NO_x limit, continued operation with good combustion practices, and the 54.5 tons/hr process weight rate constitute NO_x RACT for this source.

The EPA is also proposing to incorporate by reference the following RACT provisions of permit number P0137844 (effective date: 07/10/2025): B(3)-B(7), C(1) (b) (1) (b), C(1) (c) (1), C(1) (d) (1), C(1) (e) (1), C(1) (f) (1) (a), C(2) (b) (1) (b), C(2) (c) (1), C(2) (d) (1), C(2) (e) (1), and C(2) (f) (1) (a).

XIV. Ross Incineration

Ross Incineration Services, Inc. (RIS) operates a hazardous waste incinerator in Grafton, Ohio, located within the Cleveland Moderate nonattainment area for the 2015 ozone NAAQS. The facility is subject to source-specific NO_x limits under OAC

3745-110-03(T), which is effective at the State level. As a major NO_x source, RIS is also subject to RACT under OAC 3745-110-03(J). Ohio submitted this NO_x RACT determination to the EPA on August 25, 2025.

The incineration system includes a co-current rotary kiln (unit N001) and a countercurrent main combustion chamber. Both units are fueled by solid, sludge, or liquid waste, which serves as the heat source to maintain combustion temperatures. Air emissions from these chambers are treated by a quench, cyclone, radial flow wet scrubber, gas/liquid contactor, and two wet electrostatic precipitators (WESPs) before being vented through a stack.

RIS evaluated selective non-catalytic reduction (SNCR) and selective catalytic reduction (SCR) for post-combustion NO_x control. The temperatures in the main combustion exceed the optimal range for SNCR. To achieve appropriate temperatures, the exhaust gas would require cooling via an added quench system with reagent injection and sufficient residence time. This would likely necessitate a major retrofit, such as adding a third combustion chamber. Therefore, SNCR is not technically feasible under the current configuration but is technically feasible with the retrofit previously described.

Downstream of the WESPs, flue gas temperatures are well below the temperatures required for SCR. In addition, trace heavy metals in the flue gas could poison the catalyst, leading to frequent and costly replacements. Given these factors, SCR

is only technically feasible with significant new equipment.

Although both SNCR and SCR are theoretically technically feasible, neither is economically reasonable. The estimated SCR and SNCR costs range from approximately \$10,000 to 19,000 per ton of NO_x removed. Ross Incineration submitted a detailed cost calculation contained in a Confidential Business Information document, which the EPA relied on for its RACT analysis. In addition, due to the technical complexity of retrofitting a SNCR system on a highly regulated incinerator, and limited space with which to cool down the exhaust stream to a suitable temperature and residence times, SNCR costs are likely understated.

The RIS RACT study concluded that no additional control technology is both technically feasible and economically reasonable under OAC 3745-110-03(J). Instead, Ohio identified good combustion practices and lower NO_x emission limits as RACT for this facility. The EPA concurs with this determination, defining RACT for RIS as operating the unit according to manufacturer specifications and good combustion practices, and a NO_x emission limit of 105 lb/hr (30-day rolling average). The EPA is also proposing to approve (as a SIP strengthening measure) a SIP revision that includes a RACT reevaluation requirement: if NO_x emissions from unit N001 exceed 110% of the baseline established in the RACT study (185.9 tons per year), RIS must complete a new RACT evaluation within one year.

The EPA is proposing to agree with Ohio EPA's RACT determinations at this facility and incorporate by reference the

following RACT provisions of permit number P0137637 (effective date: 07/31/2025): C(1)(b)(1)(k), C(1)(b)(1)(L), (C)(1)(c)(19), (C)(1)(d)(54), (C)(1)(e)(20), (C)(1)(f)(1)(f).

XV. What Action is the EPA Taking?

The EPA is proposing to approve the following as meeting RACT in the Cleveland moderate nonattainment area under the 2015 ozone standard:

- PPG Industries Ohio, Inc.: Existing source-specific RACT in OAC 3745-21-09(MM).
- Owens Corning: Production limits, a vapor pressure limit for asphalt storage, and continued use of RTOs and incinerators, as detailed in the permit provisions described above.
- Akron Paint and Varnish: Facility-wide VOC limit of 99.9 tons per year and work practice standards, including the use of existing mixer covers, as reflected in the permit provisions described above.
- U.S. Steel Tubular Lorain: Operation of existing LNBS with compliance to emission limits in OAC 3745-110-03(P).
 - P003: 0.068 lb/MMbtu
 - P035: 0.12 lb/MMbtu
 - P037: 0.15 lb/MMbtu
 - P039:0.08 lb/MMbtu
 - P040:0.15 lb/MMbtu
- Charter Steel: Operation of LNBS with compliance to emission limits in OAC 3745-110-03(Q).

- Carmeuse Lime: 4.6 lb/ton NO_x limit for kilns, continued operation with good combustion practices, proper kiln operation, and a 54.5 tons/hr process weight rate limit, as detailed in the permit provisions above.
- Ross Incineration: Good operating and combustion practices to control NO_x emissions. The NO_x emission limit for the hazardous waste incinerator (unit N001) is 105 pounds per hour, based on a 30-day rolling average. If NO_x emissions from unit N001 exceed 110% of the baseline established in the RACT study, a RACT reevaluation must be completed within one year. These RACT requirements are detailed in the permit provisions above.

The EPA is also proposing to approve the following actions as SIP strengthening for the Cincinnati maintenance area under the 2015 ozone standard:

- GE Evendale: Good operating practices for combustion units and operation under engineering test plans that minimize fuel use for turbine testing and ancillary operations. These measures are detailed permit provisions described above. Presumptive limits under OAC 3745-21-19 for robotic coaters.
- Tyson Foods: Installation of a combined mist eliminator and thermal oxidizer system achieving 98% VOC control efficiency from all cook lines, as reflected in the permit provisions above.

Finally, the EPA is proposing to approve the removal of the

site-specific VOC RACT rule for Formica in OAC 3745-21-09(PP), as these units are now regulated under the equivalent CTG-based rule in OAC 3745-21-09(F).

XVI. Incorporation by Reference

In this rule, the EPA is proposing to include in a final EPA rule regulatory text that includes incorporation by reference. In accordance with requirements of 1 CFR 51.5, the EPA is proposing to incorporate by reference Ohio rule(s) 3745-21-09(MM), 3745-110-03(Q), and OAC 3745-110-03(P), discussed in section I of this preamble. The EPA has made, and will continue to make, these documents generally available through www.regulations.gov and at the EPA Region 5 Office (please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section of this preamble for more information).

XVII. Statutory and Executive Order Reviews

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the CAA and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, the EPA's role is to approve State choices, provided that they meet the criteria of the CAA. Accordingly, this action merely approves State law as meeting Federal requirements and does not impose additional requirements beyond those imposed by State law. For that reason, this action:

- Is not a significant regulatory action subject to review by the Office of Management and Budget under Executive Order

12866 (58 FR 51735, October 4, 1993);

- Is not subject to Executive Order 14192 (90 FR 9065, February 6, 2025) because SIP actions are exempt from review under Executive Order 12866;
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104-4);
- Does not have federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not subject to Executive Order 13045 (62 FR 19885, April 23, 1997) because it approves a State program;
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001); and
- Is not subject to requirements of section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA.

In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where the EPA or an Indian Tribe has demonstrated that a Tribe has jurisdiction. In those

areas of Indian country, the rulemaking does not have Tribal implications and will not impose substantial direct costs on Tribal governments or preempt Tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen dioxide, Ozone, Reporting and recordkeeping requirements, Volatile organic compounds.

Dated: February 18, 2026.

Cheryl Newton,
Acting Regional Administrator, Region 5.

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