

TO Eric Gustafson **EAG 6/28/2023**
Air Quality Program Manager
NWRO

FROM Lynn Khalife **lk, 6/28/2023**
Air Quality Engineer
NWRO

THROUGH Matt Williams **MW 6/28/2023**
Permitting Section Chief
NWRO

Dave Balog, PE, **DGB 6/28/2023**
New Source Review Chief
NWRO

DATE June 28, 2023

SUBJECT Wabtec US Rail, Inc., Grove City Engine Plant
Title V Operating Permit No. 43-00196
DEP eFACTS Primary Facility ID 3015
Pine Township, Mercer County

Procedural History

As part of the Reasonably Available Control Technology (RACT) regulations codified at 25 Pa. Code §§ 129.111—129.115 (relating to additional RACT requirements for major sources of NO_x and VOCs for the 2015 ozone NAAQS) (RACT III), the Pennsylvania Department of Environmental Protection (Department) has established a method under § 129.114(i) (relating to alternative RACT proposal and petition for alternative compliance schedule) for an applicant to demonstrate that the alternative RACT compliance requirements incorporated under § 129.99 (relating to alternative RACT proposal and petition for alternative compliance schedule) (RACT II) for a source that commenced operation on or before October 24, 2016, and which remain in force in the applicable operating permit continue to be RACT under RACT III as long as no modifications or changes were made to the source after October 24, 2016. The date of October 24, 2016, is the date specified in § 129.99(i)(1) by which written RACT proposals to address the 1997 and 2008 8-hour ozone National Ambient Air Quality Standards (NAAQS) were due to the Department or the appropriate approved local air pollution control agency from the owner or operator of an air contamination source located at a major NO_x emitting facility or a major VOC emitting facility subject to § 129.96(a) or (b) (relating to applicability).

The procedures to demonstrate that RACT II is RACT III are specified in § 129.114(i)(1)(i), 129.114(i)(1)(ii) and 129.114(i)(2), that is, subsection (i), paragraphs (1) and (2). An applicant may submit an analysis, certified by the responsible official, that the RACT II permit requirements remain RACT for RACT III by following the procedures established under subsection (i), paragraphs (1) and (2).

Paragraph (1) establishes cost effectiveness thresholds of \$7,500 per ton of NO_x emissions reduced and \$12,000 per ton of VOC emissions reduced as “screening level values” to determine the amount of analysis and due

diligence that the applicant shall perform if there is no new pollutant specific air cleaning device, air pollution control technology or technique available at the time of submittal of the analysis. Paragraph (1) has two subparagraphs.

Subparagraph (i) under paragraph (1) specifies that the applicant that evaluates and determines that there is no new pollutant specific air cleaning device, air pollution control technology or technique available at the time of submittal of the analysis and that each technically feasible air cleaning device, air pollution control technology or technique evaluated for the alternative RACT requirement or RACT emission limitation approved by the Department (or appropriate approved local air pollution control agency) under § 129.99(e) had a cost effectiveness equal to or greater than \$7,500 per ton of NO_x emissions reduced or \$12,000 per ton of VOC emissions reduced shall include the following information in the analysis:

- A statement that explains how the owner or operator determined that there is no new pollutant specific air cleaning device, air pollution control technology or technique available.
- A list of the technically feasible air cleaning devices, air pollution control technologies or techniques previously evaluated under RACT II.
- A summary of the economic feasibility analysis performed for each technically feasible air cleaning device, air pollution control technology or technique in the previous bullet and the cost effectiveness of each technically feasible air cleaning device, air pollution control technology or technique as submitted previously under RACT II.
- A statement that an evaluation of each economic feasibility analysis summarized in the previous bullet demonstrates that the cost effectiveness remains equal to or greater than \$7,500 per ton of NO_x emissions reduced or \$12,000 per ton of VOC emissions reduced.

Subparagraph (ii) under paragraph (1) specifies that the applicant that evaluates and determines that there is no new pollutant specific air cleaning device, air pollution control technology or technique available at the time of submittal of the analysis and that each technically feasible air cleaning device, air pollution control technology or technique evaluated for the alternative RACT requirement or RACT emission limitation approved by the Department (or appropriate approved local air pollution control agency) under § 129.99(e) had a cost effectiveness less than \$7,500 per ton of NO_x emissions reduced or \$12,000 per ton of VOC emissions reduced shall include the following information in the analysis:

- A statement that explains how the owner or operator determined that there is no new pollutant specific air cleaning device, air pollution control technology or technique available.
- A list of the technically feasible air cleaning devices, air pollution control technologies or techniques previously evaluated under RACT II.
- A summary of the economic feasibility analysis performed for each technically feasible air cleaning device, air pollution control technology or technique in the previous bullet and the cost effectiveness of each technically feasible air cleaning device, air pollution control technology or technique as submitted previously under RACT II.
- A statement that an evaluation of each economic feasibility analysis summarized in the previous bullet demonstrates that the cost effectiveness remains less than \$7,500 per ton of NO_x emissions reduced or \$12,000 per ton of VOC emissions reduced.
- A new economic feasibility analysis for each technically feasible air cleaning device, air pollution control technology or technique.

Paragraph (2) establishes the procedures that the applicant that evaluates and determines that there is a new or upgraded pollutant specific air cleaning device, air pollution control technology or technique available at the time of submittal of the analysis shall follow.

- Perform a technical feasibility analysis and an economic feasibility analysis in accordance with § 129.92(b) (relating to RACT proposal requirements).
- Submit that analysis to the Department (or appropriate approved local air pollution control agency) for review and approval.

The applicant shall also provide additional information requested by the Department (or appropriate approved local air pollution control agency) that may be necessary for the evaluation of the analysis submitted under § 129.114(i).

Facility details

- Wabtec US Rail, Inc., (formerly GE Transportation) Grove City Engine Plant:
 - Diesel engines are manufactured and tested at this location for shipment to Wabtec US Rail’s Erie, PA, locomotive plant and to other customers for installation into final products. Diesel engines are also rebuilt and tested at this location for customers.
 - This facility is Major for both NO_x and VOCs because their Potential Emissions for both NO_x and VOCs exceed the major-source thresholds of 100 tpy and 50 tpy, respectively.
 - No modifications or changes were made to the sources listed below after October 24, 2016.
- The EPA approval of RACT II is at [87 FR 3442, Jan. 24, 2022](#).
- The applicant submitted the ‘RACT II is RACT III’ proposal on December 29, 2022.
- A list of the sources subject to § 129.114(i), RACT II determination assures compliance with RACT III requirements, is shown below in Table A.

Table A		
List of sources subject to 25 Pa. Code § 129.114(i)		
RACT II determination assures compliance with RACT III requirements.		
Source ID	Source Name	RACT III provision
132A	Diesel Engine Test Cell 1	25 Pa. Code § 129.114(i)(1)(i)
132B	Diesel Engine Test Cell 2	25 Pa. Code § 129.114(i)(1)(i)
132C	Diesel Engine Test Cell 3	25 Pa. Code § 129.114(i)(1)(i)
132D	Diesel Engine Test Cell 4	25 Pa. Code § 129.114(i)(1)(i)
132E	Diesel Engine Test Cell 5	25 Pa. Code § 129.114(i)(1)(i)

The RACT II determination/requirements can be found in the attached RACT II review memo and on the webpage at this link, [EPA Approved Pennsylvania Source-Specific Requirements | US EPA](#), at this web address: <https://www.epa.gov/sips-pa/epa-approved-pennsylvania-source-specific-requirements>.

RACT III analysis performed by the Department under 25 Pa. Code § 129.114(j)(1)

NOx analysis. The Department has reviewed the applicant’s determination that no new control technologies exist for the reduction of NOx from test cells and no significant changes to the technical capabilities or cost of existing control technologies have occurred since the RACT II analysis was completed on June 21, 2018. Information for this analysis was obtained from (1) the RACT/BACT/LAER Clearinghouse Database (RBLC database); (2) engineering judgement; and (3) a literary search on US EPA published data. Attached is a copy of the Department’s June 21, 2018, memo in which the RACT II NOx analysis begins on page 7.

- The Department believes that there are no new control technologies or significant changes to the technical capability of the existing technology.
- A summary of the cost of NOx control for RACT II is shown in Table B below.

VOC analysis. The Department has reviewed the applicant’s determination that no new control technologies exist for the reduction of VOC from test cells and that there are still no feasible technologies for VOC control since the RACT II analysis was completed on June 21, 2018. Information for this analysis was obtained from (1) the RACT/BACT/LAER Clearinghouse Database (RBLC database); (2) engineering judgement; and (3) a literary search on US EPA published data. Attached is a copy of the Department’s June 21, 2018, memo in which the RACT II VOC analysis begins on page 8.

- The Department believes that there are no new control technologies or significant changes to the technical capability of the existing technology.
- A summary of the sources for which no control technologies are feasible is shown in Table C below.

Table B						
Summary of economic feasibility analysis for NOx						
Source ID	Source Name	Control Technology	NOx Emissions Before Control	NOx Emissions After Control	Total Annual Cost of Control Equipment	NO _x (\$/Ton)
132A	Diesel Engine Test Cell 1	SCR	450	90	\$3,070,555	\$8,529
132B	Diesel Engine Test Cell 2	SCR	450	90	\$3,070,555	\$8,529
132C	Diesel Engine Test Cell 3	SCR	450	90	\$3,070,555	\$8,529
132D	Diesel Engine Test Cell 4	SCR	450	90	\$3,337,854	\$9,272
132E	Diesel Engine Test Cell 5	SCR	36.88	7.38	\$1,392,670	\$47,203

Table C							
Summary of economic feasibility analysis for VOC							
Source ID	Source Name	Control Technology	VOC Emissions Before Control	VOC Emissions After Control	Total Annual Cost of Control Equipment	VOC (\$/Ton)	
132A	Diesel Engine Test Cell 1	No control technologies are feasible. [Refer to attached 6/21/2018 memo.]					
132B	Diesel Engine Test Cell 2	No control technologies are feasible. [Refer to attached 6/21/2018 memo.]					
132C	Diesel Engine Test Cell 3	No control technologies are feasible. [Refer to attached 6/21/2018 memo.]					
132D	Diesel Engine Test Cell 4	No control technologies are feasible. [Refer to attached 6/21/2018 memo.]					
132E	Diesel Engine Test Cell 5	No control technologies are feasible. [Refer to attached 6/21/2018 memo.]					

As shown in Table B above, an evaluation of each economic feasibility analysis summarized in the Table above demonstrates that the cost effectiveness remains equal to or greater than the \$7,500 per ton of NOx emissions reduced threshold of 25 Pa. Code § 129.114(i)(1)(i).

As indicated in the Department's June 21, 2018, review of RACT II application for this facility and as summarized in Table C above, an economic feasibility analysis is not required for VOC because no VOC control technologies are feasible.

Public discussion

The Department had no discussions with the EPA, the facility representatives, or the public regarding this 'RACT II is RACT III' proposal after the facility submitted the December 29, 2022, RACT III analysis and application.

Conclusion

The Department has analyzed the applicant's proposal for considering RACT II requirements as RACT III and also performed independent analysis. Based on the information provided by the applicant or owner/operator of the facility and independently verified by the Department, the Department determines that the RACT II requirements satisfy the RACT III requirements. The RACT III requirements are identical to the RACT II requirements and are as stringent as RACT II.

Attachments:

- June 21, 2018, Review of RACT II for GE Transportation Grove City Engine Plant