pennsylvania
DEPARTMENT OF ENVIRONMENTAL
PROTECTION

SUBJECT: Review of RACT III / Plan Approval Application
33-00140D - Eastern Gas Transmission and Storage, Inc.
Punxsutawney Compressor Station
Perry Township, Jefferson County

DATE: ~~January 18, 2024~~

TO: File AQ/Facility/Permit/33-00140D
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INTRODUCTION:
The Department received a RACT III proposal and plan approval application 33-00140D from Eastern Gas Transmission and Storage, Inc. (Eastern) on January 3, 2023. The application concerns the installation of control devices at their existing Punxsutawney Compressor Station facility located in Perry Township, Jefferson County. The site address is 88 Laska Rd, Jefferson County (15767) 40° 54' 36" N, 79° 01' 09'' W. This facility is currently authorized by TVOP 33-00140 which expires May 31, 2028.

The site contact is Environmental Specialist III Glenn Boutillier, who can be reached at Glenn.Boutillier@bhegts.com or (804) 356-1364. The responsible official is Vice President of Eastern Pipeline Operations John M. Lamb.

This is a Title V facility which is a major emitter of nitrogen oxides (NOX) and volatile organic compounds (VOC) which was in existence before August 3, 2018. The facility is subject to the Reasonably Available Control Technology (RACT) requirements in 25 Pa. Code §§129.111 through 129.115. Eastern has proposed control devices in the plan approval to comply with the RACT III determination for Sources 131 (Engine 1) and 132 (Engine 2).

The RACT III proposal included a RACT III applicability analysis of the Punxsutawney Compressor Station. The analysis addressed requirements for both NOx and VOC emissions from each source due to the major source status of each respective pollutant. Upon review of the RACT III submittal, the Department concurs with the applicability analysis provided by Eastern.

EXISTING PLAN APPROVAL SOURCES:

- Two (2) Dresser Rand natural gas fired 4 stroke lean burning compressor engines, Model TV-10, rated 4,200 bhp, Source IDs 131 & 132 (4200 BHP DRESSER RAND TCV10 COMP ENG NO 1 SN 10TCV109AP & 10TCV110AP)
    - Each to be controlled by Selective Catalytic Reduction

PROPOSED CONTROL DEVICES:

- Selective Catalytic Reduction (SCR), manufactured by AeriNOx, operating range of 450 °F – 950 °F, 16,000 hour Service life
    - Catalytic bed equipped with upstream ammonia injection for the control of NOx emissions
    - 70% NOx removal efficiency, 0.6 g/bhp NOx outlet concentration
    - Ammonia slip limited to 10 ppmvd
    - 19% Aqueous NH3 upstream reagent
    - Equipped with a Siemens programmable logic controller (Simatic 1200)

BACKGROUND

The facility was previously owned by Dominion Energy Transmission. A change in ownership occurred during the last operating permit renewal. Eastern is headquartered in Richmond, Virginia. They maintain natural gas pipelines in 6 states.

The Punxsutawney Station is located at 88 Laska Road, Punxsutawney, PA 15767 and consists of 3 natural gas compressor engines, 1 turbine, 1 auxiliary generator, 1 boiler, miscellaneous combustion units, storage tanks, fugitive VOC emissions, and a line heater. This facility is considered major for NO_x, CO, VOC, and HAP because it has the Potential to emit more than 100 TPY, 100 TPY, 50 TPY, 25 TPY (and 10 TPY for a single HAP, formaldehyde), respectively.

The RACT III major source rulemaking was published and became effective on November 12, 2022. This final-form rulemaking amends Chapter 129 of 25 PA Code to establish additional presumptive reasonably available control technology (RACT) requirements and RACT emission limitations for certain major stationary sources of oxides of nitrogen (NO_x) and volatile organic compound (VOC) emissions in existence on or before August 3, 2018, to address the Federal requirements for the 2015 8-hour ozone National Ambient Air Quality Standards (NAAQS) under the Clean Air Act (CAA) (42 U.S.C.A. §§ 7401—7671q).

Eastern submitted their RACT III Compliance Report and Initial Notification on December 29, 2022 (RACT III proposal). Perry Township and Jefferson County were notified of this application on December 21, 2022. A compliance review form was included with the application. There was no confidentiality asserted in the application.

The RACT III proposal included analysis of air pollution sources at the facility that are subject to presumptive RACT III requirements. This facility has no sources requiring a Case-by-Case RACT III analysis. Two pieces of control equipment are proposed to comply with presumptive RACT III and one alternative compliance schedule was included in accordance with 25 Pa. Code §129.112(n-q) of May 31, 2025. The Department will provide an alternative compliance date of August 3, 2024.

RACT III ANALYSIS

This facility is located in Jefferson County, Pennsylvania which is classified as in attainment or unclassifiable for all National Ambient Air Quality Standards (NAAQS). All counties in Pennsylvania are located in the Northeast Ozone Transport Region (OTR) and are classified and managed as moderate ozone nonattainment areas at a minimum.

As a moderate nonattainment area, Pennsylvania is required to attain the 2015 ozone NAAQS as expeditiously as practicable, but no later than 6 years after the initial designation as nonattainment (83 FR 10376). Nonattainment designation occurred on August 3, 2018 (83 FR 25776); therefore, Pennsylvania is required to attain the 2015 ozone NAAQS no later than August 3rd, 2024. Attaining the 2015 ozone NAAQS requires the complete implementation of RACT. The installation and operation of all RACT control devices, must occur before August 3, 2024.

The Punxsutawney Compressor Station is a major source of NOx and VOC. A summary of the facility's emissions is provided in Table 4. The following sources, identified in Table 1, are present at the Punxsutawney Compressor Station and have been evaluated for RACT III applicability based upon their NO_x and VOC potential to emit ("PTE") values and the RACT III exemption thresholds. The values presented in Table 4 represent the PTE of each source after any RACT III requirements.

Table 1: Summary of facility sources and their RACT III NOx/VOC applicability

Source ID	Description	Control Device	Installed before 8/3/2018	VOC Presumptive/ Case-by-Case/ Exempt	NOX Presumptive/ Case-by-Case/ Exempt
034	Boiler 1 (5.5 MMBtu/Hr)	No	Yes	Exempt	Presumptive
035	Misc. Combustion Units (<2.5 MMBtu/Hr)	No	Yes	Exempt	Exempt
131	Compressor Engine 1 (4200 HP)	No SCR Proposed	Yes	Presumptive	Presumptive
132	Compressor Engine 2 (4200 HP)	No SCR Proposed	Yes	Presumptive	Presumptive
133	Auxiliary Gen 1 (550 HP)	No	Yes	Exempt	Presumptive
134	Misc. Storage Tanks	No	Yes	Exempt	Exempt
136	Compressor Engine 3 (4735 HP)	C136 Engine 3 Catalytic Converter	Yes	Presumptive	Presumptive
137	Compressor Turbine	C137 Oxidation Catalyst	Yes	Presumptive	Presumptive
139	Line Heater	No	Yes	Exempt	Presumptive
Z101	Facility Equipment Fugitives	No	Yes	Presumptive	Exempt
Z102	Parts Washer (Degreasing Unit)	No	Yes	Exempt	Exempt

The RACT III proposal identified the specific RACT III citations that each facility source is subject to. The citations were categorized into two groups, RACT II NOx requirements and RACT II VOC requirements. The analysis included each source's applicable compliance demonstration method. Tables 2 and 3 summarize the applicability of each group of RACT III requirements.

Table 2: Facility Sources and their detailed RACT III NOx applicability, compliance method, and applicable RACT III Citation

Source ID	Source Description	Equipment Make	Equipment Model	NOx RACT Requirement	Citation	NOx RACT Compliance Demonstration	Citation
034	Boiler 1 (5.5 MMBtu/Hr)	AJAX	WGFD-5500	N/A - Rating less than 20 MMBtu/hr	129.112(c)(4)	N/A - Work practices	129.112(c)(4)
035	Misc. Combustion Units (<2.5 MMBtu/Hr)	N/A	N/A	N/A - Exempt	129.111(c)	N/A - Exempt	129.111(c)
131	Compressor Engine 1 (4200 HP)	Dresser Rand	TV-10	0.6 g/bhp-hr	129.112(g)(3)(ii)(A)	Emissions source test	129.115(b)(6) 129.115(e)(3)
132	Compressor Engine 2 (4200 HP)	Dresser Rand	TV-10	0.6 g/bhp-hr	129.112(g)(3)(ii)(A)	Emissions source test	129.115(b)(6) 129.115(e)(3)
133	Auxiliary Gen 1 (550 HP)	Caterpillar	SR-4 G3508TA	N/A - Emergency generator	129.112(c)(10)	N/A - Work practices	129.112(c)(10)
134	Misc. Storage Tanks	N/A	N/A	N/A – Not a NOx Source	N/A – Not a NOx Source	N/A – Not a NOx Source	N/A – Not a NOx Source
136	Compressor Engine 3 (4735 HP)	Caterpillar	G3616	0.6 g/bhp-hr	129.112(g)(3)(ii)(A)	Emissions source test	129.115(b)(6) 129.115(e)(3)
137	Compressor Turbine	Solar Centaur	50-6200LS	42 ppmvd @ 15% oxygen	129.112(g)(2)(v)(A)	Emissions source test	129.115(b)(6) 129.115(e)(3)
139	Line Heater	Bruest Hot Cat	HC-2800	N/A - Rating less than 20 MMBtu/hr	129.112(c)(4)	N/A - Work practices	129.112(c)(4)
Z101	Facility Equipment Fugitives	N/A	N/A	N/A – Not a NOx Source	N/A – Not a NOx Source	N/A – Not a NOx Source	N/A – Not a NOx Source
Z102	Parts Washer (Degreasing Unit)	N/A	N/A	N/A – Not a NOx Source	N/A – Not a NOx Source	N/A – Not a NOx Source	N/A – Not a NOx Source

Table 3: Facility Sources and their detailed RACT III VOC applicability, compliance method, and applicable RACT III Citation

Source ID	Source Description	Equipment Make	Equipment Model	VOC RACT Requirement	Citation	VOC RACT Compliance Demonstration	Citation
034	Boiler 1 (5.5 MMBtu/Hr)	AJAX	WGFD-5500	N/A - Exempt	129.111(c)	N/A - Exempt	129.111(c)
035	Misc. Combustion Units (<2.5 MMBtu/Hr)	N/A	N/A	N/A - Exempt	129.111(c)	N/A - Exempt	129.111(c)
131	Compressor Engine 1 (4200 HP)	Dresser Rand	TV-10	0.5 g/bhp-hr	129.112(g)(3)(ii)(B)	Emissions source test	129.115(b)(6) 129.115(e)(3)
132	Compressor Engine 2 (4200 HP)	Dresser Rand	TV-10	0.5 g/bhp-hr	129.112(g)(3)(ii)(B)	Emissions source test	129.115(b)(6) 129.115(e)(3)
133	Auxiliary Gen 1 (550 HP)	Caterpillar	SR-4 G3508TA	N/A - Emergency engine	129.112(c)(10)	N/A - Work practices	129.112(c)(10)
134	Misc. Storage Tanks	N/A	N/A	N/A - Exempt	129.111(c)	N/A - Exempt	129.111(c)
136	Compressor Engine 3 (4735 HP)	Caterpillar	G3616	0.5 g/bhp-hr	129.112(g)(3)(ii)(B)	Emissions source test	129.115(b)(6) 129.115(e)(3)
137	Compressor Turbine	Solar Centaur	50-6200LS	9 ppmvd @ 15% oxygen	129.112(g)(2)(v)(B)	Emissions source test	129.115(b)(6) 129.115(e)(3)
139	Line Heater	Bruest Hot Cat	HC-2800	N/A - Exempt	129.111(c)	N/A - Exempt	129.111(c)
P101	Facility Equipment Fugitives	N/A	N/A	Presumptive Fugitive	129.112(c)(3)	Leak Detection and Repair	129.114(c)
P102	Parts Washer (Degreasing Unit)	N/A	N/A	N/A - Exempt	129.111(c)	N/A - Exempt	129.111(c)

The RACT III proposal and the associated plan approval propose the installation of two Selective Catalytic Reduction systems ("SCR") to meet the presumptive RACT III requirements for the two (2) Dresser Rand 4,200 -bhp natural gas-fired engines (Source IDs 131 and 132). The application also contained a petition requesting an alternative compliance schedule for the installation of the SCRs per §129.12(n-q). ~~The proposed interim emissions standard of 2.0 g/bhp-hr NOx for Sources 131 and 132 will be incorporated into this plan approval.~~ Eastern requested an alternative compliance date of May 31, 2025. The Department will extend the final compliance date to August 3, 2024 which is the maximum extension allowed by EPA. The petition to extended the date will be submitted to EPA for approval as a revision of the SIP.

Source ID Z101 (Facility Equipment Fugitives) groups fugitive emission leaks associated with facility equipment into one source. This representation was made by the Department to simplify source IDs in the operating permit. The potential VOC emission rates from these sources are calculated per individual source. No individual source has a potential VOC emission rate exceeding the RACT III presumptive threshold of 2.7 tpy.

This determination is consistent with 25 Pa. Code §121.1, a natural gas compression and transmission facility fugitive VOC air contamination source is defined as follows:

> *"The group of fugitive-VOC-emitting components associated with an individual stationary source. Both of the following apply:*
> *(i) The group of fugitive-VOC-emitting components is considered an individual VOC-emitting source.*
> *(ii) Fugitive VOC emissions from the group of fugitive-VOC-emitting components are not aggregated with the VOC emissions from the associated individual stationary source."*

PROPOSED CONTROL DEVICES

The selective catalytic reduction (SCR) controls proposed for Engines 1 and 2 (Sources 131 and 132) are manufactured by AeriNOx. The control device's operating range is 450 °F – 950 °F and has a 16,000 hour Service life. An ammonia reagent of 19% Aqueous NH3 will be injected upstream of the catalyst bed. The control devices operation will be monitored via sensory input delivered to a Siemens Programmable Logic Controller (Simatic 1200).

The PLC will calculate the reagent injection rate (dosing rate) by measuring upstream NOx levels via a sensor then analyzing engine fuel flow and fuel composition. The theoretical dosing rate is then adjusted using the post catalyst NOx sensor. The PLC automatically adjusts the dosing rate applying trim and bias to optimize emission reduction. Pre and post SCR catalyst exhaust temperatures and pressure are monitored continuously by the PLC. The system has reagent shut off valves for safety.

EMISSIONS

Emission estimates were provided by the applicant. The estimates were calculated using the control device manufacturer's data, emission limits, 40 CFR 98 Subpart C, and US EPA's AP-42 Table 3.2-1. The emission estimates were found to be acceptable and are contained in Table 4. The table also includes emissions from all other air sources at the facility. The table's totals represent the facility wide PTE estimates upon completion of the project.

Table 4: Post project facility-wide Potential to Emit emission estimations (PTE)

SOURCE	NO_x (TPY)	CO (TPY)	VOC (TPY, including HAP)	PM_{10} (TPY)	$PM_{2.5}$ (TPY)	NH_3 (TPY)	HAP (TPY, COMBINED)
034	2.41	2.02	0.18	0.05	0.05	0.01	0.05
035	0.17	0.14	0.01	-	-	-	-
131	24.33	113.44	29.87	4.94	4.94	0.49	9.59
132	24.33	113.44	29.87	4.94	4.94	0.49	9.59
133	1.23	0.96	0.06	-	-	-	0.02
134	-	-	0.10	-	-	-	-
136	25.35	11.40	20.59	0.01	0.01	-	9.19
137	13.86	2.84	1.70	1.67	1.67	-	0.26
139	1.21	1.02	0.09	0.02	0.02	-	0.02
Z101	-	-	1.98	-	-	-	0.22
Z102	-	-	2.70	-	-	-	1.00
Total	**92.90**	**245.26**	**88.15**	**11.64**	**11.64**	**0.99**	**29.94**

(a) Emissions based upon 8,760 hours of operation and the maximum allowable emission rate.

This project will result in a reduction in emissions at the facility. Precontrol and post control emission estimates were used to estimate the reduction in emissions. Table 5 contains the uncontrolled emissions, the controlled emissions, and the reduction in emission achieved by the installation of the proposed control devices.

EMISSIONS

Table 5: Changes in facility-wide Potential to Emit emission estimations (PTE)

SOURCE 131 +132 (combined)	NO_x (TPY)	CO (TPY)	VOC (TPY, including HAP)	PM_{10} (TPY)	$PM_{2.5}$ (TPY)	HAP (TPY, COMBINED)
Uncontrolled	162.20	226.88	59.74	9.80	9.80	19.18
Controlled	48.66	226.88	59.74	9.88	9.88	19.18
Emission Change	-113.54	-	-	-	-	-

The estimated impact of this project on the facility's potential emissions is a reduction in NOx by 113.54 tons per year. No emissions are expected to increase as a result of this project. The control device manufacturer's warranty and the current operating permit was used to create the emission restrictions of the draft plan approval.

BAT ANALYSIS

This application does not contain sources which are proposed and considered new (to be constructed) or reconstructed as defined by 25 Pa. Code Section 121.1. This project does not propose the modification of any sources. Review of the use of best available technology is not required by §127.12(a)(5) for this project.

REGULATORY ANALYSIS

Per 25 Pa. Code §127.11, Department approval is required for the owner/operator of a facility to install an air cleaning device on an air contamination source. The proposed SCR systems meet the definition of *Air cleaning device* as defined under 25 Pa. Code §121.1. Department approval and a subsequent plan approval is required for their installation and initial operation.

Eastern reviewed State and Federal air quality regulations to determine the applicability of any regulations which may potentially become applicable as a result of the proposed Project. Eastern considered New Source Review regulations (including PSD and NNSR), Standards of Performance for New Stationary Sources regulations, and National Emission Standards for Hazardous Air Pollutants regulations.

This facility is located in Jefferson County, Pennsylvania which is classified as in attainment or unclassifiable for all National Ambient Air Quality Standards (NAAQS). All counties in Pennsylvania are located in the Northeast Ozone Transport Region (OTR) and are classified and managed as moderate ozone nonattainment areas at a minimum.

The Federal NSR (New Source Review) program is codified in 40 CFR Part §52. PADEP has developed state-specific NNSR (Non-attainment New Source Review) rules codified in 25 Pa. Code Chapter §127, Subchapter E. NNSR Program requirements apply to both new major stationary sources and major modifications at existing major stationary sources. The NNSR program applies to major stationary sources which emit pollutants and precursor pollutants for which an area is designated as being in nonattainment status with National Ambient Air Quality Standards (NAAQS). Facility's in the OTR undertaking Non-Attainment New Source Review must quantify and review ozone precursors NOx and VOC. This facility is considered a major stationary source; subsequently, the proposed project was reviewed to identify if NNSR program action is triggered from changes in NOx or VOC emissions. NOx emissions will change but result in a reduction in emissions over the contemporaneous period. No NNSR program action is triggered by this project.

Table 6: Contemporaneous period summary, NANSR pollutant changes over previous 10 years

Project	**Source**	**Date**	**VOC**		**NO_x**	
			Increase	Decrease	Increase	Decrease
non-SoLoNO_x operation	Solar Taurus 70 (Source P137)	2017	+8.79	0.00	+13.97	0.00
Total			+8.79	0.00	+13.97	0.00
Contemporaneous Period Emission Increase/Decrease			**+8.79**		**+36.6**	

Table 7: NANSR netting analysis

NSR Pollutant	**Step 1 Project Emissions Increase (tpy)**	**Contemporaneous Emission Increases (tpy)**	**Net Emission Increase or Decrease (tpy)**	**Significant Emissions Threshold (tpy)**	**Major Modification**
NO_x	-113.54	36.6	**-76.94**	40	No
VOC	0.00	8.79	**+8.79**	40	No

The Department is delegated authority to implement the Federal Prevention of Significant Deterioration (PSD) program in 40 CFR §52.21. Pennsylvania incorporates the Federal PSD regulations by reference in 25 Pa. Code §127.83. Eastern reviewed the proposed project in regard to PSD program applicability. Step 1 of a PSD analysis was not required because no PSD pollutants will increase above major modification thresholds as a result of this project. PSD program is not triggered.

No HAP emission changes are expect as a result of this project. It is possible that actual formaldehyde emissions may be reduced. This project will not result in any NESHAP regulation changes.

This project does not alter the facility's current applicability to any Federal or State regulations because no source is constructed, reconstructed, or modified and because the project does not result in an emissions increase. No regulations will become applicable as a result of this project and the applicability of any regulations to which the facility is currently subject, will not change.

TESTING

Eastern requested a waiver to avoid testing and supplied previous stack test results in accordance with 25 Pa. Code 129.115(b)(6): *(6) For an air contamination source without a CEMS, monitoring and testing in accordance with an emissions source test approved by the Department or appropriate approved local air pollution control agency that meets the requirements of Chapter 139, Subchapter A (relating to sampling and testing methods and procedures). The source test shall be conducted to demonstrate initial compliance and subsequently on a schedule set forth in the applicable permit.*

The Department did not find the precontrol device testing data justification for a waiver. The plan approval will require initial stack testing of Sources 131 & 132, periodic monitoring with a portable analyzer every 2,500 hours of operations, and reoccurring stack testing occurring once each permit term. Ammonia slip will be included in each stack testing program.

RECOMMENDATIONS

The Department's intent to issue the plan approval was published in the PA Bulletin on Saturday, November 19, 2023, beginning the 30-day public comment period which ended Monday, December 19, 2023.

I recommend that the Department issues plan approval 33-00140D to Eastern Gas Transmission and Storage, Inc subject to the conditions of the draft plan approval. The plan approval expiration date would be 18 months after the issuance date.

FOR DRAFT PURPOSES ONLY, NOT FOR FINAL VERSION

Special Conditions [25 Pa. Code Section 127.12(b)]

Site Level ADDITIONAL

a) Any information required to be submitted as part of this plan approval should be submitted to the attention of New Source Review Section Chief, Air Quality Program, Northwest Regional Office, 230 Chestnut Street, Meadville, PA 16335.

b) Issuance of an Operating Permit or incorporation of a plan approval into a current Operating Permit is contingent upon satisfactory compliance with the plan approval conditions, upon the source and control device being installed and operated as stated within the application, and upon satisfactory demonstration that the emissions from the source will not be in violation of applicable Rules and Regulations of the Department.

c) If at any time the Department has reason to believe that the air contaminant emissions are, or may be, in excess of any applicable air contaminant emission limitation, the owner or operator shall conduct such stack tests or source tests requested by the Department to determine the actual air contaminant emission rate. The owner or operator shall perform any such testing in accordance with the applicable provisions of 25 *Pa. Code*, Chapter 139 (relating to sampling and testing) as well as in accordance with any additional requirements or conditions established by the Department at the time the owner or operator is notified, in writing, of the need to conduct testing.

d) No person may permit air pollution as that term is defined in the act.

e) All sources shall be operated and maintained in such a manner that no owner or operator may permit the emission into the outdoor atmosphere of any malodorous air contaminants from any source such that the malodors are detectable outside the property of the owner or operator on whose land the facility is being operated.

f) The permittee shall comply with the presumptive RACT III requirements of this plan approval as early as practicable but no later than August 3, 2024.

g) All requirements of the current operating permit remain in effect, as applicable, unless modified by this plan approval. The conditions of this plan approval supersede the conditions of previous authorizations.

Site Level RECORDKEEPING

a) All records required must be maintained onsite for a minimum of 5 years and may be maintained in electronic format.

b) The owner or operator of the facility shall generate and maintain records that clearly demonstrate to the Department that the facility is in compliance with all emission limitations. At a minimum, the records shall be maintained on a monthly basis, and the actual emissions shall be calculated on a 12-month rolling sum. The Department reserves the right to request additional information necessary to determine compliance with the plan approval.

Site Level WORK PRACTICE

Site Level REPORTING

a) The owner or operator shall notify the Department by telephone within twenty-four (24) hours of the discovery of any malfunction which results in, or may possibly be resulting in, the emission of air contaminants in excess of any applicable limitation specified herein. Following the telephone notification, a written notice must also be submitted to DEP as specified below.

1) If the owner or operator is unable to provide notification by telephone to the appropriate Regional Office within twenty-four (24) hours of discovery of a malfunction due to a weekend or holiday, the notification shall be made to the Department by no
2) later than 4 p.m. on the first business day for the Department following the weekend or holiday.
3) Any malfunction that poses an imminent danger to the public health, safety, welfare, or environment shall be reported by telephone to the Department and the County Emergency Management Agency immediately after the discovery of an incident. The owner or operator shall submit a written report of instances of such malfunctions to the Department within three (3) business days of the telephone report.
4) Unless otherwise required by this plan approval, any other malfunctions shall be reported to the Department, in writing, within five (5) business days of malfunction discovery.

b) The owner or operator shall notify the Department, in writing, no later than five (5) business days after the following activities:

1) Initial commencement date of construction of the source/control device(s) authorized under this plan approval.
2) Any lapse in construction activity of eighteen (18) months or more that may take place in between the initial and start-up dates in (i) and (ii) above.

SOURCE PERIODIC MONITORING

a) The owner or operator shall conduct periodic monitoring of the engine every 2,500 hours of operation. When conducting periodic monitoring on the engine, the owner or operator may follow the procedures in (b) below. If the owner or operator decides to deviate from those procedures, they must submit a request to use an alternate procedure, in writing, at least 60 days prior to performing the periodic monitoring. In the alternate procedure request, the owner or operator must demonstrate the alternate procedure's equivalence to the standard procedure to the satisfaction of the Division of Source Testing and Monitoring.

b) Standardized Periodic Monitoring Procedure.
(i) Conduct three test runs of at least 20 minutes duration within 10% of 100% peak (or the highest achievable) load.
(ii) Determine NOX and CO emissions and O2 concentrations in the exhaust with either an electro-chemical cell portable gas analyzer used and maintained in accordance with the manufacturer's specifications and following the procedures specified in the current version of ASTM D6522.
(iii) If the measured NOX or CO emissions concentrations are in exceedance of the emissions limit, the owner or operator must perform a stack test in accordance with the Performance Testing Requirements of Condition 4 within 180 days of the periodic monitoring.

c) The 2,500 hours of operation count resets upon completion of a Department approved stack testing program which successfully demonstrates compliance.

SOURCE WORK PRACTICE

a) The owner or operator shall:

1) Install, operate, and maintain a non-resettable hour meter.

2) Ensure the engine meets the visible emissions standards, as determined by the methods described in 25 Pa. Code § 123.43, by not exceeding the following limitations:
   i) Equal to or greater than 10% for a period or periods aggregating more than three minutes in any one hour; and
   ii) Equal to or greater than 30% at any time

3) Limit the engine's time spent at idle during startup or shutdown to a period appropriate for the operation of the engine and air pollution control equipment consistent with good air pollution control practices, not to exceed 30 minutes, during which time the emissions of this plan approval do not apply.

4) Operate and maintain the engine as prescribed by the manufacturer. A copy of the engine's operational and maintenance literature shall be readily available and provided to the Department upon request.

5) Operate and maintain the control device as prescribed by the manufacturer. A copy of the control device's operational and maintenance literature shall be readily available and provided to the Department upon request.

6) The catalyst bed exhaust outlet temperature shall be maintained between 450 F and 950 F during normal operation.

7) Install, operate, and maintain the monitoring and recordkeeping equipment necessary to comply with the terms of this plan approval.

SOURCE RECORD KEEPING

a) The owner or operator shall maintain the following records at a minimum:

1) The make, model, and serial number of the engine and control device
2) A copy of the manufacturer's maintenance instructions
3) A copy of the manufacturer's engine/control device certification or vendor guarantees
4) The results of each periodic monitoring
5) The summary for each complete test report
6) The emissions calculations for each engine in accordance with 25 Pa. Code § 135.5.
7) The hours of current catalyst bed service
8) The manufacturer's rating of catalyst bed service life

b) All inspection observations and maintenance performed on the control device shall be recorded in a log. This record shall, at a minimum, include:
1) Time and date of observation
2) Name, title, and initials of the observer
3) A detailed description of the observation made
4) Any corrective action taken as result of the observation

c) All inspection observations and maintenance performed on the engine shall be recorded in a log. This record shall, at a minimum, include:
1) Time and date of observation
2) Name, title, and initials of the observer
3) A detailed description of the observation made
4) Any corrective action taken as result of the observation

d) The permittee shall continuously monitor the following control device parameters:
1) Pressure differential across the catalyst bed
2) Ammonia injection rate prior to the catalyst
3) Inlet and outlet temperature to the catalyst bed
4) Inlet NOx sensor reading
5) Outlet NOx sensor reading

e) The permittee shall continuously monitor the following engine parameters (these records may be done with strip charts recorders, data acquisition systems, or manual log entries):
1) Hours of engine operation

f) The permittee shall record all excursions and corrective actions taken in response to an excursion. An excursion is considered operation outside the range recommended by the manufacturer or prescribed by this plan approval. This record shall, at a minimum, include:
1) The time and date of the excursion observation
2) The time elapsed until the corrective actions have been taken

3) Name, title, and initials of the observer
4) A detailed description of the observation made
5) The corrective action taken as result of the observation

g) The permittee shall maintain records of all monitoring downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable). The permittee shall also record the dates, times and durations, probable causes and corrective actions taken for the incidents.

h) The permittee shall record all inspections, repairs, and maintenance performed on the monitoring equipment. This record shall, at a minimum, include:
1) Time and date of observation
2) Name, title, and initials of the observer
3) A detailed description of the observation made
4) Any corrective action taken as result of the observation

SOURCE EMISSION RESTRICTIONS

a) Emissions of air contaminates from the engine into the atmosphere shall not exceed the following:
1) NOx: 0.60 g/bhp-hr, 5.56 lbs./hr, 24.33 tpy*
2) CO: 2.8 g/bhp-hr, 25.9 lbs./hr, 113.44 tpy*
3) NMNEHC**: 0.5 g/bhp-hr, 4.63 lbs./hr, 20.28 tpy*
4) HCHO: 0.17 g/bhp-hr, 1.62 lbs./hr, 7.11 tpy*
5) NH3: 10 PPMV at 15% oxygen
*as calculated from a twelve month rolling total
** including HCHO

SOURCE Monitoring

a) The permittee shall monitor the following:
1) Pressure differential across the catalyst bed
2) Ammonia injection rate prior to the catalyst
3) Inlet and outlet temperature of the catalyst bed
4) Inlet NOx sensor reading
5) Outlet NOx sensor reading
6) Hours of engine operation
7) Hours of current catalyst bed service

b) The permittee shall maintain and operate the following alarm systems:
1) Hi NOx sensor value alarm, as measured at the control device outlet
2) Low/hi temperature alarm, as measured at the control device outlet
3) Low/hi differential pressure, as measured across the catalyst bed

c) The monitoring equipment shall be mounted in an accessible area and maintained in good operating conditions at all times.

SOURCE STACK TESTING

a) Within 60 days after achieving the normal production rate at which the affected source will be operated, but not later than 180 days after initial start-up of the source/control device, a stack test shall be performed in accordance with the provisions of Chapter 139 of the Rules and Regulations of the Department of Environmental Protection. The stack test shall be performed while the aforementioned source is operating within 10% of 100% peak (or the highest achievable) load. The stack test shall determine the following emission rates: ammonia (PPMV at 15% oxygen), CO (PPMV, g/bhp-hr, lbs/hr), NOx (PPMV, g/bhp-hr, lbs/hr), NMNEHC (PPMV, g/bhp-hr, lbs/hr), and HCHO (PPMV, g/bhp-hr, lbs/hr).

b) The stack testing program shall be repeated within twelve (12) to eighteen (18) months prior to the expiration of the facility's current operating permit (reoccurring).

c) In the event that any deadlines set forth in this condition cannot be met, the permittee may request an extension which shall include a justification for the extension, in writing prior to the deadline. The Department may grant an extension for reasonable cause.

1) Pursuant to 25 Pa. Code § 139.53(a)(3), at least 90 calendar days prior to commencing an emissions testing program, a test protocol shall be submitted to the Department for review and approval in accordance with paragraph (8) of this condition. The test protocol shall meet all applicable requirements specified in the most current version of the Department's Source Testing Manual.

    i) When testing of a source is required on a recurring basis, a single procedural protocol may be submitted for approval; thereafter, a letter, submitted at least 90 calendar days prior to commencing an emission testing program, referencing the previously approved procedural protocol is sufficient if the letter is approved by the Department. The letter shall be submitted as required in part (1). If modifications are made to the process(es), if a different stack testing company is used, or if an applicable section of the stack test manual has been revised since the approval, a new protocol shall be submitted for approval.

2) Pursuant to 25 Pa. Code § 139.53(a)(3), at least 15 calendar days prior to commencing an emission testing program, notification as to the date and time of testing shall be given to the Department in accordance with paragraph (8) of this condition. Notification shall not be made without prior receipt of a protocol acceptance letter from the Department.

3) Pursuant to 25 Pa. Code § 139.53(a)(3), if the proposed testing did not occur per the required notification in paragraph (2) above, an electronic mail notification shall be sent within 15 calendar days after the expected completion date of the onsite testing to the Department, in accordance with paragraph (8) of this condition, indicating why the proposed completion date of the on-site testing was not adhered to.

4) Pursuant to 25 Pa. Code § 139.53(a)(3), a complete test report shall be submitted to the Department no later than 60 calendar days after completion of the onsite testing portion of an emission test program.

5) Pursuant to 25 Pa. Code Section 139.53(b) a complete test report shall include a summary of the emission results on the first page of the report indicating if each pollutant measured is within permitted limits and a statement of compliance or noncompliance with all applicable permit conditions. The summary results will include, at a minimum, the following information:
   i) A statement that the owner or operator has reviewed the report from the emissions testing body and agrees with the findings.
   ii) Permit number(s) and condition(s) which are the basis for the evaluation.
   iii) Summary of results with respect to each applicable permit condition.
   iv) Statement of compliance or non-compliance with each applicable permit condition.

6) Pursuant to 25 Pa. Code § 139.3 all submittals shall meet all applicable requirements specified in the most current version of the Department's Source Testing Manual.

7) All testing shall be performed in accordance with the provisions of Chapter 139 of the Rules and Regulations of the Department of Environmental Protection.

8) Pursuant to 25 Pa. Code §§ 139.53(a)(1) and 139.53(a)(3):
   i) All submittals, besides notifications (protocols & reports only), shall be accomplished through PSIMS*Online, available through: https://www.depgreenport.state.pa.us/ecomm/Login.jsp, when it becomes available. Notifications shall be sent via OnBase: https://www.dep.pa.gov/DataandTools/Pages/Application-Form-Upload.aspx
   ii) If internet submittal cannot be accomplished, one electronic copy of all source test submissions (notifications, protocols, reports, supplemental information, etc.) shall be sent to both PSIMS Administration in Central Office and to Regional Office AQ Program Manager.
   iii) Electronic copies shall be sent at the following e-mail addresses:
   CENTRAL OFFICE:
   RA-EPstacktesting@pa.gov
   NORTHWEST REGIONAL OFFICE:
   RA-EPNWstacktesting@pa.gov

9) The permittee shall ensure all federal reporting requirements contained in the applicable subpart of 40 CFR are followed, including timelines more stringent than those contained herein. In the event of an inconsistency or any conflicting requirements between state and the federal, the most stringent provision, term, condition, method or rule shall be used by default.

10) Actions Related to Noncompliance Demonstrated by a Stack Test:
   i) If the results of a stack test, performed as required by this approval, exceed the level specified in any condition of this approval, the Permittee shall take appropriate corrective actions. Within 30 days of the Permittee receiving the stack test results, a written description of the corrective actions shall be submitted to the Department. The Permittee shall take appropriate action to minimize emissions from the affected facility while the corrective actions are being implemented. The Department shall notify the Permittee within 30 days, if the corrective actions taken are deficient. Within 30 days of receipt of the notice of deficiency, the Permittee shall submit a description of additional corrective actions to the Department. The Department

reserves the authority to use enforcement activities to resolve noncompliant stack tests.

ii) If the results of the required stack test exceed any limit defined in this plan approval, the test was not performed in accordance with the stack test protocol or the source and/or air cleaning device was not operated in accordance with the plan approval, then another stack test shall be performed to determine compliance. Within 120 days of the Permittee receiving the original stack test results, a retest shall be performed. The Department may extend the retesting deadline if the Permittee demonstrates, to the Department's satisfaction, that retesting within 120 days is not practicable. Failure of the second test to demonstrate compliance with the limits in the plan approval, not performing the test in accordance with the stack test protocol or not operating the source and/or air cleaning device in accordance with the plan approval may be grounds for immediate revocation of the plan approval to operate the affected source.

The Department hereby issues plan approval 33-00140D to Eastern Gas Transmission and Storage, Inc. for the installation and initial operation of control devices at their existing Punxsutawney Compressor Station facility located in Perry Township, Jefferson County. Eastern Gas Transmission and Storage (Eastern) has proposed this project to comply with the RACT III determination for Sources 131 (Engine 1) and 132 (Engine 2). The site address is 88 Laska Rd, Jefferson County (15767) 40° 54’ 36” N, 79° 01’ 09’’ W.