

Fact Sheet



For Final Renewal Permitting Action Under 45CSR30 and Title V of the Clean Air Act

Permit Number: **R30-10300006-2022**

Application Received: **July 9, 2021**

Plant Identification Number: **10300006**

Permittee: **Eastern Gas Transmission and Storage, Inc.**

Facility Name: **Hastings Compressor Station**

Mailing Address: **925 White Oaks Blvd., Bridgeport, WV 26330**

Physical Location: Pine Grove, Wetzel County, West Virginia
UTM Coordinates: 528.09 km Easting • 4377.66 km Northing • Zone 17
Directions: From Clarksburg take Route 20 North approximately 37 miles to
Hastings Station on left side of the road.

Facility Description

Hastings Compressor Station is a natural gas facility covered by Standard Industrial Classification (SIC) Code 4922. The station has the potential to operate seven (7) days per week, twenty-four (24) hours per day. This facility (compressor station) includes three adjacent facilities covered by this Title V permit. The facilities and equipment they currently consist of are as follows:

- 1) Hastings Station - production facility (underlying permit R13-3249C):
 - two (2) 500 HP Cooper GMXE-6 engines (EN01 and EN02),
 - one (1) 7.5 mmscf/day glycol dehydration unit (DEHY01) with flare (DEHY1),
 - one (1) 0.55 MMBtu/hr dehydration unit reboiler (RBR02),
 - one (1) natural gas fired auxiliary generator rated at 128HP for emergency use (AUX06),
 - one (1) 722 bhp Ajax DPC-2804-LE reciprocating compressor engine (EN06) (will replace EN01 & EN02),
 - four (4) aboveground storage tanks (TK2, TK3, TK6, TK7),
 - one (1) 10.0 MMBtu/hr natural gas heater (HTR01) (Carnegie Warehouse, Gate Site 427/XS 2239).

- 2) Mockingbird Hill Station - transmission facility:
- a) Underlying permit R13-2555C:
- two (2) 87 HP Capstone Microturbines (AUX02 and AUX03),
 - one (1) 80 HP Capstone Microturbine (AUX04),
 - one (1) 8,175 HP Solar Taurus 60 Turbine (TUR02),
 - one (1) 1.25 MMBtu/hr natural gas boiler (BLR02),
 - three (3) aboveground storage tanks (TK1 – TK3).
- b) Underlying permit R14-0033 (expansion site permitted in 2018, but planned for future installation):
- two (2) Solar Titan 130 Combustion Turbines / Compressors 21,765 HP each (CT-01 and CT-02),
 - one (1) 755 HP natural gas-fired Auxiliary Emergency Generator (EG-01),
 - one (1) 8.72 MMBtu/hr natural gas-fired boiler (WH-1),
 - two (2) aboveground storage tanks (pipeline fluids Tank TK4, hydrocarbon Tank TK5).
- 3) Lewis Wetzel Station - transmission facility (underlying permit - R13-2870A):
- one (1) 3,550 HP Caterpillar Model G3612TA Compressor Engine (EN03),
 - one (1) 530 HP Cummins Model KTA19G Auxiliary Generator (AUX05),
 - one (1) 4.5 MMBtu/hr natural gas fired boiler (BLR05),
 - six (6) above ground storage tanks (TK1 – TK6).

Emissions Summary

Plantwide Emissions Summary [Tons per Year]		
Regulated Pollutants	Potential Emissions*	2020 Actual Emissions
Carbon Monoxide (CO)	135.12	28.08
Nitrogen Oxides (NO _x)	264.59	79.26
Particulate Matter (PM _{2.5})	13.51	0.57
Particulate Matter (PM ₁₀)	13.51	2.19
Total Particulate Matter (TSP)	15.47	2.19
Sulfur Dioxide (SO ₂)	1.14	0.10
Volatile Organic Compounds (VOC)	60.80	14.33

PM₁₀ is a component of TSP.

Hazardous Air Pollutants	Potential Emissions*	2020 Actual Emissions
Hastings Station HAPs**	3.91	0.9
Mockingbird Hill Station HAPs**	0.3	0.19
Lewis Wetzel Station HAPs**	10.65	1.44
Total HAPs	14.86	2.53

Speciated Significant HAPs	Potential Emissions	2020 Actual Emissions
Acetaldehyde	1.29	0.26
Acrolein	0.90	0.26
Benzene	0.21	0.07
Ethylbenzene	0.03	< 0.01
Formaldehyde	10.54***	1.83
n-Hexane	0.41	0.05
Toluene	0.38	0.05
Xylene	0.54	0.05

Some of the above HAPs may be counted as PM or VOCs.

** PTE doesn't include changes covered by significant modifications SM01, SM02 and SM03 since they have not occurred yet (see Determinations and Justifications section, item 1, for the description of the permitted changes). With the changes in SM01, SM02 and SM03, the facility-wide PTE will be as follows: CO - 168.18 TPY, NO_x - 113.13 TPY, PM_{2.5} - 43.3 TPY, PM₁₀ - 43.3 TPY, TSP - 45.35 TPY, SO₂ - 6.18 TPY, VOC - 54.03 TPY, Total HAPs - 15.49 TPY, Total Formaldehyde - 11.27 TPY.*

*** Included in Total HAPs.*

**** Formaldehyde PTE for Lewis Wetzel Station is 8.3 TPY*

According to the Preliminary Determination / Fact Sheet for the permit R14-0033 (issued June 13, 2018) DAQ has determined that HAP emissions from Hastings, Mockingbird Hill and Lewis Wetzel Stations should not be aggregated to determine major source status. Total HAPs from each individual station do not exceed major source thresholds and each station is classified as an area source.

Title V Program Applicability Basis

This facility has the potential to emit 264.59 tons/year of NO_x and 135.12 tons/year of CO. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, Eastern Gas Transmission and Storage, Inc. is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

This facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR2	Opacity Requirements for boilers
	45CSR6	Open burning prohibited
	45CSR10	Sulfur requirements for fuel burned
	45CSR11	Standby plans for emergency episodes.
	45CSR13	Pre-construction permits
	45CSR14	PSD review
	45CSR16	Standards of Performance for New Stationary Sources Pursuant to 40CFR60
	WV Code § 22-5-4 (a) (14)	The Secretary can request any pertinent information such as annual emission inventory reporting.
	45CSR30	Operating permit requirement.

	45CSR34	Emission Standards For Hazardous Air Pollutants
	40 C.F.R. Part 61	Asbestos inspection and removal
	40 C.F.R. Part 60, Subpart KKKK	Standards of Performance for Stationary Combustion Turbines
	40 C.F.R. Part 60, Subpart JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
	40 C.F.R. Part 60, Subpart OOOOa	Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015
	40 C.F.R. Part 63, Subpart HH	National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities
	40 C.F.R. Part 63, Subpart ZZZZ	National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines
	40 C.F.R. Part 82, Subpart F	Ozone depleting substances
State Only:	45CSR4	No objectionable odors
	45CSR17	Control fugitive particulate matter

Each State and Federally-enforceable condition of the Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit (<i>if any</i>)
R13-2555C	May 2, 2016	
R13-2870A	August 30, 2012	
R13-3249C	May 30, 2019	
R14-0033	June 13, 2018	

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table," which may be downloaded from DAQ's website.

Determinations and Justifications

1. There were 3 significant modifications approved since the previous permit renewal was issued on 01/10/2017:
 - SM01 (issued 10/23/2017, based on permit R13-3249A) - to replace two old reciprocating engines (EN01 and EN02) at Hastings Station with the new engines (EN04 and EN05);

- SM02 (issued 9/18/2018, based on the permit R14-0033) – to expand the Mockingbird Hill Compressor Station with two Titan 130 combustion turbines/compressors (CT-01 and CT-02), one auxiliary emergency generator (EG-01), one 8.72 MMBtu/hr boiler (WH-1), and two storage vessels (TK4 and TK5);
 - SM03 (issued 03/24/2020, based on the permit R13-3249C) – to replace engines EN01 and EN02 with the new engine EN06 (722 hp) at the Hastings Station (not replaced yet, planned). R13-3249A and R30-10300006-2017 (SM01) allowed for the replacement of EN01 and EN02 with engines EN04 and EN05, but these engines were never installed, and the permit was modified (SM03) to allow EN06 to replace EN01 and EN02.
2. Sections 6.0, 7.0, 8.0 – an applicable 40 C.F.R. 60 Subpart JJJJ reporting requirement (40 C.F.R. §60.4245(e)) was added for the engines AUX06, EG-01 and AUX05 under conditions 6.5.4, 7.5.4 and 8.5.3 respectively.
 3. Conditions 6.1.4 and 8.1.8 – vacated sections of the 40 C.F.R. 60 Subpart JJJJ (§§60.4243(d)(2)(ii) and (d)(2)(iii)) were removed from these requirements.

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following (Permit Shield condition 3.7.2 was revised for consistency and clarification purposes):

- a. 40 C.F.R. 60 Subpart JJJJ – The compressor engines (EN01 and EN02) are not subject to this subpart since they were installed in 1968, before the applicability date.
- b. 40 C.F.R. 60 Subpart OOOO – This subpart applies only to production facilities (as per 40 CFR §60.5360), therefore it doesn't apply to Mockingbird Hill and Lewis Wetzel Stations since they are transmission facilities. The Hastings Station is a production facility, but it does not have tanks, gas wells, centrifugal compressors, reciprocating compressors, and/or pneumatic controllers that were constructed, modified, or reconstructed after August 23, 2011, and on or before September 18, 2015, therefore this subpart is not applicable.
- c. 40 C.F.R. 63 Subpart HHH – This subpart does not apply to the facility since the facility is not a transmission or storage station and is not a major source of HAPs.
- d. 40 C.F.R. 63 Subpart DDDDD – The reboiler (RBR02) and three boilers (BLR02, BLR05, and WH-1) is not subject to this subpart since the facility is not a major source of HAPs.
- e. 40 C.F.R. 63 Subpart JJJJJ – The reboiler (RBR02) is not subject to this subpart since it is considered a “process heater,” which is excluded from the definition of “boiler” in 40 CFR §63.11237. Boilers BLR02, BLR05, and WH-1 are not subject to this subpart per 40 CFR §63.11195(e) since they are gas-fired boilers. Heater HTR01 doesn't meet “boiler” definition in 40 CFR §63.11237, therefore it is not subject to this subpart.
- f. 40 C.F.R. 64 CAM
 - (1) Engines EN01, EN02, AUX02, AUX03, AUX04, AUX05, AUX06 do not have any controls, and their emissions are below Title V Major Source applicability thresholds, therefore, CAM is not applicable.
 - (2) Engine EN06 has emission limits specified in requirements 6.1.4 (Table 1 to 45 C.F.R. 60 Subpart JJJJ), and 6.1.5. Also, it has a control device (Oxidation Catalyst), but it is considered integral to the design of the equipment. Therefore, engine EN06 is not subject to CAM.

(3) Engine EN03 has a control device (Catalytic Converter CC1) and emission limits specified in requirement 8.1.3, but uncontrolled emissions of CO and VOC are below Title V Major Source applicability thresholds, therefore, CAM for CO and VOC emissions is not applicable. Uncontrolled emissions of Formaldehyde are estimated above the Title V Major Source applicability threshold, but conditions 8.1.5, 8.2.1 and 8.4.1 specify a continuous compliance determination method, therefore Formaldehyde emissions are exempt from CAM requirements per 45 C.F.R. §64.2(b)(1)(vi).

(4) The dehydration unit (Emission Unit DEHY01) is subject to 40 C.F.R. 63 Subpart HH standards, which have provisions for compliance monitoring established after 1990, therefore per 40 C.F.R. §64.2(b)(1)(i) it is exempt from requirements of CAM.

(5) Engine EG-01 has emission limits specified in requirement 7.1.13 (based on Table 1 to Subpart JJJJ of Part 60), and it doesn't have a control device, therefore it is not subject to CAM.

(6) Boiler WH-1 is not subject to CAM since it doesn't have a control device.

(7) Combustion turbines CT-01 and CT-02 have emission limits in requirement 7.1.10.a (including 27.04 TPY of NO_x, 27.8 TPY of CO, 3.57 TPY of VOC) and control devices (lean-premix combustion controls SoLoNO_x and an oxidation catalyst Ox Cat) to control CO, VOC and NO_x emissions. **The oxidation catalyst** provides 50% reduction in VOC emissions and 80% reduction in CO emissions, therefore pre-controlled VOC emissions are estimated at 7.14 TPY (below 100 TPY threshold) and total uncontrolled CO emissions are estimated at 62.3 TPY (including 43.0 TPY of pre-controlled emissions and 19.3 TPY of uncontrolled emissions resulting from 100 estimated start-up and shut-down events; it puts total pre-controlled CO emissions below 100 TPY threshold). **The lean-premix combustion controls SoLoNO_x** provide reduction of NO_x emissions of each turbine, but since NO_x emission limits are based on the requirements of 40 C.F.R. 60 Subpart KKKK, CAM is not applicable per 40 C.F.R. §64.2(b)(1)(i).

Request for Variances or Alternatives

None.

Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period

Beginning Date: February 23, 2022

Ending Date: March 25, 2022

Point of Contact

All written comments should be addressed to the following individual and office:

Natalya V. Chertkovsky-Veselova
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304
Phone: 304/926-0499 ext. 41250
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Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a

request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Response to Comments (Statement of Basis)

Not applicable.