

Fact Sheet



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

This Fact Sheet serves to address the changes specific to this Minor Modification, and shall be considered a supplement to the Fact Sheet corresponding with the Title V operating permit issued on May 24, 2021.

Permit Number: **R30-05100157-2021**
Applications Received: **June 21, 2021**
Plant Identification Number: **051-00157**
Permittee: **Williams Ohio Valley Midstream LLC**
Facility Name: **Oak Grove Gas Plant**
Mailing Address: **100 Teletech Drive, Suite 2; Moundsville, WV 26041**

Permit Action Number: *MM01* Revised: *January 25, 2022*

Physical Location: Moundsville, Marshall County, West Virginia
UTM Coordinates: 526.25 km Easting • 4,413.81 km Northing • Zone 17
Directions: From Lafayette Ave in Moundsville, head East onto 12th St ~ 1.1 miles.
 Continue onto Fork Ridge Rd ~5.4 miles. Site entrance is on the left.

Facility Description

This natural gas processing facility is designed to process 755 million standard cubic feet per day (MMscf/day) of incoming natural gas. The facility will receive natural gas from upstream production wells and send it to one (1) of three (3) cryogenic process trains (TXP-1, TXP-2, and TXP-3) where ethane (C₂H₆), propane (C₃H₈), and natural gas liquids (NGLs) are removed leaving residue gas. The residue gas is sent to a natural gas transmission pipeline or can be used as fuel gas on site. The ethane, propane, and NGLs are sent to the deethanizer where ethane is removed. This facility operates under SIC Code 1321.

This modification is based on the permit R13-3070D, and covers the following changes:

- 1) an increase of Methanol (MeOH), n-Hexane and other HAPs PTE in the inlet gas and carry over to entire plant (as the result of site-specific sampling and analysis);

- 2) a decrease of allowable Truck Loadout slop oil/condensate throughput from 4,000,000 gal/year to 2,000,000 gal/year (Emission Unit ID TL-1/ Emission Point ID 14E), and a reduction of the maximum quantity of slop oil/condensate throughput from 4,000,000 gal/year to 2,000,000 gal/year (to offset the HAPs PTE increase);
- 3) a reduction of each tank’s (Emission Point IDs 10E through 13E) annual throughput limitation from 1,000,000 gal/year to 500,000 gal/year;
- 4) a decrease of the Flare Control Device emission limits (Emission Unit ID FL-1/ Emission Point ID 8E);
- 5) an increase of the emission limitations of the Amine Process Vent (Emission Unit ID V-01/ Emission Point ID 16E);
- 6) an increase of the total maximum Gas Processing Plant wet natural gas throughput (plant’s “nameplate capacity”) from 660 MMscf/day to 755 MMscf/day.

Emissions Summary

This modification results in the following emission changes:

Regulated Pollutants	Oak Grove Gas Plant facility-wide PTE (tons/year)			Francis Compressor Station PTE (tons/year)			Aggregated Oak Grove and Francis Compressor Station PTE after the modification (tons/year)
	Before the Modification (TV renewal)	After the Modification	PTE Change	Before the Modification (TV renewal)	After the Modification	PTE Change	
NO _x	121.26	120.38	-0.89	6.66	6.66	0	127.04
CO	192.66	190.89	-1.77	3.89	3.89	0	194.78
Volatile Organic Compounds (VOC)	102.29	110.67	8.38	29.74	23.11	-6.63	133.77
PM ₁₀	10.68	10.68	0	0.49	0.49	0	11.18
TSP	10.68	10.68	0	0.49	0.49	0	11.18
Sulfur Dioxide	0.76	0.76	0	0.03	0.03	0	0.79
Benzene	1.78	0.45	-1.33	0.05	0.05	0	0.50
Ethylbenzene	1.96	0.53	-1.43	0.04	0.04	0	0.57
Formaldehyde (HCHO)	0.12	0.12	0	1.65	1.65	0	1.77
n-Hexane	3.98	8.78	4.81	0.33	0.33	0	9.11
Methanol (MeOH)	0	7.18	7.18	0	0.07	0.07	7.25
Toluene	1.87	0.53	-1.34	0.05	0.05	0	0.58
2,2,4-Trimethylpentane (TMP)	2.01	0.98	-1.02	0.05	0.05	0	1.03
Xylenes	1.96	0.44	-1.52	0.04	0.04	0	0.48
Other HAPs	0.01	0.17	0.16	0.25	0.21	-0.04	0.38
Total HAPs	13.68	19.18	5.51	2.46	2.68	0.22	21.86

Title V Program Applicability Basis

With the proposed changes associated with this modification, this facility maintains the potential to emit 194.78 TPY of CO, 127.04 TPY of NO_x, and 133.77 TPY of VOC. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, Williams Ohio Valley Midstream LLC 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.

The modification to this facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR13	Permit Modification
	45CSR30	Operating Permit

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>)
R13-3070D	09/14/2021	

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

The following revisions/additions were done with this modification:

- 1) Emission Units Table 1.1 - revised Process Flare (Emission Unit ID FL-1) design capacity, reduced Truck Loadout (Emission Unit ID TL-1) design capacity and added design capacity for the Truck Loadout - Reciprocating Compressors (Emission Unit ID RPC-1) and for the Dry Gas Seals – Centrifugal Compressors (Emission Unit ID DGC); also, several insignificant tanks/vessels were added (see Insignificant Tanks Table in the Non-Applicability Determination section below).
- 2) Section 5.0 – reduced the VOC and HAP emission limits for the Process Flare FL-1 (Emission Point ID 8E) in condition 5.1.2.
- 3) Section 7.0 – increased the total maximum Gas Processing Plant wet natural gas throughput (plant's "nameplate capacity") from 660 MMscf/day to 755 MMscf/day (condition 7.1.1).
- 4) Section 8.0 – increased the VOC emission limit for the Amine Process Vent (Emission Point ID 16E) and added a Hydrogen Sulfide emission limit (condition 8.1.3); also, added new monitoring requirement 8.2.2 for the sampling of the inlet gas stream to the Ethane Amine Unit.

- 5) Section 9.0 – reduced the slop oil / condensate throughput at the Truck Loadout (Emission Point ID 14E) from 4,000,000 gal/year to 2,000,000 gal/year (condition 9.1.1).
- 6) Section 10.0 – reduced the maximum annual throughput limitation of the slop oil / condensate for each storage tank (Emission Point IDs 10E through 13E) from 1,000,000 gal/year to 500,000 gal/year (condition 10.1.1)
- 7) Easting and Northing UTM Coordinates for the facility were corrected.

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

The tanks listed in the Insignificant Tanks Table below, do not have any regulatory requirements for the following reasons:

40 C.F.R. 60, Subpart OOOO—Standards of Performance for Crude Oil and Natural Gas Facilities for Construction, Modification, or Reconstruction Commenced After August 23, 2011, and on and Before September 18, 2018 is not applicable to these tanks as each of them have potential VOC emissions less than 6 TPY.

40 C.F.R. 60, Subpart Kb—Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 applies to storage vessels used to store volatile organic liquids (VOL) with a capacity greater than or equal to 75 m³ (19,813 gallons), therefore it is not applicable to most of the tanks in the table below (except 00-V-817 Flare Knockout Vessel, 21-V-828 De-Ethanizer Surge Tank and 21-ST-806 Used Amine Storage Tank), because their capacity is below 75 m³. The three tanks with the capacity greater than 75 m³ each are also not subject to this subpart because of the following:

- 1) The Flare Knockout Vessel (00-V-817) is a process tank, and not a storage vessel (as per 40 C.F.R. §60.111b Definitions). It condenses any remaining organics/water, etc. in the waste gas stream prior to combustion in the flare. This vessel empties to other equipment in the closed drain system in the plant. Therefore, 40 C.F.R. 60, Subpart Kb is not applicable.
- 2) The De-Ethanizer Surge Tank (21-V-828) is also a process tank and not a storage vessel (as per 40 C.F.R. §60.111b Definitions). It is a surge control vessel used for surge control for the De-Ethanizer process. It is also a pressurized tank that operates in excess of 204.9 kPa (typically around 200-240 psig [1379-1655 kPa]) with no emissions to atmosphere. Therefore, 40 C.F.R. 60, Subpart Kb is not applicable per 40 C.F.R. §60.110b(d)(2).
- 3) The Used Amine Storage Tank (21-ST-806) stores water that is pumped from amine tank containments in the amine process unit; the contents are majority water (~99% or more) with possible trace amounts of amine (the VOL) that could be present. The vapor pressure will be close to that of water ~2.3 kPa. Since the amine storage tank capacity ≥ 75 m³ but < 151 m³ and stores a liquid with a maximum true vapor pressure less than 15.0 kPa, it would also not be a subject to the 40 C.F.R. 60, Subpart Kb per 40 C.F.R. §60.110b(b).

Insignificant Tanks Table

Tank Description	Year Installed	Design Capacity	Content / VOL?	40 C.F.R. 60 Subpart Kb applicability
00-V-823 Common Closed Drain Vessel	2014	2,200 gal	Not a VOL	Design capacity < 75 m ³ , not containing a VOL - exempt from Subpart Kb per 40 C.F.R. §60.110b(a)
00-V-817 Flare Knockout Vessel	2014	25,000 gal	Condensable organics / N/A	Process tank, not a storage vessel - exempt from Subpart Kb per 40 C.F.R. §60.111b
21-ST-810 Lube Oil Day Tank	2014	300 gal	Not a VOL	Design capacity < 75 m ³ , not containing a VOL - exempt from Subpart Kb per 40 C.F.R. §60.110b(a)
21-V-809 Closed Drain Vessel	2014	4,500 gal	Not a VOL	Design capacity < 75 m ³ , not containing a VOL - exempt from Subpart Kb per 40 C.F.R. §60.110b(a)
21-V-701 Hot Oil Surge Tank	2014	2,300 gal	Not a VOL	Design capacity < 75 m ³ , not containing a VOL - exempt from Subpart Kb per 40 C.F.R. §60.110b(a)
21-V-828 De-Ethanizer Surge Tank	2014	70,000 gal	NGL (C2+) / N/A	Process tank, not a storage vessel; pressurized tank that operates in excess of 204.9 kPa - exempt from Subpart Kb per 40 C.F.R. §60.111b and §60.110b(d)(2)
21-ST-801 De-Ionized Water Storage Tank	2014	16,800 gal	Not a VOL	Design capacity < 75 m ³ , not containing a VOL - exempt from Subpart Kb per 40 C.F.R. §60.110b(a)
21-ST-802 Amine Storage Tank	2014	4,200 gal	Not a VOL	Design capacity < 75 m ³ , not containing a VOL - exempt from Subpart Kb per 40 C.F.R. §60.110b(a)
21-ST-803 Raw Regen Water Storage Tank	2014	16,800 gal	Not a VOL	Design capacity < 75 m ³ , not containing a VOL - exempt from Subpart Kb per 40 C.F.R. §60.110b(a)
21-ST-806 Used Amine Storage Tank	2014	25,000 gal	Water w/possible trace amounts of amines / VOL	Design capacity ≥75 m ³ but <151 m ³ and maximum true vapor pressure < 15.0 kPa - exempt from Subpart Kb per 40 C.F.R. §60.110b(b)

Tank Description	Year Installed	Design Capacity	Content / VOL?	40 C.F.R. 60 Subpart Kb applicability
21-HTR-703 Hot Oil Heater	2014	2,662 gal	Not a VOL	Design capacity < 75 m ³ , not containing a VOL - exempt from Subpart Kb per 40 C.F.R. §60.110b(a)
21-HTR-704 Hot Oil Heater	2014	2,662 gal	Not a VOL	Design capacity < 75 m ³ , not containing a VOL - exempt from Subpart Kb per 40 C.F.R. §60.110b(a)
31-ST-980 Lube Oil Day Tank	2014	300 gal	Not a VOL	Design capacity < 75 m ³ , not containing a VOL - exempt from Subpart Kb per 40 C.F.R. §60.110b(a)
32-ST-980 Lube Oil Day Tank	2014	300 gal	Not a VOL	Design capacity < 75 m ³ , not containing a VOL - exempt from Subpart Kb per 40 C.F.R. §60.110b(a)
31-V-801 Feed Separator	2014	1,700 gal	Not a VOL	Design capacity < 75 m ³ , not containing a VOL - exempt from Subpart Kb per 40 C.F.R. §60.110b(a)
32-V-801 Feed Separator	2014	1,700 gal	Not a VOL	Design capacity < 75 m ³ , not containing a VOL - exempt from Subpart Kb per 40 C.F.R. §60.110b(a)
01-ST-863 Residue Compressor Lube Oil	2014	335 gal	Not a VOL	Design capacity < 75 m ³ , not containing a VOL - exempt from Subpart Kb per 40 C.F.R. §60.110b(a)
01-ST-884 Turbo Expander Bullet Tank	2014	60 gal	Not a VOL	Design capacity < 75 m ³ , not containing a VOL - exempt from Subpart Kb per 40 C.F.R. §60.110b(a)
01-V-868 Closed Drain Vessel	2014	370 gal	Not a VOL	Design capacity < 75 m ³ , not containing a VOL - exempt from Subpart Kb per 40 C.F.R. §60.110b(a)
01-V-403 Cold Drain Tank	2014	3,500 gal	Not a VOL	Design capacity < 75 m ³ , not containing a VOL - exempt from Subpart Kb per 40 C.F.R. §60.110b(a)
01-V-860 Inlet Gas Separator	2014	380 gal	Not a VOL	Design capacity < 75 m ³ , not containing a VOL - exempt from Subpart Kb per 40 C.F.R. §60.110b(a)
01-V-402 Cold Separator	2014	7,500 gal	Not a VOL	Design capacity < 75 m ³ , not containing a VOL - exempt from Subpart Kb per 40 C.F.R. §60.110b(a)

Tank Description	Year Installed	Design Capacity	Content / VOL?	40 C.F.R, 60 Subpart Kb applicability
Diesel Tank	2014	500 gal	Diesel / VOL	Design capacity < 75 m ³ - exempt from Subpart Kb per 40 C.F.R.§60.110b(a)
Gasoline Tank	2014	500 gal	Gasoline / VOL	Design capacity < 75 m ³ - exempt from Subpart Kb per 40 C.F.R.§60.110b(a)

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: N/A
Ending Date: N/A

Point of Contact

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

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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.