West Virginia Department of Environmental Protection
Division of Air Quality

Fact Sheet

For Draft/Proposed Permitting Action Under 45CSR30 and Title V of the Clean Air Act

Permit Number: **R30-05100157-2016**
Application Received: **April 29, 2015**
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**

Revised: N/A

Physical Location:	Moundsville, Marshall County, West Virginia
UTM Coordinates:	525.9 km Easting • 4,414.1 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 600 million standard cubic feet per day (mmscfd) 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 (C_2H_6), propane (C_3H_8), 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.

Emissions Summary

Plantwide Emissions Summary [Tons per Year]

Regulated Pollutants	Potential Emissions	2014 Actual Emissions
Carbon Monoxide (CO)	192.66	33.62
Nitrogen Oxides (NO_X)	121.26	19.82
Particulate Matter ($PM_{2.5}$)	10.69	1.63
Particulate Matter (PM_{10})	10.69	1.63
Total Particulate Matter (TSP)	10.69	1.63
Sulfur Dioxide (SO_2)	0.77	0.13
Volatile Organic Compounds (VOC)	113.50	33.01

PM_{10} is a component of TSP.

Hazardous Air Pollutants	Potential Emissions	2014 Actual Emissions
Total HAPs	14.18	2.58

All individual HAPs are below 10 TPY.

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

Title V Program Applicability Basis

This facility has the potential to emit 192.66 TPY of CO, 121.26 TPY of NO_x, and 112.06 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.

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

Federal and State:	45CSR2	Particulate air pollution from combustion of fuel in indirect heat exchangers.
	45CSR6	Open burning prohibited.
	45CSR10	Sulfur oxide emissions.
	45CSR11	Standby plans for emergency episodes.
	45CSR13	NSR permitting.
	45CSR16	New Stationary Sources
	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	Emissions standards for HAPs

	40 C.F.R. 60, Subpart Dc	Standards of performance for small industrial-commercial-institutional steam generating units
	40 C.F.R. 60, Subpart JJJJ	Standards of performance for stationary spark ignition internal combustion engines
	40 C.F.R. 60, Subpart OOOO	Standards of performance for crude oil and natural gas production, transmission and distribution
	40 C.F.R. Part 61	Asbestos inspection and removal
	40 C.F.R. Part 63, Subpart ZZZZ	RICE MACT
	40 C.F.R. Part 82, Subpart F	Ozone depleting substances
State Only:	45CSR4	No objectionable odors.

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 *(if any)*
R13-3070A	January 5, 2016	

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

Section 4.0: Heaters (1E-7E)

Section 4.0 of this permit was written to include applicable requirements for the heaters (1E-7E). In addition to requirements from R13-3070A, the following state and federal rules are applicable to the heaters:

- 45CSR2-Particulate air pollution from combustion of fuel in indirect heat exchangers: The parts of this rule that apply to this facility are the visible emission (opacity) requirements of 45CSR§2-3.1, the opacity monitoring requirements of 45CSR§2-3.2, the particulate emission limits in 45CSR§2-4.1, and the recordkeeping requirements of 45CSR§2A-7.1.a.1. The heaters are exempt from the testing and monitoring requirements of 45CSR§§2-8.1.a and 8.2 because they combust only natural gas (45CSR§2-8.4.b).

- 45CSR10- To prevent and control air pollution from the emission of sulfur oxides: This facility is subject to the sulfur oxide emission limits of 45CSR§10-3.1.e. The heaters are not subject to the Testing, Monitoring, Recordkeeping, and Reporting requirements of 45CSR§10-8 because they combust natural gas (45CSR§10-10.3).

- 40 CFR 60, Subpart Dc-Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units: Since the heaters combust only natural gas, the heaters are only subject to the record-keeping and reporting requirements given under §60.48c.

This section's permit conditions and regulatory citations are summarized below:

Title V Condition Number	Summary of Condition Language	R13-3070A Condition Number	Other Regulatory Citations
4.1.1	Maximum design heat input for heaters	5.1.1	N/A
4.1.2	Emission limits for TXP1 Hot Oil Heater (1E)	5.1.2	N/A
4.1.3	Hourly natural gas consumption limit for TXP1 Hot Oil Heater (1E)	5.1.3	N/A
4.1.4	Annual natural gas consumption limit for TXP1 Hot Oil Heater (1E)	5.1.4	N/A
4.1.5	Emission limits for TXP1 Regen Gas Heater (2E)	5.1.5	N/A
4.1.6	Hourly natural gas consumption limit for TXP1 Regen Gas Heater (2E)	5.1.6	N/A
4.1.7	Annual natural gas consumption limit for TXP1 Regen Gas Heater (2E)	5.1.7	N/A
4.1.8	Emission limits for TXP2 Regen Gas Heater (3E)	5.1.9	N/A
4.1.9	Hourly natural gas consumption limit for TXP2 Regen Gas Heater (3E)	5.1.10	N/A
4.1.10	Annual natural gas consumption limit for TXP2 Regen Gas Heater (3E)	5.1.11	N/A
4.1.11	Emission limits for TXP3 Regen Gas Heater (4E)	5.1.13	N/A
4.1.12	Hourly natural gas consumption limit for TXP3 Regen Gas Heater (4E)	5.1.14	N/A
4.1.13	Annual natural gas consumption limit for TXP3 Regen Gas Heater (4E)	5.1.15	N/A
4.1.14	Emission limits for De-Ethanizer Hot Oil Heaters (5E, 6E)	5.1.17	N/A
4.1.15	Hourly natural gas consumption limit for De-Ethanizer Hot Oil Heaters (5E, 6E)	5.1.18	N/A
4.1.16	Annual natural gas consumption limit for De-Ethanizer Hot Oil Heaters (5E, 6E)	5.1.19	N/A
4.1.17	Emission limits for De-Ethanizer Regen Gas Heater (7E)	5.1.20	N/A
4.1.18	Hourly natural gas consumption limit for De-Ethanizer Regen Gas Heater (7E)	5.1.21	N/A
4.1.19	Annual natural gas consumption limit for De-Ethanizer Regen Gas Heater (7E)	5.1.22	N/A
4.1.20	Maximum opacity of 10%	5.1.24	45CSR§2-3.1
4.1.21	Permitted facility shall comply with all applicable provisions of 40CFR60 Subpart Dc	5.1.25	N/A
4.1.22	Particulate matter emission limits[1]	N/A	45CSR§2-4.1.b
4.1.23	Sulfur dioxide emission limits[2]	N/A	45CSR§10-3.1.e
4.2.1	Method 9 emission observations to demonstrate compliance with Section 4.1.20	5.2.1	N/A

Title V Condition Number	Summary of Condition Language	R13-3070A Condition Number	Other Regulatory Citations
4.3.1	Continuous opacity monitoring system or method 9 readings	5.3.1	45CSR§2-3.2
4.3.2	Particulate matter emission testing	N/A	45CSR§§2-8.1.b. and 8.1.c.
4.4.1	Monthly records of the amount of natural gas consumed and the hours of operation of each of the heaters (1E-7E)	5.4.1	N/A
4.4.2	Record and maintain records of the amount of each fuel combusted during each operating day	5.4.2	40CFR§60.48c(g)(1)
4.4.3	Alternative requirements to 4.4.2	5.4.3	45CSR16; 40CFR§60.48c(g)(2)
4.4.4	Alternative requirements to 4.4.2	5.4.4	45CSR16; 40CFR§60.48c(g)(3)
4.5.1	Notification of the date of construction or reconstruction and actual startup	5.5.1	45CSR16; 40CFR§60.48c(a)
4.5.2	Reporting periods	5.5.2	45CSR16; 40CFR§60.48c(j)

[1]The allowable particulate matter (PM) emission rate for each of the non-exempt natural gas-fired heaters, identified as Type "b" fuel burning units, per 45CSR§2-4.1.b., is the product of 0.09 and the total design heat input of the units in million Btu per hour. The maximum aggregate design heat input (short-term) of the non-exempt units will be 213.96 mmBtu/Hr. The maximum potential hourly PM emissions during normal operations from the units (including condensables) is estimated to be 1.82 lb/hr. This emission rate is 9.44% of the 45CSR2 limit.

[2]The allowable sulfur dioxide (SO_2) emissions from the non-exempt natural gas-fired heaters, each identified as a Type "b" fuel burning unit in a Priority I Region (which includes Marshall County), per 45CSR§10-3.1.e, is the product of 3.1 and the total design heat input of all units in million Btu per hour. The total design heat input of the non-exempt natural gas-fired heaters is 213.96 mmBtu/hr. Using the above equation results in a SO_2 limit of 663.28 pounds per hour. The maximum aggregate potential SO_2 emissions from the Hot Oil Heaters are estimated to be 0.14 pounds per hour. This emission rate is only a trace of the 45CSR10 limit.

Section 5.0: Flare Control Device (8E)

Section 5.0 of this permit was written to include applicable requirements for the flare (8E). All requirements for the flare in this permit come from R13-3070A and 45CSR6. This section's permit conditions and regulatory citations are summarized below:

Title V Condition Number	Summary of Condition Language	R13-3070A Condition Number	Other Regulatory Citations
5.1.1	99.0% flare destruction and removal efficiency and maximum aggregate amount of waste gases sent to the flare	6.1.1	N/A
5.1.2	Maximum emissions from the Zeeco flare (8E)	6.1.2	N/A
5.1.3	Flare model number, capacity, heat input, and operating requirements	6.1.3	45CSR§§6-4.3, 4.4, and 4.5
5.1.4	Flare compliance assessment and design evaluation	6.1.4	N/A
5.1.5	Particulate matter emission limits	N/A	45CSR§6-4.1
5.1.6	No objectionable odors	N/A	45CSR§6-4.6
5.2.1	Monitoring flare pilot flame	6.2.1	N/A
5.2.2	Monitor and record the monthly and rolling twelve (12) month total aggregate waste gases, pilot gas, and purge gas sent to the flare	6.2.2	N/A
5.3.1	Method 22 opacity test	6.3.1	N/A
5.3.2	Flare compliance assessment	6.3.2	N/A
5.3.3	Testing to determine compliance with particulate emission limit	N/A	45CSR§§6-7.1. and 7.2
5.4.1	Records of pilot flame absence	6.4.1	N/A
5.4.2	Record of flare design evaluation	6.4.2	N/A
5.4.3	Records of testing conducted in accordance with 5.3.2	6.4.3	N/A
5.4.4	Records specified by the on-going monitoring requirements of 5.2 and testing requirements of 5.3 shall be maintained	6.4.4	N/A
5.4.5	Records of the visible emission opacity tests conducted per Section 5.3.1 shall be maintained	6.4.5	N/A
5.4.6	Retention of records	6.4.6	N/A
5.5.1	If complying with 5.3.2, submit a testing protocol and notification of the testing date	6.5.1	N/A
5.5.2	Reporting deviations from allowable visible emissions requirements	6.5.2	N/A
5.5.3	Reporting deviations from the flare design and operation criteria	6.5.3	N/A

Section 6.0: Standby Generator (9E)

Section 6.0 of this permit was written to include applicable requirements for the standby generator (9E). In addition to requirements from R13-3070A, the following federal rules are applicable to the standby generator:

- 40 CFR 60 Subpart JJJJ-Standards of Performance for Stationary Spark Ignition Internal Combustion Engines: This standby generator is an emergency engine rated above 25 HP and fueled by rich burn LPG. The engine is operated in a certified manner and does not use an air-to-fuel-ratio controller (AFRC). The applicable requirements for this engine are listed in the table below.

- 40 CFR 63, Subpart ZZZZ-Standards of Performance for Stationary Spark Ignition Internal Combustion Engines: The standby generator is defined as a new stationary RICE and, therefore, per 40CFR §63.6590(c)(1) is required to show compliance with Subpart ZZZZ by meeting the requirements of 40 CFR 60, Subpart JJJJ.

This section's permit conditions and regulatory citations are summarized below:

Title V Condition Number	Summary of Condition Language	R13-3070A Condition Number	Other Regulatory Citations
6.1.1	Propane consumption limits	7.1.1	N/A
6.1.2	Engine emission limits	7.1.2	N/A
6.1.3	Maximum Yearly Operation Limitation	7.1.3	N/A
6.1.4	Comply with emission standards in §60.4231(c)	8.1.1	45CSR16; 40CFR§60.4233(c)
6.1.5	Engine certification	8.1.2	45CSR16; 40CFR§60.4231(c)
6.1.6	Operate and maintain stationary SI ICE that achieve the emission standards as required in §60.4233 over the entire life of the engine	N/A	45CSR16; 40CFR§60.4234
6.1.7	Compliance with manufacturer's emission related instructions and purchasing a certified engine	N/A	45CSR16; 40CFR§§60.4243(a) and (a)(1)
6.1.8	Requirements to be considered an emergency stationary ICE	N/A	45CSR16; 40CFR§60.4243(d)
6.1.9	Install a non-resettable hour meter	N/A	45CSR16; 40CFR§60.4237(b)
6.4.1	Records of the hours of operation	7.2.1	N/A
6.4.2	Records of maintenance, notification, and certification.	N/A	45CSR16; 40CFR§60.4245(a)
6.4.3	Records of hours of operation from non-resettable hour meter.	N/A	45CSR16; 40CFR§60.4245(b)
6.5.1	Engine reporting requirements.	N/A	45CSR16; 40CFR§60.4245(e)

Section 7.0: Gas Processing Plant (15E and 17E)

Section 7.0 of this permit was written to include applicable requirements for the gas processing plant (15E and 17E). In addition to requirements from R13-3070A, the following federal regulation applies to the gas processing plant:

- 40 CFR 60, Subpart OOOO-Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution: This subpart covers the reciprocating compressors used at this facility and also covers piping and equipment fugitives.

This section's permit conditions and regulatory citations are summarized below:

Title V Condition Number	Summary of Condition Language	R13-3070A Condition Number	Other Regulatory Citations
7.1.1	Maximum natural gas throughput limit.	9.1.1	N/A
7.1.2	Reciprocating compressor requirements.	9.1.2	45CSR16; 40CFR§60.5385
7.1.3	Equipment leak standards	9.1.3	45CSR16; 40CFR§60.5400
7.1.4	Exceptions to equipment leak standards	9.1.4	45CSR16; 40CFR§60.5401
7.1.5	Alternative emission limitations for equipment leaks	9.1.5	45CSR16; 40CFR§60.5402
7.1.6	Exemptions provided for in 40 C.F.R. 60.8(c) do not apply to 40 C.F.R. 60, Subpart OOOO	N/A	45CSR16; 40CFR§60.5370(b)
7.2.1	Initial compliance demonstration	9.2.1	45CSR16; 40CFR§60.5410
7.2.2	Continuous compliance demonstration	9.3.1	45CSR16; 40CFR§§60.5415(c)(1)-(4)
7.2.3	Continuous compliance with VOC requirements	9.3.2	45CSR16; 40CFR§60.5415(f)
7.4.1	Recordkeeping requirements for reciprocating compressors	9.4.3	45CSR16; 40CFR§60.5420(c)(3)
7.4.2	Equipment leak recordkeeping requirements	9.4.4	45CSR16; 40CFR§60.5421
7.4.3	Records of the amount of natural gas processed in the Gas Processing Plant	9.5.1	N/A
7.5.1	Notification requirements	9.4.1	45CSR16; 40CFR§60.5420(a)
7.5.2	Annual reporting requirements	9.4.2	45CSR16; 40CFR§§60.5420(b)(1), (b)(4), and (b)(7)
7.5.3	Equipment leak reporting requirements	9.4.5	45CSR16; 40CFR§60.5422

Section 8.0: Amine Process Vent (16E)

Section 8.0 of this permit was written to include applicable requirements for the amine process vent (16E). All requirements for the amine process vent in this permit come from R13-3070A. This section's permit conditions and regulatory citations are summarized below:

Title V Condition Number	Summary of Condition Language	R13-3070A Condition Number
8.1.1	Maximum ethane feedstock throughput limit.	10.1.1
8.1.2	Design and operation requirements	10.1.2
8.1.3	VOC emission limits	10.1.3
8.2.1	Ethane feedstock throughput monitoring	10.2.1
8.4.1	Record of the ethane product throughput	10.3.1

Section 9.0: Truck Loadout (14E)

Section 9.0 of this permit was written to include applicable requirements for the truck loadout (14E). All requirements for the truck loadout in this permit come from R13-3070A. This section's permit conditions and regulatory citations are summarized below:

Title V Condition Number	Summary of Condition Language	R13-3070A Condition Number
9.1.1	Maximum quantity of slop oil to be loaded	11.1.1
9.1.2	Truck loadout will be operated in accordance with the application for R13-3070A	11.1.2
9.4.1	Records of the amount of slop oil loaded	11.2.1
9.4.2	Retention and availability of records	11.2.2

Section 10.0: Storage Tanks (10E-13E)

Section 10.0 of this permit was written to include applicable requirements for the storage tanks (10E-13E). All requirements for the storage tanks in this permit come from R13-3070A. This section's permit conditions and regulatory citations are summarized below:

Title V Condition Number	Summary of Condition Language	R13-3070A Condition Number
10.1.1	Storage tank throughput limits	12.1.1
10.4.1	Records of tank throughput	12.2.1
10.4.2	Retention and availability of records	12.2.2

Non-Applicability Determinations

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

45CSR14—Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution for the Prevention of Significant Deterioration: The Oak Grove Natural Gas Processing Facility is located in Marshall County, WV. Marshall County is classified as "in attainment" with all National Ambient Air Quality Standards (NAAQS) except for, in certain tax districts, SO_2. The Clay Tax District, where the Moundsville facility is located, is classified as "non-attainment" for SO_2. Therefore, applicability to major New Source Review (NSR) for all pollutants except for SO_2 is determined under 45CSR14.

As the facility is not a "listed source" under 45CSR§14-2.43, the individual major source applicability threshold for all criteria pollutants (with the exception of SO_2) is 250 TPY. The facility-wide PTE of the Oak Grove Natural Gas Processing Facility is less than 250 TPY for all criteria pollutants. Therefore, the facility is not defined as a "major stationary source" under 45CSR14.

It is also important to note that the facility does not contain a "nested" major stationary source - in this case a secondary listed source: "Fossil Fuel Boilers (or combinations thereof) Totaling More than 250 Million Btu/hour Heat Input." All the natural-gas fired heaters would contribute to this 250 mmBtu/hr threshold. However, the aggregate MDHI of all the heaters is 223.36 mmBtu/hr. Therefore, no "nested" source is located at the Oak Grove Natural Gas Processing Facility.

45CSR19—Requirements for Pre-Construction Review, Determination of Emission Offsets for Proposed New or Modified Stationary Sources of Air Pollutants and Emission Trading for Intrasource Pollutants: Pursuant to 45CSR§19-3.1, 45CSR19 "applies to all major stationary sources and major modifications to major stationary sources proposing to construct anywhere in an area which is designated non-attainment." As noted above, the Oak Grove Natural Gas Processing Facility is located in Marshall County, WV which is classified as in attainment with all NAAQS; with the exception for SO_2 in the areas defined as the Clay (where the source is located), Washington, and Franklin Tax Districts. Pursuant to 45CSR§19-2.35, the individual major source applicability threshold for SO_2 is 100 TPY. The facility-wide SO_2 PTE of the Oak Grove Natural Gas Processing Facility is less than 100 TPY. Therefore, the facility is not defined as a "major stationary source" under 45CSR19.

40 CFR 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: Subpart Kb of 40 CFR 60 is the NSPS for storage tanks containing Volatile Organic Liquids (VOLs) for which construction commenced after July 23, 1984. The Subpart applies to storage vessels used to store volatile organic liquids with a capacity greater than or equal to 75 m^3 (19,813 gallons). None of the tanks at this facility have a capacity greater than 75 m^3, therefore this subpart does not apply.

40CFR 60 Subpart KKK—Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants: 40CFR60 Subpart KKK applies to onshore natural gas processing plants that commenced construction after January 20, 1984 and on or before August 23, 2011. The Oak Grove Natural Gas Processing Facility was constructed after August 23, 2011, therefore this subpart does not apply.

40 CFR 60, Subpart OOOO—Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution: The storage tanks located at the Oak Grove Natural Gas Processing Facility are exempt from Subpart OOOO as each of these tanks have potential VOC emissions less than 6 tons/year.

40 CFR 64—Compliance Assurance Monitoring: Since there are no pollutant-specific emission units at this facility with pre-control emissions greater than 100 TPY that use a control device to achieve compliance with an emission limitation or standard, CAM does not apply.

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: Wednesday, March 9, 2016
Ending Date: Friday, April 8, 2016

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.