

*West Virginia Department of Environmental Protection
Division of Air Quality*

*Earl Ray Tomblin
Governor*

*Randy C. Huffman
Cabinet Secretary*

**Class II General Permit
G70-A Registration to Construct**



for the
Prevention and Control of Air Pollution in regard to the
Construction, Modification, Relocation, Administrative Update and
Operation of Oil and Natural Gas Production Facilities
Located at the Well Site

*The permittee identified at the facility listed below is authorized to
construct the stationary sources of air pollutants identified herein in accordance
with all terms and conditions of General Permit G70-A.*

G70-A129

Issued to:

**Antero Resources Corporation
Zinn Wellpad
085-00044**

A handwritten signature in blue ink, appearing to read "William F. Durham", is written over a horizontal line.

*William F. Durham
Director*

Issued: February 27, 2015

This is a new Class II General Permit Registration.

Facility Location: West Union, Doddridge County, West Virginia
Mailing Address: 1615 Wynkoop Street, Denver, CO 80202
Facility Description: New construction of an oil and natural gas production facility
NAICS Code: 211111
SIC Code: 1311
UTM Coordinates: 505.3265 km Easting • 4,352.317 km Northing • Zone 17N
Longitude Coordinates: -80.938208
Latitude Coordinates: 39.320242
Directions to Facility: From the intersection of WV-74 N/ Mountain Dr and Marsh Run, head north on WV-74N and go 3.5 miles to reach destination on right.
Registration Type: Construction
Description of Change: New construction of an oil and natural gas production facility.

Subject to 40CFR60, Subpart OOOO? Yes.

Subject to 40CFR60, Subpart JJJJ? Yes, the engine is certified. Engine family is DKBXS.9622HP.

Subject to 40CFR63, Subpart ZZZZ? Yes, compliance is demonstrated by compliance with NSPS, Subpart JJJJ

Subject to 40CFR63, Subpart HH? No

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit or registration issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§ 22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §22-5-14.

The source is not subject to 45CSR30.

Permit Section Applicability for the Registrant

All registered facilities under General Permit G70-A are subject to Sections 1.0, 2.0, 3.0, and 4.0 of General Permit G70-A.

The following additional sections of General Permit G70-A apply to the registrant:

Section 5	Natural Gas Well Affected Facility	X
Section 6	Storage Vessels*	X
Section 7	Gas Production Units, In-Line Heaters, Heater Treaters, and Glycol Dehydration Reboilers	X
Section 8	Pneumatic Controllers Affected Facility (NSPS, Subpart OOOO)	<input type="checkbox"/>
Section 9	<i>Reserved</i>	<input type="checkbox"/>
Section 10	Natural Gas-Fired Compressor Engine (s) (RICE)**	X
Section 11	Tank Truck Loading Facility***	X
Section 12	Standards of Performance for Storage Vessel Affected Facilities (NSPS, Subpart OOOO)	<input type="checkbox"/>
Section 13	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (NSPS, Subpart JJJJ)	X
Section 14	Control Devices not subject to NSPS, Subpart OOOO	X
Section 15	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40CFR63, Subpart ZZZZ)	X
Section 16	Glycol Dehydration Units	<input type="checkbox"/>
Section 17	Dehydration Units With Exemption from NESHAP Standard, Subpart HH § 63.764(d) (40CFR63, Subpart HH)	<input type="checkbox"/>
Section 18	Dehydration Units Subject to NESHAP Standard, Subpart HH and Not Located Within an UA/UC (40CFR63, Subpart HH)	<input type="checkbox"/>
Section 19	Dehydration Units Subject to NESHAP Standard, Subpart HH and Located Within an UA/UC (40CFR63, Subpart HH)	<input type="checkbox"/>

* The registrant may also be subject to the applicable control device requirements of Section 12 if the registrant is subject to the NSPS, Subpart OOOO control requirements or may be subject to the control device requirements of Section 14.

** The registrant may also be subject to the applicable RICE requirements of Section 13 and/or Section 15.

*** The registrant may also be subject to the applicable control device requirements of Section 14.

1.0 Emission Units Table

Emission Unit ID	Emission Point ID	Emission Unit Description	Control Device ID	Year Installed / Modified	Max. Design Capacity	Design Capacity Unit of Measure	G70-A Applicable Sections
H001 - H0012	EP-H001 - EP-H012	Gas Processing Unit Heaters	None	New	1.5 (each)	MMBtu/hr	Section 7
TANKCOND001 - TANKCOND010	FL001	Condensate Tanks	FL001	New	400 (each)	Barrels	Section 6
TANKPW001 - TANKPW002	FL001	Produced Water Tanks	FL001	New	400 (each)	Barrels	Section 6
L001	EP-L001	Truck Loading (Condensate)	None	New	7.36	MMgal/yr	Section 11
L002	EP-L002	Truck Loading (Produced Water)	None	New	88.30	MMgal/yr	Section 11
FL001	FL001	Flare (Abutec-200)	N/A	New	138	SCFM	Section 14
ENG001	EP-ENG001	Compressor Engine (Kubota DG972-E2)	None	New	18.4 24	MMBtu/hr HP	Sections 10, 13, 15
Control Devices							
Control Device ID	Control Efficiency %	Control Device Description (Mfg, Model)	Year Installed / Modified	Max. Design Capacity	Design Capacity Unit of Measure	G-70A Applicable Sections	
FL001	98%	Flare (Abutec-200)	New	139	SCFM	Section 14	
Emission Reduction Systems						Yes or No	G-70A Applicable Sections
Was a vapor recovery system (VRU) used to determine emission limits?						No	N/A
Was a low pressure tower(s) used to determine emission limits?						No	N/A

2.0 Oil and Natural Gas Wells Table

API number	API number	API number
47-085-10169-00	9 wells not yet permitted by OOG	
47-085-10170-00		
47-085-10171-00		

3.0 Emission Limitations

Emission Unit ID	Emission Point ID	Emission Unit Description	Regulated Pollutant	Maximum Potential Emissions	
				Hourly (lb/hr)	Annual (tpy)
H001 - H012	EP-H001 - EP-H012	(12) Gas Processing Unit Heaters	NO _x	1.44	6.32
			CO	1.21	5.31
TANKCOND001- TANKCOND010 FL001	FL001	(10) Condensate Storage Tanks and Flare	Total VOCs	6.18	27.08
			Total HAPs	0.29	1.27
EP-L001	L001	Condensate Tank Truck Loading	Total VOCs	9.53	3.48
			Total HAPs	0.03	0.01
ENG001	EP-ENG001	Compressor Engine (Kubota DG972-E2)	CO	5.64	24.72
			NO _x	0.32	1.38
			Total VOCs	0.01	0.03
			Formaldehyde	0.01	0.02

4.0 Throughput Limitations

Throughput limits are on a 12-month rolling total basis.

Emission Unit ID	Emission Point ID	Emission Unit Description	Annual Throughput Limit
L001	EP-L001	Condensate Tank Truck Loading	7,358,400 gallons/yr

5.0 Reciprocating Internal Combustion Engines (R.I.C.E.) Information

Emission Unit ID	Engine Manufacturing Date	Subject to 40CFR60, Subpart JJJJ?	Subject to 40CFR63, Subpart ZZZZ?	Subject to Sections 10.1.4 / 10.2.1 (Catalytic Reduction Device)
ENG001	2013	Yes	Yes	No