

*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-A134

Issued to:

**Antero Resources Corporation
Ireland North Wellpad
085-00045**

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

*William F. Durham
Director*

Issued: March 17, 2015

Facility Location: near Pullman, Ritchie County, West Virginia
Mailing Address: 1615 Wynkoop Street
Denver, CO 80202
Facility Description: Natural Gas/Condensate Production Facility
NAICS Code: 211111
SIC Code: 1311
UTM Coordinates: 508.712 km Easting • 4,335.973 km Northing • Zone 17
Longitude Coordinate: -80.89915
Latitude Coordinate: 39.17294
Directions to Facility: From US 50 travel south on CR 74 until you just reach Pullman. In Pullman turn left onto CR 9 (Harrisville-Pull Oxford Road). Travel 1.8 miles past CR 9/12 (White Oak Rd.) until you reach Possum Run Rd. Turn right onto Possum Run Rd. and travel approximately 2.6 miles until you reach the access road which will be on the left. The facility is at the end of the access road.
Registration Type: Construction
Description of Change: Installation and operation of: eleven (11) 1.5-MMBtu/hr GPU heaters, ten (10) 400-bbl condensate tanks, two (2) 400-bbl produced water tanks, one (1) 24-bhp compressor engine, and one (1) 18.4-MMBTU/hr vapor combustor.

Subject to 40CFR60, Subpart OOOO? Yes, gas well affected facility.

Subject to 40CFR60, Subpart JJJJ? Yes, engine ENG001 is subject to this regulation and ENG001 is certified.

Subject to 40CFR63, Subpart ZZZZ? Yes, engine ENG001 is subject to this regulation, but all engines will demonstrate compliance through subpart JJJJ requirements.

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	<input checked="" type="checkbox"/>
Section 6	Storage Vessels*	<input checked="" type="checkbox"/>
Section 7	Gas Production Units, In-Line Heaters, Heater Treaters, and Glycol Dehydration Reboilers	<input checked="" type="checkbox"/>
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)**	<input checked="" type="checkbox"/>
Section 11	Tank Truck Loading Facility***	<input checked="" type="checkbox"/>
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)	<input checked="" type="checkbox"/>
Section 14	Control Devices not subject to NSPS, Subpart OOOO	<input checked="" type="checkbox"/>
Section 15	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40CFR63, Subpart ZZZZ)	<input checked="" type="checkbox"/>
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 (Mfg., Model, Serial No., Engine type 2SLB, 4SLB, 4SRB, etc.)	Control Device ID	Year Installed / Modified	Max. Design Capacity	Design Capacity Unit of Measure	G70-A Applicable Sections
EU-H001 Through EU-H011	EP-H001 Through EP-H011	GPU Heaters	N/A	2014	1.5 (each)	MMBtu/hr	7
ENG001	EP-ENG001	Compressor Engine Kubota DG972-E2	None	2014	24	bhp	10, 13, 15
TANKCOND 001-010	FL001	Ten (10) Condensate Tanks	FL001	2014	400 (each)	BBL	6
TANKPW 001-002	FL001	Two (2) Produced Water Tanks	FL001	2014	400 (each)	BBL	6
EU-L001 and EU-L002	EP-L001 And EP-L002	Condensate and Produced Water Truck Loading	None	2014	8,431,500 and 101,178,000 respectively	gallons/year	11, 14
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%	Abutec-200 Combustor Controlling TANKCOND and TANKPW	2014	18.4	MMBtu/hr	12, 14	
Emission Reduction Systems						Yes or No	G-70A Applicable Sections
Was a vapor recovery system (VRU) used to determine emission limits?						No	-
Was a low pressure tower(s) used to determine emission limits?						No	-

2.0 Oil and Natural Gas Wells Table

API number	API number
047-085-10172-00	047-085-10173-00

3.0 Emission Limitations

Emission Unit ID	Emission Point ID	Emission Unit Description	Regulated Pollutant	Maximum Potential Emissions	
				Hourly (lb/hr)	Annual (tpy)
ENG001	EP-ENG001	Kubota DG972-E2 Compressor Engine	Nitrogen Oxides	0.32	1.39
			Carbon Monoxide	5.65	24.73
			Volatile Organic Compounds	0.01	0.03
TANKCOND 001-010 and TANKPW 001-002	FL001	AbuTec-200 Combustor (Controlling Condensate Tanks and Produced Water Tanks)	Nitrogen Oxides	0.51	2.22
			Carbon Dioxide	0.43	1.86
			Volatile Organic Compounds	7.06	30.93
			PM ₁₀	0.04	0.17
			n-Hexane	0.30	1.30
EU-H001 Through EU-H011	EP-H001 Through EP-H011	GPU Heaters	Nitrogen Oxides	1.33	5.80
			Carbon Monoxide	1.12	4.87

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
EU-L001	EP-L001	Condensate Truck Loading	8,431,500 gallons/year
EU-L002	EP-L002	Produced Water Truck Loading	101,178,000 gallons/year

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