

*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-A111**

Issued to:  
**Antero Resources Corporation**  
**Mulvay Wellpad**  
**085-00040**

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

*William F. Durham  
Director*

*Issued: February 11, 2015 • Effective: February 11, 2015*

Facility Location: near Pennsboro, 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: 508.697 km Easting • 4,352.581 km Northing • Zone 17  
Longitude Coordinate: -80.8991  
Latitude Coordinate: 39.3226  
Directions to Facility: From US 50 turn right onto SR 74 north. Travel on SR 74 north until CR 74/5. Turn right onto 74/5 (Burton Run Road) and travel until you reach Short Run Road. Going left onto Short Run Road travel for approximately 0.3 miles, the access road to the facility will be on the left.  
Registration Type: Construction  
Description of Change: Installation and operation of: nine (9) 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.*

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*The source is not subject to 45CSR30.*

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### 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-H009	EP-H001 Through EP-H009	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	5,519,000 and 66,225,600 respectively	gallons/year	11, 14
<b>Control Devices</b>							
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%	Cimarron Combustor Controlling TANKCOND and TANKPW	2014	18.4	MMBtu/hr	12, 14	
<b>Emission Reduction Systems</b>						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 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	Cimarron Combustor controlling Condensate Tanks and Produced Water Tanks	Nitrogen Oxides	0.46	2.00
			Carbon Dioxide	0.39	1.68
			Volatile Organic Compounds	6.94	30.40
			n-Hexane	1.21	5.29
EU-H001 Through EU-H009	EP-H001 Through EP-H009	GPU Heaters	Nitrogen Oxides	1.05	4.57
			Carbon Monoxide	0.88	3.84
			Volatile Organic Compounds	0.06	0.26
			PM <sub>10</sub>	0.08	0.35

## 3.0 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	5,519,000 gallons/year
EU-L002	EP-L002	Produced Water Truck Loading	66,225,000 gallons/year

## 4.0 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