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**west virginia department of environmental protection**

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Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304  
Phone 304/926-0475

Earl Ray Tomblin, Governor  
Randy C. Huffman, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

March 20, 2015

CERTIFIED MAIL  
91 7199 9991 7032 6259 8369

Barry Schatz  
1615 Wynkoop Street  
Denver, CO 80202

RE: Approved Registration G70-A  
G70-A118A  
Antero Resources Corporation  
Kelly Wellpad  
Facility ID No. 085-00043

Dear Mr. Schatz,

The Director has determined that the submitted Registration Application and proposed modification and operation of an oil and natural gas production facility demonstrates eligibility and compliance with the requirements, provisions, standards and conditions of General Permit G70-A and hereby grants General Permit registration authorizing the proposed activity.

General Permit G70-A can be accessed electronically at [www.dep.wv.gov/daq/permitting/Pages/airgeneralpermit.aspx](http://www.dep.wv.gov/daq/permitting/Pages/airgeneralpermit.aspx). Hard copies are available upon request by contacting Danielle Wentz at (304)926-0499 ext. 1193.

Please be aware of the actions required in Monitoring Requirements, Testing Requirements, Recordkeeping Requirements, and the Reporting Requirements.

Should you have any questions, please contact the undersigned engineer at (304)926-0499 ext. 1224 or [David.J.Keatley@wv.gov](mailto:David.J.Keatley@wv.gov).

Sincerely,



David Keatley  
Permit Writer - NSR Permitting

Enclosures: Registration G70-A118A

*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 Class I  
Administrative Update**



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-A118A**

**Issued to:  
Antero Resources Corporation  
Kelly Wellpad  
085-00043**

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

*William F. Durham  
Director*

*Issued: March 20, 2015*

This Class II General Permit Registration will supersede and replace G70-A118.

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: 503.218 km Easting • 4,351.659 km Northing • Zone 17  
Longitude Coordinate: -80.96267  
Latitude Coordinate: 39.31432  
Directions to Facility: From US 50 take WV 74 north. The facility is north of town approximately 1.7 miles north of McDougal Drive. The facility will be on the left.  
Registration Type: Class I Administrative Update  
Description of Change: Correcting the condensate and produce water throughputs in section 1.0 of the permit registration.

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	Reserved	<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-H006	EP-H001 Through EP-H006	GPU Heaters	N/A	2015	1.5 (each)	MMBtu/hr	7
ENG001	EP-ENG001	Compressor Engine Kubota DG972-E2	None	2015	24	bhp	10, 13, 15
TANKCOND 001-004	FL001	Four (4) Condensate Tanks	FL001	2015	400 (each)	BBL	6
TANKPW 001-002	FL001	Two (2) Produced Water Tanks	FL001	2015	400 (each)	BBL	6
EU-L001 and EU-L002	EP-L001 And EP-L002	Condensate and Produced Water Truck Loading	None	2015	3,679,200 and 44,150,400 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%	Abutec-200 Combustor (Controlling TANKCOND and TANKPW)	2015	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 Oil and Natural Gas Wells Table

API number	API number	API number
047-085-10161-00	047-085-10162-00	047-085-10168-00

### 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 001-004 and TANKPW 001-002	FL001	Abutec-200 Combustor  (Controlling Condensate Tanks and Produced Water Tanks)	Nitrogen Oxides	0.30	1.31
			Carbon Dioxide	0.26	1.10
			Volatile Organic Compounds	4.52	19.80
			n-Hexane	0.81	3.52
			PM <sub>10</sub>	0.03	0.10
EU-H001 Through EU-H006	EP-H001 Through EP-H006	GPU Heaters	Nitrogen Oxides	0.70	3.05
			Carbon Monoxide	0.59	2.56
			Volatile Organic Compounds	0.04	0.17

### 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	3,679,200 gallons/year
EU-L002	EP-L002	Produced Water Truck Loading	44,150,400 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