



west virginia department of environmental protection

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

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

October 14, 2015

CERTIFIED MAIL
91 7199 9991 7035 6613 6052

Barry Schatz
1615 Wynkoop Street
Denver, CO 80202

RE: Approved Registration G70-A057A
Antero Resources Corporation
Fritz Wellpad
Facility ID No. 017-00107

Dear Mr. Schatz:

The Director has determined that the submitted Registration Application and proposed construction 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. 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. 1222 or Roy.F.Kees@wv.gov.

Sincerely,

Roy F. Kees, P.E.
Engineer - NSR Permitting

Enclosures: Registration G70-A057A

*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 Modify**



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-A057A

Issued to:

**Antero Resources Corporation
Fritz Well Pad
017-00107**

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

*William F. Durham
Director*

Issued: October 14, 2015

This General Permit Registration will supersede and replace G70-A057

Facility Location: West Union, Doddridge County, West Virginia
Mailing Address: 1615 Wynkoop Street, Denver, CO 80202
Facility Description: Natural Gas Production
NAICS Code: 211111
SIC Code: 1311
UTM Coordinates: 513.810 km Easting • 4,342.77 km Northing • Zone 17
Longitude Coordinates: -80.83998
Latitude Coordinates: 39.23415
Directions to Facility: At the intersection of Harrisville-Pullman Oxford Road / C/R 9 and Right Fork White Oak Road, turn right on Harrisville-Pullman Oxford Road / C/R 9 and go for 3.4 miles. Entrance to the facility will be on the left.
Registration Type: Modification
Description of Change: Modification by increasing condensate production, adding one well, one GPU, nine line heaters, two condensate tanks and three enclosed combustors..

Subject to 40CFR60, Subpart OOOO? Yes

Subject to 40CFR60, Subpart JJJJ? Yes, Certified

Subject to 40CFR63, Subpart ZZZZ? Subpart JJJJ Req's Only

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
H001	EP-H001	Heater Treater	--	2014	1.5	mmBtu/hr	7
H002	EP-H002	Heater Treater	--	2014	1.5	mmBtu/hr	7
H003	EP-H003	Heater Treater	--	2014	1.5	mmBtu/hr	7
H004	EP-H004	Heater Treater	--	2014	1.5	mmBtu/hr	7
H005	EP-H005	Heater Treater	--	2014	1.5	mmBtu/hr	7
H006	EP-H006	Heater Treater	--	2014	1.5	mmBtu/hr	7
H007	EP-H007	Heater Treater	--	2014	1.5	mmBtu/hr	7
H008	EP-H008	Heater Treater	--	2014	1.5	mmBtu/hr	7
H009	EP-H009	Heater Treater	--	2015	1.5	mmBtu/hr	7
LH001	EP-LH001	Line Heater	--	2015	2.0	mmBtu/hr	7
LH002	EP-LH002	Line Heater	--	2015	2.0	mmBtu/hr	7
LH003	EP-LH003	Line Heater	--	2015	2.0	mmBtu/hr	7
LH004	EP-LH004	Line Heater	--	2015	2.0	mmBtu/hr	7
LH005	EP-LH005	Line Heater	--	2015	2.0	mmBtu/hr	7
LH006	EP-LH006	Line Heater	--	2015	2.0	mmBtu/hr	7
LH007	EP-LH007	Line Heater	--	2015	2.0	mmBtu/hr	7
LH008	EP-LH008	Line Heater	--	2015	2.0	mmBtu/hr	7
LH009	EP-LH009	Line Heater	--	2015	2.0	mmBtu/hr	7
TANKCOND001	EC001-004	Cond. Tank	EC001-004	2014	400	Bbl	6 & 14
TANKCOND002	EC001-004	Cond. Tank	EC001-004	2014	400	Bbl	6 & 14
TANKCOND003	EC001-004	Cond. Tank	EC001-004	2014	400	Bbl	6 & 14
TANKCOND004	EC001-004	Cond. Tank	EC001-004	2014	400	Bbl	6 & 14
TANKCOND005	EC001-004	Cond. Tank	EC001-004	2014	400	Bbl	6 & 14
TANKCOND006	EC001-004	Cond. Tank	EC001-004	2014	400	Bbl	6 & 14
TANKCOND007	EC001-004	Cond. Tank	EC001-004	2014	400	Bbl	6 & 14
TANKCOND008	EC001-004	Cond. Tank	EC001-004	2014	400	Bbl	6 & 14
TANKCOND009	EC001-004	Cond. Tank	EC001-004	2015	400	Bbl	6 & 14
TANKCOND010	EC001-004	Cond. Tank	EC001-004	2015	400	Bbl	6 & 14
TANKPW001	EC001-004	P. Water Tank	EC001-004	2014	400	Bbl	6 & 14

TANKPW002	EC001-004	P. Water Tank	EC001-004	2014	400	Bbl	6 & 14
E001	E001	Kubota DG972-E2 Engine	--	2014	23.6	Hp	10, 13, 15
L001	EP-L001	Cond. Loading	N/A	2014	13,797,000	Gal/year	11
Control Devices (If applicable)							
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	
EC001	98	Cimmaron Model 48" HV ECD Flare	2014	90	Scfm	14	
EC001	98	Cimmaron Model 48" HV ECD Flare	2015	90	Scfm	14	
EC001	98	Cimmaron Model 48" HV ECD Flare	2015	90	Scfm	14	
EC001	98	Cimmaron Model 48" HV ECD Flare	2015	90	Scfm	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	API number
047-017-06370-00	(5) Wells Not Yet Permitted	
047-017-06371-00		
047-017-06464-00		
047-017-06465-00		

3.0 Emission Limitations

Emission Unit ID	Emission Point ID	Emission Unit Description	Regulated Pollutant	Maximum Potential Emissions	
				Hourly (lb/hr)	Annual (tpy)
H001-H009	EP-H001-H009	(9) 1.5mmBtu/hr GPU Heaters	Nitrogen Oxides	1.11	4.85
			Carbon Monoxide	0.93	4.08
LH001-LH009	EP-LH001-LH009	(9) 2.0mmBtu/hr Line Heaters	Nitrogen Oxides	1.48	6.47
			Carbon Monoxide	1.24	5.43
TANKC OND001 1-010	EC001-004	(10) 400 BBL Condensate Tanks & Enclosed Combustors	Volatile Organic Compounds	4.68	20.49
			Total HAPs	0.46	2.04
			Nitrogen Oxides	0.43	1.88
			Carbon Monoxide	0.36	1.58

L001	EP-L001	Condensate Truck Loading	Volatile Organic Compounds	14.49	9.92
			Total HAPs	0.05	0.03
E001	E001	Kubota DG972-E2 Compressor Engine 23.6 hp	Nitrogen Oxides	0.32	1.38
			Carbon Monoxide	5.64	24.72
			Volatile Organic Compounds	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 Truck Loading	13,797,000 gal/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)
E001	2013	Yes	Yes	Yes