



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

September 15, 2015

CERTIFIED MAIL
91 7199 9991 7035 6611 2964

Barry Schatz
1615 Wynkoop Street
Denver, CO 80202

RE: Approved Registration G70-A028C
Antero Resources Corporation
Primm Pad
Facility ID No. 017-00091

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. 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-A028C

*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-A028C

Issued to:
Antero Resources Corporation
Primm Pad
017-00091

A blue ink signature of William F. Durham, written in a cursive style, positioned above a horizontal line.

*William F. Durham
Director*

Issued: September 15, 2015

This Class II General Permit Registration will supersede and replace G70-A028B.

Facility Location: Greenwood, Doddridge County, West Virginia
Mailing Address: 1615 Wynkoop St.
Denver, CO 80202
Facility Description: Natural Gas Production
NAICS Code: 211111
SIC Code: 1311
UTM Coordinates: 512.722 km Easting • 4,343.594 km Northing • Zone 17
Longitude Coordinates: -80.852583
Latitude Coordinates: 39.241562
Directions to Facility: From Clarksburg, head west on US-50 for 29 miles. Turn left onto C/R 50/30 and continue south for approximately 2 miles. Turn left onto C/R 21 / Oxford Road and continue south. The Primm site is on your left, approximately 1.4 miles south of the intersection of C/R 50/30 & C/R 21.
Registration Type: Modification
Description of Change: Increase condensate throughput, add eight line heaters and three enclosed combustors.

Subject to 40CFR60, Subpart OOOO? Yes

Subject to 40CFR60, Subpart JJJJ? Yes

Subject to 40CFR63, Subpart ZZZZ? Yes, engine ENG001 has to meet 40CFR60 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 checked="" 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
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
TANKCOND001	FL-001	Condensate Tank	EC001-004	2014	400	Bbl	6 & 14
TANKCOND002	FL-001	Condensate Tank	EC001-004	2014	400	Bbl	6 & 14
TANKCOND003	FL-001	Condensate Tank	EC001-004	2014	400	Bbl	6 & 14
TANKCOND004	FL-001	Condensate Tank	EC001-004	2014	400	Bbl	6 & 14
TANKCOND005	FL-001	Condensate Tank	EC001-004	2014	400	Bbl	6 & 14
TANKCOND006	FL-001	Condensate Tank	EC001-004	2014	400	Bbl	6 & 14
TANKCOND007	FL-001	Condensate Tank	EC001-004	2014	400	Bbl	6 & 14
TANKCOND008	FL-001	Condensate Tank	EC001-004	2014	400	Bbl	6 & 14
TANKCOND009	FL-001	Condensate Tank	EC001-004	2015	400	Bbl	6 & 14
TANKCOND010	FL-001	Condensate Tank	EC001-004	2015	400	Bbl	6 & 14
TANKPW001	FL-001	Produced Water Tank	EC001-004	2014	400	Bbl	6 & 14
TANKPW002	FL-0001	Produced Water Tank	EC001-004	2014	400	Bbl	6 & 14

ENG001	EP-ENG001	Kubota DG97-E2	None	2014	24	bhp	10, 13 & 15
L001	EP-L001	Condensate Loading	N/A	2014	24,528,000	Gal/year	11
L002	EP-L002	Produced Water Loading	N/A	2014	49,056,000	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
EC-001	98	Cimmaron Model No. 48" ECD	2013	131,000	scfd	14
EC-002	98	Cimmaron Model No. 48" ECD	2015	131,000	scfd	14
EC-003	98	Cimmaron Model No. 48" ECD	2015	131,000	scfd	14
EC-004	98	Cimmaron Model No. 48" ECD	2015	131,000	scfd	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
047-017-06192	047-017-06190	047-017-06563
047-017-06193	047-017-06191	047-017-06564
047-017-06561	047-017-06562	

3.0 Emission Limitations

Emission Unit ID	Emission Point ID	Emission Unit Description	Regulated Pollutant	Maximum Potential Emissions	
				Hourly (lb/hr)	Annual (tpy)
H001-H008	EP-H001-H008	(8) 1.5 mmBtu/hr Heater Treaters	Nitrogen Oxides	0.96	4.22
			Carbon Monoxide	0.81	3.54
LH001-LH008	EP-LH001-LH008	(8) 2.0 mmBtu/hr Line Heaters	Nitrogen Oxides	1.28	5.62
			Carbon Monoxide	1.08	4.72
TANKCO ND1-10	EC001-004	(10) 400 BBL Condensate Tanks & Enclosed Combustor(s)	Volatile Organic Compounds	9.85	43.16
			Total HAPs	0.38	1.67
			Nitrogen Oxides	0.59	2.58
			Carbon Monoxide	0.49	2.16
ENG001	EP-ENG001	Kubota DG972-E2 Compressor	Nitrogen Oxides	0.32	1.38
			Carbon Monoxide	5.64	24.72
			Volatile Organic Compounds	0.01	0.03
			Formaldehyde	--	0.02
L001	EP-L001	Condensate Truck Loading	Volatile Organic Compounds	10.14	12.34
			Total HAPs	0.03	0.04

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	24,528,000 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 (JJJJ Requirements Only)	No