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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)

November 4, 2015

CERTIFIED MAIL  
91 7199 9991 7035 6613 6113

Barry Schatz  
1615 Wynkoop Street  
Denver, CO 80202

RE: Approved Registration G70-A073B  
Antero Resources Corporation  
Weigle East Pad  
Facility ID No. 095-00045

Dear Mr. Schatz:

The Director has determined that the submitted Registration Application and proposed update 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. 1222 or [Roy.F.Kees@wv.gov](mailto:Roy.F.Kees@wv.gov).

Sincerely,

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

Enclosures: Registration G70-A073B  
c. Elizabeth McLaughlin

*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 Update**

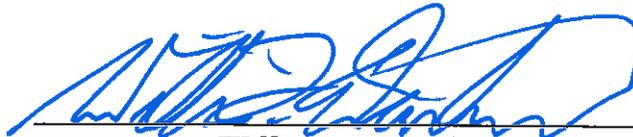


for the  
Prevention and Control of Air Pollution in regard to the  
Construction, Modification, Relocation, Administrative Update and  
Operation of Oil and Natural Gas Production Facilities  
Located at the Well Site

*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-A073B**

Issued to:  
**Antero Resources Corporation**  
**Weigle East Wellpad**  
**095-00045**

  
\_\_\_\_\_  
*William F. Durham*  
Director

*Issued: November 4, 2015*

This Class II General Permit Registration will supersede and replace G70-A073A.

Facility Location: Middlebourne, Tyler County, West Virginia  
Mailing Address: 1615 Wynkoop Street, Denver, CO 80202  
Facility Description: New construction of an oil and natural gas production facility  
NAICS Code: 211111  
SIC Code: 1311  
UTM Coordinates: 512.6638 km Easting • 4,368.527 km Northing • Zone 17N  
Longitude Coordinates: -80.852782  
Latitude Coordinates: 39.46623  
Directions to Facility: From Middlebourne, travel on WV-18 south for 3.7 miles. Turn right onto Lemasters Bridge Road (Rt. 18/14) for 0.3 miles then turn right and continue for ~0.5 miles to the site.  
Registration Type: Class II Administrative Update  
Description of Change: Addition of one VRU engine, fourteen line heaters and one thermoelectric generator.

Subject to 40CFR60, Subpart OOOO? Yes.

Subject to 40CFR60, Subpart JJJJ? Yes, the engines are certified.

Subject to 40CFR63, Subpart ZZZZ? Yes, compliance is demonstrated by compliance with NSPS, Subpart JJJJ

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	X
Section 6	Storage Vessels*	X
Section 7	Gas Production Units, In-Line Heaters, Heater Treaters, and Glycol Dehydration Reboilers	X
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)**	X
Section 11	Tank Truck Loading Facility***	X
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)	X
Section 14	Control Devices not subject to NSPS, Subpart OOOO	X
Section 15	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40CFR63, Subpart ZZZZ)	X
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	Control Device ID	Year Installed / Modified	Max. Design Capacity	Design Capacity Unit of Measure	G70-A Applicable Sections
H001 - H014	EP-H001 - EP-H014	Gas Processing Unit Heater	None	2014-15	1.5 (each)	MMBtu/hr	Section 7
LH001 - LH014	EP-LH001 - EP-LH014	Line Heater	None	2015	2.0 (each)	MMBtu/hr	Section 7
TEG001	EP-TEG001	Thermoelectric Generator	None	2015	0.02 (each)	MMBtu/hr	Section 7
TANKCOND001 - TANKCOND010	EC001-004	Condensate Tank	EC001-004	2014	400 (each)	Barrels	Section 6
TANKPW001-002	EC001-004	Produced Water Tank	EC001-004	2014	400 (each)	Barrels	Section 6
L001	EP-L001	Truck Loading (Condensate)	None	2014	42.9	MMgal/yr	Section 11
L002	EP-L002	Truck Loading (Produced Water)	None	2014	85.8	MMgal/yr	Section 11
ENG001-002, 005	EP-ENG001-002, 005	Compressor Engine Zenith ZPP 422	NSCR	2015	72	HP	Sections 10, 13, 15
ENG003-004	EP-ENG003-004	Compressor Engine Zenith ZPP 644	NSCR	2015	98	HP	Sections 10, 13, 15
<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	
EC001-004	98%	(4) Flare (Cimmaron 48"; Model 700-TI-603-D-31C)	2014-15	90	SCFM	Section 14	
<b>Emission Reduction Systems</b>						Yes or No	G-70A Applicable Sections
Was a vapor recovery system (VRU) used to determine emission limits?						Yes	10,13,15
Was a low pressure tower(s) used to determine emission limits?						Yes	14

**2.0 Oil and Natural Gas Wells Table**

API number	API number	API number
47-095-02169-00	47-095-02182-00	
47-095-02172-00	47-095-02181-00	
47-095-02173-00	(7) Wells Not Permitted	
47-095-02174-00		
47-095-02183-00		

**3.0 Emission Limitations**

Emission Unit ID	Emission Point ID	Emission Unit Description	Regulated Pollutant	Maximum Potential Emissions	
				Hourly (lb/hr)	Annual (tpy)
H001 –H014	EP-H001 – EP-H014	(14) Gas Processing Unit Heaters	NO <sub>x</sub>	1.72	7.55
			CO	1.45	6.34
LH001 –LH014	EP-LH001 – EP-LH014	(14) Line Heaters	NO <sub>x</sub>	2.30	10.06
			CO	1.93	8.45
TANKCOND001-TANKCOND010	EC001-004	(10) Condensate Storage Tanks and Combustors	Total VOCs	8.27	36.22
			Total HAPs	0.51	2.26
			Nitrogen Oxides	0.50	2.20
			Carbon Monoxide	0.42	1.85
EP-L001	L001	Condensate Tank Truck Loading	Total VOCs	15.78	33.59
			Total HAPs	0.07	0.16
ENG001-002, 005	EP-ENG001-002, 005	(3) Compressor Engines (Zenith ZPP 422)	CO	1.56	6.84
			NO <sub>x</sub>	0.96	4.19
			Total VOCs	0.07	0.29
			Formaldehyde	0.05	0.20
ENG003-004	EP-ENG003-004	(2) Compressor Engines (Zenith ZPP 644)	CO	1.42	6.21
			NO <sub>x</sub>	0.87	3.80
			Total VOCs	0.06	0.25
			Formaldehyde	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
L001	EP-L001	Condensate Tank Truck Loading	42,924,000 gallons/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)
ENG001-002, 005	2013	Yes	Yes	Yes
ENG003-004	2013	Yes	Yes	Yes

