

*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 Modification Registration**



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-A007A

Issued to:
Antero Resource Corporation
Graff Pad
095-00032

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

*William F. Durham
Director*

Issued: February 26, 2015

Facility Location: near Alma, Tyler County, West Virginia
Mailing Address: 1625 17th Street, Denver, CO 80202
Facility Description: Natural gas production facility
NAICS Code: 211111
SIC Code: 1311
UTM Coordinates: 512.97987 km Easting • 4,364.64029 km Northing • Zone 17
Longitude Coordinates: -80.849183
Latitude Coordinates : 39.431203
Directions to Facility: At the intersection of WV-18N and Co Rd 48/Conway Run Rd turn left to Co Rd 48
Conway Run Rd for approximately 0.54 miles.
Registration Type: Construction
Description of Change: Modifications include addition of two (2) natural gas wells, two (2) GPU heaters, four (4)
condensate storage tanks, and one (1) compressor engine.

Subject to 40CFR60, Subpart OOOO? Yes, Gas Wells

Subject to 40CFR60, Subpart JJJJ? Yes, Kubota 24 HP Engine DG972E2 is certified.

Subject to 40CFR63, Subpart ZZZZ? Yes, Compliance demonstrated by NSPS, Subpart JJJJ.

Subject to 40CFR63, Subpart HH? No TEG Dehydration Unit

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 – H003	EP-H001 – EP-H003	GPU Heaters	N/A	2014	1.5	MMBtu/hr	Section 7
TANKCOND 001-006	FL001	Condensate Tanks	FL001	2013	400	bbl (each)	Section 6 Section 14
TANKPW001-002	FL001	Produced Water Tanks	FL001	2013	400	bbl (each)	Section 6 Section 14
L001	EP-L001	Condensate Loading	N/A	2013	4,599,000	gal/yr	Section 11
L002	EP-L002	Produced Water Loading	N/A	2013	55,188,000	gal/yr	Section 11
ENG001	EP-ENG001	Kubota DG972-E2 Compressor Engine (Engine Family: DKBXS.9622HP)	None	2015	24	HP	Sections 10, 13, and 15
FL001	FL001	Vapor Combustor 48" Cimarron, Model No. 700-TI-603-D-31C	N/A	2013	131,000	scf/day	Section 14
Control Devices							
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%	48" Cimarron Vapor Combustor Model No. 700-TI-603-D-31C	2013	131,000	scf/day	Section 14	
Emission Reduction Systems						Yes or No	G-70A Applicable Sections
Was a vapor recovery system (VRU) used to determine emission limits?						No	N/A
Was a low pressure tower(s) used to determine emission limits?						No	N/A

2.0 Oil and Natural Gas Wells Table

API number	API number	API number
0479502063		
2 wells not yet permitted by OOG		

3.0 Emission Limitations

Emission Unit ID	Emission Point ID	Emission Unit Description	Regulated Pollutant	Maximum Potential Emissions	
				Hourly (lb/hr)	Annual (tpy)
H001 - H003	EP-H001 - EP-H003	GPU Heaters	Nitrogen Oxides (NOx)	0.37	1.61
			Carbon Monoxide (CO)	0.31	1.36
			Volatile Organic Compounds (VOC)	0.02	0.09
			PM10/PM2.5	0.03	0.12
FL001	FL001	Vapor Combustor	Nitrogen Oxides (NOx)	0.40	1.73
			Carbon Monoxide (CO)	0.33	1.45
			Volatile Organic Compounds (VOC)	5.11	22.39
			PM10/PM2.5	0.03	0.13
			Total Hazardous Air Pollutants (HAPs)	0.24	1.06
L001	EP-L001	Condensate Loading	Volatile Organic Compounds (VOC)	6.30	1.44
			Total Hazardous Air Pollutants (HAPs)	0.03	0.01
ENG001	EP-ENG001	Compressor Engine	Nitrogen Oxides (NOx)	0.32	1.38
			Carbon Monoxide (CO)	5.64	24.72
			Volatile Organic Compounds (VOC)	0.01	0.03
			Total Hazardous Air Pollutants (HAPs)	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
H001	EP-H001	1.5 MMBtu/hr Heater	31.5 MMscf/yr
TANKCON001-006	FL001	400 bbl Condensate Tanks	4,599,000 gal Condensate/yr
L001	EP-L001	Condensate Loading	4,599,000 gal Condensate/yr
FL001	FL001	Vapor Combustor	34.63 MMscf/yr (Waste and Pilot gas)

5.0 Reciprocating Internal Combustion Engines (R.I.C.E.) Information (N/A)

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