



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 5, 2015

CERTIFIED MAIL
91 7199 9991 7034 1379 8167

Paul Gieger
Senior Vice President Ops Management
SWN Production Company, LLC
1000 Energy Drive
Spring, TX 77389

RE: Approved Registration G70-A166
SWN Production Company, LLC
Ridgetop Land Ventures Wellpad
Facility ID No. 103-00105

Dear Mr. Gieger:

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. 1211 or W.Tracy.Rothwell@wv.gov.

Sincerely,

William T. Rothwell II, P.E.
Engineer

Enclosures: Registration G70-A166

*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 Construct**

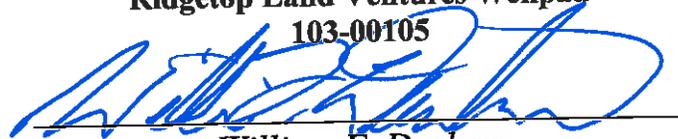


for the
Prevention and Control of Air Pollution in regard to the
Construction, Modification, Relocation, Administrative Update and
Operation of Oil and Natural Gas Production Facilities
Located at the Well Site

*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-A166

Issued to:
**SWN Production Company, LLC
Ridgetop Land Ventures Wellpad
103-00105**



*William F. Durham
Director*

Issued: October 5, 2015

Facility Location: New Martinsville, Wetzel County, West Virginia
Mailing Address: 10000 Energy Drive
Spring, TX 77389
Facility Description: Natural Gas Well Pad
NAICS Code: 211111
SIC Code: 1311
UTM Coordinates: 528.013 km Easting • 4,390.714 km Northing • Zone 17S
Longitude Coordinates: -80.673410°
Latitude Coordinates: 39.665780°
Directions to Facility: From the Route 7 Staging area, take Brock Ridge (CR1/15) for 4 miles to the intersection with route 89. Turn right on Route 89 and travel 2 miles to Hollman Ridge (CR 1/17). Turn right on Hollman Ridge and travel 0.6 miles, then veer right onto Harland Ridge Road (CR1-19) and follow 0.7 miles and entrance is on the left.
Registration Type: Construction
Description of Change: SWN Production Company, LLC is constructing a new Natural Gas Well Pad at this Location.

Subject to 40CFR60, Subpart OOOO? Yes

Subject to 40CFR60, Subpart JJJJ? Yes. The Zenith engine is certified, but the two Caterpillar engines and the GM Vortec Engine are not certified.

Subject to 40CFR63, Subpart ZZZZ? Yes, compliance is demonstrated by complying with all relevant parts in 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.

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
EU-ENGINE1	EP-ENGINE1	Caterpillar 3306 NA Engine	NCSR	2015	145	hp	10, 13, 15
EU-ENGINE2	EP-ENGINE2	Caterpillar 3306 NA Engine	NCSR	2015	145	hp	10, 13, 15
VRU-1	VRU-1	GM Vortec 5.7L NA Engine	NCSR	2015	92.0	hp	10, 13, 15
VRU-2	VRU-2	Zenith ZPP-644 4.4L 6 Cylinder Engine	NCSR	2015	77.0	hp	10, 13, 15
EU-GPU 1-5	EP-GPU 1-5	(5) GPU Burners	---	2015	1.0	mmBTU/hr	7
EU-HT 1&2	EP-HT 1&2	(2) Heater Treater	---	2015	0.5	mmBTU/hr	7
EU-TANKS-COND	EP-TANKS-COND	Four (4) Condensate Tanks	APC-VRU1 APC-VRU2 APC-COMB-TKLD	2015	400	bbl Each	6, 14
EU-TANKS-PW	EP-TANKS-PW	Four (4) Produced Water Tanks	APC-VRU1 APC-VRU2 APC-COMB-TKLD	2015	400	bbl Each	6, 14
EU-LOAD-COND	EP-LOAD-COND	Condensate Truck Loading	APC-VRU1 APC-VRU2 APC-COMB-TKLD	2015	12,478,620	gal/yr	11
EU-LOAD-PW	EP-LOAD-PW	Produced Water Truck Loading	APC-VRU1 APC-VRU2 APC-COMB-TKLD	2015	12,923,190	gal/yr	11
APC-COMB-TKLD	APC-COMB-TKLD	Vapor Combustor	---	2015	147,000	scfd	14
EU-PILOT	EP-PILOT	Vapor Combustor Pilot	---	2015	50	scf/hr	14

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
APC-COMB-TKLD	≥ 98	Vapor Combustor MRW Technologies TBF-5.5-30-147000	2015	147,000	scfd	14
NCSR		Non Selective Catalytic Reduction	2015	---	---	10, 13, 15
Emission Reduction Systems					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?					No	-

2.0 Oil and Natural Gas Wells Table

API number	API number	API number
047-103-02779	047-103-02917	
047-103-02780	047-103-02935	
047-103-02814	047-103-03044	
047-103-02886		
047-103-02903		

3.0 Emission Limitations

Emission Unit ID	Emission Point ID	Emission Unit Description	Regulated Pollutant	Maximum Potential Emissions	
				lb/hr	TPY
EU-ENGINE1	EP-ENGINE1	145-hp Caterpillar G3306 NA Engine w/Catalytic Converter	NOx	0.32	1.40
			CO	0.64	2.80
			VOC	0.24	1.05
			Formaldehyde	0.02	0.09
			Total HAP	0.03	0.15
EU-ENGINE2	EP-ENGINE2	145-hp Caterpillar G3306 NA Engine w/Catalytic Converter	NOx	0.32	1.40
			CO	0.64	2.80
			VOC	0.24	1.05
			Formaldehyde	0.02	0.09
			Total HAP	0.03	0.15
VRU-1	VRU-1	92-hp General Motors Vortec 5.7L Engine w/Catalytic Converter	NOx	0.20	0.89
			CO	0.41	1.78
			VOC	0.16	0.74
			Formaldehyde	0.02	0.07
			Total HAP	0.03	0.11
VRU-2	VRU-2	77-hp Zenith ZPP-644 4.4L 6 Cylinder Engine w/Catalytic Converter	NOx	0.27	1.16
			CO	0.76	3.33
			VOC	0.29	1.27
			Formaldehyde	0.02	0.10
			Total HAP	0.04	0.17
EU-GPU1 to EU-GPU5	EP-GPU1 to EP-GPU5	Five (5) 1.0-MMBtu/hr GPU Burners (Combined)	NOx	0.39	1.70
			CO	0.33	1.43
EU-HT1 and EU-HT2	EP-HT1 and EP-HT2	Two (2) 0.5-MMBtu/hr Heater Treaters (Combined)	NOx	0.08	0.34
			CO	0.07	0.29
EU-TANKS-COND	EP-TANKS-COND	Four (4) 400-bbl Condensate Tanks Routed to Vapor Combustor	VOC	1.18	5.17
			Total HAP	0.03	0.14
EU-TANKS-PW	EP-TANKS-PW	Two (2) 400-bbl Produced Water Tanks routed to Vapor Combustor	VOC	0.07	0.30
			Total HAP	<0.01	<0.01
EU-LOAD-COND	EP-LOAD-COND	Condensate Truck Loading w/ Vapor Return routed to Combustor	VOC	10.90	47.73
			Total HAP	0.27	1.17
EU-LOAD-PW	EP-LOAD-PW	Produced Water Truck Loading w/ Vapor Return routed to Combustor	VOC	0.61	2.96
			Total HAP	<0.01	0.01
APC-COMB-TKLD	APC-COMB-TKLD	One (1) 15.0 mm/BTU/hr Vapor Combustor – Loading Stream	NOx	1.17	5.13
			CO	0.98	4.31
			PM ₁₀	0.09	0.39

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-TANKS-COND	EP-TANKS-COND	Four (4) 400 bbl Condensate Tanks	12,478,620 gal/yr
EU-TANKS-PW	EP-TANKS-PW	Two (2) 400 bbl Produced Water Tanks	12,923,190 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)
EU-ENGINE1	June 2012	Yes	Yes	Yes
EU-ENGINE2	June 2012	Yes	Yes	Yes
VRU-1	After July 2010	Yes	Yes	Yes
VRU-2	2013	Yes	Yes	Yes