



west virginia department of environmental protection

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)

October 21, 2015

CERTIFIED MAIL  
91 7199 9991 7035 6613 3181

Mr. RJ Moses  
Noble Energy, Inc.  
1000 Noble Energy Drive  
Canonsburg, PA 15317

RE: Approved Registration G70-A038A  
Noble Energy, Inc.  
SHRI  
Permit Application G70-A038A  
Plant ID No. 095-00036

Dear Mr. Moses:

The Director has determined that the submitted Class I Administrative Update Application and proposed Administrative Updates 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. 1258 or [Caraline.F.Griffith@wv.gov](mailto:Caraline.F.Griffith@wv.gov).

Sincerely,

Caraline Griffith  
Permit Engineer

Enclosures: Registration G70-A111A  
c: Clayton Murrall  
Environmental Contact

*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 for Class I  
Administrative 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-A038A**

**Issued to:  
Noble Energy, Inc.  
Shirley1 (SHR1) Production Facility  
095-00036**

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

*William F. Durham  
Director*

*Issued: October 21, 2015*

*This permit registration replaces and supersedes G70-A038.*

Facility Location: Centerville, Tyler County, West Virginia  
Mailing Address: 333 Technology Drive, Suite 110, Canonsburg, PA 15317  
Facility Description: Natural Gas Production Facility  
NAICS Code: 211111  
SIC Code: 1311  
UTM Coordinates: 513.255 km Easting • 4362.828 km Northing • Zone 17  
Longitude Coordinates: 39.41487  
Latitude Coordinates: -80.84602  
Directions to Facility: From Charleston: I-77 North for approximately 75 miles to exit 176. East on US-50 for approximately 32 miles. North on WV 74 for approximately 11 miles. North on WV 18 for approximately 3 miles. Entrance is on left.  
Registration Type: Class I Administrative Update  
Description of Change: Removing one (1) Caterpillar 3508B engine rated at 690 hp used for compression of flash gas associated with condense stabilization and replacing it with one (1) Caterpillar 342TA engine rated at 265 hp to serve the same function.

Subject to 40CFR60, Subpart OOOO? Yes. The gas wells that exist at the SHR1 Production Facility were drilled principally for the production of natural gas and were done so after August 23, 2011.

Subject to 40CFR60, Subpart JJJJ? Yes, engine (3S-ENG1) and it is not certified. Because this engine will not be certified by the manufacturer, Noble will be required to perform an initial performance test within 180 days from startup, and subsequent testing every 8,760 hours or 3 years, whichever comes first.

Subject to 40CFR63, Subpart ZZZZ? Yes, compliance is demonstrated by compliance with NSPS, Subpart JJJJ for engine 3S-ENG1. Engine 3S-ENG2 is existing under this rule and is less than 100 hp and located at an area source of HAPs. Therefore, engine 3S-ENG2 is required to minimize idle time at startup, and change engine oil and filter, inspect spark plugs, and inspect/replace as necessary all hoses and belts every 1,440 hours or annually (whichever comes first).

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	<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	Control Device ID	Year Installed / Modified	Max. Design Capacity	Design Capacity Unit of Measure	G70-A Applicable Sections
1S-TK1-10	8E-COMB	Ten (10) Condensate Storage Tanks	8C-COMB	2014	400	bbl	6.0, 14.0
2S-TK11-21	8E-COMB	Eleven (11) Produced Water Storage Tanks	8C-COMB	2014	400	bbl	6.0, 14.0
3S-ENG1	3E-ENG1	Caterpillar G342TA 4SRB Engine	NSCR with interlock	2015	265	hp	10.0, 13.0, 15.0
3S-ENG2	3E-ENG2	Gas Jack GJ230 4SRB Engine	3C-NSCR	2014	46	hp	10.0, 13.0, 15.0
4S-GPU1-6	4E-GPU1-6	Six (6) Gas Processing Units	None	2014	1.0	MMBtu/hr	7.0
5S-LP	5E-LP	LP Separator Heater	None	2014	0.75	MMBtu/hr	7.0
6S-TL1	6E-TL1	Condensate Truck Loading	None	2014	30,660,000	gal/yr	11.0
7S-TL2	7E-TL2	Produced Water Truck Loading	None	2014	38,325,000	gal/yr	11.0
8S-COMB1-2	8E-COMB1-2	Vapor Combustor Units	8C-COMB	2014	5,833	scfh	14.0
9S-PILOT	9E-PILOT	Vapor Combustor Pilots	NA	2014	40	scfh	14.0
10S-COMB	10E-COMB	Flare	NA	2014	3	mmscfd	14.0
11S-PILOT	11E-PILOT	Flare Pilot	NA	2014	60	scfh	14.0
12S-TE GEN	12E-TE GEN	Thermoelectric Generator	None	2014	Demin	NA	NA
<b>Control Devices</b>							
Control Device ID	Control Efficiency %	Control Device Description	Year Installed / Modified	Max. Design Capacity	Design Capacity Unit of Measure	G-70A Applicable Sections	
8C	98% - VOC 98% - HAP	Vapor Combustor Units	2014	5,833	scfh	14.0	
10C	98% - VOC 98% - HAP	Backup Flare	2014	3	mmscfd	14.0	
NSCR with Interlock	84.49% - NOx 71.59% - CO	NSCR (Non-selective catalytic reduction for rich burn engines)	2015	NA	NA	10.0, 13.0, 15.0	

3C - NSCR	88.0 % - NOx 78.3 % - CO	NSCR (Non-selective catalytic reduction for rich burn engines)	2013	NA	NA	10.0, 13.0, 15.0
<b>Emission Reduction Systems</b>					<b>Yes or No</b>	<b>G-70A Applicable Sections</b>
Was a vapor recovery system (VRU) used to determine emission limits?					Yes	6.0, 14.0
Was a low pressure tower(s) used to determine emission limits?					No	NA

## 2.0 Oil and Natural Gas Wells Table

<b>API number</b>	<b>API number</b>	<b>API number</b>
047-95-02111	047-95-02109	047-95-02110
047-95-02112	047-95-02113	047-95-02114

## 3.0 Emission Limitations

Emission Unit ID	Emission Point ID	Emission Unit Description	Regulated Pollutant	Maximum Potential Emissions	
				Hourly (lb/hr)	Annual (tpy)
3S-ENG1	3E-ENG1	265 hp Caterpillar G342TA Engine	Nitrogen Oxides	0.89	3.89
			Carbon Monoxide	1.78	7.78
			Volatile Organic Compounds	0.62	2.71
3S-ENG2	3E-ENG2	46 hp Gas Jack GJ230 Engine	Nitrogen Oxides	0.20	0.89
			Carbon Monoxide	0.41	1.78
			Volatile Organic Compounds	0.10	0.44
8S-COMB 1-2	8E-COMB 1-2	Storage Tanks / Condensate Truck Loading / Vapor Combustor Units	Volatile Organic Compounds	17.55	7.79
10S-COMB	10E-COMB	Backup Flare	Volatile Organic Compounds	81.54	36.20

## 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
1S-TK1-10	8E-COMB 1-2	Ten (10) - 400 bbl Condensate Storage Tanks	30,660,000 gal/yr (all tanks combined)
2S-TK11-21	8E-COM1-2	Eleven (11) 400 bbl Produced Water Storage Tanks	38,325,000 gal/yr (all tanks combined)
3S-ENG1	3E-ENG1	Caterpillar G342TA 4SRB Engine	14.11 MMscf/yr
3S-ENG2	3E-ENG2	Gas Jack GJ230 4SRB Engine	2.6 MMscf/yr
6S-TL1	8E-COMB 1-2	Condensate Truck Loading	30,660,000 gal/yr
7S-TL2	7E-TL2	Produced Water Truck Loading	38,325,000 gal/yr

**5.0 Reciprocating Internal Combustion Engines (R.I.C.E.) Information**

<b>Emission Unit ID</b>	<b>Engine Manufacturing Date</b>	<b>Subject to 40CFR60, Subpart JJJJ?</b>	<b>Subject to 40CFR63, Subpart ZZZZ?</b>	<b>Subject to Sections 10.1.4 / 10.2.1 (Catalytic Reduction Device)</b>
3S-ENG1	Pre 6/12/2006	Yes	Yes	Yes
3S-ENG2	4/7/2005	No	Yes	Yes