



August 12, 2016

BY: U.S. CERTIFIED MAIL, RETURN RECEIPT REQUESTED

9590 9401 0103 5168 7644 00

William F. Durham
Director, Division of Air Quality
WVDEP
601 57th Street
Charleston, WV 25304



RE: **Dominion Transmission, Inc.**
HG Well #11358
Permit Determination Request

Dear Mr. Durham:

Dominion Transmission, Inc. (Dominion) is submitting this request for a permit determination for the addition of a natural gas pumpjack engine at our HG Well #11358 location, a production well located near Churchville, Lewis County, West Virginia.

Based on the response from DEP dated December 16, 2013 (enclosed) for a similar unit, Dominion believes a permit is not necessary for the installation and operation of a Subaru, Model EH72 engine at HG Well #11358. Information on the unit is included below:

Engine Manufacturer and Model: Subaru EH72, manufactured 2015
Manufacturer's Rated bhp: 21 hp
Subject to NSPS Subpart JJJJ? Yes
Subject to NESHAP Subpart ZZZZ? Yes, new source
Fuel Type: Pipeline Quality Natural Gas

Potential Emissions (Based on 8,760 hours)

Pollutant	Source	lbs/hr	tons/yr
NO _x	AP-42	0.48	2.09
CO	AP-42	0.78	3.42
VOC	AP-42	0.08	0.33
SO ₂	AP-42	1.23E-04	5.41E-04
PM (filterable)	AP-42	2.00E-03	8.74E-03
PM10 (filterable)	AP-42	2.00E-03	8.74E-03
PM2.5 (filterable)	AP-42	2.00E-03	8.74E-03
PM (condensibles)	AP-42	2.08E-03	9.12E-03
Formaldehyde	AP-42	4.31E-03	1.89E-02
Total HAP	AP-42	0.02	0.10

The pumpjack engine is not deemed to be a stationary source per WVDEP Regulation 13 definition since there are no substantive requirements and the potential emission are below permitting thresholds. 40 CFR 60 Subpart JJJJ applies to the engine which requires DTI to purchase an engine certified to emission standards in 40 CFR 1048.101(c); therefore, no performance tests are required. The engine is EPA certified and by meeting Subpart JJJJ requirements, the engine also meets 40 CFR Part 63, Subpart ZZZZ requirements. Dominion will meet the requirements of Subpart JJJJ by complying with the following requirements:

- Operating and maintaining the engine according to manufacturer's instructions
- Maintaining records of maintenance conducted in accordance with the manufacturer's instructions;
- Maintaining a copy of the engine certification.

If you require any additional information, please contact Rebekah Remick at 804-273-3536 or via email at Rebekah.J.Remick@dom.com.

Sincerely,



Amanda B. Tornabene
Director, Energy Infrastructure Environmental Services

Enclosures

Appendix A: Permit Determination for HG Well #11358

Appendix B: Previous Review for Similar Unit



Appendix A
Permit Determination for HG Well #11358



WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY
601 57th Street, SE
Charleston, WV 25304
Phone: (304) 926-0475
www.dep.wv.gov/daq

**PERMIT DETERMINATION FORM
(PDF)**

FOR AGENCY USE ONLY: PLANT I.D. # _____

PDF # _____ PERMIT WRITER: _____

1. NAME OF APPLICANT (AS REGISTERED WITH THE WV SECRETARY OF STATE'S OFFICE):

Dominion Transmission, Inc.

2. NAME OF FACILITY (IF DIFFERENT FROM ABOVE):

HG Well #11358

3. NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM (NAICS) CODE:

211111

4A. MAILING ADDRESS:

925 White Oaks Blvd., Bridgeport, WV 26330

4B. PHYSICAL ADDRESS:

Along Churchville Road

5A. DIRECTIONS TO FACILITY (PLEASE PROVIDE MAP AS ATTACHMENT A):

From the junction of US Rt. 33 and Co Rt. 9 (Churchville Rd.) at Camden, proceed on Co Rt. 9 and go 3.55 miles. Turn Right on Co Rt. 10. Go 0.45 miles and turn left on Co Rt. 2. Go 1.40 miles and turn right on the well road. The following are the GPS coordinates for the Station Site: 39.11149 / -80.57548

5B. NEAREST ROAD:

Churchville Road

5C. NEAREST CITY OR TOWN:

Churchville, WV

5D. COUNTY:

Lewis

5E. UTM NORTHING (KM):

4329234.6

5F. UTM EASTING (KM):

536702.2

5G. UTM ZONE:

17

6A. INDIVIDUAL TO CONTACT IF MORE INFORMATION IS REQUIRED:

Rebekah (Becky) Remick

6B. TITLE:

Environmental Consultant

6C. TELEPHONE:

804-273-3536

6D. FAX:

804-273-2964

6E. E-MAIL:

Rebekah.J.Remick@dom.com

7A. DAQ PLANT I.D. NO. (FOR AN EXISTING FACILITY ONLY):

7B. PLEASE LIST ALL CURRENT 45CSR13, 45CSR14, 45CSR19 AND/OR TITLE V (45CSR30) PERMIT NUMBERS ASSOCIATED WITH THIS PROCESS (FOR AN EXISTING FACILITY ONLY):

N/A

7C. IS THIS PDF BEING SUBMITTED AS THE RESULT OF AN ENFORCEMENT ACTION? IF YES, PLEASE LIST: **No**

8A. TYPE OF EMISSION SOURCE (CHECK ONE):

NEW SOURCE **ADMINISTRATIVE UPDATE**

MODIFICATION **OTHER (PLEASE EXPLAIN IN 11B)**

8B. IF ADMINISTRATIVE UPDATE, DOES DAQ HAVE THE APPLICANT'S CONSENT TO UPDATE THE EXISTING PERMIT WITH THE INFORMATION CONTAINED HEREIN?

YES **NO**

9. IS *DEMOLITION* OR *PHYSICAL RENOVATION* AT AN EXISTING FACILITY INVOLVED? **YES** **NO**

10A. DATE OF ANTICIPATED INSTALLATION OR CHANGE:

10/15/2016

10B. DATE OF ANTICIPATED START-UP:

10/15/2016

11A. PLEASE PROVIDE A **DETAILED PROCESS FLOW DIAGRAM** SHOWING EACH PROPOSED OR MODIFIED PROCESS EMISSION POINT AS **ATTACHMENT B**.

11B. PLEASE PROVIDE A **DETAILED PROCESS DESCRIPTION** AS **ATTACHMENT C**.

12. PLEASE PROVIDE **MATERIAL SAFETY DATA SHEETS (MSDS)** FOR ALL MATERIALS PROCESSED, USED OR PRODUCED AS **ATTACHMENT D**. FOR CHEMICAL PROCESSES, PLEASE PROVIDE A MSDS FOR EACH COMPOUND EMITTED TO AIR.

13A. REGULATED AIR POLLUTANT EMISSIONS:

⇒ **FOR A NEW FACILITY**, PLEASE PROVIDE PLANT WIDE EMISSIONS BASED ON THE POTENTIAL TO EMIT (PTE) FOR THE FOLLOWING AIR POLLUTANTS INCLUDING ALL PROCESSES.

⇒ **FOR AN EXISTING FACILITY**, PLEASE PROVIDE THE PROPOSED CHANGE IN EMISSIONS BASED ON THE PTE OF ALL PROCESS CHANGES FOR THE FOLLOWING AIR POLLUTANTS.

PTE FOR A GIVEN POLLUTANT IS TYPICALLY BEFORE AIR POLLUTION CONTROL DEVICES AND IS COLLECTED BASED ON THE MAXIMUM DESIGN CAPACITY OF PROCESS EQUIPMENT.

POLLUTANT	HOURLY PTE (LB/HR)	YEARLY PTE (TON/YR) (HOURLY PTE MULTIPLIED BY 8760 HR/YR) DIVIDED BY 2000 LB/TON
PM	4.08E-03	1.79E-02
PM ₁₀	4.08E-03	1.79E-02
VOCs	0.08	0.33
CO	0.78	3.42
NO _x	0.48	2.09
SO ₂	1.23E-04	5.41E-04
Pb	N/A	N/A
HAPs (AGGREGATE AMOUNT)	0.02	0.10
TAPs (INDIVIDUALLY)*		
OTHER (INDIVIDUALLY)*		

* ATTACH ADDITIONAL PAGES AS NEEDED

13B. PLEASE PROVIDE ALL SUPPORTING CALCULATIONS AS ATTACHMENT E.

CALCULATE AN HOURLY AND YEARLY PTE OF EACH PROCESS EMISSION POINT (SHOWN IN YOUR DETAILED PROCESS FLOW DIAGRAM) FOR ALL AIR POLLUTANTS LISTED ABOVE INCLUDING INDIVIDUAL HAP'S (LISTED IN SECTION 112(b) OF THE 1990 CAAA), TAP'S (LISTED IN 45CSR27), AND OTHER AIR POLLUTANTS (E.G. POLLUTANTS LISTED IN TABLE 45-13A OF 45CSR13, MINERAL ACIDS PER 45CSR7, ETC.).

14. CERTIFICATION OF DATA

I, BRIAN SHEPPARD (TYPE NAME) ATTEST THAT ALL THE REPRESENTATIONS CONTAINED IN THIS APPLICATION, OR APPENDED HERETO, ARE TRUE, ACCURATE, AND COMPLETE TO THE BEST OF MY KNOWLEDGE BASED ON INFORMATION AND BELIEF AFTER REASONABLE INQUIRY, AND THAT I AM A **RESPONSIBLE OFFICIAL**** (PRESIDENT, VICE PRESIDENT, SECRETARY OR TREASURER, GENERAL PARTNER OR SOLE PROPRIETOR) OF THE APPLICANT.

SIGNATURE OF RESPONSIBLE OFFICIAL: 

TITLE: VICE PRESIDENT, PIPELINE OPERATIONS DATE: 08 / 08 / 16

** THE DEFINITION OF THE PHRASE 'RESPONSIBLE OFFICIAL' CAN BE FOUND AT 45CSR13, SECTION 2.23.

NOTE: PLEASE CHECK ENCLOSED ATTACHMENTS:

ATTACHMENT A ATTACHMENT B ATTACHMENT C ATTACHMENT D ATTACHMENT E
RECORDS ON ALL CHANGES ARE REQUIRED TO BE KEPT AND MAINTAINED ON-SITE FOR TWO (2) YEARS.

THE PERMIT DETERMINATION FORM WITH THE INSTRUCTIONS CAN BE FOUND ON DAQ'S PERMITTING SECTION WEB SITE:

www.dep.wv.gov/daq

Attachment A
Facility Location



edit in Google Map Maker [Report a problem](#)

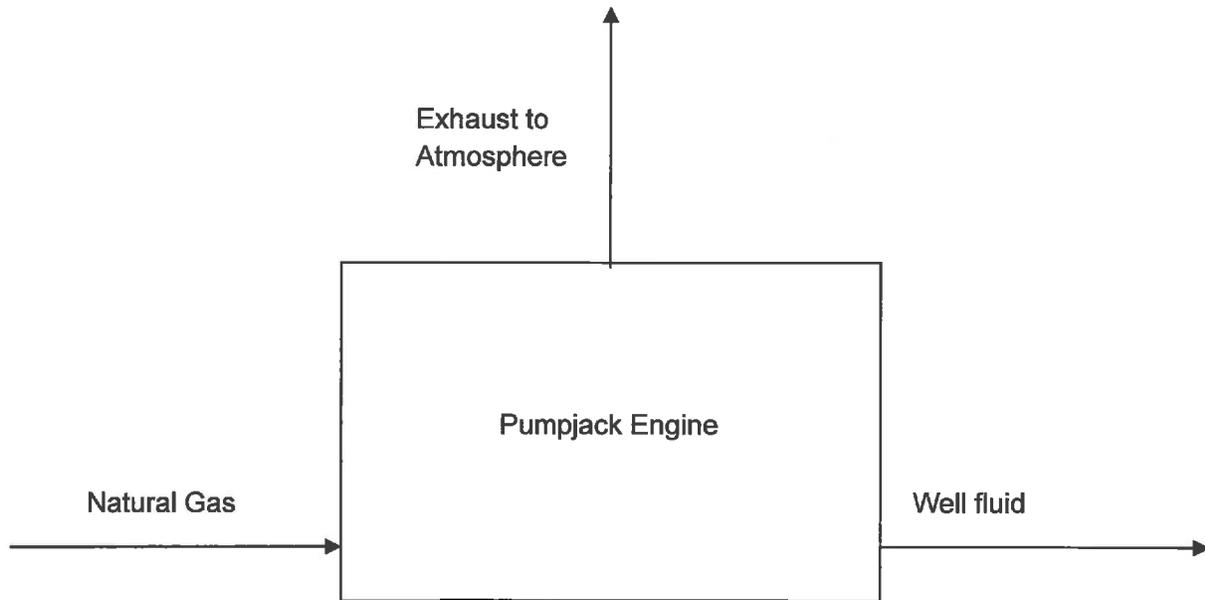
Attachment B

Process Flow Diagram

Dominion Transmission, Inc.

HG Wells

Pumpjack Engine (HG Well #11358) Process Flow Diagram



Attachment C

Process Description

Process Description

HG Well #11358 is a well location located in Lewis County, West Virginia. The purpose of the facility is to remove fluid from the well as needed by running a pumpjack engine on a daily basis.

The purpose of this permit determination is for the addition of a natural gas-fired 21 hp pumpjack engine.

Attachment E
Supporting Calculations

Non-Emergency Pumpjack Engine Potential Emissions
Dominion Transmission, Inc.
HG Well #11358

Date: August 2016

Input Data: Subaru EH72 (2015)
 Design Class: 4-stroke rich burn
 Engine Power: 21 bhp
 Fuel Input: 0.21 MMBtu/hr
 10,000 Btu/hp-hr (manufacturer - at 3600 rpm)
 Natural Gas Consumption: 210 cf/hr
 1.84 MMcf/hr
 Maximum Hours of Operation: 8,760 hrs/yr
 Heating Value of Natural Gas: 1,000 Btu/cf

Emission Calculations

Pollutant	Emission Factor		Potential Emissions		
			(lb/hr)	(lb/day)	(tons/yr)
Criteria Pollutants					
PM (filterable)	9.50E-03	lb/MMBtu	2.00E-03	4.79E-02	8.74E-03
PM-10 (filterable)	9.50E-03	lb/MMBtu	2.00E-03	4.79E-02	8.74E-03
PM-2.5 (filterable)	9.50E-03	lb/MMBtu	2.00E-03	4.79E-02	8.74E-03
PM (condensibles)	9.91E-03	lb/MMBtu	2.08E-03	4.99E-02	9.12E-03
SO ₂	5.88E-04	lb/MMBtu	1.23E-04	2.96E-03	5.41E-04
CO	3.72	lb/MMBtu	0.78	18.75	3.42
NO _x	2.27	lb/MMBtu	0.48	11.44	2.09
VOC	0.358	lb/MMBtu	0.08	1.80	0.33
Greenhouse Gases					
CO ₂	117.0	lb/MMBtu	24.57	589.57	107.60
CH ₄	2.20E-03	lb/MMBtu	0.00	0.01	0.00
N ₂ O	2.20E-04	lb/MMBtu	0.00	0.00	0.00
CO ₂ e	117.1	lb/MMBtu	24.59	590.17	107.71
Hazardous Air Pollutants					
1,1,2,2-Tetrachloroethane	2.53E-05	lb/MMBtu	5.31E-06	1.28E-04	2.33E-05
1,1,2-Trichloroethane	1.53E-05	lb/MMBtu	3.21E-06	7.71E-05	1.41E-05
1,1-Dichloroethane	1.13E-05	lb/MMBtu	2.37E-06	5.70E-05	1.04E-05
1,2-Dichloroethane	1.13E-05	lb/MMBtu	2.37E-06	5.70E-05	1.04E-05
1,2-Dichloropropane	1.30E-05	lb/MMBtu	2.73E-06	6.55E-05	1.20E-05
1,3-Butadiene	6.63E-04	lb/MMBtu	1.39E-04	3.34E-03	6.10E-04
1,3-Dichloropropene	1.27E-05	lb/MMBtu	2.67E-06	6.40E-05	1.17E-05
Acrolein	2.63E-03	lb/MMBtu	5.52E-04	1.33E-02	2.42E-03
Acetaldehyde	2.79E-03	lb/MMBtu	5.86E-04	1.41E-02	2.57E-03
Benzene	1.58E-03	lb/MMBtu	3.32E-04	7.96E-03	1.45E-03
Butr/isobutyraldehyde	4.86E-05	lb/MMBtu	1.02E-05	2.45E-04	4.47E-05
Carbon Tetrachloride	1.77E-05	lb/MMBtu	3.72E-06	8.92E-05	1.63E-05
Chlorobenzene	1.29E-05	lb/MMBtu	2.71E-06	6.50E-05	1.19E-05
Chloroform	1.37E-05	lb/MMBtu	2.88E-06	6.90E-05	1.26E-05
Ethane	7.04E-02	lb/MMBtu	1.48E-02	3.55E-01	6.48E-02
Ethylbenzene	2.48E-05	lb/MMBtu	5.21E-06	1.25E-04	2.28E-05
Ethylene Dibromide	2.13E-05	lb/MMBtu	4.47E-06	1.07E-04	1.96E-05
Formaldehyde	2.05E-02	lb/MMBtu	4.31E-03	1.03E-01	1.89E-02
Methanol	3.06E-03	lb/MMBtu	6.43E-04	1.54E-02	2.81E-03
Methylene Chloride	4.12E-05	lb/MMBtu	8.65E-06	2.08E-04	3.79E-05
Naphthalene (POM)	9.71E-05	lb/MMBtu	2.04E-05	4.89E-04	8.93E-05
PAH	1.41E-04	lb/MMBtu	2.96E-05	7.11E-04	1.30E-04
Styrene	1.19E-05	lb/MMBtu	2.50E-06	6.00E-05	1.09E-05
Toluene	5.58E-04	lb/MMBtu	1.17E-04	2.81E-03	5.13E-04
Vinyl Chloride	7.18E-06	lb/MMBtu	1.51E-06	3.62E-05	6.60E-06
Xylene	1.95E-04	lb/MMBtu	4.10E-05	9.83E-04	1.79E-04
TOTAL HAP:			0.022	0.519	0.095

(1) All emission factors from AP-42, Section 3.2, Natural Gas-Fired Reciprocating Engines, Table 3.2-3, 7/00

(2) Lb/MMBtu numbers based on 40 CFR Part 98 Tables C-1 and C-2 for natural gas

For example: CO₂ = (53.06 kg CO₂/MMBtu) / (0.453592 kg/lb) = 117.0 lb/MMBtu

(3) Global Warming Potentials = 25 for CH₄ and 298 for N₂O (per 40 CFR Part 98 Table A-1 to Subpart A)

For example: CO₂e = (117.0 lb/MMBtu) + (0.0022 lb/MMBtu * 25) + (0.00022 lb/MMBtu * 298) = 117.1 lb/MMBtu

(4) Btu/hp-hr rating from manufacturer.

SPECIFICATIONS

MODEL	EH72 LP/NG	
Type	Air-Cooled, 4-stroke, V-Twin Cylinder, Horizontal P.T.O. shaft, OHV, LPG/NATURAL GAS Fueled Engine	
Bore x Stroke	mm(in)	2-84 x 65 (3.31 x 2.56)
Displacement	cm ³ (cu.in)	720 (43.9)
Maximum Torque	N•m	39.5 N•m @ 2500rpm
Maximum Output	LPG (Propane content of 95% or higher) : 25hp18.6kw@3600rpm Natural Gas (Methane content of 90% or equivalent) : 21hp15.7kw@3600rpm	
Direction of Rotation	Counterclockwise as viewed from P.T.O. shaft side	
Lubricant	Automotive Engine Oil SAE #20, #30 or 10W-30; Class SE or higher (SG, SH or SJ is recommended)	
Capacity of Lubricant	1.55 (52.48)	
Fuel	LPG/NATURAL GAS	
Spark Plug	BPR6ES (NGK)	
Starting System	Electric Starter	
Dry Weight	46 (101.3)	
Dimension (L x W x H)	kg (lb)	317 x 477 x 475 (12.5 x 18.8 x 18.7)
Valve Clearance (Intake & Exhaust)	0.1 to 0.02mm (0.0039 to 0.0008 in) Not: Adjust the valve clearance while the engine is cold.	

Rebekah J Remick (Services - 6)

From: Jay Albright [jalbright@subarupower.com]
Sent: Thursday, July 14, 2016 10:05 AM
To: Rebekah J Remick (Services - 6)
Subject: EH72 LPNG Fuel Consumption

Rebekah,

As we discussed, I don't have direct lab-measured fuel consumption for that engine. But 10,000 BTU / HP-hr is a very reliable rule of thumb for these air cooled engines operating under load (more than half load) and around 3600rpm. This applies to both propane and natural gas. I hope this helps but if you have other questions please feel free to call back.

Best regards,

Jay Albright
Engineering Manager
Subaru Industrial Power Products
905 Telser Road
Lake Zurich, IL 60047

Main 847-540-7300

Direct 847-847-2973

Fax 847-438-5012

www.subarupower.com

Send engine and parts orders to orders@subarupower.com

This message is confidential. It may also be privileged or otherwise protected by work product immunity or other legal rules. If you have received it by mistake, please let us know by e-mail reply and delete it from your system; you may not copy this message or disclose its contents to anyone. The integrity and security of this message cannot be guaranteed on the Internet.

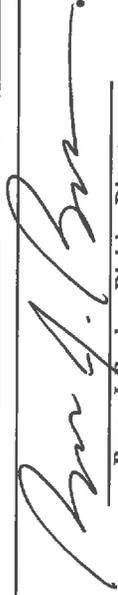


UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
2015 MODEL YEAR
CERTIFICATE OF CONFORMITY
WITH THE CLEAN AIR ACT OF 1990

OFFICE OF TRANSPORTATION
AND AIR QUALITY
ANN ARBOR, MICHIGAN 48105

Certificate Issued To: Fuji Heavy Industries
(U.S. Manufacturer or Importer)
Certificate Number: FFJXS.7202DA-007

Effective Date:
07/30/2014
Expiration Date:
12/31/2015


Byron J. Bunker, Division Director
Compliance Division

Issue Date:
07/30/2014
Revision Date:
N/A

Manufacturer: Fuji Heavy Industries
Engine Family: FFJXS.7202DA
Useful Life : 1000 Hours / 5 Years
Engine Class : Nonhandheld-Class II
Fuel : Natural Gas (CNG/LNG)
LPG/Propane
Emission Standards : NMHC + NOx (g/kW-hr) : 8
HC + NOx (g/kW-hr) : 8
CO (g/kW-hr) : 610

Pursuant to Section 213 of the Clean Air Act (42 U.S.C. section 7547), 40 CFR Part 1054, 40 CFR Part 1068 and 40 CFR Part 60 (stationary only and combined stationary and mobile), and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued for the following small nonroad engine family, more fully described in the documentation required by 40 CFR Part 1054 and produced in the stated model year.

This certificate of conformity covers only those new small nonroad engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 1054 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 1054. This certificate of conformity does not cover small nonroad engines imported prior to the effective date of the certificate.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 1068.20 and 1068, Subpart E and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Part 1054. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void *ab initio* for other reasons specified in 40 CFR Part 1054, 40 CFR Part 1068.

This certificate does not cover small nonroad engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.

Appendix B
Previous Review for Similar Unit



west virginia department of environmental protection

Division of Air Quality
601 57th Street SE
Charleston, WV 25304
Phone (304) 926-0475 • FAX: (304) 926-0479

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

December 16, 2013

Jeffrey Barger
P.O. Box 2450
Clarksburg, WV 26302-2450

Re: Withdrawal of Permit Application
Dominion Transmission, Inc.
Racket Newberne M&R Facility
Cox Mills, Gilmer County, WV
Permit Application G60-C055
Plant ID No.: 021-00021

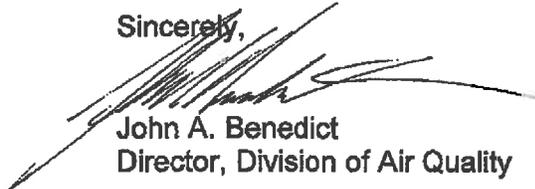
Dear Mr. Jeffrey Barger:

In accordance with your letter received on November 21, 2013, this Division hereby acknowledges the withdrawal of your company's application for a G60-C General Permit Registration for a Kohler 20 RESA, 27 bhp emergency generator/engine to be located at your Racket Newberne M&R Facility located near Cox Mills, Gilmer County, WV.

A permit registration was not needed for the generator engine because the generator was not deemed to be a stationary source and there are no substantive requirements. Although 40 CFR 60 Subpart JJJJ does apply, no performance tests are required. Dominion is aware that it must maintain maintenance records, a copy of the engine certification and fulfill any other applicable requirement(s) of Subpart JJJJ.

No further action will be taken by this Division regarding the G60-C General Permit Registration proposed in application G60-C055.

Sincerely,



John A. Benedict
Director, Division of Air Quality

JAB/jcl

cc: John Legg
Permit Writer

Meghann Quinn, Dominion Transmission, Inc.

Promoting a healthy environment.