

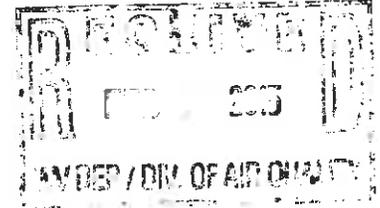


February 4, 2015

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

7012 3460 0003 4189 8048

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



RE: **Dominion Transmission, Inc.**  
**GP Compressor Station - Millstone**  
**Permit Determination Request**

Dear Mr. Durham:

Dominion Transmission, Inc. (Dominion) is submitting this request for permit determination for the addition of a natural gas compressor engine at the GP Compressor Station - Millstone, an existing natural gas compression station located near Weston, 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 Continental TM27-4cyc at GP Compressor Station - Millstone. Information on the unit is included below:

**Engine Manufacturer and Model:** Continental TM27-4cyc, manufactured 3/2007  
**Manufacturer's Rated bhp:** 72 bhp  
**Subject to NSPS Subpart JJJJ?** No, before applicability date  
**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 <sub>x</sub>	AP-42	0.42	1.82
CO	AP-42	0.68	2.99
VOC	AP-42	0.07	0.29
SO <sub>2</sub>	AP-42	1.08E-04	4.72E-04
PM (filterable)	AP-42	1.74E-03	7.63E-03
PM10 (filterable)	AP-42	1.74E-03	7.63E-03
PM2.5 (filterable)	AP-42	1.74E-03	7.63E-03
PM (condensibles)	AP-42	1.82E-03	7.96E-03
Formaldehyde	AP-42	3.76E-03	1.65E-02
Total HAP	AP-42	0.019	0.083

The compressor engine is not deemed to be a stationary source since there are no substantive requirements and the potential emission are below permitting thresholds. Although, 40 CFR Part 63 Subpart ZZZZ does apply, there are no requirements (e.g. no performance tests) for this engine as the requirements for Subpart ZZZZ are to meet NSPS Subpart JJJJ requirements (which it is not subject to).

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

Sincerely,

A handwritten signature in black ink, appearing to read "Amanda B. Tornabene". The signature is fluid and cursive, with a long horizontal stroke at the end.

Amanda B. Tornabene  
Director, Gas Environmental Services

Enclosures

- Appendix A: Permit Determination for GP Compressor Station - Millstone
- Appendix B: Previous Review for Similar Unit

# **Appendix A**

**Permit Determination for GP Compressor Station - Millstone**

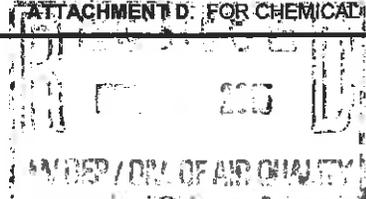


WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
DIVISION OF AIR QUALITY  
601 57<sup>th</sup> Street, SE  
Charleston, WV 25304  
Phone: (304) 926-0475  
www.dep.wv.gov/daq

**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): <b>Dominion Transmissions, Inc.</b>		
2. NAME OF FACILITY (IF DIFFERENT FROM ABOVE): <b>GP Compressor Station - Millstone</b>		3. NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM (NAICS) CODE: <b>211111</b>
4A. MAILING ADDRESS: <b>445 West Main Street, Clarksburg, WV 26301</b>		4B. PHYSICAL ADDRESS: <b>Well location 3837; off Millstone Rd – Valley Chapel, WV</b>
5A. DIRECTIONS TO FACILITY (PLEASE PROVIDE MAP AS ATTACHMENT A): <b>See Attachment A</b>		
5B. NEAREST ROAD: <b>Cort</b>	5C. NEAREST CITY OR TOWN: <b>Weston, WV</b>	5D. COUNTY: <b>Lewis County</b>
5E. UTM NORTHING (KM): <b>4331160.5</b>	5F. UTM EASTING (KM): <b>543708.5</b>	5G. UTM ZONE: <b>17</b>
6A. INDIVIDUAL TO CONTACT IF MORE INFORMATION IS REQUIRED: <b>Rebekah Remick</b>		6B. TITLE: <b>Environmental Specialist III</b>
6C. TELEPHONE: <b>804-273-3536</b>	6D. FAX: <b>804-273-2964</b>	6E. E-MAIL: <b>Rebekah.J.Remick@dom.com</b>
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): <b>N/A</b>
7C. IS THIS PDF BEING SUBMITTED AS THE RESULT OF AN ENFORCEMENT ACTION? IF YES, PLEASE LIST: <b>No</b>		
8A. TYPE OF EMISSION SOURCE (CHECK ONE): <input checked="" type="checkbox"/> <b>NEW SOURCE</b> <input type="checkbox"/> <b>ADMINISTRATIVE UPDATE</b> <input type="checkbox"/> <b>MODIFICATION</b> <input type="checkbox"/> <b>OTHER (PLEASE EXPLAIN IN 11B)</b>		8B. IF ADMINISTRATIVE UPDATE, DOES DAQ HAVE THE APPLICANT'S CONSENT TO UPDATE THE EXISTING PERMIT WITH THE INFORMATION CONTAINED HEREIN? <input type="checkbox"/> <b>YES</b> <input type="checkbox"/> <b>NO</b>
9. IS DEMOLITION OR PHYSICAL RENOVATION AT AN EXISTING FACILITY INVOLVED? <input type="checkbox"/> <b>YES</b> <input checked="" type="checkbox"/> <b>NO</b>		
10A. DATE OF ANTICIPATED INSTALLATION OR CHANGE: <b>4/1/2014</b>		10B. DATE OF ANTICIPATED START-UP: <b>4/1/2014</b>
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	1.74E-03	7.63E-03
PM <sub>10</sub>	1.74E-03	7.63E-03
VOCs	0.07	0.29
CO	0.68	2.99
NO <sub>x</sub>	0.42	1.82
SO <sub>2</sub>	1.08E-04	4.72E-04
Pb		
HAPs (AGGREGATE AMOUNT)	0.019	0.083
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: **01 / 27 / 2015**

\*\*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

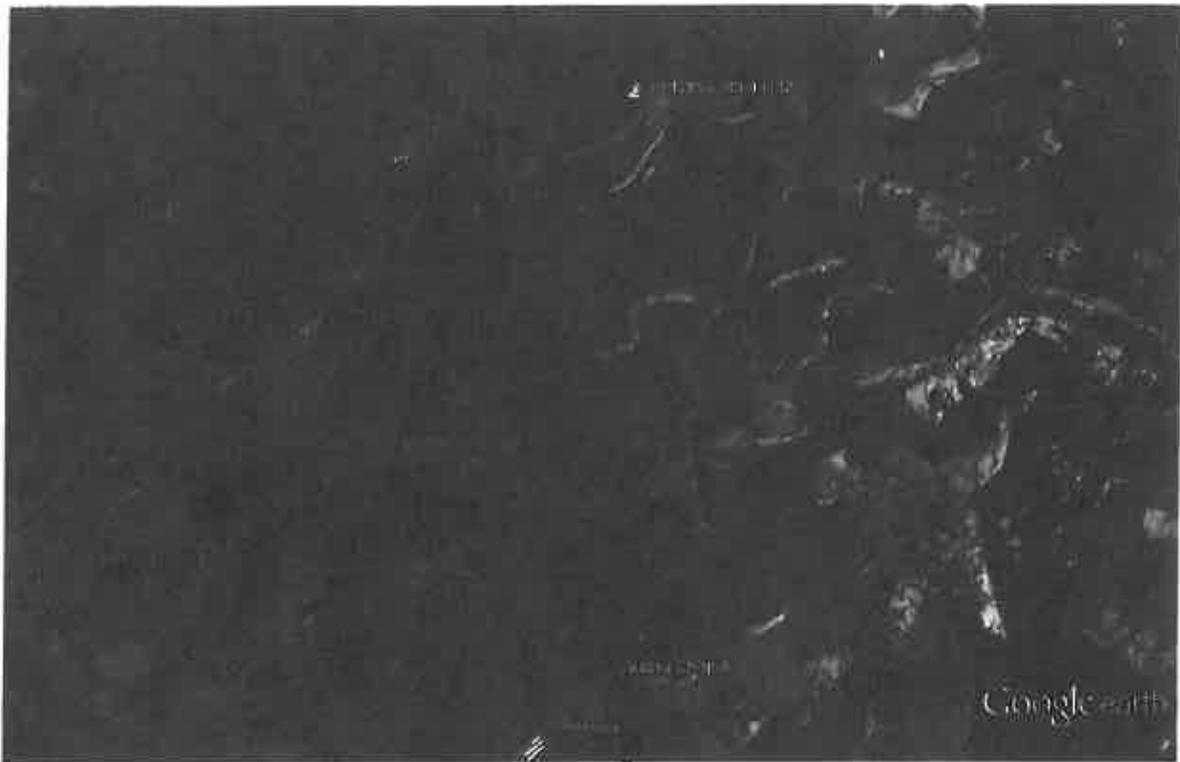
RECORDS ON ALL CHANGES ARE REQUIRED TO BE KEPT AND MAINTAINED ON-SITE FOR TWO (2) YEARS.

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

[www.dep.wv.gov/daq](http://www.dep.wv.gov/daq)

## **Attachment A**

### Facility Location and Directions



Google earth

miles 1  
km 2



**Directions:**

From Jane Lew, go South of Rt. 19 for 5 miles. Turn right and go 2.5 miles to Jackson's Mill at the Fire Department. Turn left and go 500 ft; turn right on Valley Chapel. Bear right on Millstone Rd. (11/16) Go 0.1 miles and bear left; go 0.9 miles to Lease Rd. on the right. Follow past CNGT well 8424 to location.

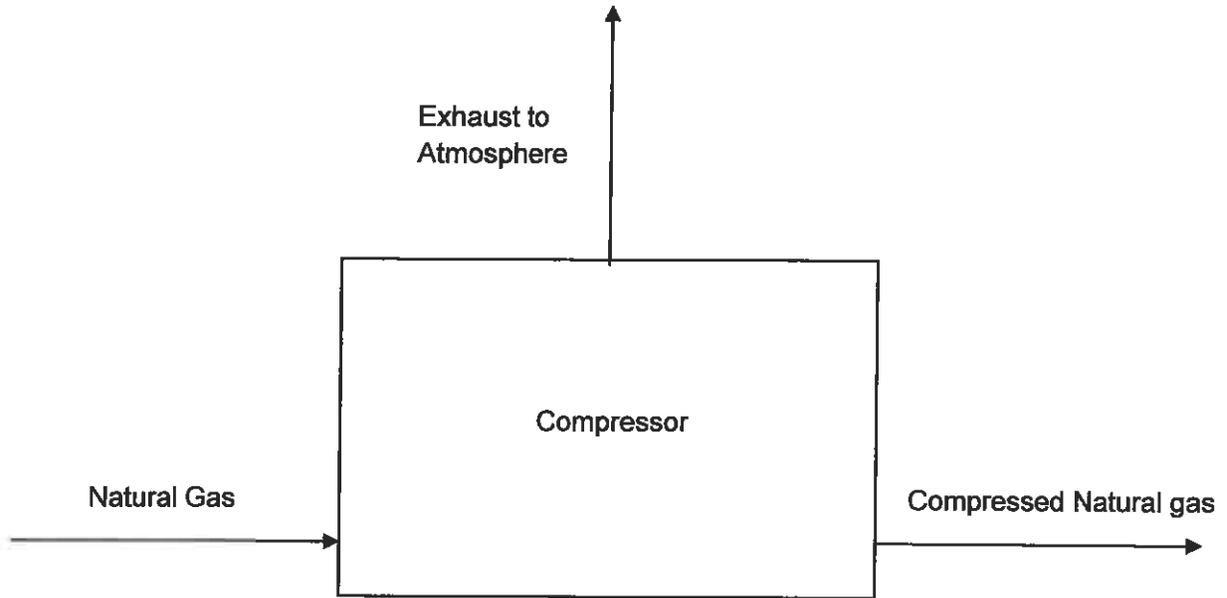
Or

From the junction of Co Rt. 10 and Co Rt. 10/11 (Milestone Run) at Valley Chapel, proceed to 10/11 (staying on the left fork) for 1.05 miles and turn right on the well road.

**Attachment B**

Process Flow Diagram

**Process Flow Diagram for the Compressor Engine – GP Compressor Station - Millstone**



**Attachment C**

Process Description

### **Process Description**

GP Compressor Station – Millstone is a single well compressor. The purpose of the facility is to compress natural gas produced from the well. The compressor engine at the facility receives natural gas and compresses it to enable further transportation into the pipeline.

**Attachment E**

Supporting Calculations

**Non-Emergency Generator Potential Emissions**  
**Dominion Transmission, Inc.**  
**GP Compressor Station - Millstone**

Input Data: Continental - Model # TM27-4cyc  
 Design Class: 4-stroke rich burn  
 Engine Power: 72 bhp  
 Rated Electrical Output: 53.7 kW  
 Fuel Input: 0.18 MMBtu/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)	(tons/yr)
PM (filterable)	9.50E-03	lb/MMBtu	1.74E-03	7.63E-03
PM-10 (filterable)	9.50E-03	lb/MMBtu	1.74E-03	7.63E-03
PM-2.5 (filterable)	9.50E-03	lb/MMBtu	1.74E-03	7.63E-03
PM (condensibles)	9.91E-03	lb/MMBtu	1.82E-03	7.96E-03
SO <sub>2</sub>	5.88E-04	lb/MMBtu	1.08E-04	4.72E-04
CO	3.72	lb/MMBtu	0.68	2.99
NO <sub>x</sub>	2.27	lb/MMBtu	0.42	1.82
VOC	0.358	lb/MMBtu	0.07	0.29
CO <sub>2</sub>	117.0	lb/MMBtu	21.44	93.90
CH <sub>4</sub>	2.20E-03	lb/MMBtu	0.00	0.00
N <sub>2</sub> O	2.20E-04	lb/MMBtu	0.00	0.00
CO <sub>2</sub> e	117.1	lb/MMBtu	21.46	94.00
1,1,2,2-Tetrachloroethane	2.53E-05	lb/MMBtu	4.64E-06	2.03E-05
1,1,2-Trichloroethane	1.53E-05	lb/MMBtu	2.80E-06	1.23E-05
1,1-Dichloroethane	1.13E-05	lb/MMBtu	2.07E-06	9.07E-06
1,2-Dichloroethane	1.13E-05	lb/MMBtu	2.07E-06	9.07E-06
1,2-Dichloropropane	1.30E-05	lb/MMBtu	2.38E-06	1.04E-05
1,3-Butadiene	6.63E-04	lb/MMBtu	1.22E-04	5.32E-04
1,3-Dichloropropene	1.27E-05	lb/MMBtu	2.33E-06	1.02E-05
Acrolein	2.63E-03	lb/MMBtu	4.82E-04	2.11E-03
Acetaldehyde	2.79E-03	lb/MMBtu	5.11E-04	2.24E-03
Benzene	1.58E-03	lb/MMBtu	2.90E-04	1.27E-03
Butyl/isobutyraldehyde	4.86E-05	lb/MMBtu	8.91E-06	3.90E-05
Carbon Tetrachloride	1.77E-05	lb/MMBtu	3.24E-06	1.42E-05
Chlorobenzene	1.29E-05	lb/MMBtu	2.36E-06	1.04E-05
Chloroform	1.37E-05	lb/MMBtu	2.51E-06	1.10E-05
Ethane	7.04E-02	lb/MMBtu	1.29E-02	5.65E-02
Ethylbenzene	2.48E-05	lb/MMBtu	4.55E-06	1.99E-05
Ethylene Dibromide	2.13E-05	lb/MMBtu	3.90E-06	1.71E-05
Formaldehyde	2.05E-02	lb/MMBtu	3.76E-03	1.65E-02
Methanol	3.06E-03	lb/MMBtu	5.61E-04	2.46E-03
Methylene Chloride	4.12E-05	lb/MMBtu	7.55E-06	3.31E-05
Naphthalene (POM)	9.71E-05	lb/MMBtu	1.78E-05	7.79E-05
PAH	1.41E-04	lb/MMBtu	2.58E-05	1.13E-04
Styrene	1.19E-05	lb/MMBtu	2.18E-06	9.55E-06
Toluene	5.58E-04	lb/MMBtu	1.02E-04	4.48E-04
Vinyl Chloride	7.18E-06	lb/MMBtu	1.32E-06	5.76E-06
Xylene	1.95E-04	lb/MMBtu	3.57E-05	1.57E-04
TOTAL HAP:			0.019	0.083

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

(2) Conversion of bhp to kW:

$$0.746 \text{ kW/bhp} \\ (72 \text{ bhp}) * (0.746 \text{ kW/bhp}) = 53.7 \text{ kW}$$

(3) Conversion of kilowatt to MMBtu/hr:

$$3412.14 \text{ BTU/kw-hr} \\ (53.7 \text{ kw}) * (3412.14 \text{ Btu/kw-hr}) * (1 \text{ MMBtu}/10^6 \text{ Btu}) = 0.18 \text{ MMBtu/hr}$$

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

$$\text{For example: } \text{CO}_2 = (53.06 \text{ kg CO}_2/\text{MMBtu}) / (0.453592 \text{ kg/lb}) = 117.0 \text{ lb/MMBtu}$$

(5) Global Warming Potentials = 25 for CH<sub>4</sub> and 298 for N<sub>2</sub>O (per 40 CFR Part 98 Table A-1 to Subpart A)

$$\text{For example: } \text{CO}_2\text{e} = (117.0 \text{ lb/MMBtu}) + (0.0022 \text{ lb/MMBtu} * 25) + (0.00022 \text{ lb/MMBtu} * 298) = 117.1 \text{ lb/MMBtu}$$

**Appendix B**  
**Previous Review for Similar Unit**



west virginia department of environmental protection

Division of Air Quality  
601 57<sup>th</sup> 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](http://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

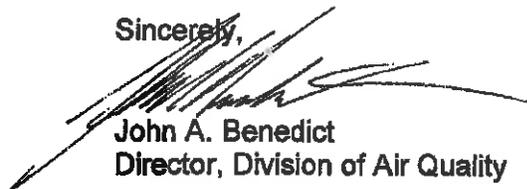
Dear Mr. Jeffrey Barger:

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.