COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Northern Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS

Dominion Transmission, Inc.
Leesburg Station
Loudoun County, Virginia
Permit No. NRO71978

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Dominion Transmission, Inc. has applied for a Title V Operating Permit renewal for its natural gas pipeline compressor station in Loudoun County, Virginia. The Department has reviewed the application and has prepared a Title V Operating Permit.

Engineer/Permit Contact: _____ Date: _____
Martha Lee

Air Permit Manager: _____ Date: _____
Terry H. Darton

Regional Director: _____ Date: _____
Thomas A. Faha

FACILITY INFORMATION

Permittee
Dominion Transmission, Inc.
445 West Main Street
Clarksburg, West Virginia 26302-2450

Facility
Leesburg Compressor Station
40620 Consolidated Lane
Leesburg, Virginia 20175

County-Plant Identification Number: 51-107-01016

SOURCE DESCRIPTION

NAICS: 486210 SIC Code: 4922 - Natural Gas Transmission.
The Leesburg Compressor Station is a natural gas transmission facility located in Loudoun County, Virginia. Natural gas is received via pipelines from upstream compression stations, compressed, and returned to pipelines for transmission downstream.

The Leesburg facility utilizes two natural gas-fired stationary reciprocating internal combustion (IC) engines, each rated at 3,010 horsepower (HP), to drive the natural gas compressors. The engines are each equipped with an oxidation catalyst to control carbon monoxide emissions. The facility also utilizes one natural gas-fired Solar Taurus 60 model turbine, rated at 8,036 horsepower to compress natural gas. The turbine is equipped with a special low-NO_x burner to control NO_x emissions. Auxiliary equipment at the facility includes one 2.75 MMBtu/hr natural gas-fired boiler used for space heating, one 550 HP natural gas-fired emergency auxiliary generator, and one 2.9 MMBtu/hr natural gas-fired heater used to reheat the portion of a natural gas stream that is cooled as part of a pressure-lowering operation necessary for a customer's pipeline system.

The facility is a Title V major source of nitrogen oxides and carbon monoxide emissions. The source is located in an area which is nonattainment for ozone. The Leesburg Station is a major source for the nonattainment new source review (NSR) program, and a Prevention of Significant Deterioration (PSD) minor source. The facility is subject to the New Source Performance Standards (NSPS) Subpart GG – Standards of Performance for Stationary Gas Turbines, and is an area source for hazardous air pollutants (HAP).

The facility operates under a minor new source review (NSR) permit issued December 10, 2009, which combines the November 2, 2004, minor NSR permit to modify and operate the combustion turbine, and the January 21, 2000, minor NSR permit to modify and operate the IC engines and auxiliary equipment. The initial minor NSR permit for the two IC engines and the emergency auxiliary generator was issued on July 22, 1992. The permit was amended on February 10, 1998, to correct equipment capacity and lower the associated emission rates, and superseded on January 21, 2000, to modify the provisions for compliance testing. The combustion turbine was originally permitted on March 26, 2004, and superseded on November 2, 2004, to incorporate the use of a NOx continuous emissions monitoring system (CEMS) in

lieu of parametric monitoring. On August 13, 2009, the DEQ issued an exemption for the 2.9 MMBtu/hr heater.

The facility is also subject to reasonably available control technology (RACT) and was issued a RACT state operating permit (SOP) permit on May 8, 2000. The NO_x emission limits and controls established as BACT in the July 22, 1992, permit were proposed and established as RACT for the IC engines and the auxiliary generator.

The facility was issued a Title V permit on May 9, 2000, which expired on May 8, 2005. Changes to the initial Title V permit include the addition of the turbine and the installation of the exempt heater. The Department of Environmental Quality (DEQ) received a Title V renewal application on November 10, 2004. Upon request by the DEQ an update was submitted on June 29, 2009. The facility currently operates under a Title V permit application shield.

COMPLIANCE STATUS

The facility normally undergoes a full compliance evaluation (FCE) biennially. The most recent FCE, including a site visit, was conducted on May 1, 2009. In addition, all reports, notifications, and other data as required by permit conditions or regulations, which are submitted to the DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION
The emissions units and air pollution control devices for the Leesburg Station are identified in Table 1 below.

TABLE 1. Summary of Emission Units and Control Devices at the Leesburg Station

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity	Pollution Control Device Description (PCD)	PCD ID	Pollutant Controlled	Applicable Permit Date
Internal Combustion Sources							
TUR01	S05	Solar Taurus 60 Model natural gas-fired turbine (constructed 2004)	8036 horsepower	Solar SoloNOx Burner Combustion Control (constructed 2004)	C03	NOx	12/10/09
EN01	S01	Dresser Rand Model TLAD8 natural gas-fired IC compressor engine (constructed 1992)	3,010 horsepower	Johnson Matthey LHC Catalyst (constructed 1993)	C01	CO	12/10/09
EN02	S02	Dresser Rand Model TLAD8 natural gas-fired IC compressor engine (constructed 1992)	3,010 horsepower	Johnson Matthey LHC Catalyst (constructed 1993)	C02	CO	12/10/09
AUX01	SO3	Caterpillar Model 3508 natural gal-fired Auxiliary Generator (constructed 1992)	550 horsepower	---	---	---	12/10/09
Fuel Burning Equipment							
B01	S04	Ajax Model WGFD-2750 natural gas-fired boiler (constructed 1992)	2.75 MMBtu/hr	---	---	---	12/10/09

EMISSIONS INVENTORY

A copy of the 2008 annual emission update is attached as Attachment A. Emissions are summarized in the following tables:

TABLE 2.
2008 Actual Emissions of Criteria Pollutants for the Leesburg Compressor Station

	Criteria Pollutant Emission in Tons/Year				
Emission Unit	**VOC**	**CO**	**SO_2**	**PM-10**	**NO_x**
TUR01	0.039	0.093	0.003	0.316	2.02
EN01	3.129	.939	0.002	0.245	7.238
EN02	1.626	1.167	0.002	0.294	5.782
AUX01	0.007	0.024	0.0	0.001	0.078
B01	0.035	0.531	0.004	0.048	0.633
FUG[1]	4.07				
Total	8.905	2.754	0.10	0.904	15.75

[1] Fugitive emissions are included in the calculation for emission inventory submittal and emission fees. The fugitive emissions from blowdowns, valves, fittings, storage tanks etc. are not subject to any other applicable requirements.

TABLE 3.

2008 Actual Facility Emissions of Hazardous Air Pollutants for the Leesburg Compressor Station

Pollutant	**Hazardous Air Pollutant Emission in Tons/Year**
Formaldehyde	3.018

EMISSION UNIT APPLICABLE REQUIREMENTS - (Emission Unit TUR01)

Limitations

The following applicable NO_x, CO, VOC, PM, PM-10, and formaldehyde limitations are carried forward from the November 2, 2004, permit into the minor NSR permit issued December 10, 2009. A copy of the permit is included as Attachment B.

Title V Condition

III.A.1 NOx emissions shall be controlled by Solar's SoLoNOx burner, a dry-low NOx burner. This is a BACT requirement. (Condition I.1 of 12/10/09 Permit)

III.A.2 The approved fuel for the turbine is pipeline natural gas as defined in 40 CFR §72.2. This requirement (pipeline) is more restrictive than the NSPS Subpart GG natural gas requirement. (Condition I.2 of 12/10/09 Permit)

III.A.3 Limits fuel consumption for the turbine. (Condition I.3 of 12/10/09 Permit)

III.A.4 Limits annual emissions of NOx, CO, VOC, PM, PM-10, and formaldehyde. Limits concentration and hourly emissions of NOx. The emission limits are a BACT requirement. (Condition I.4 of 12/10/09 Permit)

III.A.5 Sets a visible emissions limit of five percent opacity for the turbine. This is a BACT requirement. (Condition I.5 of 12/10/09 Permit)

III.A.6 Requires the turbine to be operated in compliance with 40 CFR 60, Subpart GG unless the federal operating permit is more restrictive. (Condition I.6 of 12/10/09 Permit)

Monitoring and Recordkeeping

The monitoring and recordkeeping requirements have been modified to meet Part 70 requirements.

The compliance strategy for the turbine entails continuous monitoring of NOx, proper operation and maintenance of the equipment, and the use of pipeline quality natural gas.

Title V Condition

III.B.1 A continuous emissions monitoring system (CEMS) replaced the parametric monitoring initially used to monitor NOx emissions. The NOx CEMS data may be used as a basis to request stack testing to demonstrate compliance if the data indicate that a non-compliance issue may exist. A CEMS quality control program, which meets the requirements of 40 CFR 60.12 and Appendix B, or F, as appropriate, is also required. (Condition I.7 of 12/10/09 Permit)

III.B.2. The sulfur content monitoring shall be in accordance with the most recent NSPS Subpart GG requirements; but must provide data to document compliance with pipeline quality natural gas, in accordance with Condition III.A.2. (Condition I.8 of 12/10/09 Permit)

III.B.3. Waives the fuel monitoring of nitrogen content for the turbines. The Title V permit does not require fuel-bound nitrogen content monitoring as contained in NSPS Subpart GG at 40 CFR 60.334. This has not been included as EPA policy has established that nitrogen monitoring can be waived for pipeline quality natural gas, since there is no fuel-bound nitrogen, and the free nitrogen does not contribute appreciably to NO_x emissions. The August 14, 1987 EPA memorandum from John Rasnic that established this policy is included as Attachment B. (Condition I.9 of 12/10/09 Permit)

III.B.4 Compliance with the emission limits established for NO_x, CO, VOC, PM, PM-10, and formaldehyde is achieved by proper operation and maintenance of the engines, and by abiding by the fuel throughput restrictions established in the permit. The permit requires the permittee to maintain records of all scheduled and non-scheduled maintenance. The permit also requires all operators to be trained on the proper operation of the process and air pollution control equipment, and records of the training maintained.
The turbine burns pipeline-quality natural gas. As long as the equipment is properly maintained and operated, there is very little likelihood that the opacity standards will be violated. Therefore, the permit conditions requiring proper operation and maintenance of the equipment, with associated training and recordkeeping, establish a federally enforceable maintenance program which provides a reasonable assurance of compliance with the opacity standards. (Condition I.8 of 12/10/09 Permit)

III.B.5 The permit includes provisions for maintaining records of all required emissions data and operating parameters necessary to demonstrate compliance. These records include: the consumption of natural gas by the turbine, scheduled and unscheduled maintenance on the turbine, NOx CEMS data on the turbine, the time lengths for startup and shutdown, and emissions data to determine compliance with annual emission limits. The permittee must maintain written operating procedures for the engines and the related air pollution control equipment and must train all operators on the proper operation of the equipment. The proper operation and maintenance of the turbine functions as air pollution control for all criteria pollutants. (Condition I.9 of 12/10/09 Permit)

Testing

Title V Condition

III.C The permit does not require source emission tests. The turbine employs a NOx CEMS, which continuously measures emissions when the turbine is operating. In addition, the facility is required to implement a CEMS quality control program to ensure reliability of the data. A table of test methods has been included in the permit if additional testing is performed. A performance evaluation of the NOx CEMS shall take place during any required performance test.
The DEQ and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

Title V Condition

III.D The permit requires the permittee to report excess emissions due to the startup/shutdown process. The permit also establishes time schedules for submitting copies of test reports and quarterly CEMS reports to the DEQ. The general reporting requirements enumerated in the General Requirements section of the permit also apply. Documents must be certified by a responsible official.

Streamlined Requirements

Conditions specific to the initial stack test and CEMS performance evaluation, as well as any initial notifications, were not included in the combined permit issued December 10, 2009. The conditions were satisfied and are not included in the Title V Operating permit renewal. Initial compliance testing, the CEMS performance evaluation, and the VEE were conducted on November 9 and 10, 2004, and results of the testing were subsequently approved by the DEQ.

NSPS Subpart GG: The combustion turbine has the following applicable requirements established in NSPS Subpart GG, which is included in 9 VAC 5-50-410 by reference:

a. 60.332(a)(2): Standard for Nitrogen Oxides

where:

$$STD = 0.0150 \frac{(14.4)}{Y} + F$$

STD = Allowable NO_x emissions (percent by volume at 15 percent oxygen and on a dry basis).
Y = Manufacturer's rated heat rate at manufacturer's rated peak load (kilojoules per watt hour), or actual measured heat rate based on lower

heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour.

F = NO_x emission allowance for fuel-bound nitrogen as defined in ∋ 60.332 (a)(3)

The allowable NO_x emission limit for the Solar turbine is more stringent than the limits established by NSPS Subpart GG. Therefore, only the limits from the minor NSR permit have been included in the Title V permit.

b. 60.333: Standard for sulfur dioxide:

SO_2 # 0.015 percent by volume, dry basis, at 15% O_2, OR, fuel sulfur content # 0.8 percent by weight.

The fuel sulfur content requirement is more stringent than the standard contained in NSPS Subpart GG; therefore, the NSPS limit is not included in the permit.

EMISSION UNIT APPLICABLE REQUIREMENTS - (Emission Units EN01 and EN02)

Limitations

The following applicable NO_x, CO, VOC, and formaldehyde limitations are carried forward from the January 21, 2000, permit into the minor NSR permit issued December 10, 2009. A copy of the permit is included as Attachment B.

Title V Condition

IV.A.1 CO emissions from the compressor engines shall be controlled by an oxidation catalyst, which shall be provided with adequate access for inspection. This is a BACT requirement. (Condition II.1 of 12/10/09 Permit)

IV.A.2 The approved fuel for the compressor engines is natural gas. (Condition II.2 of 12/10/09 Permit)

IV.A.3 Establishes limits on the combined fuel consumption for the engines. (Condition II.3 of 12/10/09 Permit)

IV.A.4 Emission limits for NO_x, CO, VOC, and formaldehyde are established for each engine. The emission limits represent BACT. The equivalent emission limits for NOx and VOC are specified in the RACT permit in terms of grams-per-brake-horsepower (g/bhp-hr); therefore, these limits are also included in the Title V permit. (Condition II.7 of 12/10/09 Permit and Condition 3 of 5/22/00 RACT permit)

IV.A.5 Sets a visible emissions limit of five percent opacity for the engines. This is a BACT requirement. (Condition II.10 of 12/10/09 Permit)

Monitoring and Recordkeeping

The monitoring and recordkeeping requirements have been modified to meet Part 70 requirements, with additional monitoring and recordkeeping provisions added, as needed, to establish sufficient periodic monitoring to document compliance with the applicable requirements for the engines.

Title V Condition

IV.B.1 Compliance with the emission limits established for NO_x, CO, VOC, and formaldehyde is achieved by proper operation and maintenance of the engines, and by abiding by the fuel throughput restrictions established in the permit. Additionally, CO is controlled by oxidation catalyst for each engine. The permit requires the permittee to develop an inspection and maintenance schedule for the engines and control systems and maintain records of all scheduled and non-scheduled maintenance. The permit also requires written operating instructions for all equipment, that all operators be trained on the proper operation of the

process and air pollution control equipment, and that records of the training be maintained.

The engines burn natural gas. As long as the engines are properly maintained and operated, there is very little likelihood that the opacity standards will be violated. Therefore, the permit conditions requiring proper operation and maintenance of the engines, with associated training and recordkeeping, establish a federally enforceable maintenance program which provides a reasonable assurance of compliance with the opacity standards. (Condition III.2 of 012/10/09 Permit)

IV.B.2 The permit establishes periodic monitoring requirements for the oxidation catalyst by requiring the permittee to monitor the temperature change and pressure drop across the catalyst. These parameters, in conjunction with the periodic testing to evaluate CO emissions, will provide a reasonable assurance that the catalyst remains effective. The permit specifies the indicator ranges and requires the report establishing the ranges to remain on the premises. (Title V permit condition)

IV.B.3 The permit requires periodic testing to be performed on the exhaust from each engine. The testing is required to be conducted on each engine at a frequency of once every six-month period. The testing is conducted to provide a reasonable assurance of compliance with the emission limits. Testing involves the use of portable analyzers to measure NO_x, CO, and diluent O_2 concentrations. The procedures shall be approved by the DEQ. VOC emissions will be measured by collecting a sample of exhaust gas and measuring for total hydrocarbons, methane, and ethane. The methane and ethane emissions will be subtracted from the total hydrocarbon emissions to obtain non-methane and non-ethane hydrocarbon emissions.

The periodic testing serves several purposes. First, the testing will be used to demonstrate that proper operation and maintenance of the engines and control system continues to achieve compliance with the established permit limits for NO_x, CO, and VOC. Additionally, the periodic testing for CO and VOC will provide a measure of the engine operation and combustion efficiency. Compliance with the formaldehyde emission limits will be inferred by demonstrating compliance with criteria pollutant emission limits. Second, the measurements will be used to confirm the emission factors which will be employed to demonstrate compliance with annual permit limits. Third, the CO testing will provide an indication of the continued effectiveness of the oxidation catalyst in controlling CO emissions.

If the periodic testing indicates an exceedance of an emission limit, the permittee is required to take action to correct any equipment which is not operating properly. If corrective action does not eliminate the emissions excursion, the permittee is required to conduct an EPA reference method test in accordance with test methods identified in the permit, or other procedures approved by the DEQ. The reference method testing will be used to determine the compliance

status of the engine(s). It is worth noting that an excursion above an emission standard which is measured using a portable gas analyzer may be considered credible evidence of a violation, however, it does not necessarily establish or correspond to a violation of the permit. (Title V permit condition)

IV.B.4 The permit includes provisions for maintaining records of all required emission data and operating parameters necessary to demonstrate compliance. These records include: the consumption of natural gas by the compressor engines, scheduled and unscheduled maintenance on the engines, periodic NO_x, CO, and VOC measurements on each engine, and temperature change and pressure drop readings across the oxidation catalyst for each engine. Additionally, the permittee must maintain written operating procedures for the engines and the related air pollution control equipment and must train all operators on the proper operation of the equipment. The proper operation and maintenance of the compressor engines functions as air pollution control for all criteria pollutants. Therefore, the requirement to maintain written operating procedures and provide training to operators applies to the compressor engines as well as the oxidation catalyst.

Pollutant-specific emission factors will be used in conjunction with operational data to calculate annual emissions on a monthly basis for each engine. The emission factors and equations shall be approved by the DEQ. The use of these emission factors provides a reasonable assurance of compliance with emission limitations, and underscores that the operational and fuel restrictions are the controlling parameters limiting emissions from the engines. The periodic measurement of NO_x, CO, and VOC emissions will serve as a check on the continued representativeness of the manufacturer supplied emission factors. (Condition II.11 of 012/10/09 Permit)

Testing

Title V Condition

IV.C The permit requires the permittee to conduct an EPA reference method test program once during the five-year permit term. Testing shall be conducted to evaluate the compliance of the engines with respect to the applicable NO_x, CO, and VOC emission standards. A table of test methods has been included in the permit to identify the current reference method test procedures for the subject pollutants.

Reporting

Title V Condition

IV.D The permittee is required to report excursions outside of the established indicator ranges for the oxidation catalyst monitoring, and excursions above emission

limits revealed during the periodic emissions monitoring. The permit also establishes time schedules for submitting copies of test reports to the DEQ. The general reporting requirements enumerated in the General Requirements section of the permit also apply. Documents must be certified by a responsible official.

RACT Requirements

The requirement for NO_x and VOC RACT controls is established in 9 VAC 5 Chapter 40, Article 51 of the state regulations. The state RACT regulations were promulgated in response to requirements of the federal Clean Air Act (Section 182) targeted at reducing emissions of nitrogen oxides (NO_X) and volatile organic compounds (VOC) which contribute to the formation of tropospheric (lower atmosphere) ozone.

The Leesburg Station is a major source of NO_x emissions located in the Northern Virginia Ozone Nonattainment Area and is required, at a minimum, to institute Reasonably Available Control Technology (RACT) for the control of NO_x. The source is also required to institute RACT for control of VOC emissions as the facility had an uncontrolled emission rate of VOC greater than 25 tons per year, which was the RACT threshold for areas classified as 'serious' for ozone non-attainment.

The State Operating Permit issued June 2, 2000, implementing NO_x and VOC RACT provisions for the Leesburg Station, establishes as RACT the same emission controls and limitations as contained in the State Air Pollution Control Board permit that was issued on July 22, 1992, and superseded with the January 21, 2000, and the December 10, 2009, permit amendments. These controls and limitations were determined to represent the required best available control technology in the initial permit review, and therefore, for emissions of NO_X and VOC are no less stringent than RACT. The NO_x RACT emission level from each of the two compressor engines is 1.5 grams per brake horsepower-hour (g/bhp-hr). This rate equates to the 10 lbs/hr established in the initial permit for the facility. The VOC RACT emission level from each of the two compressor engines is 0.46 g/bhp-hr, which equates to the 3.0 lbs/hr limit established in the initial permit. These emission rates, in grams-per-brake-horsepower-hr, represent the manufacturer-guaranteed emission rates while each engine operates at design capacity. Design capacity is defined to mean operation at 95 percent or greater of rated horsepower. These RACT emission levels are the same as the already established limits for the engines, but are reiterated in the Title V permit in terms of g/bhp-hr.

Request for Streamlined Requirement

In the 2004 Title V renewal application the facility requested removal of the periodic monitoring requirement for the oxidation catalyst. The condition requires a log of the monthly observation of the temperature change and pressure drop across the catalyst of each engine as an indicator of catalyst effectiveness. Corrective action is required if the observations indicate an excursion outside of the normal operating ranges.

The facility cites the manufacturer's operating procedures for the catalyst as sufficient means to ensure effectiveness (See Appendix D of the 2004 Title V application). The procedures recommend direct measurement of VOC and CO concentrations as a better means to ensure catalyst effectiveness. However, the procedures do not provide a clear indication of how often the measurements should be taken.
As part of their periodic monitoring plan, Dominion is required to perform semi-annual testing to measure the emissions of NOx, CO, VOC, and O_2. In addition, Dominion has indicated that there is an alarm system that is activated at 0.9 psi (normal pressure range is 0 to 0.8 psi), and the burner trips out if the temperature exceeds 1000^{o}F.

Although fouling or masking is not likely because the engines burn exclusively natural gas, temperature is critical to the catalyst longevity. Requiring a once-a-month observation of the temperature change and pressure drop across the catalyst could serve as an early indicator of any potential problems and serve as a backup in case of failure of the alarm system. Therefore, the periodic monitoring requirement will remain.

EMISSION UNIT APPLICABLE REQUIREMENTS - (Emission Units B01 and AUX01)

The following limitations are carried forward from the January 21, 2000, permit into the minor NSR permit issued December 10, 2009. A copy of the permit is included as Attachment B.

Title V Condition

V.A.1 The approved fuel for the boiler and auxiliary generator is natural gas. (Condition II.2 of 012/10/09 Permit)

V.A.2 Limit on natural gas throughput for the boiler. The twelve-month cumulative fuel throughput limitation is based on the maximum hourly fuel consumption rate and the annual operating hours. (Condition II.4 of 012/10/09 Permit)

V.A.3 NO_x emission limits established for the boiler. This is a BACT requirement. The short term (e.g. hourly) NO_x emission limit for the boiler is based on manufacturer emissions data. The annual emission limit is based on the maximum hourly emission rate and 8760 operating hours per year. (Condition II.8 of 012/10/09 Permit)

V.A.4 Limit on natural gas throughput for the auxiliary generator. The twelve-month cumulative fuel throughput limitation is based on the maximum hourly fuel consumption rate and the allowable annual operating hours. (Condition II.5 of 012/10/09 Permit)

V.A.5 Limit on annual operating hours for the auxiliary generator. (Condition II.6 of 012/10/09 Permit)

V.A.6 NO_x and CO emission limits established for the auxiliary generator. This is a BACT requirement. The short term NO_x and CO emission limits are based on manufacturer emissions data. The annual emission limits are based on the maximum hourly emission rates and allowable operating hours. (Condition II.9 of 012/10/09 Permit)

V.A.7 Visible emissions limit of five percent opacity established for the boiler and auxiliary generator. This is a BACT requirement. (Condition II.10 of 012/10/09 Permit)

Monitoring and Recordkeeping

The monitoring and recordkeeping requirements of the NSR permit have been modified to meet Part 70 requirements.

Title V Condition

V.B.1 The permit requires the permittee to develop an inspection and maintenance schedule for the equipment and maintain records of all scheduled and non-

scheduled maintenance. The permit also requires that written operating procedures be available and that all operators be trained on the proper operation of the equipment. Records of the training shall be maintained on site.(Condition III.2 of 012/10/09 Permit)

V.B.2 The permit includes requirements for maintaining records of all emission data and operating parameters. These records include the consumption of natural gas by the boiler and auxiliary generator, and the annual operating hours of the auxiliary generator. Additionally, the permit requires that an inspection and maintenance schedule be established for the boiler and auxiliary generator to assure that the units are operated in accordance with good air pollution control practices.

As long as the natural gas throughput limits and operating hours limit are not violated, there is very little chance that criteria pollutant emission limits will be violated. Therefore, recordkeeping demonstrating compliance with the natural gas throughput limits for both units, and recordkeeping demonstrating compliance with operating hours for the auxiliary generator can be used to demonstrate compliance with NO_x and CO, satisfying the periodic monitoring requirements.

Emissions from the operation of the boiler and auxiliary generator will be calculated on a monthly basis to demonstrate compliance with annual limits. Annual emissions shall be calculated monthly as the sum of each consecutive twelve-month period using the actual operating hours or fuel throughput and DEQ approved pollutant-specific emission factors and equations.

There is no monitoring for the visible emissions limitation. Compliance with the visible emission limits in the permit is expected from the natural gas fired boiler and generator as long as the units are maintained and operated properly. Condition V.B.1 establishes equipment inspection and maintenance as a federally enforceable requirement in lieu of periodic monitoring for opacity. This inspection and maintenance program along with the required documentation provides assurance of continued proper operation of the engines. (Condition II.11 of 012/10/09 Permit)

Testing

Title V Condition

V.C The permit does not require source emission tests. A table of test methods has been included in the permit if testing is performed. The DEQ and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

No specific reporting requirements have been included in the permit.

Streamlined Requirements

As stated previously, the Leesburg Station is subject to VOC and NO_x RACT provisions. The State Operating Permit implementing NO_x and VOC RACT provisions establishes as RACT the same emission controls and limitations as contained in the State Air Pollution Control Board permit to install, modify, and operate that was issued on July 22, 1992, amended February 10, 1998, superseded on January 21, 2000, and again on December 10, 2009. The February 10, 1998 amendment accounts for the auxiliary generator which was actually installed. The installed auxiliary generator is a less NO_x-emitting model than what was identified in the original permit. The February 10, 1998 permit amendment restricts the NO_x emissions from the auxiliary generator to 2.4 lbs/hr. This corresponds to a NO_x RACT emission rate of 2.0 g/bhp-hr for the rated 550 horsepower auxiliary generator (2.4 lbs/hr x 1/550 hp x 453.6 g/lb = 2.0). No permit limits are established for VOC emissions from the generator as these emissions are considered negligible. The proposed RACT emission level of 2.0 g/bhp-hr is the same as the already established limit for the engine and is not repeated in the proposed Title V permit as it would be redundant.

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110, that apply to all Federal operating permit sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions, including those caused by upset conditions, within one business day.

Comments on General Conditions

B. Permit Expiration

This condition refers to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §2.2-604 and §10.1-1185 of the *Code of Virginia,* and the "Department of Environmental Quality Agency Policy Statement No. 2-2003".

This general condition cites the Articles that follows:
Article 1 (9 VAC 5-80-50 et seq.), Part II of 9 VAC 5 Chapter 80. Federal Operating Permits for Stationary Sources]

This general condition cites the sections that follow:
9 VAC 5-80-80. Application
9 VAC 5-80-140. Permit Shield
9 VAC 5-80-150. Action on Permit Applications

F. Failure/Malfunction Reporting

Section 9 VAC 5-20-180 requires malfunction and excess emission reporting within four hours of discovery. Section 9 VAC 5-80-250 of the Title V regulations also requires malfunction reporting; however, reporting is required within two days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to section 9 VAC 5-20-180 including Title V facilities. Section 9 VAC 5-80-250 is from the Title V regulations. Title V facilities are subject to both sections. A facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC 5-80-250. The report must be made within four daytime business hours of discovery of the malfunction.

This general condition cites the sections that follow:

9 VAC 5-40-41. Emissions Monitoring Procedures for Existing Sources
9 VAC 5-40-50. Notification, Records and Reporting
9 VAC 5-50-50. Notification, Records and Reporting

This general condition contains a citation from the Code of Federal Regulations as follows:
40 CFR 60.13 (h). Monitoring Requirements.

J. Permit Modification

This general condition cites the sections that follow:
9 VAC 5-80-50. Applicability, Federal Operating Permit For Stationary Sources
9 VAC 5-80-190. Changes to Permits.
9 VAC 5-80-260. Enforcement.
9 VAC 5-80-1100. Applicability, Permits For New and Modified Stationary Sources
9 VAC 5-80-1790. Applicability, Permits For Major Stationary Sources and Modifications Located in Prevention of Significant Deterioration Areas
9 VAC 5-80-2000. Applicability, Permits for Major Stationary Sources and Major Modifications Locating in Nonattainment Areas

U. Malfunction as an Affirmative Defense

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in sections 9 VAC 5-80-250 and 9 VAC 5-20-180. The malfunction requirements are listed in General Condition U and General Condition F. For further explanation see the comments on general condition F.

This general condition cites the sections that follow:
9 VAC 5-20-180. Facility and Control Equipment Maintenance or Malfunction
9 VAC 5-80-110. Permit Content

Y. Asbestos Requirements

The Virginia Department of Labor and Industry under Section 40.1-51.20 of the Code of Virginia also holds authority to enforce 40 CFR 61 Subpart M, National Emission Standards for Asbestos.

This general condition contains a citation from the Code of Federal Regulations that follow:
40 CFR 61.145, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to demolition and renovation.
40 CFR 61.148, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to insulating materials.
40 CFR 61.150, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to waste disposal.

This general condition cites the regulatory sections that follow:
9 VAC 5-60-70. Designated Emissions Standards
9 VAC 5-80-110. Permit Content

FUTURE APPLICABLE REQUIREMENTS

40 CFR Part 63 Subpart ZZZZ - – EPA is proposing CO emission standards, generally available control technologies (GACT), and management practices for emergency compression ignition (CI) engines greater than 500 HP operating at area sources of HAP.

INAPPLICABLE REQUIREMENTS

The following requirements have been identified as inapplicable:

40 CFR Part 64 - Compliance Assurance Monitoring: The Compliance Assurance Monitoring (CAM) rule applies to pollutant-specific emission units with pre-control device emissions of regulated pollutants exceeding major source thresholds. The units must have control devices in place and applicable requirements for the subject pollutant. The rule requires sources to monitor the operation and maintenance of the control devices to ensure compliance with applicable requirements. The Leesburg Station does not have any emission units which emit pre-control device emissions above the major source thresholds.

40 CFR Part 63, Subpart B - Requirements for Control Technology Determinations for Major Sources in Accordance with Clean Air Act Sections, Sections 112(g) and 112(j): This subpart establishes the requirements for determining case-by-case maximum achievable control technology standards (MACT) for major sources of hazardous air pollutants which include one or more stationary sources included in a source category or subcategory for which the EPA Administrator has failed to promulgate an emission standard. The Leesburg Station is not a major source of hazardous air pollutants.

40 CFR Part 82 - Protection of Stratospheric Ozone: The Leesburg Station does not use any ozone depleting substances regulated by the subject rule.

40 CFR Part 63 Subpart ZZZZ - National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines: Stationary RICE subject to limited requirements do not have to meet the requirements of Subpart ZZZZ or Subpart A of 40 CFR 63.

COMPLIANCE PLAN

Dominion Transmission, Inc. is currently in compliance with all applicable requirements. No compliance plan was included in the application or the permit.

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation[1]	Pollutant(s) Emitted (5-80-720 B)	Rated Capacity (5-80-720 C)
HW01	AO Smith Model FSGL40216 hot water heater	9 VAC 5-80-720 C	---	0.04 MMBtu/hr
PW01	Zep Super Brute Model 906601 parts washer	9 VAC 5-80-720 B	VOC	---
PW02	Zep Super Brute Model 906601 parts washer	9 VAC 5-80-720 B	VOC	---
TK01	Ethylene glycol storage tank	9 VAC 5-80-720 B	VOC	5,000 gallons
TK02	Floor drain waste storage tank	9 VAC 5-80-720 B	VOC	2,000 gallons
TK03	Reclaim oil storage tank	9 VAC 5-80-720 B	VOC	2,000 gallons
TK04	Waste oil storage tank	9 VAC 5-80-720 B	VOC	2,000 gallons
TK05	Lube oil storage tank	9 VAC 5-80-720 B	VOC	8,000 gallons
TK06	Pipeline fluid storage tank	9 VAC 5-80-720 B	VOC	2,000 gallons
B02	Engineering Technology, Inc. (ETI) indirect gas-fired water bath heater (constructed 2009)	9 VAC 5-80-720 C	---	2.9 MMBtu/hr

[1]The citation criteria for insignificant activities are as follows:
9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application
9 VAC 5-80-720 B - Insignificant due to emission levels
9 VAC 5-80-720 C - Insignificant due to size or production rate

CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

PUBLIC PARTICIPATION

The public comment period began with the publication of the public notice in the Loudoun Times Mirror newspaper on February 24, 2010. The public comment period closed on March 29**,** 2010. There were no official comments received during this review period.

The EPA concurrent review period closed on April 13, 2010. No comments were received from EPA during this review period.

ATTACHMENT A

2008
ANNUAL EMISSION UPDATE

ATTACHMENT B

DECEMBER 10, 2009, PERMIT TO MODIFY AND OPERATE