

# Fact Sheet



## For Draft/Proposed Renewal Permitting Action Under 45CSR30 and Title V of the Clean Air Act

Permit Number: **R30-02300003-2011**  
Application Received: **March 17, 2010**  
Plant Identification Number: **03-54-023-00003**  
Permittee: **Virginia Electric and Power Company**  
Facility Name: **Mt. Storm Power Station**  
Mailing Address: **5000 Dominion Boulevard, Glen Allen, VA 23060**

*Revised: N/A*

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Physical Location: Mt. Storm, Grant County, West Virginia  
UTM Coordinates: 649.85 km Easting • 4340.00 km Northing • Zone 17  
Directions: Off of State Route 93, two (2) miles west of Bismark. From the intersection of Route 93 into Davis, WV continue east on Route 93 for approximately 8 miles.

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### Facility Description

Dominion's Virginia Electric and Power Company's Mt. Storm Power Station is a coal-fired electric generation facility and operates under Standard Industrial Classification (SIC) code 4911 and North American Industry Classification System (NAICS) code 221112. The facility consists of three (3) coal-fired boilers, two with a rated design capacity of 5,779 mmBtu/hr each and one with a rated design capacity of 5,824 mmBtu/hr, an oil-fired auxiliary boiler with a rated design capacity of 150 mmBtu/hr, and various supporting operations such as coal handling, ash handling, limestone handling, and various tanks with insignificant emissions. The Mt. Storm Power Station has the potential to operate seven (7) days per week, twenty-four (24) hours per day and fifty-two (52) weeks per year.

## Emissions Summary

<b>Plantwide Emissions Summary [Tons per Year]</b>		
<b>Regulated Pollutants</b>	<b>Potential Emissions</b>	<b>2009 Actual Emissions</b>
Carbon Monoxide (CO)	1571.72	623.61
Nitrogen Oxides (NO <sub>x</sub> )	47,167.09	3,765.96
Particulate Matter (PM <sub>10</sub> )	3076.26*	522.42
Total Particulate Matter (TSP)	3908.29*	849.68
Sulfur Dioxide (SO <sub>2</sub> )	205,559.53	3,062.68
Volatile Organic Compounds (VOC)	188.61	119.89

*PM<sub>10</sub> is a component of TSP.*

*\* TSP and PM<sub>10</sub> have increased by 23.89 and 9.63 TPY respectively as a result of the addition of a coal blending operation. (Permit Modification R30-02300003-2005 MM01)*

<b>Hazardous Air Pollutants</b>	<b>Potential Emissions</b>	<b>2009 Actual Emissions</b>
Hydrogen Chloride	184.58	119.73
Hydrogen Fluoride	23.07	14.97
Sulfuric Acid Mist	495.83	293.57
Total of other Miscellaneous non-major HAPs	6.34	3.755

*Some of the above HAPs may be counted as PM or VOCs.*

### Title V Program Applicability Basis

This facility has the potential to emit 204,092 tons per year of SO<sub>2</sub>, 6,739 tons per year NO<sub>x</sub>, 11,310 tons per year CO, and 2329.13 tons per year PM<sub>10</sub> and 214 tons per year HAPs. Due to this facility's potential to emit over 100 tons per year of criteria pollutant over 10 tons per year of a single HAP, and over 25 tons per year of aggregate HAPs, Virginia Electric and Power Company's Mt. Storm Power Station is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

### Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

This facility has been found to be subject to the following applicable rules:

Federal and State:

45CSR2	To Prevent And Control Particulate Air Pollution From Combustion Of Fuel In Indirect Heat Exchangers
45CSR6	Control Of Air Pollution From Combustion Of Refuse
45CSR10	Control of Sulfur Dioxide Emissions from Indirect Heat Exchangers.
45CSR11	Prevention Of Air Pollution Emergency Episodes
45CSR13	Permits For Construction, Modification, Relocation And Operation Of Stationary Sources Of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, And Procedures For Evaluation
45CSR14	Permits for Construction and Major Modification, of Major Stationary Sources of Air Pollution for the Prevention of Significant Deterioration
45CSR16	Standards of Performance for New Stationary Sources Pursuant to 40 CFR Part 60
45CSR30	Requirements For Operating Permits
45CSR33	Acid Rain Provisions And Permits
45CSR34	Emission Standards For Hazardous Air Pollutants
45CSR38	Provisions For Determination Of Compliance With Air Quality Management Rules
45CSR39	Control Of Annual Nitrogen Oxides Emissions
45CSR40	Control Of Ozone Season Nitrogen Oxides Emissions
45CSR41	Control Of Annual Sulfur Dioxide Emissions
40 C.F.R 60, Subpart Y	Standards of Performance for Coal Preparation Plants
40 C.F.R. 60, Subpart OOO	Standards of Performance for Nonmetallic Mineral Processing Plants
40 C.F.R. Part 61, Subpart M	National Emission Standard For Asbestos
40 C.F.R. Part 72	Permits Regulation
40 C.F.R. Part 73	Sulfur Dioxide Allowance System
40 C.F.R. Part 74	Sulfur Dioxide Opt-ins
40 C.F.R. Part 75	Continuous Emissions Monitoring
40 C.F.R. Part 76	Acid Rain Nitrogen Oxides Emission Reduction Program
40 C.F.R. Part 77	Excess Emissions
40 C.F.R. Part 78	Appeals Procedure (for Acid Rain Program)
40 C.F.R. Part 82, Subpart F	Ozone depleting substances
WV Code § 22-5-4 (a) (14)	The Secretary can request any pertinent information such as annual emission inventory reporting.

State Only:

45CSR4	To Prevent And Control The Discharge Of Air Pollutants Into The Open Air Which Causes Or Contributes To An Objectionable Odor Or Odors
45CSR42	Greenhouse Gas Emissions Inventory Program

Each State and Federally-enforceable condition of the draft Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the draft Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the draft Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

### Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit ( <i>if any</i> )
R13-656	June 4, 1982	
R13-1438	February 20, 1992	
R13-1660D	May 13, 2003	Supersedes and replaces R13-1660C issued January 5, 2002 which superseded and replaced R13-1660B issued July 10, 1998 which superseded and replaced R13-1660R issued February 18, 1997 which superseded and replaced the original permit R13-1660 issue February 28, 1994
R13-1661/R14-10	August 12, 1994	
R13-2034C	August 4, 2008	Supersedes and replaces R13-2034B issued February 22, 2008 which superseded and replaced R13-2034A issued March 13, 2006 which superseded and replaced R13-2034 issued July 23, 1996.  Also Supersedes and replaces, permit R13-2593A issued March 8, 2005 which Superseded and replaced permit R13-2593 issued September 21, 2004.
R13-2735	December 13, 2007	
R33-3954-2012-3 (Acid Rain Permit)	December 18, 2007	Effective January 1, 2008
CAIR Permit	June 18, 2007	
Consent Decree: No. 03-CV-517A (US vs. VEPCO)	October 3, 2003	Effective October 10, 2003 (date entered by the courts)
CO-R39-C-2009-11	June 26, 2009	Compliance Order

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table B," which may be downloaded from DAQ's website.

### Determinations and Justifications

This is a renewal of the Title V permit which was issued on October 19, 2005 and modified on October 5, 2007, May 27, 2008, November 20, 2008 and March 10, 2009. Changes to the most recent version of the Title V Permit consist of the following:

**1) Title V Boilerplate changes**

- **Condition 1.1.** The Equipment Table was updated to reflect new emission point ID names as submitted in the Title V renewal application. The table was also updated to reflect revisions resulting from NSR permit modifications.
- **Condition 2.1.4.** has been added and states: *Unless otherwise specified in a permit condition or underlying rule or regulation, all references to a “rolling yearly total” shall mean the sum of the monthly data, values or parameters being measured, monitored, or recorded, at any given time for the previous twelve (12) consecutive calendar months.*
- **Condition 3.1.1. and 3.1.2.** were revised because the language in 45CSR§§6-3.1. & 3.2. was revised.
- **Condition 3.1.3.** citation was changed because 45CSR15 was repealed and 40 CFR 61 is now incorporated into 45CSR34.
- **Condition 3.5.3. and 3.5.5.** were revised to require electronic submittal of the annual certification to USEPA. The certification shall now only be submitted to the USEPA by e-mail.

**2) Condition 3.4.4.** was revised to require monthly inspections of fugitive dust controls systems throughout the year.

**3) 45CSR26 - NO<sub>x</sub> Budget Trading Program as A Means of Control and Reduction of Nitrogen Oxides from Electric Generating Units**

- This Rule has been repealed. Therefore the requirements of this rule have been removed. The NO<sub>x</sub> Budget Permit Application included in Appendix A has also been removed. The facility is now subject to 45CSR40 (*Control Of Ozone Season Nitrogen Oxides Emissions*) and the Clean Air Interstate Rule (CAIR) NO<sub>x</sub> Ozone Season Trading Program.

**4) 45CSR37 - Mercury Budget Trading Program To Reduce Mercury Emissions**

- This Rule has been repealed. Therefore the CAMR Mercury Budget Trading Program requirements have been removed from the permit.

**5) Conditions 3.1.9., 3.1.10. and 3.1.11.**

- The discussion regarding the vacature of CAIR by the US Court of Appeals for the District of Columbia has been removed.

**6) 45CSR42 - Greenhouse Gas Emissions Inventory Program**

- This rule is applicable only when the facility becomes an “affected source” by emitting any greenhouse gas on an annual basis greater than the de minimis amounts listed in section 3.1 of the rule i.e.:

Greenhouse Gas Compound	tons/year
carbon dioxide	10,000
methane	476
nitrous oxide	32.6

Greenhouse Gas Compound	tons/year
hydrofluorocarbons	0.855
perfluorocarbons	1.09
sulfur hexafluoride	0.42

If the applicability threshold is triggered, then in accordance with a reporting cycle provided by the Secretary, affected sources shall report to the Secretary the quantity of all greenhouse gases emitted above *de minimis* amounts in the years specified by the Secretary under Section 4. of 45CSR42. Conditions 3.1.12. and 3.5.10. were added to the permit

**7) Requirements from Permit R13-2735**

- This permit was issued on December 13, 2007. It establishes requirements to provide the means to make enforceable the result of the BART analysis related to boilers “MTST-01-BLR-STG-1,” (*MS1/2e*) “MTST-02-BLR-STG-1” (*MS1/2e*) and “MTST-03-BLR-STG-1” (*MS3e*). These requirements are contained in conditions 3.4.1, 4.1.6., 4.1.7., 4.1.8., 4.1.9., 4.2.6., 4.2.7., 4.3.4., 4.4.3., 4.4.4., 4.4.5., and 4.5.7. “R13-2735” has also been added to the “*Active R13, R14, and R19 Permits*” table in Section 1.2.

**8) VEPCO Federal Consent Decree**

- The following language has been incorporated into the permit as Condition 4.1.21:

The Consent Decree entered by the United States District Court for the Eastern District of Virginia, Civil Action Nos. 03-CV-517-A and 03-CV-603-A, on October 10, 2003 between Virginia Electric and Power Company (VEPCO) and the United States of America, et al.(the “Consent Decree”), as such Consent Decree might be amended or modified from time to time in accordance with its terms, is incorporated in its entirety into this permit by reference and is attached as Appendix D to this permit. The permittee’s obligation under this permit shall be to comply with the terms and conditions of the Consent Decree that relate to the operation of North Branch Power Station exclusively, and such compliance shall be determined exclusively by reference to the terms and conditions of the Consent Decree.

Brief descriptions of the paragraphs added to the permit are as follows:

**Paragraph 5**

- This paragraph of the consent decree defines a “30-Day Rolling Average Emission Rate”

**Paragraphs 56, 57 and 58**

- These paragraphs of the consent decree have requirements for the installation and operation of selective catalytic reduction (SCR) controls for NO<sub>x</sub> emission reductions.

**Paragraph 66**

- This paragraph of the consent decree contains an option of compliance with an emission rate after a flue gas desulfurization control device (FGD) demonstrates SO<sub>2</sub> 30-Day Rolling Average Removal Efficiency of at least 95.0%.

**Paragraph 67**

- This paragraph of the consent decree contains requirements for the interim mitigation of Mount Storm SO<sub>2</sub> emissions while FGDs are improved.

**Paragraph 69**

- This paragraph of the consent decree contains requirements for the operation of the FGDs

**Paragraph 78**

- This paragraph of the consent decree has requirements for the operation of the electrostatic precipitators (ESPs).

**Paragraph 80**

- This paragraph of the consent decree has requirements for the operation maintenance of the ESPs in compliance with the approved ESP optimization plan. It also sets a PM emission limit of 0.030 lb/mmBtu for each unit.

**Paragraph 81**

- This paragraph of the consent decree specifies PM emission rate determination methods.

**Paragraph 95**

- This paragraph of the consent decree requires that a stack test for PM emissions be conducted at least once every four (4) successive QA Operating Quarter” (as defined in 40 CFR §72.2). The results of such testing shall be submitted to the Plaintiffs [of the Consent Decree] as part of the periodic reporting of paragraph 137 (see below).

**Paragraph 137**

- This paragraph of the Consent Decree requires that a periodic report, in accordance with Appendix B Section III.C.1.a. of the Consent Decree, be submitted.

**40 C.F.R. Part 64 – Compliance Assurance Monitoring (CAM)**

- The existing Title V permit contains monitoring that meets the definition of “continuous compliance demonstration method” for Units 1, 2 and 3 electrostatic precipitators (ESPs). The ESPs are equipped with “Forry Energy Management Systems” which monitor ESP performance. Included in the permit is a 45CSR2A Monitoring and Recordkeeping Plan which requires Station personnel to obtain ESP average kw/hour data, on an hourly basis as well as other unit data taken from the Digital Control System (DCS) for each of the units. From this data, ESP Efficiency (percent power) and ESP Corona Power Density (watts/1000 ACFM) are calculated hourly. The potential particulate emissions are also calculated and compared to the Units’ regulatory emission limits. The monitoring plan is attached to the Permit as Appendix B.

Furthermore, the compliance method does not include an assumed control device emission reduction factor that could affect the actual operation and maintenance of the ESPs. Therefore in accordance with 40 CFR §64.2(b)(vi), this facility is exempt from the requirements of 40 CFR Part 64 for Particulate Matter.

- There are no add-on control devices for the emissions of Carbon monoxide (CO). Therefore CAM is not applicable for CO.
- The CAM rule is not applicable to the units for Volatile Organic Compounds (VOCs), or Hazardous Air Pollutants (HAPs) since there are no emission limitations or standards for these pollutants
- The units are exempt from the CAM rule under 40 CFR§64.2(b) for the following pollutants:
  - *Oxides of Nitrogen (NO<sub>x</sub>)*

The units are subject to emission standards that apply under an emissions trading program that has been approved by the Administrator. Also NO<sub>x</sub> CEMs are required through the Acid Rain Program

- *Sulfur Dioxide (SO<sub>2</sub>)*  
The units are subject to emission standards prescribed by the Acid Rain Program pursuant to sections 404, 405, 406, 407(a), 407(b), or 410 of the Act.
- There are no add-on control devices for emissions discharged from the auxiliary boiler. Therefore, CAM is not applicable to this boiler.

#### **MACT 112(j) Hammer Application**

- If US EPA has not already promulgated a standard pursuant to 40 C.F.R. 63 for industrial, commercial, institutional boilers and process heaters, the facility shall submit a Part 1 112(j) “equivalent emission limitation by permit” application for case-by-case MACT determination, containing the information required in 40 C.F.R. §63.53(a), within thirty (30) days of the date for a final rule specified in the final order of the United States District Court for the District of Columbia, which is currently February 21, 2011. The Part 1 112(j) application shall identify each affected unit, and address HAP emissions from each of the boilers and process heaters. If the facility determines there are no affected units (boilers or process heaters), a statement of non-applicability must be submitted in lieu of a Part 1 application. A Part 2 112(j) “equivalent emission limitation by permit” application for case-by-case MACT determination containing information required in 40 C.F.R. §63.53(b) is due within 60 days of the Part 1 112(j) application submittal. All 112(j) “equivalent emission limitation by permit” applications must be submitted to both WVDEP-Division of Air Quality, and Chief of Permits and Technical Branch, US EPA Region III, Mail Code 3AP11, 1650 Arch Street, Philadelphia, PA, 19103-2029

#### **Non-Applicability Determinations**

The following requirements have been determined not to be applicable to the subject facility due to the following:

45CSR5	Pursuant to 45CSR5, if 45CSR2 is applicable to the facility, then the facility is exempt from 45CSR5. 45CSR2 is applicable to the facility.
45CSR17	Pursuant to 45CSR17, if 45CSR2 is applicable to the facility, then the facility is exempt from 45CSR17. 45CSR2 is applicable to the facility.
40 CFR 60 Subpart D 40 CFR 60 Subpart Da	The Steam Generators potentially subject to these rules commenced construction prior to August 17, 1971
40 CFR 60 Subpart Db	The Steam Generator potentially subject to this rule commenced construction prior to June 19, 1984
40 CFR 60 Subpart Dc	This facility does not have Seam Generators less than 100 mmBtu/hr but greater than 10 mmBtu/hr.
40 CFR 60 Subpart K	The facility does not include storage vessels that are used to store petroleum liquids (as defined in 40 CFR 60.111(b)) which construction, reconstruction, or modification commenced after June 11, 1973 and prior to May 19, 1978.

40 CFR 60 Subpart Ka	The facility does not include storage vessels that are used to store petroleum liquids (as defined in 40 CFR 60.111a(b)) which construction, reconstruction, or modification commenced after May 18, 1978 and prior to July 23, 1984.
40 CFR 60 Subpart Kb	Storage vessels potentially affected by this subpart have a storage capacity of less than 75 cubic meters and therefore are not subject to this subpart.
40 CFR 60 Subpart GG	The Combustion Turbine potentially subject to this rule commenced construction prior to October 3, 1977 and combusts Jet Fuel Oil.
40 CFR 63 Subpart YYYY	The combustion turbine <i>MTST-C1-CTG-T-1</i> is defined as an “existing combustion turbine” per 40 CFR §60.6090(a)(1) and therefore is not subject to this subpart or to 40 CFR 63 Subpart A pursuant to 40 CFR §60.6090(b)(4).
40 CFR 63 Subpart ZZZZ	Emergency diesel generators <i>MTST-00-EG-DG-1A</i> <i>MTST-00-EG-DG-1B</i> , are existing emergency stationary RICE and therefore are not subject to the requirements of this subpart pursuant to 40 CFR §63.6590(b)(3).  The diesel fire pumps <i>MTST-00-FP-ENG-1</i> and <i>MTST-00-FP-ENG-3</i> are less than 500 brake horsepower and therefore are not affected sources as defined in this subpart.
40 CFR 82 Subpart B	The facility does not conduct motor vehicle maintenance involving CFCs on site.
GHG Clean Air Act requirements	This is a renewal Title V permit and there has not been any modifications that would have triggered a PSD permit.

### Request for Variances or Alternatives

None.

### Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

### Comment Period

Beginning Date: January 25, 2011  
Ending Date: February 24, 2011

All written comments should be addressed to the following individual and office:

Frederick Tipane  
Title V Permit Writer  
West Virginia Department of Environmental Protection  
Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304

### Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The

Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

**Point of Contact**

Frederick Tipane  
West Virginia Department of Environmental Protection  
Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304  
Phone: 304/926-0499 ext. 1215 • Fax: 304/926-0478

**Response to Comments (Statement of Basis)**

Not applicable.