COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
TIDEWATER REGIONAL OFFICE
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STATEMENT OF LEGAL AND FACTUAL BASIS

Southeastern Public Service Authority of Virginia
3809 Elm Avenue, Portsmouth, Virginia 23704-7101
Permit No.: TRO- 61018

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, Southeastern Public Service Authority applied to renew their Title V Operating Permit for the Portsmouth facility and the Department of Environmental Quality (Department) issued the permit on February 4, 2008. The Department has re-opened the Title V Operating Permit and has prepared a draft Title V Operating Permit for the SPSA Portsmouth facility.

Engineer/Permit Contact: _____ Date: July 20, 2009

Air Permit Manager: _____ Date: July 20, 2009

Regional Director: _____ Date: July 20, 2009

I. FACILITY INFORMATION

Permittee
Southeastern Public Service Authority of Virginia
723 Woodlake Drive
Chesapeake, VA 23320-7463

Responsible Official
Bucky Taylor
Executive Director

Facility
SPSA Municipal Waste Combustor Facilities
3809 Elm Avenue
Portsmouth, VA 23704-7101

Contact Person
Scott D. Whitehurst
Superintendent of Environmental Management
(757) 393-3100

County-Plant Identification Number: 51-740-00078

Facility Description:
NAICS numbers: 562213 and 562219 (Waste management), 221330 (Steam Generation), 221119 (Other electrical generation), 924110 (Administration)

Waste is received on the Refuse Derived Fuel (RDF) plant tipping floor and separated into processable and non-processable waste. Processable bulky waste is diverted to the bulky waste shredder for shredding to manageable sizing. This waste is then introduced back on the tipping floor. All processable waste is then introduced to 3 process lines, each with a shredder, where sorting, sizing and separation of ferrous metal takes place through a series of trommels, magnets, and hand picking stations. Waste is then loaded onto the RDF transfer conveyor where it is conveyed to the steam plant for combustion.

The steam plant consists of four combustion trains in which refuse derived fuel (RDF), coal or oil is combusted to produce steam and electricity. The primary fuels burned are RDF and coal. The four combustion trains are independent but can operate simultaneously. Each combustion train consists of a boiler, a spray dryer absorber (SDA), and a fabric filter (FF). The units utilize the SDA and FF, as well as good combustion practices (GCP), to reduce the levels of Municipal Waste Combustor (MWC) organics (dioxins/furans), MWC acid gases (sulfur dioxide and hydrogen chloride), MWC metals (particulate matter, opacity, cadmium, lead, and mercury), and carbon monoxide prior to exhausting through the stack. Each combustion train is also equipped with a No. 2 fuel oil-fired burner which provides heat during unit startup and shutdown.

Coal is unloaded and transferred to storage or directly to the boilers for combustion via a set of enclosed conveyors. The four transfer points of the conveyor system, as well as the conical for each unit, are equipped with fabric filters to control particulate emissions generated during the transfer process. In addition, the facility operates a diesel-fired standby generator, an auxiliary boiler, two No. 2 fuel oil storage tanks, a lime silo, an ash conveyor (with negligible emissions), and truck traffic, as well as a number of insignificant activities.

II. REASON FOR REOPENING PERMIT

During a compliance evaluation of the facility, the Tidewater Regional Office learned that the recent amendments to the federal guidelines of 40 CFR Part 60, Subpart Cb (which were pulled into the Title V permit at time of renewal - February 2008) were not adopted by the state and, therefore, the Title V listed limitations and conditions were in conflict with the state regulation 9 VAC 5 Chapter 40, Article 54. The Tidewater Regional Office is re-opening the Title V permit to remove the 40 CFR Part 60, Subpart Cb requirements, and replace them with 9 VAC 5-40 Article 54 requirements. Although some of the amendments made to Cb in 2006 are more restrictive than the Virginia regulation, Virginia has not adopted the 2006 revisions to Subpart Cb at this time because they are currently undergoing formal reconsideration by EPA. Other clarifications or corrections have also been made as described in Section IV below.

III. COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, has been conducted. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance.

IV. CHANGES TO THE TITLE V OPERATING PERMIT

At the request of EPA Region III, we added the following citation - 40 CFR Part 62.11640 - to all conditions that reference 9 VAC 5 Chapter 40, Article 54 to ensure federal enforceability.

Section I - Facility Information

Responsible Official has changed.

Section II - Emission Units Table

For units 044, 045, 046 and 047 - The reference to NSPS Cb applicability has been removed from the description column and PM_{10} has been added as a pollutant to the pollutant controlled column.

For units 048 and 101-108 PM_{10} has been added as a pollutant to the pollutant controlled column.

Section III – Definitions and Clarifications section added.

Section IV. A. - Fuel Burning Equipment Limitations

Condition 13 - changed the conjunction 'and' to 'or' in paragraph d.

Condition 16 - Changed the language to clarify meaning of the condition in accordance with Article 54 and changed the citations.

Condition 17 - Changed the table to reflect the emission limits from both Article 54 and the underlying PSD permit and the averaging times listed in Article 54. Removed all NSPS Cb requirements from the table. Changed the citations to Article 54. Clarified that these limits apply when firing RDF with any other fuel.

Condition 18 - Clarified that this conditions applies when the boilers are firing coal only. Added a Title Row to the table and deleted the citations referring to 40 CFR 40 Subpart Db. Changed ppm to ppmv for clarification.

Condition 19 - Clarified that this condition applies when the boilers are firing No. 2 fuel oil only. Changed ppm to ppmv for clarification.

Condition 23 - Split the PSD permit condition (#34) into two conditions. Added clarification that the opacity can be determined using COMS on the RDF boilers. Changed citation from NSPS Cb to Article 54 and added 9 VAC 5-40-20 citation which allows COMS for monitoring.

Condition 24 - This is the second condition from the PSD permit condition #34. Separated this condition from the previous condition specifying the opacity limits for the emergency generator.

Condition 26 - The underlying PSD condition (#41) was split into 2 conditions for clarification. This first condition only references the auxiliary boiler which is subject to Subpart Db.

Condition 27 - This is the second part of the underlying PSD Condition #41. Removed the reference to both Subpart Cb and Db for these boilers. Added the reference to 9 VAC 5-40 Article 54.

Condition 28 - Added this condition to include operator training limitations from Article 54.

Section IV. B. - Fuel Burning Equipment Monitoring and Recordkeeping

Condition 1 - Removed steam load and temperature monitoring from this condition (added them as individual conditions 4 & 5), changed citations from NSPS Cb to Article 54.

Condition 2 - Removed plural reference from first sentence. Changed citations from NSPS Cb to Article 54.

Condition 3 - Changed citations from NSPS Cb to Article 54.

Condition 4 - Added this condition for specific monitoring conditions for steam flow from each boiler.

Condition 5 - Added this condition for specific monitoring of inlet temp to the PM control device.

Condition 9 - Re-arranged the conditions to match the underlying PSD permit. Added clarification to paragraph n. Added conditions q through t. Added Article 54 as a citation to the condition.

Section IV. C. - Fuel Burning Equipment Reporting

Condition 4 - Changed citations from NSPS Cb to Article 54;

in paragraphs a.(ii), (iv) and (v) changed the word unit to steam; and

in paragraphs a.(iv) and (v) replaced the words "temperature" or "temperature data" with more clarifying language as follows: "inlet temperature to the" particulate matter control device to clarify condition intent.

Section IV. D. - Fuel Burning Equipment Testing

Condition 2 - Removed references to NSPS Cb, changed definition for annual testing to meet Article 54 definitions, clarified language, added requirement for protocol submission and added citations for Article 54.

Condition 3 - Changed references from NSPS Cb to Article 54, added clarifying language, added requirement for protocol submission and changed citations.

Condition 4 - Added this condition to require facility to show compliance with VOC and HF limitations.

Section V. A.1 - Paragraphs a and d have been corrected to reflect the way the original PSD permit was written. In reviewing past permits, an error was discovered in the 2001 amendment to the PSD permit and it has been corrected here.

Original Permit Language:

a. Fugitive coal dust emissions from the car unloading hopper, coal pile reclaimer and coal pile shall be controlled by a permanently installed wet suppression system.

b. Fugitive coal dust emissions from the coal silos, bins and conveyor belts shall be controlled by baghouses. The baghouses shall be provided with adequate access for inspection.

Section VII. A. - Lime Silo Requirements and Miscellaneous Equipment Limitations

Condition 5 - Added a citation for Article 54.

Section VII. B. - Lime Silo Requirements and Miscellaneous Equipment Monitoring and Recordkeeping

Condition 1 - Added article 54 to citations.

Section IX - Removed the reference to Db from the inapplicable requirements table because the auxiliary boiler is subject to this regulation, however, the RDF boilers are no longer subject to Db based on the following amendment to the regulation: 60.40b (k) has been revised to the following: "any affected facility that meets the applicability requirements and is subject to an EPA approved State or Federal section 111(d)/129 plan implementing subpart Cb or subpart BBBB of this part is not covered by this subpart. [72 FR 32742, June 13, 2007, as amended at 74 FR 5084, Jan. 28, 2009]"

Section XI - Condition 2 - changed the citations to reflect the State Toxics Articles.

V. STREAMLINED CONDITIONS (THIS REOPENING)

A. Fuel Burning Equipment Section

Condition IV.A.16, 17, 23, 26, 27, - the NSPS Cb references have been changed to the 9 VAC 5-40 Article 54 references

Conditions IV.A.23 and 24 - The underlying PSD permit condition (#34) has been broken into two separate conditions for clarification and to specify that COMS can determine compliance for Opacity standard.

Conditions IV.A.26 and 27 - The underlying PSD permit condition (#41) has been broken into two separate conditions for clarification to show that the RDF boilers are no longer applicable to Subpart Db.

Condition IV.B.1, 2, 3, and 9 - the NSPS Cb references have been changed to the 9 VAC 5-40 Article 54 references.

Condition IV.B.1 - This condition has been changed to reflect the current Part 60 sections that the facility must use to maintain and calibrate the CEMS. The underlying condition in the 8/20/03 permit references a section in Subpart Db, however, the boilers are no longer subject to Db, so the new references are pulled from 9 VAC 5-40 Article 54.

Condition IV.B.3- This condition has been streamlined to include a reference to 40 CFR Subpart 60 Appendix F which is not cited in the underlying permit, but is applicable to the CEMS as referenced in 9 VAC 5-40 Article 54.

Condition IV.C.4 - The NSPS Eb (referenced from NSPS Cb) references have been changed to the 9 VAC 5-40 Article 54 references.

Condition IV.D.2 and 3 - the NSPS Cb references have been changed to the 9 VAC 5-40 Article 54 references.

VI. STREAMLINED CONDITIONS FROM 2008 RENEWAL

A. Fuel Burning Equipment Section

Condition IV.A.13 was changed to remove the requirement for nitrogen content being part of the oil Certification that is required. This has been done because the oil companies do not regularly test the nitrogen content, so the facility will be responsible for doing the sampling and testing on a monthly basis (See Condition IV.A.14).

Condition IV.A.23 - removed the six-minute higher opacity exception because these units are subject 9 VAC 5-40 Article 54 which does not allow this exception. Condition IV.A.24 was separated from this condition because this modified unit is allowed the six minute exception.

B. RDF Handling Operations Section

We streamlined out the following four emission limit conditions from the minor NSR permit dated 5/29/96. They are for the RDF Handling section of the facility. There are no enforceable throughputs for the individual processes listed in this 1996 permit, therefore the conditions are not enforceable and have been streamlined out.

8. Emissions from the operation of the bulky waste shredder shall not exceed the limits specified below:

Total Suspended Particulate	1.0 lbs/hr	2.2 tons/yr
PM-10	1.0 lbs/hr	2.2 tons/yr

Annual emissions shall be determined as the sum of each consecutive 12-month period.
(Condition 8 of the 5/29/96 Permit)

9. Emissions from the operation of each process line shall not exceed the limits specified below:

Total Suspended Particulate	11.1 lbs/hr	42.1 tons/yr
PM-10	11.1 lbs/hr	42.1 tons/yr

Annual emissions shall be determined as the sum of each consecutive 12-month period.
(Condition 9 of the 5/29/96 Permit)

10. Emissions from the operation of the tipping floor shall not exceed the limits specified below:

Total Suspended Particulate	2.0 lbs/hr	8.2 tons/yr
PM-10	2.0 lbs/hr	8.2 tons/yr

Annual emissions shall be determined as the sum of each consecutive 12-month period.
(Condition 10 of the 5/29/96 Permit)

11. Emissions from the operation of the RDF conveyor to the steam plant shall not exceed the limits specified below:

Total Suspended Particulate	2.6 lbs/hr	9.8 tons/yr
PM-10	2.6 lbs/hr	9.8 tons/yr

Annual emissions shall be determined as the sum of each consecutive 12-month period.
(Condition 11 of the 5/29/96 Permit)

Condition VI.A.2 has been changed to remove the short term limitation of "200 lb/hr" for the processing of unprocessed solid waste. We do not limit the short term processing rate of processes and it serves no purpose.

C. Storage Tanks

The entire Storage Tank Section were streamlined out of the permit because the storage tanks storing #2 Fuel oil were no longer applicable to NSPS Kb. The requirements were put in the underlying minor NSR permit at the time of permitting because at that time they were Kb applicable. The emission units have been moved to the Insignificant Emissions Units table in Section VIII of the permit.

VII. REPORTS

The following table lists the various reports that the facility must submit in accordance with the permit:

Report	Equipment	Frequency	Regulatory basis
NSPS Db Reports Auxiliary boiler	Opacity/VEE readings	Quarterly (Semi-annual if it applies)	NSPS Db and 9 VAC 5-50-50C
	Fuel Analysis Report		
	Capacity Factor Report		
Excess emission reports	RDF CEMS/COMS	Quarterly	NSPS Db, 9 VAC 5-40-8160 and 9 VAC 5-50-50C
Annual compliance certification reports	Title V permit conditions	Annually	9 VAC 5-80 Article 1
Annual emission statement	Facility	Annually	9 VAC 5-20-160-
Semi-Annual Monitoring Report	Facility	Semi-Annually	9 VAC 5-20-160
Fuel Quality Reports	Distillate/Fuel Oil #2 certifications	Semi-Annually	NSPS Db
Stack test protocol	Variable RDF Units	For each occurrence	9 VAC 5-50-50 and 9 VAC 5-40-8160
Stack testing reports	Variable RDF Units	For each occurrence	9 VAC 5-50-50 and 9 VAC 5-40-8160
RATA reports	Specific RDF Units	For each occurrence	9 VAC 5-50-50 and 9 VAC 5-40-8160
Monitoring/Operating Report	9 VAC 5-40-8160 D & E	Semi-annual (Due February 1 and August 1)	9 VAC 5-50-50 and 9 VAC 5-40-8160

VIII. PUBLIC PARTICIPATION

The proposed permit will be placed on public notice in The Virginian Pilot from June 3, 2009 to July 6, 2009.