Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

TIDEWATER REGIONAL OFFICE
5636 Southern Boulevard, Virginia Beach, Virginia 23462
(757) 518-2000 FAX (757) 518-2009
www.deq.virginia.gov

Matthew J. Strickler
Secretary of Natural Resources

David K. Paylor
Director
(804) 698-4000

Craig R. Nicol
Regional Director

September 29, 2020

Mr. Anil Mehrotra
Plant Engineering
Hampton / NASA Steam Plant
50 Wythe Creek Road
Hampton, Virginia 23666
Via Email: amehrotra@hampton.gov

Facility: Hampton / NASA Steam Plant
Location: Hampton
Registration No.: 61019

Dear Mr. Mehrotra:

Attached is a Title V permit to operate your facility pursuant to 9VAC5 Chapter 80 Article 1 of the Virginia Regulations for the Control and Abatement of Air Pollution. This permit incorporates provisions from the permit dated August 16, 2007.

In the course of evaluating the application and arriving at a final decision to issue this permit, the Department of Environmental Quality (DEQ) deemed the application complete on June 28, 2017, and solicited written public comments by placing a newspaper advertisement in the Daily Press on Thursday, August 13, 2020. The thirty-day required comment period, provided for in 9VAC5-80-270, expired on Monday, September 14, 2020.

The permit contains legally enforceable conditions. Failure to comply may result in a Notice of Violation and/or civil charges. Please read all permit conditions carefully.

This permit approval to operate shall not relieve Hampton / NASA Steam Plant of the responsibility to comply with all other local, state, and federal permit regulations.

To review any federal rules referenced in the attached permit, please refer to the website on which the US Government Publishing Office maintains the text of these rules: **www.ecfr.gov**, Title 40, Part 70.

The Board's Regulations as contained in Title 9 of the Virginia Administrative Code 5-170-200 provide that you may request a formal hearing from this case decision by filing a petition with the Board within 30 days after this case decision notice was mailed or delivered to you. Please consult the relevant regulations for additional requirements for such requests.

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have 30 days from the date you actually received this permit or the date on which it was mailed to you, whichever occurred first, within which to initiate an appeal of this decision by filing a Notice of Appeal with:

David K. Paylor, Director
Department of Environmental Quality
PO Box 1105
Richmond, VA 23218

If this permit was delivered to you by mail, three days are added to the thirty-day period in which to file an appeal. Please refer to Part Two A of the Rules of the Supreme Court of Virginia for information on the required content of the Notice of Appeal and for additional requirements governing appeals from decisions of administrative agencies.

If you have any questions concerning this permit, please contact me at **laura.corl@deq.virginia.gov** or at (757) 518-2178.

Sincerely,

Laura D. Corl

Laura D. Corl
Air Permit Manager

LDC/JWF/61019_010_20_cvrltr_T5Renewal_Hampton_NASA.docx

Attachment: Permit
Statement of Legal and Factual Basis

cc: OAPP, Susan Tripp
Associate Director, Air Permits Branch, Air & Radiation Division, U.S. EPA, Region III
Manager/Inspector, Air Compliance
File DEQ-VRO

Commonwealth of Virginia
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY
TIDEWATER REGIONAL OFFICE
5636 Southern Boulevard, Virginia Beach, Virginia 23462
(757) 518-2000 FAX (757) 518-2009
www.deq.virginia.gov

Matthew J. Strickler
Secretary of Natural Resources

David K. Paylor
Director
(804) 698-4000

Craig R. Nicol
Regional Director

Federal Operating Permit
Article 1

This permit is based upon the requirements of Title V of the Federal Clean Air Act and Chapter 80, Article 1, of the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution. Until such time as this permit is reopened and revised, modified, revoked, terminated or expires, the permittee is authorized to operate in accordance with the terms and conditions contained herein. This permit is issued under the authority of Title 10.1, Chapter 13, §10.1-1322 of the Air Pollution Control Law of Virginia. This permit is issued consistent with the Administrative Process Act, and 9VAC5-80-50 through 9VAC5-80-300, of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution of the Commonwealth of Virginia.

Authorization to operate a Stationary Source of Air Pollution as described in this permit is hereby granted to:

Permittee Name:	Hampton/NASA Steam Plant
Facility Location:	50 Wythe Creek Road Hampton, VA 23666
Registration Number:	61019
Permit Number:	TRO-61019

This permit includes the following programs:
Federally Enforceable Requirements - Clean Air Act (Pages 3 through 28)

September 29, 2020
Effective Date

September 28, 2025
Expiration Date

September 29, 2020
Regional Director — Signature Date

Table of Contents

Facility Information

Permittee
Hampton/NASA Steam Plant
50 Wythe Creek Road
Hampton, VA 23666

Responsible Official
John MacDonald
Steam Plant Manager

Facility
Hampton/NASA Steam Plant
50 Wythe Creek Road
Hampton, VA 23666

Contact Person
Anil Mehrotra
Plant Engineer
(757) 865-1914

County-Plant Identification Number: 51-650-00061

NAICS: 221330 – Steam and Air-Conditioning Supply
SIC: 4961 – Steam and Air-Conditioning Supply

Facility Description
This is a municipal waste mass burn facility that generates steam for use at the NASA Langley base. Refuse is received and stored in a stockpile, then fluffed, and delivered by an overhead crane, for mass combustion and waste heat recovery in one of two high pressure watertube Detroit Stoker water-wall furnaces (Units 1 and 2). Combustion gas products are cooled in a Keeler water-tube boiler with economizer. The flue gas is rapidly quenched and scrubbed with a lime slurry and water in a McGill AirClean spray dryer. Solid particles are removed from the flue gas with a three compartment McGill AirClean filter system. Emissions are monitored with Land Instrument FGAII analyzers. Flue gases from Units 1 and 2 are exhausted through two separate flues in a 248 foot double flue stack. Alternate scenarios were not provided in the application.

The facility is a Title V major source of NOx, CO, HCl, and SO_2. This source is located in an attainment area for all pollutants, and is a PSD sized source. The boilers at this facility are subject to 9VAC5-40, Article 46, Emission Standards for Small Municipal Waste Combustors (Rule 4-46). They are classified as Class II units which are defined as units with a combustion capacity less than or equal to 250 tons per day of municipal solid waste. The facility is operating under a minor NSR permit dated 8/16/2007.

Definitions

The following are from 9VAC5 Chapter 40, Article 46.

"Eight-hour block average" means the average of all hourly emission concentrations or parameter levels when the municipal waste combustion unit operates and combusts municipal solid waste measured over any of three eight-hour periods of time: (i) midnight to 8 a.m., (ii) 8 a.m. to 4 p.m., and (iii) 4 p.m. to midnight.

"Four-hour block average" means the average of all hourly emission concentrations or parameter levels when the municipal waste combustion unit operates and combusts municipal solid waste measured over any of six four-hour periods: (i) midnight to 4 a.m., (ii) 4 a.m. to 8 a.m., (iii) 8 a.m. to noon, (iv) noon to 4 p.m., (v) 4 p.m. to 8 p.m., and (vi) 8 p.m. to midnight.

"One-hour arithmetic averages" shall be calculated as specified in 9VAC5-40-6750 (H).

"Operating Day" means any day the unit combusts any municipal solid waste or refuse-derived fuel. (5-40-6750)

"Operating Hour" means each hour that the facility operates 30 minutes or more.

'Twenty-four hour daily average" or "24-hour daily average" means either the arithmetic mean or geometric mean (as specified) of all hourly emission concentrations when the municipal waste combustion unit operates and combusts municipal solid waste measured during the 24 hours between midnight and the following midnight.

Emission Units

Process Equipment to be operated consists of:

Fuel Burning Equipment

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description *	PCD ID	Pollutant Controlled	Applicable Permit Date
1	#1	Mass burn waterwall municipal waste combustion unit with pre-heater, (1979) Keeler MK1 Water Wall boiler NB 5341 Detroit Stoker	5 ton/hr-120 ton/day (45.9 nunBTU/hr) 33,000 lb/hr steam	McGill Airclean LLC., BETA/MARK 3-156-14, Spray Dryer & Fabric Filter	SD / FF	Acid Gases / PM	8/16/2007
2	#2	Mass burn waterwall municipal waste combustion unit with plc-heater, (1979) Keeler MK1 Water Wall boiler NB 5342 Detroit Stoker	5 ton/hr-120 ton/day (45.9 mmEITU/hr) 33,000 lb/hr steam	McGill Airclean LLC., BETA/MARK 3-156-14, Spray Dryer & Fabric Filter	SD / FF	Acid Gases / PM	8/16/2007

Miscellaneous Equipment

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description *	PCD ID	Pollutant Controlled	Applicable Permit Date
AH1	-	Ash Handling	3 ton/hr	Wet suppression / Water added	-	PM/PM10	8/16/2007
EG1	-	Emergency Diesel Generator Startup 10/2003 MACT ZZZZ	1120 HP, 750kW Installed 2003	-	-	-	8/16/2007

*The Size/Rated capacity and PCD efficiency is provided for informational purposes only, and is not an applicable requirement.

Fuel Burning Equipment Requirements – Units 1 and 2

Limitations

1. Boiler Load - Operation of each boiler (Units 1 and 2) shall not exceed 110% of the maximum demonstrated load of the municipal waste combustor (4-hour block average), as demonstrated in the most recent dioxin/furan testing, except as specified in 9VAC5-40-6720 (E).
(9VAC5-80-110 and Condition 3 of 8/16/2007 Permit)

2. Emission Controls - Particulate, sulfur dioxide, and hydrogen chloride emissions from the refuse fired boilers (Units 1 and 2) shall be controlled by spray dryers and fabric filters (SD/FF). The SD/FF shall be provided with adequate access for inspection and shall be in operation when the boilers are operating.
(9VAC5-80-110 and Condition 4 of 8/16/2007 Permit)

3. Control Device Inlet Temperature - Each boiler (Units 1 and 2) shall be operated such that the inlet temperature of the fabric filter does not exceed 30°F (17°C) above the maximum demonstrated temperature from the last annual emissions test of the fabric filter (4-hour block average).
(9VAC5-80-110 and Condition 5 of 8/16/2007 Permit)

4. Preheaters – Each refuse fired boiler (Units 1 and 2) shall use a combustion air preheater during periods when high-moisture refuse is burned, as indicated by carbon monoxide (CO) spiking (when CO concentration is >100 ppm) and heavy flame beds (when flame beds are in excess of two feet above the grate at the drop-off of the burn-out section).
(9VAC5-80-110 and Condition 6 of 8/16/2007 Permit)

5. Combustion Conditions - The permittee shall ensure that the best possible combustion conditions are maintained to include measures to keep the combustion temperatures of the grates at 1650°F or above. The upper furnace temperatures in each boiler (Units 1 and 2) shall be in excess of 1450°F (four-hour block average).
(9VAC5-80-110 and Condition 7 of 8/16/2007 Permit)

6. Fuel - The approved fuel for the refuse fired boilers (Units 1 and 2) is Municipal Solid Waste as defined in 9VAC5-40-6560. A change in the fuel may require a permit to modify and operate.
(9VAC5-80-110 and Condition 8 of 8/16/2007 Permit)

7. RCRA - No materials regulated by the Resource Conservation and Recovery Act (RCRA) Subtitle C shall be incinerated in this facility.
(9VAC5-80-110 and Condition 9 of 8/16/2007 Permit)

8. Requirements by Reference - Except where this permit is more restrictive than the applicable requirement, the refuse fired boilers (Units 1 and 2) shall be operated in compliance with the requirements of 9VAC5-40 Article 46.
   a. Operator Training and Certification - Training and/or certifications shall be obtained and maintained as required by 9VAC5-40-6700. As an example: When any unit is operating at least one person on site must have a Virginia Class IV Operators License (18 VAC 155-20-110).

   b. Plant Specific Training courses and Operating Manual - Plant specific training courses shall be established and an operating manual written as required by 9VAC5-40-6700 (B).

   c. Staffing - The municipal waste combustion units shall not be operated unless staffed in accordance with 9VAC5-40-6700 (D), (E) and (F).

   (9VAC5-80-110 and Condition 10 of 8/16/2007 Permit)

9. Process Emission Limits - Emissions from the operation of each Class II refuse fired boiler (Units 1 and 2) shall not exceed the limits specified below:

Pollutant	Article 46 Standard	Citation	EPA Compliance Method
PM/PM10	70 mgidscm @7% oxygen (3-run average)	9VAC5-40-6570	Method 5 or 29
CO	100 ppmvd @7% oxygen (4-hour block average, arithmetic mean)	9VAC5-40-6580	CEMS (direct compliance)
Dioxins/furans	125 ng/dscm@ 7% oxygen (3-run average; min. run duration of 4 hours)	9VAC5-40-6590	Method 23
Hydrogen chloride (HC1)	250 ppmvd @7% oxygen or 50% reduction of potential emissions (3-run average; min run duration 1 hour)	9VAC5-40-6600	Method 26 or 26A
Sulfur Dioxide (SO_2)	77 ppmvd @7% oxygen or 50% reduction of potential emissions (24-hour block geometric average concentration or % reduction)	9VAC5-40-6610	CEMS (direct compliance)
Nitrogen Oxides	Not Applicable	Not Applicable	Not Applicable
Lead (Pb)	1.6 mg/dscm @7% oxygen (3-run average)	9VAC5-40-6630	Method 29
Cadmium (Cd)	0.10 mg/dscm @7% oxygen (3-run average)	9VAC5-40-6640	Method 29
Mercury	0.080 mg/dscm @ 7% oxygen (3-run average)	9VAC5-40-6650	Method 29

(9VAC5-80-110 and Condition 12 of 8/16/2007 Permit)

10. Visible emissions from the refuse fired boilers shall not exceed 10% opacity (measured for thirty 6-minute averages (no 6-minute average shall exceed the limit)) as determined by the EPA Method 9 (reference 40 CFR 60, Appendix A).
(9VAC5-80-110 and Condition 13 of 8/16/2007 Permit)

Monitoring

11. COMS - Continuous Opacity Monitoring Systems, meeting the design specifications of 40 CFR Part 60, Appendix B, shall be installed on the boilers (Units 1 and 2) to measure and record the opacity of emissions from the boilers. The COMS shall be installed, calibrated, maintained and operated in accordance with the requirements of 40 CFR 60.13 and 9VAC5-40-6750. Data shall be reduced to six minute averages. The data obtained from the COM are not used to determine compliance with the opacity limit.
(9VAC5-80-110 and Conditions 15 and 19 of 8/16/2007 Permit)

12. CEMS for SO_2, CO and O_2 - Continuous Emission Monitoring Systems, meeting the design specifications of 40 CFR Part 60, Appendix B, shall be installed on the boilers (Units 1 and 2) to measure and record the emissions of oxygen, carbon monoxide, and sulfur dioxide from the outlet of each air pollution control device as ppmvd corrected to 7% O_2. The CEMS shall be installed, calibrated, maintained, audited and operated in accordance with the requirements of 40 CFR 60.13, Appendices B and F and 9VAC5 Chapter 40, Article 46. Data shall be reduced as specified in Article 46 for each pollutant. The SPAN VALUE for the SO_2, CO and O_2, shall be determined as set forth in 9VAC5-40-6750. Valid 1-hour averages shall be obtained for 75% of the operating hours per day for 90% of the operating days per calendar quarter.
(9VAC5-80-110 and Condition 18 of 8/16/2007 Permit)

13. CEMS/COMS Performance Evaluations - Annual performance evaluations of the continuous monitoring systems shall be conducted in accordance with 40 CFR Part 60, Appendix B, and 9VAC5-50-30, 9VAC5-40-6750 (C) and (J). Each evaluation shall be conducted no more than 13 months after the previous evaluation. A copy of the performance evaluations report shall be submitted to the Director, Tidewater Regional Office within 60 days of the evaluation. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation and calibration of the device. A 30 day notification, prior to the demonstration of continuous monitoring system's performance, and subsequent notifications shall be submitted to the Director, Tidewater Regional Office.
(9VAC5-80-110 and Condition 20 of 8/16/2007 Permit)

14. CEMS/COMS Quality Control Program - A CEMS/COMS quality control program which meets the requirements of 40 CFR 60.13 and Appendix F shall be implemented for all continuous monitoring systems. (See 9VAC5-40-6750 (D) for O_2).
(9VAC5-80-110 and Condition 21 of 8/16/2007 Permit)

15. Temperature Monitoring Devices -

    a. Each fabric filter (FF 1 and 2) shall be equipped with a device to continuously measure the inlet temperature of the fabric filter.

    b. Each boiler (Units 1 and 2) shall be equipped with a device to continuously measure the upper furnace temperature of the boiler.

    Each device shall be installed, maintained and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the boiler is operating. Upper furnace and fabric filter temperatures for each boiler shall be continuously monitored, displayed and 1-hour block averages calculated and recorded. Valid 1-hour averages will be obtained for at least 75% of the operating hours per day for 90% of the operating days per calendar quarter. (9VAC5-80-110, 9VAC5-40-6720 B, and Condition 22 of 8/16/2007 Permit)

16. Unit Load - The owner shall install, calibrate, maintain, and operate on each boiler (Units 1 and 2) a steam flow meter in accordance with 9VAC5-40-6750 (I)(1)(a). The steam flow rate for each boiler shall be continuously monitored, displayed and 1-hour block averages calculated and recorded. Valid 1-hour averages will be obtained for at least 75% of the operating hours per day for 90% of the operating days per calendar quarter. (9VAC5-80-110 and Condition 23 of 8/16/2007 Permit)

Recordkeeping

17. On Site Records - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Tidewater Regional Office. These records shall include, but are not limited to:

    a. Operational load rates of the boilers (Units 1 and 2);

    b. Inlet temperatures of the fabric filters (FF 1 and 2);

    c. Upper furnace temperatures for each boiler (Units 1 and 2);

    d. Results of all stack tests, visible emission evaluations and performance evaluations;

    e. Operator training and certifications;

    f. Deviations from staffing requirements;

    g. CEMS/COMS records as required by 9VAC5-40-6760 (E); and,

h. Continuous monitoring system calibrations and calibration checks, percent operating time, and excess emissions.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9VAC5-80-110, 9VAC5-50-50, and Condition 24 of 8/16/2007 Permit)

Testing

18. Boiler Stack Tests (Units 1 and 2) - Annually and upon request by the DEQ, the permittee shall conduct additional emission tests for Particulate Matter, Lead, Cadmium, Mercury, Hydrogen Chloride and MWC Organics (dioxins/furans) and Opacity from each of the boilers to demonstrate compliance with the emission limits contained in this permit. Emission testing shall be conducted in accordance with 9VAC5-40-6740. For the Opacity test, the permittee shall conduct a 3-hour VEE of each boiler stack (Units 1 and 2) at least annually, in accordance with EPA Method 9 to determine compliance with the visual emissions standard of 10% opacity. For the Particulate Matter test, the probe and filter holder heating systems in the sampling train shall be set to provide a gas temperature no greater than 160° ± 14° C (320° ± 25 °F) and the minimum sample probe volume is 1.0 m^3. Unless approved by the board, the annual tests shall be conducted no more than 13 months after the previous annual test. The permittee shall submit a test protocol at least 30 days prior to testing. If any boiler has demonstrated compliance with an emission limit for 3 consecutive years, the boiler is not required to test for that pollutant for the next two years. Thereafter, emission tests shall be performed every third year but no later than 36 months following the previous emission test. Alternative test schedule for dioxins/furans emissions may be established in accordance with 9VAC5-40-6740 (E). If an emission test for any unit shows noncompliance with an emission limit, annual tests for that pollutant shall be conducted on that unit until all emission tests for that pollutant over three consecutive years show compliance with the emission limit for that pollutant.
(9VAC5-80-110 and Conditions 15, 16, and 27 of 8/16/2007 Permit)

19. Emissions Testing - The refuse fired boilers (Units 1 and 2) shall be constructed so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods. This includes constructing the facility/equipment such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and providing a stack or duct that is free from cyclonic flow. Sampling ports shall be provided when requested at the appropriate locations and safe sampling platforms and access shall be provided.
(9VAC5-80-110 and Condition 29 of 8/16/2007 Permit)

20. Operating Parameters - Operating parameters required for continuous monitoring are as follows:

    a. Municipal waste combustion units that generate steam shall install, calibrate, maintain, and operate a steam flowmeter as follows.

i. The measurements of steam shall be continuously measured and recorded in kilograms (or pounds) per hour.

ii. The steam flow shall be calculated in 4-hour block averages.

iii. Nozzles or orifices for steam flow or feed water flow rate measurements shall be designed, constructed, installed, calibrated, and used following the recommendations in "American Society of Mechanical Engineers Interim Supplement 19.5 on Instruments and Apparatus: Application, Part II of Fluid Meters," 6th Edition (1971), Chapter 4 (see 9VAC5-20-21).

iv. Before each dioxins/furans emission test, or at least once a year, all signal conversion elements associated with steam flow measurements shall be calibrated according to the manufacturer's instructions.

(9VAC5-80-110, 9VAC5-40-6750 I, and Condition 28 of 8/16/2007 Permit)

21. Testing - If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the appropriate method(s) in accordance with procedures listed in 9VAC5-40-6740 or as approved by the DEQ.
(9VAC5-80-110)

Reporting

22. Reports for Continuous Monitoring Systems - Excess Emission Report - The permittee shall furnish written reports to the Director, Tidewater Regional Office of excess emissions from any process monitored by a continuous monitoring system (COMS/CEMS) used for direct compliance on a quarterly basis, postmarked no later than the 30th day following the end of the quarter. These reports shall include, but are not limited to the following information:

a. The magnitude of excess emissions, any conversion factors used in the calculation of excess emissions, and the date and time of commencement and completion of each period of excess emissions;

b. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the process, (note first 3 hours are exempt per 9VAC5-40-6800 (C) and (D)) the nature and cause of the malfunction (if known), the corrective action taken or preventative measures adopted;

c. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments; and

d. When no excess emissions have occurred or the continuous monitoring systems have not been inoperative, repaired or adjusted, such information shall be stated in that report.

(9VAC5-80-110, 9VAC5-40-50 C, and Conditions 11 and 25 of 8/16/2007 Permit)

23. Annual and Semi-Annual Reports - The annual and semi-annual reports shall be submitted in accordance with the requirements of 9VAC5-40-6770 (B)(2) and (B)(3). The annual report shall be submitted no later than February 1 of each year that follows the calendar year in which the data is collected. A semi-annual report on any recorded emission or parameter level that does not meet the requirements specified in 9VAC5, Chapter 40, Article 46 shall be submitted. For data collected during the first half of a calendar year, the report shall be submitted by August 1 of that year. For data collected during the second half of the calendar year, the report shall be submitted by February 1 of the following year.
(9VAC5-80-110 and Condition 26 of 8/16/2007 Permit)

24. Stack Test Reports - Stack tests shall be reported, and data reduced, as set forth in 9VAC5-50-30 of State Regulations. All test results, with the exception of testing involving MWC organics, shall be reported to the Director, Tidewater Regional Office, in writing, within 90 days after test completion. Test results that involve testing of MWC organics shall be reported to the Director, Tidewater Regional Office, in writing, within 120 days after test completion.
(9VAC5-50-30 and 9VAC5-80-110)

25. Standby Emissions Reduction Plan (SERP) - Upon request of the Director, Tidewater Regional Office, a Standby Emissions Reduction Plan (SERP) shall be submitted within 30 days. The plan shall be available in writing to operators, and implemented in accordance with Chapter 70 of the Regulations.
(9VAC5-70-50 and 9VAC5-80-110)

Miscellaneous Equipment Requirements – EG1 and AH1

Limitations

26. Requirements by Reference (Unit EG1) - Except where this permit is more restrictive than the applicable requirement, the permittee shall meet the requirements of 40 CFR 63, Subpart ZZZZ for Unit EG1.
(9VAC5-80-110 and Condition 11 of 8/16/2007 Permit)

27. Emergency Generator Operating Hours - The emergency generator (Unit EG1) shall not operate more than 500 hours per year, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9VAC5-80-110)

28. Visible Emissions from Generator - Visible emissions from the emergency generator (Unit EG1) shall not exceed 20% opacity, except during one six-minute period in any one hour in which visible emissions shall not exceed 30% opacity, as determined by 40 CFR 60, Appendix A, Method 9. This condition applies at all times except during startup, shutdown, and malfunction.
(9VAC5-80-110)

29. Visible Emissions - Visible emissions from the handling of ash from the refuse fired boilers shall not exceed 5% of hourly observation period (measured for three 1-hour observation periods) as determined by the EPA Method 22 (reference 40 CFR 60, Appendix A).
(9VAC5-80-110 and Condition 14 of 8/16/2007 Permit)

30. Visible Emissions from Ash Handling - Visible emissions from the handling of ash (Unit AH1) from the refuse fired boilers shall not show any fugitive ash visible emissions for more than 5 percent of hourly observation period, measured at three, 1-hour observation periods. The three, 1-hour observation period shall include periods when the facility transfers fugitive ash from the municipal waste combustion unit to the area where the fugitive ash is stored or loaded onto containers or trucks.
(9VAC5-80-1180, 9VAC5-40-6670, and 9VAC5-40-6740 Dh)

Monitoring

31. Visible Emission Monitoring - The permittee shall perform an annual visible emissions evaluation (at least once each 12 consecutive calendar months) on the generator stack (Unit EG1) for a period of not less than one minute for the presence of visible emissions during normal operations and daylight hours. If visible emissions are observed, the permittee shall perform corrective actions to eliminate the cause of the visible emissions. The permittee shall maintain a log of the date, time, location, name of person performing the observation, whether or not visible emissions were detected, and any corrective actions taken, if

necessary. These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9VAC5-80-110)

Testing

32. Testing - Fugitive Emission Evaluation from Ash Handling - Annually, and upon request by the DEQ, the permittee shall conduct a fugitive emission evaluation on the Ash Handling (Unit AH1) system from the boilers to demonstrate compliance with the emission limits contained in this permit. Emission testing shall be conducted in accordance with EPA Method 22. The three, 1-hour observation period shall include periods when the facility transfers ash from the municipal waste combustion unit to the area where the ash is stored or loaded onto containers or trucks.
(9VAC5-80-110, 9VAC5-40-6670, 9VAC5-40-6740, and Condition 27 of 8/16/2007 Permit)

33. Testing - If further testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the appropriate method(s) in accordance with procedures listed in 9VAC5-40-6740 or as approved by the DEQ. Samples taken as required by this permit, or otherwise, shall be analyzed in accordance with 1 VAC 30-45, Certification for Noncommercial Environmental Laboratories, or 1 VAC 3046, Accreditation for Commercial Environmental Laboratories.
(9VAC5-80-110)

Recordkeeping

34. On Site Records - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Tidewater Regional Office. These records shall include, but are not limited to:

    a. Results of all visible emission evaluations and fugitive emission evaluations; and

    b. Records showing the number of hours of operation for the emergency generator.

    These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
    (9VAC5-80-110, 9VAC5-50-50, and Condition 24 of 8/16/2007 Permit)

Reporting

35. Annual and Semi-Annual Reports - The annual and semi-annual reports (Unit AH1) shall be submitted in accordance with the requirements of 9VAC5-40-6770 (B)(2) and (B)(3).
(9VAC5-80-110 and Condition 26 of 8/16/2007 Permit)

Insignificant Emission Units

36. Insignificant Emission Units - The following emission units at the facility are identified in the application as insignificant emission units under 9VAC5-80-720:

Emission Unit No.	Emission Unit Description	Citation	Pollutants Emitted (9VAC5-80-720B)	Rated Capacity (9VAC5-80-720C)
LHI	Hydrated Lime Hopper Fill Vent Fabric Filter	9VAC5-80-720 B	Lime Dust	--

These emission units are presumed to be in compliance with all requirements of the federal 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 9VAC5-80-110. (9VAC5-80-110)

Permit Shield & Inapplicable Requirements

37. Permit Shield & Inapplicable Requirements - Compliance with the provisions of this permit shall be deemed compliance with all applicable requirements in effect as of the permit issuance date as identified in this permit. This permit shield covers only those applicable requirements covered by terms and conditions in this permit and the following requirements which have been specifically identified as being not applicable to this permitted facility:

Citation	Title of Citation	Description of Applicability
40 CFR 60 Subpart E	Standards of Performance for Incinerators	Combustion units 1 and 2 are MCW units, rather than incinerators.
40 CFR 60 Subpart Cb	Emissions Guidelines and Compliance Times for Large Municipal Waste Combustors That are Constructed on or Before September 20, 1994	Applies only to existing MWC units with capacities exceeding 250 tons per day.
40 CFR 60 Subpart Eb	Standards of Performance for Large Municipal Waste Combustors for Which Construction is Commenced After September 20, 1994 or for Which Modification or Reconstruction is Commenced After June 19, 1996	Applies only to new MWC units with capacities exceeding 250 tons per day.
40 CFR 60, Subpart IIII	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	The emergency generator at this site was manufactured before the applicability date of this NSPS (July 11, 2005).
40 CFR 63, Subpart JJJJJJ	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources	This source is a major source of HAP.
40 CFR 63, Subpart DDDDD	National Emission Standards for Hazardous Air pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters-Major Sources	The units are considered MCW units and not boilers.
40 CFR 63, Subpart UUUUU	National Emission Standards for Hazardous Air Pollutants: Coal - and Oil-Fired Electric Utility Steam Generating Units	These units do not fire coal or distillate alone.
40 CFR 64.2(b)(1Xi)	Compliance Assurance Monitoring	The applicable emission standards, for Units 1 and 2, pursuant to section 111d were proposed after the November 15, 1990, so all monitoring requirements are included in the emissions guidelines (NSPS BBBB) and state rule (Rule-4-46).
9VAC5-40-6760 (F)	Activated Carbon Records	The facility will be achieving the mercury standard without the use of activated carbon.

Nothing in this permit shield shall alter the provisions of §303 of the federal Clean Air Act, including the authority of the administrator under that section, the liability of the owner for any violation of applicable requirements prior to or at the time of permit issuance, or the ability to obtain information by (i) the administrator pursuant to §114 of the federal Clean Air Act, (ii) the Board pursuant to §10.1-1314 or §10.1-1315 of the Virginia Air Pollution Control Law or (iii) the DEQ pursuant to §10.1-1307.3 of the Virginia Air Pollution Control Law.
(9VAC5-80-110 and 9VAC5-80-140)

General Conditions

38. Federal Enforceability - All terms and conditions in this permit are enforceable by the administrator and citizens under the federal Clean Air Act, except those that have been designated as only state-enforceable.
(9VAC5-80-110)

39. Permit Expiration

    a. This permit has a fixed term of five years. The expiration date shall be the date five years from the date of issuance. Unless the owner submits a timely and complete application for renewal to the DEQ consistent with the requirements of 9VAC5-80-80, the right of the facility to operate shall be terminated upon permit expiration.

    b. The owner shall submit an application for renewal at least six months but no earlier than eighteen months prior to the date of permit expiration.

    c. If an applicant submits a timely and complete application for an initial permit or renewal under 9VAC5-80-80 (F), the failure of the source to have a permit or the operation of the source without a permit shall not be a violation of Article 1, Part II of 9VAC5 Chapter 80, until the Board takes final action on the application under 9VAC5-80-150.

    d. No source shall operate after the time that it is required to submit a timely and complete application under subsections C and D of 9VAC5-80-80 for a renewal permit, except in compliance with a permit issued under Article 1, Part II of 9VAC5 Chapter 80.

    e. If an applicant submits a timely and complete application under section 9VAC5-80-80 for a permit renewal but the Board fails to issue or deny the renewal permit before the end of the term of the previous permit, (i) the previous permit shall not expire until the renewal permit has been issued or denied and (ii) all the terms and conditions of the previous permit, including any permit shield granted pursuant to 9VAC5-80-140, shall remain in effect from the date the application is determined to be complete until the renewal permit is issued or denied.

    f. The protection under subsections (F)(1) and (F)(5)(ii) of section 9VAC5-80-80 (F) shall cease to apply if, subsequent to the completeness determination made pursuant to section 9VAC5-80-80 (D), the applicant fails to submit by the deadline specified in writing by the Board any additional information identified as being needed to process the application.

    (9VAC5-80-80, 9VAC5-80-110, and 9VAC5-80-170)

40. Recordkeeping and Reporting - All records of monitoring information maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:

    a. The date, place as defined in the permit, and time of sampling or measurements;

    b. The date(s) analyses were performed;

    c. The company or entity that performed the analyses;

    d. The analytical techniques or methods used;

    e. The results of such analyses; and

    f. The operating conditions existing at the time of sampling or measurement.

    (9VAC5-80-110)

41. Recordkeeping and Reporting - Records of all monitoring data and support information shall be retained for at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. (9VAC5-80-110)

42. Recordkeeping and Reporting - The permittee shall submit the results of monitoring contained in any applicable requirement to DEQ no later than March 1 and September 1 of each calendar year. This report must be signed by a responsible official, consistent with 9VAC5-80-80 (G), and shall include:

    a. The time period included in the report. The time periods to be addressed are January 1 to June 30 and July 1 to December 31; and

    b. All deviations from permit requirements. For purpose of this permit, deviations include, but are not limited to:

        i. Exceedances of emissions limitations or operational restrictions;

        ii. Excursions from control device operating parameter requirements, as documented by continuous emission monitoring or periodic monitoring, or Compliance Assurance Monitoring (CAM) which indicates an exceedance of emission limitations or operational restrictions; or,

        iii. Failure to meet monitoring, recordkeeping, or reporting requirements contained in this permit.

c. If there were no deviations from permit conditions during the time period, the permittee shall include a statement in the report that "no deviations from permit requirements occurred during this semi-annual reporting period."

(9VAC5-80-110)

43. Annual Compliance Certification - Exclusive of any reporting required to assure compliance with the terms and conditions of this permit or as part of a schedule of compliance contained in this permit, the permittee shall submit to EPA and DEQ no later than March 1 each calendar year a certification of compliance with all terms and conditions of this permit including emission limitation standards or work practices for the period ending December 31. The compliance certification shall comply with such additional requirements that may be specified pursuant to §114(a)(3) and §504(b) of the federal Clean Air Act. The permittee shall maintain a copy of the certification for five (5) years after submittal of the certification. This certification shall be signed by a responsible official, consistent with 9VAC5-80-80 (G), and shall include:

a. The time period included in the certification. The time period to be addressed is January 1 to December 31;

b. The identification of each term or condition of the permit that is the basis of the certification;

c. The compliance status;

d. Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-compliance;

e. Consistent with subsection 9VAC5-80-110, the method or methods used for determining the compliance status of the source at the time of certification and over the reporting period;

f. Such other facts as the permit may require to determine the compliance status of the source; and

g. One copy of the annual compliance certification shall be submitted to EPA in electronic format only. The certification document should be sent to the following electronic mailing address:

R3_APD_Permits@epa.gov

(9VAC5-80-110)

44. Permit Deviation Reporting - The permittee shall notify the Tidewater Regional Office within four daytime business hours after discovery of any deviations from permit requirements which may cause excess emissions for more than one hour, including those attributable to upset conditions as may be defined in this permit. In addition, within 14 days of the discovery, the permittee shall provide a written statement explaining the problem, any corrective actions or preventative measures taken, and the estimated duration of the permit deviation. The occurrence should also be reported in the next semi-annual compliance monitoring report pursuant to Condition 42 of this permit.
(9VAC5-80-110 F.2)

45. Failure/Malfunction Reporting - In the event that any affected facility or related air pollution control equipment fails or malfunctions in such a manner that may cause excess emissions for more than one hour, the owner shall no later than four daytime business hours after the malfunction is discovered, notify the Tidewater Regional Office of such failure or malfunction and within 14 days provide a written statement giving all pertinent facts, including the estimated duration of the breakdown. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the Tidewater Regional Office.
(9VAC5-80-110 and 9VAC5-20-180)

46. Severability - The terms of this permit are severable. If any condition, requirement or portion of the permit is held invalid or inapplicable under any circumstance, such invalidity or inapplicability shall not affect or impair the remaining conditions, requirements, or portions of the permit.
(9VAC5-80-110)

47. Duty to Comply - The permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Air Act or the Virginia Air Pollution Control Law or both and is ground for enforcement action; for permit termination, revocation and reissuance, or modification; or, for denial of a permit renewal application.
(9VAC5-80-110)

48. Need to Halt or Reduce Activity not a Defense - It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
(9VAC5-80-110)

49. Permit Modification - A physical change in, or change in the method of operation of, this stationary source may be subject to permitting under State Regulations 9VAC5-80-50, 9VAC5-80-1100, 9VAC5-80-1605, or 9VAC5-80-2000 and may require a permit modification and/or revisions except as may be authorized in any approved alternative operating scenarios.
(9VAC5-80-110, 9VAC5-80-190, and 9VAC5-80-260)

50. Property Rights - The permit does not convey any property rights of any sort, or any exclusive privilege.
(9VAC5-80-110)

51. Duty to Submit Information - The permittee shall furnish to the Board, within a reasonable time, any information that the Board may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Board copies of records required to be kept by the permit and, for information claimed to be confidential, the permittee shall furnish such records to the Board along with a claim of confidentiality.
(9VAC5-80-110)

52. Duty to Submit Information - Any document (including reports) required in a permit condition to be submitted to the Board shall contain a certification by a responsible official that meets the requirements of 9VAC5-80-80 (G).
(9VAC5-80-110)

53. Duty to Pay Permit Fees - The owner of any source for which a permit was issued under 9VAC5-80-50 through 9VAC5-80-300 shall pay annual emissions fees, as applicable, consistent with the requirements of 9VAC5-80-310 through 9VAC5-80-350 and annual maintenance fees, as applicable, consistent with the requirements of 9VAC5-80-2310 through 9VAC5-80-2350.
(9VAC5-80-110, 9VAC5-80-310 et seq., and 9VAC5-80-2310 et seq.)

54. Fugitive Dust Emission Standards - During the operation of a stationary source or any other building, structure, facility, or installation, no owner or other person shall cause or permit any materials or property to be handled, transported, stored, used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions may include, but are not limited to, the following:

    a. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land;

    b. Application of asphalt, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which may create airborne dust; the paving of roadways and the maintaining of them in a clean condition;

    c. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty material. Adequate containment methods shall be employed during sandblasting or similar operations;

d. Open equipment for conveying or transporting material likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion; and,

e. The prompt removal of spilled or tracked dirt or other materials from paved streets and of dried sediments resulting from soil erosion.

(9VAC5-80-110 and 9VAC5-40-90)

55. Startup, Shutdown, and Malfunction - At all times, including periods of startup, shutdown, and soot blowing, and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Board, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
(9VAC5-80-110 and 9VAC5-40-20 E)

56. Alternative Operating Scenarios - Contemporaneously with making a change between reasonably anticipated operating scenarios identified in this permit, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating. The permit shield described in 9VAC5-80-140 shall extend to all terms and conditions under each such operating scenario. The terms and conditions of each such alternative scenario shall meet all applicable requirements including the requirements of 9VAC5 Chapter 80, Article 1.
(9VAC5-80-110)

57. Inspection and Entry Requirements - The permittee shall allow DEQ, upon presentation of credentials and other documents as may be required by law, to perform the following:

a. Enter upon the premises where the source is located or emissions-related activity is conducted, or where records must be kept under the terms and conditions of the permit.

b. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of the permit.

c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit.

d. Sample or monitor at reasonable times' substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

(9VAC5-80-110)

58. Reopening for Cause - The permit shall be reopened by the Board if additional federal requirements become applicable to a major source with a remaining permit term of three years or more. Such reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 9VAC5-80-80 (F). The conditions for reopening a permit are as follows:

    a. The permit shall be reopened if the Board or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

    b. The permit shall be reopened if the administrator or the Board determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

    c. The permit shall not be reopened by the Board if additional applicable state requirements become applicable to a major source prior to the expiration date established under 9VAC5-80-110 (D).

    (9VAC5-80-110)

59. Permit Availability - Within five days after receipt of the issued permit, the permittee shall maintain the permit on the premises for which the permit has been issued and shall make the permit immediately available to DEQ upon request.
(9VAC5-80-110 and 9VAC5-80-150)

60. Transfer of Permits

    a. No person shall transfer a permit from one location to another, unless authorized under 9VAC5-80-130, or from one piece of equipment to another.

    b. In the case of a transfer of ownership of a stationary source, the new owner shall comply with any current permit issued to the previous owner. The new owner shall notify the Board of the change in ownership within 30 days of the transfer and shall comply with the requirements of 9VAC5-80-200.

    c. In the case of a name change of a stationary source, the owner shall comply with any current permit issued under the previous source name. The owner shall notify the Board of the change in source name within 30 days of the name change and shall comply with the requirements of 9VAC5-80-200.

    (9VAC5-80-110 and 9VAC5-80-160)

61. Permit Revocation or Termination for Cause - A permit may be revoked or terminated prior to its expiration date if the owner knowingly makes material misstatements in the permit application or any amendments thereto or if the permittee violates, fails, neglects or refuses to comply with the terms or conditions of the permit, any applicable requirements, or the applicable provisions of 9VAC5 Chapter 80 Article 1. The Board may suspend, under such conditions and for such period of time as the Board may prescribe any permit for any grounds for revocation or termination or for any other violations of these regulations. (9VAC5-80-110, 9VAC5-80-190 C, and 9VAC5-80-260)

62. Duty to Supplement or Correct Application - Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrections. An applicant shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete application was filed but prior to release of a draft permit. (9VAC5-80-110 and 9VAC5-80-80 E)

63. Stratospheric Ozone Protection - If the permittee handles or emits one or more Class I or II substances subject to a standard promulgated under or established by Title VI (Stratospheric Ozone Protection) of the federal Clean Air Act, the permittee shall comply with all applicable sections of 40 CFR Part 82, Subparts A to F. (9VAC5-80-110 and 40 CFR Part 82)

64. Asbestos Requirements - The permittee shall comply with the requirements of National Emissions Standards for Hazardous Air Pollutants (40 CFR 61) Subpart M, National Emission Standards for Asbestos as it applies to the following: Standards for Demolition and Renovation (40 CFR 61.145), Standards for Insulating Materials (40 CFR 61.148), and Standards for Waste Disposal (40 CFR 61.150). (9VAC5-60-70 and 9VAC5-80-110)

65. Accidental Release Prevention - If the permittee has more, or will have more than a threshold quantity of a regulated substance in a process, as determined by 40 CFR 68.115, the permittee shall comply with the requirements of 40 CFR Part 68. (9VAC5-80-110 and 40 CFR Part 68)

66. Changes to Permits for Emissions Trading - No permit revision shall be required under any federally approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit. (9VAC5-80-110)

67. Emissions Trading - Where the trading of emissions increases and decreases within the permitted facility is to occur within the context of this permit and to the extent that the regulations provide for trading such increases and decreases without a case-by-case approval of each emissions trade:

    a. All terms and conditions required under 9VAC5-80-110, except subsection N, shall be included to determine compliance.

    b. The permit shield described in 9VAC5-80-140 shall extend to all terms and conditions that allow such increases and decreases in emissions.

    c. The owner shall meet all applicable requirements including the requirements of 9VAC5-80-50 through 9VAC5-80-300.

    (9VAC5-80-110)