



NRO-158-14

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

NORTHERN REGIONAL OFFICE

13901 Crown Court, Woodbridge, Virginia 22193

(703) 583-3800 Fax (703) 583-3821

www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

Thomas A. Faha
Regional Director

September 12, 2014

Mr. Harold Scott Thacker
Director of Post Collection Operations
King George Landfill, Inc.
10376 Bullock Drive
King George, Virginia 22485

Location: King George County
Registration No. 40903
County-Plant ID No. 51-099-00016

Dear Mr. Thacker:

Attached is a renewal to your permit to operate a municipal solid waste landfill with a landfill gas collection and control system and a landfill gas-to-energy recovery system pursuant to 9 VAC 5 Chapter 80, Article 1, of the Virginia Regulations for the Control and Abatement of Air Pollution. This permit incorporates provisions from the minor new source review permit document issued on January 31, 2014.

This permit contains legally enforceable conditions. Failure to comply may result in a Notice of Violation and civil penalty. Please read all conditions carefully.

In evaluating the application and arriving at a final decision to issue this permit, the Department deemed the application complete on February 26, 2014 and solicited written public comments by placing a newspaper advertisement in *The Journal* on July 23, 2014. The thirty-day comment period (provided for in 9 VAC 5-80-270) expired on August 25, 2014. No comments were received in this office from the public or the US EPA.

This approval to operate does not relieve King George Landfill, Inc. of the responsibility to comply with all other local, state, and federal permit regulations.

Issuance of this permit is a case decision. The Regulations, at 9 VAC 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 permit is mailed or delivered to you. Please consult that and other relevant provisions for additional requirements for such requests.

Mr. Harold Scott Thacker
September 12, 2014
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Additionally, 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 to court by filing a Notice of Appeal with:

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

In the event that you receive this permit by mail, three days are added to the period in which to file an appeal. Please refer to Part Two A of the Rules of the Supreme Court of Virginia for additional information including filing dates and the required content of the Notice of Appeal.

If you have any questions concerning this permit, please contact Ali Khalilzadeh at (703) 583-3839.

Sincerely,

James B. LaFratta
Regional Air Permit Manager

TAF/JBL/AK/14-158-TV Renewal Permit Cover Letter (9-12-14)

Attachment: Permit

cc: Thomas Cue, King George Landfill, Inc. (pdf copy via email)
Director, OAPP (electronic file submission)
Manager, Data Analysis (electronic file submission)
Chief, Air Enforcement Branch (3AP13), U.S. EPA, Region III
Manager/Inspector, Air Compliance
File



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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 9 VAC 5-80-50 through 9 VAC 5-80-300 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: King George Landfill, Inc.
Facility Name: King George County Landfill
Facility Location: 10376 Bullock Drive, King George, Virginia 22485
Registration Number: 40903
Permit Number: NRO-40903

This permit includes the following programs:

Federally Enforceable Requirements - Clean Air Act (Pages 4 through 34)
State Only Enforceable Requirements (Page 34)

September 12, 2014
Effective Date

September 11, 2019
Expiration Date

Thomas A. Faha
Regional Director

Signature Date

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Facility Information

Permittee/Facility Name

King George Landfill, Inc.
King George County Landfill
10376 Bullock Drive
King George, VA 22485

Responsible Official

Mr. Harold Scott Thacker
Director of Post Collection Operations
804-727-9017

Contact Person

Mr. John Dottellis
Area Engineer/Environmental Protection Manager
410-808-3039

County-Plant Identification Number: 51-099-00016

Facility Description: NAICS 562212, SIC Code 4953, 4911

The King George County Landfill (KGCL) consists of a municipal solid waste landfill with a landfill gas collection and control system (GCCS) that includes four open flares (but only three are constructed to date), a sulfur pretreatment and landfill gas-to-energy recovery system that includes four combustion turbines, and two leachate concentrators. The KGCL is a non-hazardous municipal solid waste (MSW) landfill located off State Route 665, approximately 1.1 miles north of State Route 3 and approximately nine miles east of Fredericksburg, Virginia in King George County. KGCL is owned by the County of King George and operated by King George Landfill, Inc. The facility operates under the terms of Solid Waste Permit No. 586, issued by the DEQ Land Division on August 17, 1995, as amended. The solid waste permit allows the landfill to accept MSW; commercial, industrial, and institutional wastes; construction, demolition, and debris wastes; non-hazardous contaminated soils; non-hazardous incinerator and air pollution control ashes; and other types of waste. KGCL began accepting waste in November 1996.

The facility is a Title V major source of Carbon Monoxide, Nitrogen Oxides, and Sulfur Dioxide. The landfill, the GCCS, and open flares are subject to the New Source Performance Standard (NSPS) Subpart WWW – Standards of Performance for Municipal Solid Waste Landfills and the Landfill MACT (40 CFR 63 Subpart AAAA – NESHAP for Municipal Solid Waste Landfills). The LFG combustion turbines are subject to the NSPS Subpart KKKK – Standards of Performance for Stationary Combustion Turbines. The landfill facility also has several small emergency generators, which are subject to either NSPS Subpart IIII – Standards of Performance for Stationary Combustion Ignition Internal Combustion Engines or the RICE MACT (40 CFR 63, Subpart ZZZZ – NESHAP for Stationary Reciprocating Internal Combustion Engines).

Emission Units

Equipment to be operated consists of:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
Landfill Operations							
LFO-1	Landfill	MSW Landfill Operations	44.9 million cubic yards	See Turbines and Flares below	GCCS	NMOC	9/18/2009, as amended 8/29/2012 & 1/31/2014
LFG Combustion Equipment							
CF-1 CF-2	SCF1 SCF2	Two Open Flares, LFG Specialties Model CF-3000	3000 cfm each, 98.4 MMBtu/hr HHV each	(Considered an NMOC emission control device)	--	NMOC	9/18/2009, as amended 8/29/2012 & 1/31/2014
CF-3	SCF3	Open Flare, LFG Specialties Model Flametrol IV	3500 cfm, 114.8 MMBtu/hr HHV	(Considered an NMOC emission control device)	--	NMOC	9/18/2009, as amended 8/29/2012 & 1/31/2014
CF-4	SCF4	To be determined	To be determined	--	--	--	9/18/2009, as amended 8/29/2012 & 1/31/2014
TG-1 TG-2 TG-3 TG-4	S001 S002 S003 S004	Four Solar Centaur Turbines, GSC 4500/4700	3330 kW each, 48.6 MMBtu/hr HHV each	SulfaTreat or Paques Thiopaq Biodesulfurization	Sulfur Treat 1 Sulfur Treat 2	SO ₂	9/18/2009, as amended 8/29/2012 & 1/31/2014
Internal Combustion Engines							
F002	N/A	Flare Station Emergency Generator, manufactured 2009	500 kW / 685 bhp	--	--	--	--
WP-ENG	N/A	Water pump engine (portable), Godwin CD150	40 Hp	--	--	--	--
Leachate Concentrators							
LC-1 LC-2	LCS1 LCS2	Two Leachate Concentrators, Heartland Technology Partners, LLC	1250 gal/hr each	--	--	--	8/29/2012, as amended 1/31/2014

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

Landfill Operations (Emission unit ID# LFO-1)

1. **NSPS, Subpart WWW Applicability** – The permittee shall comply with all applicable provisions of 40 CFR 60, Subpart WWW (New Source Performance Standards for Municipal Solid Waste Landfills) for the construction and operation of the municipal solid waste (MSW) landfill and gas collection and control system. The permittee shall refer to the most current version of this applicable Federal regulation for additional or revised requirements not included in this permit.
(9 VAC 5-50-410, 9 VAC 5-80-110, and 40 CFR 60, Subpart WWW [60.750 to 60.759])
2. **NESHAP, Subpart AAAA Applicability** – The permittee shall comply with all applicable provisions of 40 CFR 63, Subpart AAAA (National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills, a.k.a. the Landfill MACT). In accordance with the Landfill MACT, the permittee shall develop and implement a “Startup, Shutdown and Malfunction” (SSM) Plan for the facility and maintain a copy on site.
(9 VAC 5-60-100, 9 VAC 5-80-110, 40 CFR 63.6(e)(3), 40 CFR 63, Subpart AAAA [63.1930 to 63.1990], and Condition 34 of NSR permit dated 1/31/2014)
3. **Landfill Design Capacity** – The MSW design capacity of the landfill is 44,903,233 cubic yards. A change in the MSW design capacity may require a State Air Pollution Control Board permit to construct and operate.
(9 VAC 5-80-110)
4. **Gas Collection and Control System (GCCS)** - The permittee shall operate an active GCCS, approved by the Administrator, that captures the landfill gas (LFG) generated within the landfill. The GCCS installed at the King George County Landfill shall be designed in accordance with 40 CFR 60.752(b)(2)(ii)(A). The active collection system shall be designed to handle the maximum expected gas flow rate from the entire area of the landfill that warrants control over the intended use period of the LFG control or treatment system equipment. The system shall collect LFG from each area, cell, or group of cells in the landfill in which solid waste has been placed for a period of five (5) years or more if active, or two (2) years or more if closed or at final grade. The GCCS shall collect LFG at a sufficient extraction rate. Also, the system shall be designed to minimize the off-site migration of subsurface gas. Based on the King George Landfill, Inc., Title V application, uncontrolled Non-Methane Organic Compound (NMOC) emission rates are estimated to be more than 50 Megagrams per year (Mg/yr). Therefore, it is the responsibility of King George Landfill, Inc., to keep for the life of the GCCS an up-to-date, readily accessible plot map showing each existing and planned collector in the system and provide a unique identification location label for each LFG collector.
(9 VAC 5-80-110, 40 CFR 60.752(b)(2)(ii)(A), 40 CFR 60.753(a), and 40 CFR 60.758(d))
5. **Emission Controls** –NMOCs collected with the GCCS shall be controlled by an open flare system (CF-1 to CF-4) and/or the collected LFG shall be routed to a treatment system that processes the gas for subsequent sale or use in energy recovery devices (TG-1 to TG-4) including off-site electric power generation. The permittee shall operate the LFG treatment

system and/or LFG combustion devices (flares or turbines) at all times that LFG is being collected by the GCCS.

(9 VAC 5-80-110, 40 CFR 60.752(b)(2)(iii), 40 CFR 60.753(f), and Condition 11 of NSR Permit dated 01/31/2014)

6. **Dust Emission Control** - Unless otherwise specified, dust emission controls shall include the following or equivalent as a minimum:
 - a. Dust from grading, cell construction, waste compaction, application of daily cover, wood waste chipping operations, storage piles and traffic areas shall be controlled by wet suppression or equivalent (as approved by the DEQ) control measures.
 - b. All material being stockpiled shall be kept moist to control dust during storage and handling, or covered to minimize emissions.
 - c. Dust from haul roads shall be controlled by wet suppression and the prompt removal of dried sediment resulting from soil erosion and dirt spilled or tracked onto paved surfaces within the landfill.
 - d. Reasonable precautions shall be taken to prevent deposition of dirt on public roads and subsequent dust emissions. Dirt spilled or tracked onto paved surfaces shall be promptly removed to prevent particulate matter from becoming airborne.

(9 VAC 5-80-110, 9 VAC 5-50-90, and Condition 19 of NSR Permit dated 1/31/2014)
7. **GCCS Design Plan** – The permittee shall maintain onsite a current landfill gas collection and control system design plan in accordance with the requirements of 40 CFR Part 60, Subpart WWW.

(9 VAC 5-80-110 and Condition 12 of NSR permit dated 1/31/2014)
8. **GCCS Operation** –
 - a. The permittee shall operate the GCCS such that the surface methane concentration is less than 500 ppm above the methane background level at the surface of the landfill.
 - b. A negative pressure shall be maintained at each active wellhead except in the case of fire, increased well temperature, use of a geomembrane or synthetic cover if the permittee has developed acceptable pressure limits in the GCCS design plan, or at a decommissioned well.
 - c. The permittee shall operate each interior, active wellhead in the collection system such that the gas temperature is less than 55 degrees Celsius and with either a nitrogen level of less than 20 percent (20%) or an oxygen level of less than five percent (5%), unless a DEQ approved higher operating value has been established at a particular wellhead.
 - d. If monitoring demonstrates that items a, b, and c above are not met, corrective action shall be taken as specified in §60.755(a)(3) through (5) or §60.755(c) of this subpart. If corrective actions are taken as specified in §60.755, the monitored exceedance is not a violation of these operational requirements.

(9 VAC 5-80-110 and 40 CFR 60.753(b), (c), (d), and (g))

9. **Placement of New Wells** - The permittee shall place each new well or design component as specified in the GCCS design plan and shall install wells no later than 60 calendar days after the date on which the initial solid waste has been in place in any cell or group of cells for a period of five (5) years or more if active or two (2) years or more if closed or at final grade. (9 VAC 5-80-110 and 40 CFR 60.755(b))
10. **GCCS Compliance** - The provisions of 40 CFR 60.755 shall apply to the operation of the GCCS at all times, except during periods of start-up, shut down, or malfunction, provided that the duration of start-up, shut down, or malfunction does not exceed five (5) calendar days for the GCCS and does not exceed one (1) hour for the LFG treatment system or LFG combustion devices. (9 VAC 5-80-110 and 40 CFR 60.755(e))
11. **GCCS Shutdown** - The permittee shall operate the GCCS such that all collected LFG is routed to one or more of the LFG combustion devices or to a LFG treatment system. In the event that the collection and control system malfunctions, the GCCS gas moving equipment shall be shut down and all vents to the atmosphere shall be closed within one (1) hour. (9 VAC 5-80-110 and 40 CFR 60.753(e))
12. **GCCS Testing/Monitoring Ports** – The GCCS shall be constructed so as to allow for emissions testing and monitoring upon reasonable notice at any time, using appropriate test methods specified in 40 CFR 60 Subpart WWW, as applicable; 40 CFR 60 Appendix A, as applicable; or as determined by the Air Compliance Manager, Northern Regional Office, in consultation with the operator of the King George County Landfill, owner or permittee. Test ports shall be provided at the appropriate locations. (9 VAC 5-80-110 and Condition 14 of NSR permit dated 1/31/2014)
13. **GCCS Wellfield Monitoring** – Each wellhead shall be equipped with a sampling port and a thermometer, other temperature measuring device, or an access port for temperature measurements. On a monthly basis, the permittee shall measure at each individual wellhead the gauge pressure, the temperature, and either the nitrogen or oxygen concentration of the landfill gas. (9 VAC 5-80-110, 40 CFR 60.756(a), and Condition 31 of NSR permit dated 1/31/2014)
14. **Landfill Surface Monitoring** - Surface monitoring shall be performed in accordance with the most recent Surface Monitoring Design Plan. (9 VAC 5-80-110, 40 CFR 60.753(d), 40 CFR 60.756(f), and Condition 31 of NSR permit dated 1/31/2014)
15. **Landfill Cover Integrity Monitoring** - The permittee shall implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis. (9 VAC 5-80-110 and 40 CFR 60.755(c)(5))
16. **Recordkeeping** – The permittee shall maintain the following records in accordance with NSPS Subpart WWW:

- a. Instances when positive pressure occurs in a GCCS wellhead in efforts to avoid a fire. These records shall be submitted with the semi-annual report (see Condition 17);
- b. The permittee shall keep up-to-date, readily accessible records for the life of the control equipment of the data listed below as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring shall be maintained for a minimum of five (5) years. Records of the control device vendor specifications shall be maintained until removal.
 - i. The maximum expected gas generation flow rate as calculated in 40 CFR 60.755(a)(1).
 - ii. The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in 40 CFR 60.759(a)(1).
 - iii. The open flare information as specified in Condition 35.b.
- c. The permittee shall keep for five (5) years up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored in 60.756 (see Conditions 13, 14, and 33) as well as up-to-date, readily accessible records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded.
- d. The permittee shall keep for the life of the collection system an up-to-date, readily accessible plot map showing each existing and planned LFG collector in the system and providing a unique identification location label for each collector. Any areas of the landfill containing asbestos or non-degradable waste such as incinerator ash shall be delineated on the map if they are to be excluded from the collection system. Records of the nature, date of deposition, and amount deposited shall be accessible. Additionally, the permittee shall keep up-to-date, readily accessible records of the installation date and location of all newly installed LFG collectors as specified in 40 CFR 60.755(b).
- e. The permittee shall keep for at least five (5) years up-to-date, readily accessible records of all collection and control system exceedances of the operational standards in 40 CFR 60.753 (see Conditions 4, 8, and 11), the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance.
(9 VAC 5-50-410, 9 VAC 5-80-110, 40 CFR 60.753(b)(1), and 40 CFR 60.758)

17. **Reporting** – The permittee shall submit the following information in a semi-annual report (due on or before March 1st and September 1st) in accordance with NSPS Subpart WWW and NESHAP Subpart AAAAA:

- a. For the GCCS wellheads, the value and length of time for exceedance in well pressure, temperature, and nitrogen or oxygen parameters.
- b. For the control device bypasses, a description and duration of all periods when LFG flows through a bypass line or duration which the bypass valve is unlocked.
- c. For the open flare, description and duration of all periods when the control device was not operating for a period exceeding 1 hour and length of time the control device was not operating.

- d. Description and duration of all periods when the collection system was not operating in excess of 5 days.
 - e. The location of each exceedance of the 500 ppm surface methane concentration and the concentration recorded at each location for which an exceedance was recorded in the previous month.
 - f. The date of installation and the location of each well or collection system expansion added due to exceedances of oxygen, nitrogen, or pressure, the age of the initial solid waste placed in a cell or group of cells, or due to exceedances of surface methane concentrations.
 - g. Startup, shutdown, and malfunction plan reports:
 - i. If actions taken during a startup, shutdown or malfunction are consistent with the procedures in the SSM plan, this information shall be included in a semi-annual SSM plan report.
 - ii. Any time an action taken during a startup, shutdown or malfunction is not consistent with the SSM plan, the source shall report actions taken within 2 working days after commencing such actions, followed by a letter 7 days after the event. Any new actions that are indicated as appropriate during an SSM event shall be incorporated in a new SSM Plan.
- (9 VAC 5-80-110, 40 CFR 60.757(f), 40 CFR 63.10(b) and (d), 40 CFR 63.1980(a) and Condition 34 of NSR permit dated 1/31/2014)

18. Landfill and GCCS Closure

- a. The collection and control system may be capped or removed provided that:
 - i. The landfill is a closed landfill as defined in 40 CFR 60.751 and a closure report has been submitted to the DEQ (see Condition 18.b.);
 - ii. The GCCS has been in operation a minimum of 15 years; and
 - iii. The calculated NMOC gas produced by the landfill is less than 50 Mg/yr on three (3) successive test dates. The test dates shall be no less than 90 days apart, and no more than 180 days apart. NMOC emission rates shall be calculated per 40 CFR 60.754(b).
- b. The permittee shall submit a closure report to the DEQ within 30 days of waste acceptance cessation. DEQ may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of 40 CFR 258.60. If a closure report has been submitted to the DEQ, no additional wastes may be placed into the landfill without filing a notification of modification.
- c. The permittee shall submit an equipment removal report to the DEQ 30 days prior to removal or cessation of operation of the control equipment. The report shall contain the following:
 - i. A copy of the closure report (see Condition 18.b.);
 - ii. A copy of the initial performance test report demonstrating that the 15 year minimum control period has expired; and

iii. Dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 50 Mg or greater of NMOC per year.

DEQ may request such additional information as may be necessary to verify that all of the conditions for removal have been met.

(9 VAC 5-50-410, 9 VAC 5-80-110, 40 CFR 60.752(b)(2)(v), 40 CFR 60.757(d) and (e))

LFG Combustion Equipment Requirements – (Emission unit ID# TG-1 to TG-4, and CF-1 to CF-4)

19. **Combustion Turbine Requirements - (emission unit ID# TG-1 to TG-4) – NSPS, Subpart KKKK Applicability** - The permittee shall comply with all applicable provisions of 40 CFR 60, Subpart KKKK (New Source Performance Standards for Stationary Combustion Turbines) for the operation of the four (4) Solar Centaur Turbines, since each turbine has a rated capacity greater than 10.0 MMBtu/hr and was installed after February 18, 2005.
(9 VAC 5-50-410, 9 VAC 5-80-110 and 40 CFR 60, Subpart KKKK [60.4300 to 60.4420])
20. **Combustion Turbine Requirements - (emission unit ID# TG-1 to TG-4) – Emission Controls** - Emissions from the Solar Centaur combustion turbines shall be controlled by the following:
- a. Nitrogen oxides (as NO₂) emissions shall be controlled by the combustion of treated landfill gas (see Condition 23) whenever any of the combustion turbines are operated. The facility shall install and operate a flow meter and associated recordkeeping device to determine the flow of treated landfill gas to the combustion turbines. The facility shall operate and maintain the stationary combustion turbines, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction.
 - b. Sulfur Dioxide (SO₂) emissions shall be controlled by the SulfaTreat and/or Paques Thiopaq sulfur control systems (Sulfur Treat 1 and/or Sulfur Treat 2), as necessary, to comply with the sulfur dioxide emission limits for the turbines, as stated in Condition 26. The facility shall operate and maintain the equipment in a manner consistent with good air pollution control practices for minimizing emissions including during startup, shutdown, and malfunction.
 - c. Per 40 CFR 60.4333, the facility shall operate and maintain the stationary combustion turbines and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including startup, shutdown and malfunction. In addition, the permittee may only change those settings that are permitted by the manufacturer and do not degrade the air emissions from the combustion turbines.
 - d. Any uncontrolled venting of landfill gas from the combustion turbines, the landfill gas treatment system, or the treated landfill gas transport system is prohibited, except as

indicated in 40 CFR 755(e) (see Condition 10). All atmospheric vents in the treated landfill gas transport system shall be controlled by a lockout-tag-out system or by installing and operating a device to divert the emissions from all vents to an approved landfill gas control system.

- e. All components of the combustion turbine facility's landfill gas treatment system, which consists of the treated landfill gas transport system (blowers and compressors), landfill gas filtration and landfill gas dewatering, shall be in operation whenever the facility is operating the combustion turbines. If any component of the landfill gas treatment system or treated landfill gas transport system malfunctions, the treated landfill gas transport system shall be shut down and all untreated landfill gas shall be diverted to the flare(s).
(9 VAC 5-80-110 and Condition 2 of the NSR Permit dated 01/31/2014)

21. **Combustion Turbine & Flare Requirements - (emission unit ID# TG-1 to TG-4 and CF-1 to CF-4) – Approved Fuels** - The approved fuel for the open flares (CF-1 to CF-4) is LFG. Natural gas or LP gas may be used as fuel for the pilot. The approved fuel for the four combustion turbines (TG-1 to TG-4) is treated landfill gas. A change in the fuels may require a permit to modify and operate.
(9 VAC 5-80-110 and Condition 15 of NSR permit dated 1/31/2014)

22. **Combustion Turbine & Flare Requirements - (emission unit ID# TG-1 to TG-4 and CF-1 to CF-4) – Fuel Throughput** - The facility shall consume no more than 6.833×10^9 cubic feet of LFG per year, calculated monthly as the sum of each consecutive twelve (12) month period.
(9 VAC 5-80-110 and Condition 16 of NSR permit dated 1/31/2014)

23. **Combustion Turbine Requirements - (emission unit ID# TG-1 to TG-4) – Fuel Specifications** – The treated LFG used in the four combustion turbines shall meet the specifications below:

- a. Minimum heat content: 300 BTU/scf (HHV)
b. The higher heating value (HHV) of the treated LFG shall be determined on a weekly basis using the following formula:

$$\text{Heat Value} \left(\frac{\text{BTU}}{\text{cf}} \right) = \left(\frac{\% \text{ Methane}}{100} \right) \times 1012 \frac{\text{BTU}}{\text{cf}}$$

A log of the measured methane concentration values and the resultant calculated treated landfill gas heating value shall be maintained. The methane-measuring device shall be maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. The measuring device shall be provided with adequate access for inspection.

- c. Treated LFG shall be that which has been processed in accordance with 40 CFR 60.752(b)(2)(iii)(C). The LFG treatment system, at a minimum, shall be composed of a de-watering process, filtration through a 10-micron filter, and compression. The primary and secondary knockout tanks are located at the King George Landfill. All treated

landfill gas consumed by the combustion turbines shall pass through each component of the LFG treatment process prior to use in the combustion process.

- d. Verification of satisfactory operation of treatment equipment shall, at a minimum, include certification that the manufacturer's written requirements or recommendations for installation, operation, and maintenance of the devices shall be followed.
(9 VAC 5-80-110, and Conditions 7, 9, 17, and 18 of NSR permit dated 1/31/2014)

24. Combustion Turbine Requirements - (emission unit ID# TG-1 to TG-4) – Fuel

Monitoring - The facility shall monitor the total sulfur content of the treated LFG fuel at the inlet and outlet of the sulfur control system for the combustion turbines using the approved custom schedule in 40 CFR 60.4370(c)(1)(i-iv) or other DEQ approved custom schedule. The facility, when using this pre-approved method shall monitor total sulfur content of the LFG measured as Hydrogen Sulfide (H₂S) for thirty consecutive unit operating days. If all the sulfur content results are less than half the standard in Condition 26, then the facility shall monitor total sulfur content at twelve month intervals until the result exceeds half the standard (see 40 CFR 60.4370(c)(1)(i-iv) for custom schedule). The facility shall report any missed sulfur content test or if results, after the sulfur control system, are above the sulfur content standard as required in 40 CFR 60.4385(c). The sulfur content of the LFG fuel shall be determined using the total sulfur method described in Gas Processors Association (GPA) Standard 2377 (see 40 CFR 60.17), which measures the major sulfur compound (Hydrogen Sulfide) using a "Length of Stain" Detector Tube or other approved method.
(9 VAC 5-80-110, and Condition 8 of NSR permit dated 1/31/2014)

- 25. Flare Requirements - (emission unit ID# CF-1 to CF-4) – Fuel Specifications** – The net heating value of (untreated) landfill gas being routed to the open flares shall be at least 200 BTU/scf.
(9 VAC 5-80-110 and Condition 17 of NSR permit dated 1/31/2014)

- 26. Combustion Turbine Requirements - (emission unit ID# TG-1 to TG-4) – Emissions Limitations** - Emissions from the operation of each of the combustion turbines shall not exceed the limits specified below:

Sulfur Dioxide	65 ng SO ₂ /J (0.15 lb SO ₂ /MMBtu) heat input
Nitrogen Oxides (as NO ₂)	96 ppm at 15% O ₂ or 700 ng/J of useful output (5.5 lb/MWh)

Compliance with the NSPS Subpart KKKK Standards for NO_x shall be determined by stack testing (see Condition 34).
(9 VAC 5-80-110, 40 CFR 60.4320, 40 CFR 60.4330, and Condition 20 of NSR permit dated 1/31/2014)

- 27. Combustion Turbine & Flare Requirements - (emission unit ID# TG-1 to TG-4 and CF-1 to CF-4) – Visible Emissions Limit** – Each open flare shall be operated with no visible emissions, as determined by EPA Method 22 (reference 40 CFR 60, Appendix A), except for periods not to exceed a total of five (5) minutes during any two (2) consecutive hours.

Visible emissions from the four (4) combustion turbine stacks shall not exceed 10% opacity whenever the combustion turbines are operated except during one (1) six-minute period in any one hour in which visible emissions shall not exceed 20% opacity. All visible emissions rates shall be determined by EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction.

Upon request by the DEQ, the permittee shall conduct additional visible emissions evaluations (VEE) of the combustion turbines (TG-1 to TG-4) to demonstrate compliance with these visible emissions limits. The details of the VEE shall be arranged with the Regional Air Compliance Manager of the DEQ's Northern Regional Office. (9 VAC 5-50-80, 9 VAC 5-80-110, and Conditions 21 and 27 of NSR permit dated 1/31/2014)

28. **Combustion Turbine Requirements – (emission unit ID# TG-1 to TG-4) – Visible Emission Periodic Monitoring** - The permittee shall perform a visual emission observation (VEO) on the exhaust stack of each combustion turbine at least once per calendar week, when operating. The observations shall be conducted during daylight hours and under normal operating conditions to identify the presence of visible emissions. If no visible emissions are observed, no further action is required. If visible emissions are observed, the permittee shall proceed as follows:
- a. Take timely corrective action and re-conduct the observation to ensure the turbine has resumed proper operation with no visible emissions, or
 - b. Conduct a visible emission evaluation (VEE) in accordance with EPA Method 9 (reference 40 CFR 60, Appendix A) for a minimum of six (6) minutes, to ensure visible emissions from the turbine are in compliance with Condition 27. If any of the 15-second observations exceeds 10% opacity, the VEE shall be extended for a minimum of 30 minutes. Timely corrective action shall be taken, if necessary, such that the turbine resumes operation in compliance with Condition 27.

The permittee shall maintain an observation log to demonstrate compliance with these monitoring requirements. The logbook shall include the date and time of each observation, name of the observer, whether or not there were visible emissions, any VEE recordings and necessary corrective actions. If a turbine has not been operated during a week, it shall be noted in the log that a VEO was not required. The logbook shall be available on site for inspection by the DEQ and be current for the most recent five (5) years. (9 VAC 5-80-110 E)

29. **Flare Requirements - (emission unit ID# CF-1 to CF-4) – Visible Emission Periodic Monitoring** - The permittee shall perform a visual emission observation (VEO) on each open flare at least once per calendar week, when operating. The observations shall be conducted during daylight hours and under normal operating conditions to identify the presence of visible emissions. If no visible emissions are observed, no further action is required. If visible emissions are observed, the permittee shall proceed as follows:

- a. Take timely corrective action and re-conduct the observation to ensure the flare has resumed proper operation with no visible emissions, or
- b. Conduct a visual determination of smoke from the flares in accordance with EPA Method 22 (reference 40 CFR 60, Appendix A) to determine compliance with Condition 27. If there is an exceedance of the visible emission limit, timely corrective action shall be taken such that the flare resumes operation in compliance with the visible emission limit, as stated in Condition 27.

The permittee shall maintain an observation log to demonstrate compliance with these monitoring requirements. The logbook shall include the date and time of each observation, name of the observer, whether or not there were visible emissions, Method 22 recordings and necessary corrective actions. If a flare has not been operated during a week, it shall be noted in the log that a VEO was not required. The logbook shall be available on site for inspection by the DEQ and be current for the most recent five (5) years.
(9 VAC 5-80-110 E)

30. Combustion Turbine Requirements - (emission unit ID# TG-1 to TG-4) – Monitoring Devices

- a. The facility shall be equipped with a device to continuously measure and record the consumption of treated LFG by the combustion turbines.
- b. The facility shall be equipped with devices to continuously measure the pressure within the treated LFG transport system. At a minimum, devices shall be located just before and just after the 10-micron filter and after the completed treatment process.
(9 VAC 5-80-110 and Condition 3 of NSR permit dated 1/31/2014)

31. Combustion Turbine Requirements - (emission unit ID# TG-1 to TG-4) – Monitoring Device Observation

– The facility shall log observations of landfill gas flow to the four combustion turbines when operating (combustion turbines noted as “OFF” or “0” when not running). The log shall contain a minimum of hourly observations processed monthly and stored onsite. The log shall be used for emissions calculations during periods where some or all electronic data are not available. In the case where no electronic information or manual records are available, the facility will calculate emissions using worst case scenario.
(9 VAC 5-80-110 and Condition 4 of NSR permit dated 1/31/2014)

32. Combustion Turbine Requirements - (emission unit ID# TG-1 to TG-4) – Monitoring Device Observation

– The monitoring device used to measure the pressure in the treated landfill gas system shall be observed by the facility whenever treated landfill gas is combusted in the combustion turbines with a frequency of not less than daily (excluding weekends and holidays) to ensure good performance of the treatment system. The facility shall keep a daily log of the observations from the monitoring device, including the change in pressure across the 10-micron filter.
(9 VAC 5-80-110 and Condition 5 of NSR permit dated 1/31/2014)

33. Flare Requirements - (emission unit ID# CF-1 to CF-4) – Monitoring Devices and Observation – The following equipment shall be installed, calibrated, maintained, and operated according to the manufacturer’s specifications:

- a. A heat sensing device at the pilot light or the flame itself to indicate the continuous presence of a flame; and
- b. A flow rate measuring device that shall record gas flow to the flare at least every 15 minutes or secure the bypass line valve in the closed position with a car-seal or lock-and-key type configuration. If the bypass valve is secured with a seal or lock, a visual inspection of the lock shall be performed at least once every month to ensure that the valve remains closed.

(9 VAC 5-80-110, 40 CFR 60.756(c), and Condition 31 of NSR permit dated 1/31/2014)

34. Combustion Turbine Requirements - (emission unit ID# TG-1 to TG-4) – Testing – The facility shall perform an annual performance test in accordance with 40 CFR 60.4400 to demonstrate compliance for the NOx emission limit and 40 CFR 60.4415 to demonstrate continuous compliance for the SO2 emission limit (which is met by Condition 24).

- a. If the NOx emission result from the performance test is less than or equal to 75% of the NOx emission limit standard, the facility may reduce the frequency of subsequent performance tests to once every two years (no more than 26 calendar months following the previous performance test).
- b. If the results of any subsequent performance test exceed 75% of the NOx emission limit standard, the facility must resume annual performance tests.

The tests shall be performed at plus or minus 25% of 100% peak load on each of the four combustion turbines. The tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30 and the test methods and procedures contained in each applicable section or subpart listed in 9 VAC 5-50-410. The details of the tests are to be arranged with the Regional Air Compliance Manager of the DEQ’s Northern Regional Office. The facility shall submit a test protocol at least thirty (30) days prior to testing. Two copies of the test results shall be submitted to the Regional Air Compliance Manager of the DEQ’s Northern Regional Office within sixty (60) days after test completion and shall conform to the test report format.

(9 VAC 5-80-110, 40 CFR 60.4340, 40 CFR 60.4400, and Condition 26 of NSR permit dated 1/31/2014)

35. Flare Requirements (emission unit ID# CF-1 to CF-4) – NSPS WWW Recordkeeping and Reporting –

- a. In accordance with NSPS Subpart WWWW, the permittee shall keep for five (5) years up-to-date, readily accessible continuous records of the flares’ operating parameters specified to be monitored in 40 CFR 60.756 (see Condition 33).
- b. The permittee shall keep up-to-date, readily accessible records for the life of the control equipment as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring shall be maintained for a minimum of five (5)

years. Records of the control device vendor specifications shall be maintained until the equipment is removed. These records shall include, a description of the flare type (i.e., steam-assisted, air-assisted, or nonassisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in 40 CFR 60.18; continuous records of the flare pilot flame or flare flame monitoring and records of all periods of operations during which the pilot flame of the flare flame is absent.

- c. Reporting requirements specific to the flares' operating parameters are outlined in Condition 17)
(9 VAC 5-50-410, 9 VAC 5-80-110, 40 CFR 60.758(b)(4) and (c)(4))

Internal Combustion Engine Requirements for Emergency Generators and Water Pump - (emission unit ID# F001, F002, F004 to F006, and WP-ENG)

36. **Emergency Generator Requirements - (emission unit ID# F002, F004) – NSPS, Subpart IIII Applicability** - The permittee shall comply with all applicable provisions of 40 CFR 60, Subpart IIII (New Source Performance Standards for Stationary Combustion Ignition Internal Combustion Engines) for the operation of the 685 brake horsepower (500 kW) stationary compression-ignition (CI) RICE used by the flare station emergency generator and the 400 kilowatt stationary CI RICE diesel emergency generator. The permittee shall refer to the most current version of this applicable Federal regulation for additional or revised requirements not included in this permit.
(9 VAC 5-50-410, 9 VAC 5-80-110, and 40 CFR 60, Subpart IIII [60.4200 to 60.4219])
37. **Emergency Generator Requirements - (emission unit ID# F002, F004) – NSPS IIII Approved Fuels** – The stationary reciprocating internal combustion engines (RICES) used by the emergency generators can only combust non-road diesel fuel that meets the requirements of 40 CFR 80.510(b).
(9 VAC 5-80-110 and 40 CFR 60.4207(b))
38. **Emergency Generator Requirements - (emission unit ID# F002, F004) – NSPS IIII Emission Standards** – The CI RICES used by the emergency generators shall be certified as meeting the engine manufacturer emission standards and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants (NO_x, CO, HC, PM, and opacity) beginning in model year 2007.
(9 VAC 5-80-110, 40 CFR 60.4202(a), and 40 CFR 60.4205(b))
39. **Emergency Generator Requirements - (emission unit ID# F002, F004) - NSPS IIII Limitations** - The permittee shall comply with the following requirements, as applicable, for the stationary CI RICES used by the emergency generators F002 and F004:
 - a. There is no time limit on the use of emergency stationary ICE in emergency situations; however, in accordance with 9 VAC 5-80-1105.B.2., use of an emergency stationary CI

RICE in excess of 500 hours of operation per year may trigger permitting in accordance with 9 VAC 5-80-1100 *et seq.*;

- b. Each emergency stationary CI RICE may operate for the following combination of purposes for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by condition c below counts as part of the 100 hours per calendar year allowed by this condition.
 - i. Maintenance checks and readiness testing, provided that the tests are recommended by federal, state, or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine;
 - ii. Emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (see 40 CFR 60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.
 - iii. Periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.
- c. Each emergency stationary CI RICE may operate for up to 50 hours per calendar year in non-emergency situations, not to include peak shaving or non-emergency demand response or to generate income for a facility in an electric grid or otherwise supply power as part of a financial arrangement with another entity except in accordance with 40 CFR 60.4211(f)(3)(i). The 50 hours are counted as part of the 100 hours per calendar year limitation specified in item b above.
(9 VAC 5-80-110, 9 VAC 5-80-1105.B.2., and 40 CFR 60.4211(f))

40. Emergency Generator Requirements - (emission unit ID# F002, F004) - NSPS IIII Compliance - The permittee shall comply with the following requirements, as applicable, for the emergency stationary CI RICES:

- a. Operate and maintain the emergency stationary CI RICE in accordance with the manufacturer's emission-related written instructions;
- b. Change only those emission-related settings that are permitted by the manufacturer; and
- c. Meet the requirements of 40 CFR 89, 94, and/or 1068, as applicable.
(9 VAC 5-80-100 and 40 CFR 60.4211(a))

41. Emergency Generator Requirements - (emission unit ID# F002, F004) – NSPS IIII Monitoring - For the stationary RICES used by the emergency generators F002 and F004, the permittee shall install a non-resettable hour meter, if not already installed, prior to startup of the engine. Engines equipped with diesel particulate filters must install a backpressure monitor.
(9 VAC 5-80-110, 40 CFR 60.4209)

42. **Emergency Generator Requirements - (emission unit ID# F002, F004) - NSPS IIII Recordkeeping & Reporting**
- a. If the stationary CI RICEs are equipped with a diesel particulate filter, the owner or operator must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached.
 - b. If the emergency stationary CI RICEs operate or are contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in 40 CFR 60.4211(f)(2)(ii) and (iii) or that operate for the purposes specified in 40 CFR 60.4211(f)(3)(i), you must submit an annual report in accordance with 40 CFR 60.4214(d)(1) through (3).
(9 VAC 5-80-110 and 40 CFR 60.4214(c) and (d))
43. **Emergency Generator Requirements - (emission unit ID# F001, F002, and F004 to F006) – NESHAP, Subpart ZZZZ Applicability** - The permittee shall comply with all applicable provisions of 40 CFR 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, a.k.a. the RICE MACT) for the operation of the stationary CI RICEs and stationary Spark Ignition (SI) RICEs. The permittee shall refer to the most current version of this applicable Federal regulation for additional or revised requirements not included in this permit.
(9 VAC 5-60-100, 9 VAC 5-80-110 and 40 CFR 63, Subpart ZZZZ [63.6580 to 63.6675])
44. **Emergency Generator Requirements - (emission unit ID# F002 and F004) – NESHAP, Subpart ZZZZ, Applicability** - The permittee shall meet the requirements of 40 CFR 63, Subpart ZZZZ for the CI RICEs used by the emergency generators F002 and F004 by satisfying all applicable requirements of NSPS Subpart IIII. No further applicable requirements to 40 CFR 63 Subpart ZZZZ applies to these CI RICEs.
(9 VAC 5-60-100, 9 VAC 5-80-110 and 40 CFR 63.6590(c))
45. **Emergency Generators - (emission unit ID# F001, F005, and F006) – NESHAP ZZZZ Emission Standards** - The permittee shall operate and maintain the stationary RICEs and associated after treatment control devices (if any) used by the emergency generators F001, F005, and F006 in accordance with the engine manufacturer's emission-related written instructions or develop a maintenance plan that provides for the maintenance and operation of the RICEs in a manner consistent with good air pollution control practice for minimizing emissions.
(9 VAC 5-60-100, 9 VAC 5-80-110, and 40 CFR 63.6625(e))
46. **Emergency Generator Requirements - (emission unit ID# F001, F005, and F006) – NESHAP ZZZZ Limitations** - The stationary RICEs used by the emergency generators F001, F005, and F006 may be operated for the purpose of maintenance and readiness testing, provided that they are recommended by federal, state, or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator (if applicable to the generators), or the insurance company, for up to

100 hours per year. Additionally, as part of the 100 hours per year, the stationary emergency generator sets may be used for the purposes of emergency demand response (declared Energy Emergency Alert Level 2 conditions) and for situations where there is a five percent (5%) or greater deviation in the power voltage or frequency below the standard power level. For stationary emergency RICEs located at area sources of HAPs, up to 50 hours per year may be used for non-emergency situations in accordance with 40 CFR 63.6640(f)(4). These non-emergency hours are counted as part of the 100 hours per year provided for maintenance, readiness testing, and emergency demand response. The 50 hours per year allocated for non-emergency situations shall not be used for any peak shaving or non-emergency demand response situations, except as provided under the provisions of 40 CFR 63.6640(f)(4)(ii). (9 VAC 5-60-100, 9 VAC 5-80-110, 40 CFR 63.6640(f))

47. **Emergency Generator Requirements - (emission unit ID# F001, F005, and F006) – NESHAP ZZZZ Compliance** - For the stationary RICEs used by the emergency generators F001, F005, and F006, the permittee shall comply with the following requirements from Table 2d of 40 CFR 63, Subpart ZZZZ:
- a. Change the oil and filter every 500 hours of operation or annually, whichever comes first;
 - b. Inspect the air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary (F001);
 - c. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary (F005 and F006); and
 - d. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.
- (9 VAC 5-60-100, 9 VAC 5-80-110, and 40 CFR 63.6603(a))
48. **Emergency Generator Requirements - (emission unit ID# F001, F005, and F006) - NESHAP ZZZZ Monitoring** - For the stationary RICEs used by the emergency generators F001, F005, and F006, the permittee shall install a non-resettable hour meter, if not already installed.
- (9 VAC 5-60-100, 9 VAC 5-80-110, 40 CFR 63.6625(f))
49. **Emergency Generator Requirements - (emission unit ID# F001, F005, and F006) – NESHAP ZZZZ Recordkeeping and Reporting** – The following records shall be maintained on the stationary RICEs used by the emergency generators F001, F005, and F006:
- a. For each RICE, the permittee shall keep records of the operating hours recorded by a non-resettable hour meter and documentation as to the number of hours spent for emergency operations (including documentation as to what classified the operation as emergency) and the number of hours spent for non-emergency operation;
 - b. If an emergency generator is used for emergency demand response purposes, periods of voltage or frequency deviations, or to supply power as part of a financial arrangement with another entity (in accordance with 40 CFR 63.6640(f)(2)(ii), (f)(2)(iii), or (f)(4)(ii),

respectively), the permittee shall keep records of the notification of the emergency situation, and the date, start time and end time the generator was operated for these purposes;

- c. If an emergency generator operates or is contractually obligated to be available to operate for more than 15 hours per calendar year for emergency demand response purposes, periods of voltage or frequency deviations, or to supply power as part of a financial arrangement with another entity (in accordance with 40 CFR 63.6640(f)(2)(ii), (f)(2)(iii), or (f)(4)(ii), respectively), the permittee shall submit an annual report to the EPA in accordance with the requirements listed in (h)(1 - 3) of 40 CFR 63.6650; and
- d. Records of the hours for maintenance conducted on the RICES and after-treatment control devices (if any) in order to demonstrate that the engines were operated and maintained according to the permittee's own maintenance plan.

These records shall be kept at the facility and be made available for inspection by the DEQ for the most recent five (5) year period.

(9 VAC 5-60-100, 9 VAC 5-80-110, 40 CFR 63.6655, and 40 CFR 63.6660)

50. **Water Pump Engine Requirements - (emission unit ID# WP-ENG) – NESHAP, Subpart ZZZZ Applicability** – The water pump engine is listed as a 40 hp portable internal combustion diesel engine with a date of 1/1/1998. The diesel engine is not subject to the requirements of 40 CFR Part 63, Subpart ZZZZ, so long as the nonroad engine will not remain at a location for more than 12 consecutive months. A location is any single site at the KGCL facility.
(9 VAC 5-60-100, 9 VAC 5-80-110, 40 CFR 63.6585(a))

51. **Emergency Generator and Water Pump Engine Requirements - (emission unit ID# F002 and WP-ENG) – Visible Emission Limit** – Visible emissions from the CI RICE used by the flare station emergency generator (F002) and the Water Pump Engine (WP-ENG) shall not exceed 20% opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 30% opacity. This condition applies at all times except during startup, shutdown, and malfunction.
(9 VAC 5-80-110 and 9 VAC 5-50-80)

52. **Emergency Generator and Water Pump Engine Requirements - (emission unit ID# F002 and WP-ENG) – Visible Emission Periodic Monitoring** – The permittee shall perform a visual emission observation (VEO) on the exhaust stack of each engine (F002 and WP-ENG) at least once per month, when operating. The observations shall be conducted during daylight hours and under normal operating conditions to identify the presence of visible emissions. If visible emissions are observed, the permittee shall proceed as follows:
- a. Take timely corrective action and re-conduct the observation to ensure the engine has resumed proper operation with no visible emissions, or
 - b. Conduct a visible emissions evaluation (VEE) in accordance with EPA Method 9 (reference 40 CFR 60, Appendix A) for a minimum of six (6) minutes, to ensure visible emissions from the engine meet the opacity standard stated in Condition 51. If any of the

15-second observations exceeds 20% opacity, the VEE shall be extended for a minimum of 30 minutes. Timely corrective action shall be taken, if necessary, such that the engine resumes operation in compliance with Condition 51.

The permittee shall maintain an observation log to demonstrate compliance with these monitoring requirements. The logbook shall include the date and time of each observation, name of the observer, whether or not there were visible emissions, any VEE recordings and necessary corrective actions. If the engine has not been operated during the month, it shall be noted in the log that a visual observation was not required. The logbook shall be available on site for inspection by the DEQ and be current for the most recent five (5) years.
(9 VAC 5-80-110 E)

Leachate Concentrator Requirements - (emission unit ID# LC-1 to LC-2)

53. Leachate Concentrator System - (emission unit ID# LC-1 to LC-2) – Operating Limits –

The exhaust from the operation of the gas turbines may be diverted to provide heat for the operation of the leachate concentrators. However, if odors increase from operating the concentrators, the permittee shall shut down the equipment and take corrective action to reduce odors that may be emanating from the concentrators. The permittee shall notify the Regional Air Compliance Manager of the DEQ's NRO, and shall not resume normal operation until the problem is resolved and approval is granted by DEQ.

(9 VAC 5-80-110 and Condition 13 of NSR permit dated 1/31/2014)

54. Leachate Concentrator Requirements - (emission unit ID# LC-1 to LC-2) – Monitoring Devices –

The leachate concentrators shall be equipped with devices (flow meters) to continuously measure the volume of leachate processed. To ensure proper performance, the monitoring devices shall be observed by the permittee with a frequency of not less than daily (excluding weekends and holidays) in which the equipment is operated. Refer to Condition 56 for recordkeeping requirements to demonstrate compliance with this condition.

(9 VAC 5-80-110 and Conditions 3.c. and 6 of NSR permit dated 1/31/2014)

Facility Wide Conditions

55. Facility Wide Conditions - Emissions Limitations - Emissions from the combined operation of the open flare system (CF-1 to CF-4), the four LFG combustion turbines (TG-1 to TG-4), and the two leachate concentrators (LC-1 to LC-2) shall not exceed the limits specified below:

PM-10 (Total)	49.0 tons/yr	(9 VAC 5-50-260)
Sulfur Dioxide	240.0 tons/yr	(9 VAC 5-50-260)
Nitrogen Oxides (as NO ₂)	170.0 tons/yr	(9 VAC 5-50-260)
Carbon Monoxide	225.0 tons/yr	(9 VAC 5-50-260)
NMOC as Hexane	34.0 tons/yr	(9 VAC 5-50-260)

All emission limits are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period.

(9 VAC 5-80-110, and Condition 20 of NSR permit dated 1/31/2014)

- 56. Facility Wide Conditions - Recordkeeping** - The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Northern Regional Office. These records shall include, but are not limited to:
- a. Annual throughput of LFG to the flares (CF-1 to CF-4), calculated monthly as the sum of each consecutive twelve (12) month period;
 - b. Annual throughput of treated LFG to the combustion turbines (TG-1 to TG-4), calculated monthly as the sum of each consecutive twelve (12) month period;
 - c. Annual throughput of leachate to the leachate concentrators (LC-1 to LC-2), calculated monthly as the sum of each consecutive twelve (12) month period;
 - d. Annual accumulation of MSW, calculated monthly as the sum of each consecutive twelve (12) month period;
 - e. Monthly and annual emissions (in tons) using calculation methods approved by the Regional Air Compliance Manager of DEQ's NRO to verify compliance with emission limitations in Condition 55. Annual emissions shall be calculated monthly as the sum of each consecutive twelve (12) month period;
 - f. A log for each monitoring device data and the observations, as required by Conditions 31, 32, and 54, for the landfill gas flow to the combustion turbines, the treated landfill gas transport system pressure readings, and volume of leachate through the concentrators;
 - g. Weekly landfill gas calorific value determination results, including % methane readings as described in Condition 23.b.;
 - h. Results of all stack tests, visible emission evaluations, logs of visible emission observations and corrective actions for the flares, turbines, and engines (F002 and WP-ENG), and performance evaluations;
 - i. All treated landfill gas sulfur content results and reports of excess emissions required by 40 CFR 60.4385(c) and Condition 24;
 - j. Scheduled and unscheduled maintenance on the combustion turbines; and
 - k. Operating procedures and operator training records for the combustion turbines.

The content and format of such additional records shall be arranged with the Regional Air Compliance Manager of the DEQ's NRO. These records and all records required by NSPS Subparts WWW, IIII, and KKKK, and NESHAPS AAAA, YYYY, and ZZZZ (see Conditions 16, 35, 42, and 49) shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years.

(9 VAC 5-50-50, 9 VAC 5-80-110, 9 VAC 5-80-900, and Condition 33 of NSR permit dated 1/31/2014)

57. Facility Wide Conditions – Monitoring Devices – Each monitoring device shall be installed, maintained, calibrated 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 facility is operating.

(9 VAC 5-80-110 and Condition 3 of NSR permit dated 1/31/2014)

58. Facility Wide Conditions - Testing - The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods in accordance with procedures approved by the DEQ. Test ports shall be provided at the appropriate locations and safe sampling platforms and access shall be provided.

(9 VAC 5-50-30, 9 VAC 5-80-110, and Condition 28 of NSR permit dated 1/31/2014)

Insignificant Emission Units

59. Insignificant Emission Units - The following emission units at the facility are identified in the application as insignificant emission units under 9 VAC 5-80-720:

Emission Unit No.	Emission Unit Description	Citation¹ (9 VAC _)	Pollutant(s) Emitted (9 VAC 5-80-720B)	Rated Capacity (9 VAC 5-80-720C)
P002	Diesel Storage Tank	5-80-720.A.41.	VOC	10,000 gal
P003	Oil Recovery Tank	5-80-720.C.3.	VOC	500 gal
P004	Leachate Tank	5-80-720.B.2. & B.5.	VOC & HAPs	250,000 gal
P005	Leachate Tank	5-80-720.B.2. & B.5.	VOC & HAPs	250,000 gal
P006	Leachate Tank	5-80-720.B.2. & B.5.	VOC & HAPs	250,000 gal
P007	Diesel Storage Tank	5-80-720.A.41.	VOC	10,000 gal
P008	Kerosene Storage Tank	5-80-720.B.2.	VOC	275 gal
P009	Used Oil Storage Tank	5-80-720.C.3.	VOC	550 gal
P010	Transmission Oil Tank	5-80-720.C.3.	VOC	275 gal
P011	Hydraulic Oil Storage Tank	5-80-720.C.3.	VOC	550 gal
P012	Transmission Oil Storage Tank	5-80-720.C.3.	VOC	550 gal
P013	Engine Oil Storage Tank	5-80-720.C.3.	VOC	550 gal

P014	Diesel Fuel Storage Tank	5-80-720.A.41.	VOC	150 gal
P015	Used Oil Storage Tank	5-80-720.C.3.	VOC	550 gal
P016	Diesel Fuel Storage Tank for Flare Emergency Generator	5-80-720.A.41.	VOC	875 gal
P017	Leachate Tank	5-80-720.B.2. & B.5.	VOC & HAPs	250,000 gal
F001	Emergency Generator (pre-2001)	5-80-720.C.1.a.	NOx, CO, SO ₂ , PM, VOC, & HAPs	55 kW
F003	Emergency Generator (diesel)	5-80-720.C.4.b.	NOx, CO, SO ₂ , PM, VOC, & HAPs	Portable Unit
F004	Emergency Generator (diesel)	5-80-720.C.4.b.	NOx, CO, SO ₂ , PM, VOC, & HAPs	400 kW
F005	Emergency Generator at Scale House (propane)	5-80-720.C.4.	NOx, CO, SO ₂ , PM, VOC, & HAPs	25 kW
F006	Emergency Generator at Main Office (propane)	5-80-720.C.4.	NOx, CO, SO ₂ , PM, VOC, & HAPs	8 kW
T1	Organic Phase Condensate – Turbine Plant	5-80-720.B.2. & B.5.	VOC & HAPs	500 gal
OW-1	Oil-water separator for organic phase condensate	5-80-720.B.2. & B.5.	VOC & HAPs	25 gal/min design flow rate
GC-1	Vent from gas chromatograph (LFG analysis equipment) – Turbine Plant	5-80-720.A.45.	VOC & HAPs	N/A – listed insignificant activity
LC1	Leachate Balance Tank for Leachate Concentrator Process (shared by two leachate concentrators)	5-80-720.B.	VOC & HAPs	8,000 gal
LC2	Leachate Concentrate Tank	5-80-720.B.	VOC & HAPs	9,300 gal
LC3	Leachate Concentrate Tank	5-80-720.B.	VOC & HAPs	9,300 gal
LRCIRC	Recirculation of leachate on the landfill's active face	5-80-720.B.	VOC & HAPs	30,000 gal/day by permit
HTR-1	Propane-fired comfort heater	5-80-720.B.	NOx, CO, SO ₂ , PM, VOC, & HAPs	0.15 MMBtu/hr
HTR-2	Propane-fired comfort heater	5-80-720.B.	NOx, CO, SO ₂ , PM, VOC, & HAPs	0.15 MMBtu/hr

Emission Unit No.	Emission Unit Description	Citation¹ (9 VAC _)	Pollutant(s) Emitted (9 VAC 5-80-720B)	Rated Capacity (9 VAC 5-80-720C)
WHTR-1	Natural gas-fired hot water heater	5-80-720.C.	NO _x , CO, SO ₂ , PM, VOC, & HAPs	0.0345 MMBtu/hr
SOLIDIF	Solidification of liquid wastes (waste management process)	5-80-720.B.	PM, VOC, & HAPs	N/A – calculations based on 300,000 gallons of liquid/year
ALTCOV	Use of contaminated soils for alternate daily cover	5-80-720.B.	VOC & HAPs	N/A – calculations based on maximum allowable TPH of 3,000 ppm
PUMP1	Diesel-fueled Water Pump Engine (1998)	5-80-720.C.1.a.	NO _x , CO, SO ₂ , PM, VOC, & HAPs	23 hp
PUMP2	Diesel-fueled Water Pump Engine (1998)	5-80-720.C.1.a.	NO _x , CO, SO ₂ , PM, VOC, & HAPs	23 hp
PUMP3	Diesel-fueled Water Pump Engine (1998)	5-80-720.C.1.a.	NO _x , CO, SO ₂ , PM, VOC, & HAPs	23 hp
LTPLNT1	Diesel-fueled Light Plant Engine (2008)	5-80-720.C.1.a.	NO _x , CO, SO ₂ , PM, VOC, & HAPs	11 hp
LTPLNT2	Diesel-fueled Light Plant Engine (2008)	5-80-720.C.1.a.	NO _x , CO, SO ₂ , PM, VOC, & HAPs	11 hp
LTPLNT3	Diesel-fueled Light Plant Engine (2011)	5-80-720.C.1.a.	NO _x , CO, SO ₂ , PM, VOC, & HAPs	11 hp
LTPLNT4	Diesel-fueled Light Plant Engine (2011)	5-80-720.C.1.a.	NO _x , CO, SO ₂ , PM, VOC, & HAPs	11 hp

¹The citation criteria for insignificant activities are as follows:

- 9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application
- 9 VAC 5-80-720 B - Insignificant due to emission levels
- 9 VAC 5-80-720 C - Insignificant due to size or production rate

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 9 VAC 5-80-110, except for those applicable requirements outlined in NSPS Subpart IIII and NEHSAP Subpart ZZZZ for SI or CI RICEs used by emergency generators (see Internal Combustion Engine Requirements for Emergency Generators and Water Pump).

Permit Shield & Inapplicable Requirements

60. **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 Cc and Rule 4-43 (9 VAC 5-40-5800 <i>et seq.</i>)	Emission Standards for Municipal Solid Waste Landfills	These regulations only apply to MSW landfills which commenced construction, reconstruction, or modification before May 30, 1991.
40 CFR 60 Subpart Kb and Rule 4-25 (9 VAC 5-40-3410 <i>et seq.</i>)	Standards of Performance for Volatile Organic Liquid Storage Vessels	Vapor pressures of the four leachate tanks were calculated to be below the applicability threshold.

Citation	Title of Citation	Description of Applicability
40 CFR 60 Subpart WWW	Standards of Performance for Municipal Solid Waste Landfills	Turbines combusting “treated” LFG are not subject to the cited NSPS testing, monitoring, recording, and reporting requirements (four combustion turbines, TG-1 to TG-4)
40 CFR 63 Subpart AAAA	NESHAPs for Municipal Solid Waste Landfills	Recordkeeping and reporting requirements are not applicable to combustion devices that use “treated” LFG (four combustion turbines TG-1 to TG-4)
40 CFR 63 Subpart YYYY	NESHAPs for Stationary Combustion Turbines	The NESHAP only applies to turbines located at a major source of HAPs. The KGCL is not a major source of HAPs.
40 CFR 64	Compliance Assurance Monitoring	The Landfill is subject to an NSPS that was proposed after 11/15/1990. Therefore, this regulation does not apply.
40 CFR 72 – 78	Acid Rain Regulations	The landfill gas to energy plant is not considered a “qualifying facility.”

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 Department pursuant to §10.1-1307.3 of the Virginia Air Pollution Control Law.

(9 VAC 5-80-140)

General Conditions

61. **General Conditions - 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.
(9 VAC 5-80-110 N)
62. **General Conditions - Permit Expiration** - This permit has a fixed term of five (5) years. The expiration date shall be the date five (5) years from the date of issuance. Unless the owner submits a timely and complete application for renewal to the Department consistent with the requirements of 9 VAC 5-80-80, the right of the facility to operate shall be terminated upon permit expiration.
(9 VAC 5-80-80 B, C, and F, 9 VAC 5-80-110 D, and 9 VAC 5-80-170 B)
63. **General Conditions - Permit Expiration** - The owner shall submit an application for renewal at least six (6) months but no earlier than 18 months prior to the date of permit expiration.
(9 VAC 5-80-80 B, C, and F, 9 VAC 5-80-110 D and 9 VAC 5-80-170 B)
64. **General Conditions - Permit Expiration** - If an applicant submits a timely and complete application for an initial permit or renewal under this section, 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 9 VAC 5 Chapter 80, until the Board takes final action on the application under 9 VAC 5-80-150.
(9 VAC 5-80-80 B, C, and F, 9 VAC 5-80-110 D and 9 VAC 5-80-170 B)
65. **General Conditions - Permit Expiration** - No source shall operate after the time that it is required to submit a timely and complete application under subsections C and D of 9 VAC 5-80-80 for a renewal permit, except in compliance with a permit issued under Article 1, Part II of 9 VAC 5 Chapter 80.
(9 VAC 5-80-80 B, C, and F, 9 VAC 5-80-110 D and 9 VAC 5-80-170 B)
66. **General Conditions - Permit Expiration** - If an applicant submits a timely and complete application under section 9 VAC 5-80-80 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 9 VAC 5-80-140, shall remain in effect from the date the application is determined to be complete until the renewal permit is issued or denied.
(9 VAC 5-80-80 B, C, and F, 9 VAC 5-80-110 D and 9 VAC 5-80-170 B)
67. **General Conditions - Permit Expiration** - The protection under subsections F 1 and F 5 (ii) of section 9 VAC 5-80-80 F shall cease to apply if, subsequent to the completeness determination made pursuant section 9 VAC 5-80-80 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.

(9 VAC 5-80-80 B, C, and F, 9 VAC 5-80-110 D and 9 VAC 5-80-170 B)

68. **General Conditions -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.
- (9 VAC 5-80-110 F)
69. **General Conditions -Recordkeeping and Reporting** - Records of all monitoring data and support information shall be retained for at least five (5) 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.
- (9 VAC 5-80-110 F)
70. **General Conditions -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 9 VAC 5-80-80 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;
 - b. All deviations from permit requirements. For purpose of this permit, deviations include, but are not limited to:
 - i. Exceedance of emissions limitations or operational restrictions;
 - ii. Excursions from control device operating parameter requirements, as documented by continuous emission monitoring, 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."

Additional specific reporting requirements as outlined in NSPS Subparts WWW, IIII, and KKKK, and NESHAP Subparts AAAA and ZZZZ can be found in Conditions 17, 18, 35, 42, and 49.
(9 VAC 5-80-110 F)

- 71. General Conditions - 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 9 VAC 5-80-80 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 9 VAC 5-80-110 E, 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
- (9 VAC 5-80-110 K.5)

- 72. General Conditions - Permit Deviation Reporting** - The permittee shall notify the Director, DEQ Northern Regional Office within four (4) daytime business hours after discovery of any deviations from permit requirements which may cause excess emissions for more than one (1) 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. Owners subject to the requirements of 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9 VAC 5-40-40 and

9 VAC 5-50-40. The occurrence should also be reported in the next semi-annual compliance monitoring report pursuant to Condition 70 of this permit.

(9 VAC 5-80-110 F.2 and 9 VAC 5-80-250)

73. **General Conditions - 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 (1) hour, the owner shall, as soon as practicable but no later than four (4) daytime business hours after the malfunction is discovered, notify the Director, DEQ Northern Regional Office by facsimile transmission, telephone, or electronic mail (e-mail) of such failure or malfunction and shall within 14 days of discovery provide a written statement giving all pertinent facts, including the estimated duration of the breakdown. Owners subject to the requirements of 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9 VAC 5-40-40 and 9 VAC 5-50-40. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the Director, DEQ Northern Regional Office.
(9 VAC 5-20-180 C)
74. **General Conditions - 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.
(9 VAC 5-80-110 G.1)
75. **General Conditions - 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.
(9 VAC 5-80-110 G.2)
76. **General Conditions - 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.
(9 VAC 5-80-110 G.3)
77. **General Conditions - 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 9 VAC 5-80-50, 9 VAC 5-80-1100, 9 VAC 5-80-1605, or 9 VAC 5-80-2000 and may require a permit modification and/or revisions except as may be authorized in any approved alternative operating scenarios.
(9 VAC 5-80-190 and 9 VAC 5-80-260)

78. **General Conditions - Property Rights** - The permit does not convey any property rights of any sort, or any exclusive privilege.
(9 VAC 5-80-110 G.5)
79. **General Conditions - 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.
(9 VAC 5-80-110 G.6)
80. **General Conditions - 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 9 VAC 5-80-80 G.
(9 VAC 5-80-110 K.1)
81. **General Conditions - Duty to Pay Permit Fees** - The owner of any source for which a permit under 9 VAC 5-80-50 through 9 VAC 5-80-300 was issued shall pay permit fees consistent with the requirements of 9 VAC 5-80-310 through 9 VAC 5-80-350 in addition to an annual permit maintenance fee consistent with the requirements of 9 VAC 5-80-2310 through 9 VAC 5-80-2350. The actual emissions covered by the permit program fees for the preceding year shall be calculated by the owner and submitted to the Department by **April 15** of each year. The calculations and final amount of emissions are subject to verification and final determination by the Department. The amount of the annual permit maintenance fee shall be the largest applicable base permit maintenance fee amount from Table 8-11A in 9 VAC 5-80-2340, adjusted annually by the change in the Consumer Price Index.
(9 VAC 5-80-110 H, 9 VAC 5-80-340 C and 9 VAC 5-80-2340 B)
82. **General Conditions - 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.

(9 VAC 5-50-90)

83. **General Conditions - Startup, Shutdown, and Malfunction** - At all times, including periods of startup, shutdown, 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.

(9 VAC 5-50-20 E)

84. **General Conditions - 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 9 VAC 5-80-140 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 9 VAC 5 Chapter 80, Article 1.

(9 VAC 5-80-110 J)

85. **General Conditions - 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.

(9 VAC 5-80-110 K.2)

86. **General Conditions - 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 (3) 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 9 VAC 5-80-80 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 9 VAC 5-80-110 D.
(9 VAC 5-80-110 L)
87. **General Conditions - Permit Availability** - Within five (5) 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.
(9 VAC 5-80-150 E)
88. **General Conditions - Transfer of Permits** - No person shall transfer a permit from one location to another, unless authorized under 9 VAC 5-80-130, or from one piece of equipment to another.
(9 VAC 5-80-160)
89. **General Conditions - Transfer of Permits** - 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 9 VAC 5-80-200.
(9 VAC 5-80-160)
90. **General Conditions - Transfer of Permits** - 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 9 VAC 5-80-200.
(9 VAC 5-80-160)
91. **General Conditions - Malfunction as an Affirmative Defense** - A malfunction constitutes an affirmative defense to an action brought for noncompliance with technology-based emission limitations if the requirements stated in Condition 92 are met.
(9 VAC 5-80-250)

92. **General Conditions - Malfunction as an Affirmative Defense** - The affirmative defense of malfunction shall be demonstrated by the permittee through properly signed, contemporaneous operating logs, or other relevant evidence that show the following:
- a. A malfunction occurred and the permittee can identify the cause or causes of the malfunction.
 - b. The permitted facility was at the time being properly operated.
 - c. During the period of the malfunction the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit.
 - d. The permittee notified the Board of the malfunction within two (2) working days following the time when the emission limitations were exceeded due to the malfunction. This notification shall include a description of the malfunction, any steps taken to mitigate emissions, and corrective actions taken. The notification may be delivered either orally or in writing. The notification may be delivered by electronic mail, facsimile transmission, telephone, or any other method that allows the permittee to comply with the deadline. This notification fulfills the requirements of 9 VAC 5-80-110 F.2.b to report promptly deviations from permit requirements. This notification does not release the permittee from the malfunction reporting requirement under 9 VAC 5-20-180 C.
(9 VAC 5-80-250)
93. **General Conditions - Malfunction as an Affirmative Defense** - In any enforcement proceeding, the permittee seeking to establish the occurrence of a malfunction shall have the burden of proof.
(9 VAC 5-80-250)
94. **General Conditions - Malfunction as an Affirmative Defense** - The provisions of this section are in addition to any malfunction, emergency or upset provision contained in any applicable requirement.
(9 VAC 5-80-250)
95. **General Conditions - 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 9 VAC 5 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.
(9 VAC 5-80-190 C and 9 VAC 5-80-260)
96. **General Conditions - 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.
(9 VAC 5-80-80 E)

97. **General Conditions - 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.
(40 CFR Part 82, Subparts A-F)
98. **General Conditions - 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), Standards for Waste Disposal (40 CFR 61.150), and Standards for Active Waste Disposal Sites (40 CFR 61.154).
(9 VAC 5-60-70 and 9 VAC 5-80-110 A.1)
99. **General Conditions - 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.
(40 CFR Part 68)
100. **General Conditions - 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.
(9 VAC 5-80-110 I)
101. **General Conditions - 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 9 VAC 5-80-110, except subsection N, shall be included to determine compliance.
 - b. The permit shield described in 9 VAC 5-80-140 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 9 VAC 5-80-50 through 9 VAC 5-80-300.
(9 VAC 5-80-110 I)

State-Only Enforceable Requirements

102. **State-Only Enforceable Requirements** - The following terms and conditions are not required under the federal Clean Air Act or under any of its applicable federal requirements, and are not subject to the requirements of 9 VAC 5-80-290 concerning review of proposed permits by EPA and draft permits by affected states.

9 VAC 5 Chapter 50, Part II, Article 2 (9 VAC 5-50-130 through 150): Standards of Performance for Odorous Emissions

(9 VAC 5-80-110 N and 9 VAC 5-80-300)