

**COMMONWEALTH OF VIRGINIA  
Department of Environmental Quality  
Northern Regional Office**

**STATEMENT OF LEGAL AND FACTUAL BASIS**

King George Landfill, Inc.  
King George County Landfill  
10376 Bullock Drive, King George, Virginia 22485  
Permit No. NRO-40903

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, King George Landfill, Inc., has applied for a Title V Operating Permit for its King George facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer/Permit Contact: \_\_\_\_\_  
Kathryn J. Perszyk  
(703) 583-3856

Date: \_\_\_\_\_

Air Permit Manager: \_\_\_\_\_  
James LaFratta

Date: \_\_\_\_\_

Regional Director: \_\_\_\_\_  
Thomas A. Faha

Date: \_\_\_\_\_

## **FACILITY INFORMATION**

### **Permittee/Facility Name**

King George Landfill, Inc.  
King George County Landfill  
10376 Bullock Drive  
King George, Virginia 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]

## **SOURCE DESCRIPTION**

NAICS Code: 562212 – Solid Waste Landfill; 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), a sulfur pretreatment and landfill gas-to-energy recovery system, 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 and has a total design capacity of 44,903,233 cubic yards. Landfill gas generated by the landfill is collected by the GCCS, and any landfill gas not utilized by the landfill gas-to-energy recovery system (described below) is sent to the open flares. Three of the four permitted open flares have been installed to date. Two of the existing flares have a maximum design capacity of 3,000 cfm each, while the existing third and future fourth open flares have a maximum design capacity of 3,500 cfm each. 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).

Landfill gas must be treated prior to combustion in the four existing Solar 4500/4700 Turbines. Landfill gas treatment includes a de-watering process, filtration, and compression, in addition to the recently added sulfur pretreatment system (SulfaTreat and/or Paques Thiopaq Bidesulfurization Systems). Each turbine can consume approximately 2,304,000 standard cubic feet of landfill gas per day (at 50% methane concentration), or 1,600 cfm, with 48.6 million BTUs higher heating value (HHV) per hour. Each turbine generates approximately 3,300 kW of electrical power, which is transformed and delivered to the local utility's electrical

transmission system. The turbines are subject to the NSPS Subpart KKKK – Standards of Performance for Stationary Combustion Turbines. Waste heat from the exhaust of turbines 3 and 4 is utilized by the two leachate concentrator units. The exhaust heat is anticipated to provide enough heat to evaporate approximately 60,000 gallons of leachate per day total.

The landfill facility has several small emergency generators located on-site that are used to provide emergency power during interruptions in service from the normal power supplier and during testing and operational maintenance of the units. These units 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).

The facility is a Title V major source of Carbon Monoxide, Nitrogen Oxides, and Sulfur Dioxide. This source is located in an attainment area for all pollutants, and is a PSD minor source. The facility is currently permitted under a Minor NSR Permit issued on September 18, 2009, and amended on August 29, 2012, January 31, 2014, and January 30, 2015.

## COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, was conducted on August 13, 2013. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

## EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of the following:

LFO-1	MSW Landfill Operations
GCCS	Gas Collection and Control System (includes CF-1 to CF-4 and TG-1 to TG-4)
CF-1 & CF-2	Two (2) LFG Specialties Model CF-3000 Open Flares, 3000 cfm each
CF-3	LFG Specialties Model Flametrol IV Open Flare, 3500 cfm
CF-4	Future Open Flare
TG-1 to TG-4	Four (4) Solar Centaur Turbines, GSC 4500/4700, 3330 kW each
WP-ENG	94 hp portable water pump engine
LC-1 to LC-2	Two (2) Heartland Technology Partners Leachate Concentrators, 1250 gal/hr

## EMISSIONS INVENTORY

Actual emissions for 2011 were provided by King George Landfill, Inc., as part of the application for the Title V Operating permit renewal; however, emissions from the facility's 2013 emission statement are provided below. Only the hazardous air pollutant (HAP) emissions for specific pollutants with total emissions over 1 ton/year are presented below, as well as a total HAP emissions reported.

Emission Unit	2013 NMOC, TRS, and Criteria Pollutant Emission in Tons/Year							
	VOC	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>x</sub>	NMOC	TRS
Landfill Operations	26.88	--	--	5.41	4.24	--	68.91	2.54
Combustion Equipment	4.49	94.34	29.59	16.27	16.27	79.57	11.42	--
Leachate Concentrators*	--	--	--	--	--	--	--	--
Total	31.37	94.34	25.59	21.68	20.51	79.57	80.33	2.54

\* No emissions data was reported for the leachate concentrators in 2013.

2013 Facility Wide Hazardous Air Pollutant Emissions	
Pollutant	Emissions in Tons/Year
Dichloromethane	1.53
Hydrogen Chloride	1.06
Toluene	4.63
Xylenes	1.64
Total HAPs	12.71

**LANDFILL OPERATIONS APPLICABLE REQUIREMENTS - [emission unit #LFO-1; CF-1 to CF-4; TG-1 to TG-4; F004, F005, and F006; WP-ENG; and LC-1 to LC-2]**

**Limitations, Standards for Air Emissions, and Operational Standards Overview**

The King George County Landfill (KGCL) facility is subject to New Source Performance Standards (NSPS) under 40 CFR 60 Subpart WWW, and required to obtain a Title V permit. The KGCL is an area source landfill that has a design capacity equal to or greater than 2.5 million Mg and 2.5 million m<sup>3</sup> that is not permanently closed as of January 16, 2003 (40 CFR 63.1935). KGCL was subject to a State Operating Permit (SOP) issued June 28, 1996, which was superseded on January 19, 2001. The initial Title V permit was issued on July 31, 2001, incorporating the SOP conditions as well as the NSPS Subpart WWW [§§60.750 through 60.759] requirements. A significant amendment to the SOP was issued July 14, 2005, superseding the 2001 permit, and allowing operation of four open flares. This permit also incorporated the NESHAP Subpart AAAA [§§63.1930 through 63.1990] requirements. The 2005 SOP was combined into a minor New Source Review (NSR) permit issued on September 18, 2009, incorporating four landfill gas combustion turbines and applicable requirements of NSPS Subpart KKKK [§§60.4300 through 60.4420]. This permit was amended on August 29, 2012, and January 31, 2014, incorporating the two leachate concentrators and landfill gas sulfur treatment system, respectively. Another amendment was issued January 30, 2015, to modify the permitted MSW capacity to match this Title V; the capacity change reflects the conversion of previously designated ash cells to MSW cells approved through a solid waste permit modification in December 2012.

The KGCL facility has several small stationary emergency generators (F004, F005, and F006) that are used to provide emergency power during interruptions in service from the normal power supplier and during testing and operational maintenance of the units. The facility also operates a

portable diesel engine-powered water pump (WP-ENG). These engines have never been the subject of a State permit and, except for WP-ENG, are listed as insignificant emission units in the Title V Permit. The 400 kW emergency diesel generator (F004) is a CI RICE manufactured after April 1, 2006, thus is subject to 40 CFR Part 60 Subpart IIII, the New Source Performance Standards for Stationary Compression Ignition Internal Combustion Engines (RICE NSPS). The 25 kW scale house emergency propane generator (F005) and 8 kW main office emergency propane generator (F006) are existing SI RICEs located at an area source of HAPs with less than 500 hp in aggregate capacity, thus are affected existing sources for 40 CFR Part 63 Subpart ZZZZ, the National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (RICE MACT). The 94 hp portable water pump engine (WP-ENG) is not subject to the RICE NSPS or MACT so long as the nonroad engine will not remain at a location (any single site at the KGCL facility) for more than 12 consecutive months. Stationary RICEs are exempt from the emissions standards in 9 VAC 5 Chapter 40-Part II-Article 8 Existing Stationary Sources Emission Standards for Fuel Burning Equipment (Rule 4-8). The water pump engine (WP-ENG) is subject to 9 VAC 5 Chapter 40-Part II-Article 1 Existing Stationary Sources - Emission Standards -Visible Emissions and Fugitive/Dust Emissions (Rule 4-1).

Applicable limitations and standards requirements from 40 CFR 60 (NSPS) Subpart WWW, as well as from Subpart A (General Provisions) [§60.18], Subpart IIII [§§60.4200 through 60.4219], and Subpart KKKK, and 40 CFR 63 (NESHAP) Subpart AAAA and Subpart ZZZZ [§§63.6580 through 63.6675], have been included in this Title V modification and renewal permit. Title V permit conditions 1, 2, 19, 36, 43, 44, and 50 address applicability of each of these NSPS and NESHAP Subparts to the various emission units located at the KGCL. Additional limitation requirements from the amended minor New Source Review permit dated January 30, 2015, have also been included in the Title V permit (except for Conditions 23, 24, 25, and 32 which address initial performance tests and notifications that have already been made, and the General Conditions specific to the NSR permit). The Title V permit was completely revised to include the conditions from the January 30, 2015, NSR permit and those NSPS and NESHAP identified as applicable requirements.

### **Limitations**

The following limitations are derived from Conditions 2, 7, 9 – 11, 13, 15 – 21, 27, 30, and 34 of the January 30, 2015, State NSR permit issued to King George Landfill, Inc.

Condition 3: Limits landfill MSW design capacity for the King George County Landfill (KGCL) to 44,903,233 cubic yards. On December 21, 2012, the facility's Solid Waste Permit No. 586 was modified converting previously designated ash disposal cells to MSW disposal cells without increasing the total design capacity of the landfill of 44,903,233 cubic yards. The NSR permit was amended accordingly on January 30, 2015.

Condition 4: Prescribes design and operation standards for the landfill gas collection and control system (GCCS).

Condition 5: Prescribes emission controls of non-methane organic compounds (NMOC) as controlled by open flares or treated for subsequent sale or use in the Solar Centaur turbines and requires the KGCL to operate the flares and/or turbines at all times that LFG is collected by the GCCS.

Condition 6: Requires fugitive dust emissions control from landfill operations.

Condition 8: Specifies operating parameters and corrective action for the GCCS in order to control surface methane concentrations.

Condition 9: Requires KGCL to expand the GCCS wellfield within 60 days after initial solid waste has been placed for 5 years or more when active and 2 years or more if the landfill is closed or at final grade.

Conditions 10 - 11: Requires KGCL to operate the GCCS at all times with exceptions for periods of startup, shutdown, or malfunction.

Condition 20: Specifies emission controls for the four (4) Solar Centaur turbines in order to meet the emission limits specified in Condition 27.

Condition 21: Establishes approved fuels for the four (4) LFG Specialties open flares and four (4) Solar Centaur turbines

Condition 22: Limits the maximum throughput of LFG to the four (4) Solar Centaur turbines and four (4) LFG Specialties open flares to  $6.833 \times 10^9$  cubic feet of LFG per year.

Condition 23: Establishes fuel specifications including minimum and maximum heat content and LFG treatment steps for LFG to be consumed by the four (4) Solar Centaur turbines.

Condition 25: Specifies minimum heat value of untreated LFG routed to the four open flares.

Condition 26: Places emission limits on the four (4) Solar Centaur turbines as established in NSPS Subpart KKKK.

Condition 27: Visible emission limits for the four (4) LFG Specialties open flares and four (4) Solar Centaur turbines.

Conditions 37 - 40: Outlines the applicable requirements from NSPS Subpart IIII as applicable to the CI RICE used by the NSPS emergency generator (F004). This NSPS establishes the approved fuel; limits hours of operation; requires certification that each CI RICE meets the engine manufacturer's emission standards and maximum engine power; and requires engine operation and maintenance to comply with other conditions of the NSPS.

Conditions 45 - 47: Outlines the applicable requirements from NESHAP Subpart ZZZZ as applicable to the existing SI RICEs used by the emergency generators (F005 and F006) located at an area source of HAP emissions. The NESHAP limits hours of operation and requires engine operation and maintenance to minimize emissions.

Condition 51: Visible emission limits for the water pump engine (WP-ENG).

Condition 53: Requires shutdown of the leachate concentrators and corrective action should odors increase at the KGCL that are attributed to the concentrator operation. Resumed

operation of the concentrators requires DEQ approval.

Condition 55: Sets the facility wide emission limits.

### **Monitoring & Recordkeeping**

The monitoring and recordkeeping requirements in Conditions 3-6, 8, 31, and 33 of the January 30, 2015, State NSR permit have been modified to meet Part 70 requirements.

Condition 7: Requires the KGCL to maintain a current GCCS design plan in accordance with NSPS Subpart WWW.

Conditions 13 - 15: Requirement to perform GCCS wellfield monitoring and landfill cover integrity monitoring on a monthly basis, and landfill surface monitoring in accordance with the facility's Surface Monitoring Design Plan. These monitoring requirements are required in accordance with NSPS Subpart WWW.

Condition 16: Outlines recordkeeping requirements as applicable to the landfill and GCCS as outlined in NSPS Subpart WWW and NESHAP Subpart AAAA.

Condition 24: Requires monitoring the total sulfur content of treated LFG.

Conditions 28-29: Requires periodic monitoring of visible emissions from the four (4) Solar Centaur turbines and the four (4) LFG Specialties open flares, respectively. The weekly visible emission observations should be adequate to ensure compliance with the opacity limits, since no visible emissions are expected from the gas turbines or flares that are properly operated and maintained.

Conditions 30 - 32: Requires the KGCL to continuously measure and record the consumption of treated LFG by the four (4) Solar Centaur turbines and the pressure within the treated LFG transport system.

Conditions 33 & 35: Requires the KGCL to continuously monitor and record the presence of the flares' flame and measure and record the flow rate of LFG to the flare at least every 15 minutes or status of the bypass line valve. These monitoring and recordkeeping requirements are required in accordance with NSPS Subpart WWW.

Conditions 41 - 42: Requires installation of a non-resettable hour meter and recordkeeping to ensure compliance with the limitations set forth in the NSPS, Subpart IIII, for the CI RICE used by the NSPS emergency generator (F004),

Conditions 48 - 49: Requires installation of a non-resettable hour meter and recordkeeping to ensure compliance with the limitations set forth in the NESHAP, Subpart ZZZZ, for the RICES used by the emergency generators (F005 and F006).

Condition 52: Requires periodic monitoring of visible emissions from the water pump engine (WP-ENG). The monthly visible emission observations should be adequate to ensure compliance with the opacity limits, since they are small equipment or are not operated

frequently or have minimal emissions impact.

Condition 54: Requires monitoring the total volume of leachate processed through the leachate concentrators.

Condition 56: Requires the KGCL to maintain records of all emission data and operating parameters as necessary to demonstrate compliance with the permit.

Condition 57: Requires all monitoring devices to be installed, maintained, calibrated and operated in accordance with approved procedures.

### **Testing**

The stack testing requirements are contained in Conditions 23 - 28 of the NSR permit dated January 30, 2015. The four combustion turbines may be tested only after submission of a test protocol at least 30 days prior to testing. An initial performance test to determine the NO<sub>x</sub> and SO<sub>2</sub> emission rates from the combustion turbines was performed, and demonstrated compliance with the permitted emission limits. Also, a concurrent visible emissions evaluation (VEE) for each combustion turbine was performed and demonstrated compliance. Therefore, the initial performance test requirements from the NSR permit (Conditions 23 – 25) were streamlined out.

The subsequent performance tests (Stack Test and VEE) shall be completed as follows:  
Condition 27: Requires additional VEE of the combustion turbines with no set frequency to determine compliance with the visible emissions limits. Details of the VEE must be arranged with the DEQ prior to performance.

Condition 34: Requires an annual performance test to demonstrate compliance with the NO<sub>x</sub> emission limit stated in Condition 26. The frequency of NO<sub>x</sub> performance tests may be reduced to once every two years should the NO<sub>x</sub> emission result be less than or equal to 75% of the emission limit. Compliance with the SO<sub>2</sub> limit is determined by the monitoring requirements of Condition 24.

Conditions 12 & 58: Requires construction of the facility to allow for emissions testing and requires using appropriate testing methods.

### **Reporting**

All reports required by the NSPS Subparts WWW, IIII, and KKKK, and NESHAP Subparts AAAA and ZZZZ shall be prepared and submitted to the DEQ Northern Regional Office in accordance with procedures outlined in the appropriate Federal regulation.

Condition 17: Outlines the information that shall be submitted in the semi-annual report per NSPS Subpart WWW and NESHAP Subpart AAAA.

Condition 18: Outlines the conditions under which the GCCS can be capped or removed and requires submission of closure, equipment removal, and NMOC emission reports.

Condition 42: Requires submission of an annual report should the NSPS emergency generator (F004) operate for more than 15 hours in a calendar year for emergency demand response during an Energy Emergency Alert Level 2, periods of voltage or frequency deviation of 5% or greater, or to supply power as part of a financial agreement in accordance with NSPS Subpart IIII.

Condition 49: Requires submission of an annual report should either of the emergency generators (F005 and F006) operate for more than 15 hours in a calendar year for emergency demand response during an Energy Emergency Alert Level 2, periods of voltage or frequency deviation of 5% or greater, or to supply power as part of a financial agreement in accordance with NESHAP Subpart ZZZZ.

All other reporting requirements are outlined in General Conditions 68 - 73.

## **GENERAL CONDITIONS**

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

### **Comments on General Conditions**

#### Conditions 62 - 67: Permit Expiration

This condition refers to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §2.2-604 and §10.1-1185 of the *Code of Virginia*, and the "Department of Environmental Quality Agency Policy Statement No. 2-09".

These general conditions cite the Article that follows:

Article 1 (9 VAC 5-80-50 et seq.), Part II of 9 VAC 5 Chapter 80. Federal Operating Permits for Stationary Sources

These general conditions cite the sections that follow:

9 VAC 5-80-80. Application

9 VAC 5-80-140. Permit Shield

9 VAC 5-80-150. Action on Permit Applications

#### Condition 73: Failure/Malfunction Reporting

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

In order for emission units to be relieved from the requirement to make a written report in 14 calendar days the emission units must have continuous monitors meeting the requirements of 9 VAC 5-50-410 or 9 VAC 5-40-41.

These general conditions cite the sections that follow:

- 9 VAC 5-40-50. Notification, Records and Reporting
- 9 VAC 5-50-50. Notification, Records and Reporting

Condition 77: Permit Modification

This general condition cites the sections that follow:

- 9 VAC 5-80-50. Applicability, Federal Operating Permit for Stationary Sources
- 9 VAC 5-80-190. Changes to Permits.
- 9 VAC 5-80-260. Enforcement.
- 9 VAC 5-80-1100. Applicability, Permits for New and Modified Stationary Sources
- 9 VAC 5-80-1605. Applicability, Permits for Major Stationary Sources and Modifications Located in Prevention of Significant Deterioration Areas
- 9 VAC 5-80-2000. Applicability, Permits for Major Stationary Sources and Major Modifications Locating in Nonattainment Areas

Conditions 91 – 94: Malfunction as an Affirmative Defense

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in sections 9 VAC 5-80-250 and 9 VAC 5-20-180. The malfunction requirements are listed in these general conditions and General Condition 73. For further explanation see the comments on General Condition 73.

These general conditions cite the sections that follow:

- 9 VAC 5-20-180. Facility and Control Equipment Maintenance or Malfunction
- 9 VAC 5-80-110. Permit Content

Condition 98: Asbestos Requirements

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

This general condition contains citations from the Code of Federal Regulations that follow:

- 40 CFR 61.145, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to demolition and renovation.
- 40 CFR 61.148, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to insulating materials.
- 40 CFR 61.150, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to manufacturing, fabricating, demolition, renovation, and spraying operations.
- 40 CFR 61.154, NESHAP Subpart M. National Emission Standard for Asbestos as it applies to active waste disposal sites.

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

**STATE ONLY APPLICABLE REQUIREMENTS**

The following Virginia Administrative Codes have specific requirements only enforceable by the State and have been identified as applicable by the applicant:

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

**INAPPLICABLE REQUIREMENTS**

The following inapplicable requirements were identified in the application and drafting of the Title V renewal permit.

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 – 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 – 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.”

**MANDATORY GREENHOUSE GAS REPORTING**

40 CFR Part 98 - Mandatory Reporting of Greenhouse Gases Rule: The provisions of the Final Rule for the Mandatory Reporting of Greenhouse Gases (GHG) (40 CFR Part 98) require owners and operators of general stationary fuel combustion sources that emit 25,000 metric tons or more per year of CO<sub>2</sub> equivalent (CO<sub>2</sub>e) in combined emissions from such units, to annually report GHG emissions directly to the EPA. The definition of "applicable requirement" in 40 CFR 70.2 and 71.2 does not include requirements such as those included in Part 98, promulgated under Clean Air Act (CAA) section 114(a)(1) and 208. Therefore, the requirements of 40 CFR Part 98 are not applicable under the Title V permitting program.

In accordance with 40 CFR Part 98.2 and Table A-1 of the GHG regulations, emission reporting is required for landfills that generate CO<sub>2</sub>e in amounts of 25,000 metric tons or more per year. According to the applicant, the landfill facility's CO<sub>2</sub>e emissions for the year 2011 were 102,232 metric tons/year, as calculated pursuant to the procedures in 40 CFR Part 98, Subpart HH for the landfill and 40 CFR, Part 98, Subpart C for the LFG-fired combustion sources. Based on these calculated CO<sub>2</sub>e emissions, the King George County Landfill facility is an affected source subject to the GHG emissions reporting requirements of 40 CFR Part 98. As such, GHG emissions must be reported for the landfill,

As a result of several EPA actions regarding GHG under the CAA, emissions of GHG must be addressed for a Title V permit renewed after January 1, 2011. The facility has submitted its Mandatory GHG Report for the year 2011 to the EPA pursuant to 40 CFR Part 98. There have been no modifications to the landfill facility that would have resulted in the issuance of a PSD permit. Therefore, there are no applicable requirements for the facility specific to GHG.

**INSIGNIFICANT EMISSION UNITS**

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110, except for those applicable requirements outlined in NSPS Subpart IIII and NESHAP Subpart ZZZZ for SI or CI RICEs used by emergency generators (see Conditions 36 – 49 as applicable to F004, F005, and F006). Requirements of NSPS Subpart IIII and NESHAP Subpart ZZZZ are not extended to the emergency generator F003, the water pump engines PUMP1 to PUMP3, and the light plant engines LTPLNT1 to LTPLNT5 listed below as the units are portable and the NSPS and NESHAP only apply to stationary RICEs.

Insignificant emission units include the following:

<b>Emission Unit No.</b>	<b>Emission Unit Description</b>	<b>Citation<sup>1</sup> (9 VAC _)</b>	<b>Pollutant(s) Emitted (9 VAC 5-80-720B)</b>	<b>Rated Capacity (9 VAC 5-80-720C)</b>
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

<b>Emission Unit No.</b>	<b>Emission Unit Description</b>	<b>Citation<sup>1</sup> (9 VAC _)</b>	<b>Pollutant(s) Emitted (9 VAC 5-80-720B)</b>	<b>Rated Capacity (9 VAC 5-80-720C)</b>
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	550 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
P018	Hydraulic Oil Storage Tank for Rail Tipper	5-80-720.C.3.	VOC	250 gal
F003	Emergency Generator (diesel)	5-80-720.C.4.b.	NO <sub>x</sub> , CO, SO <sub>2</sub> , PM, VOC, & HAPs	Portable Unit
F004	Emergency Generator (diesel)	5-80-720.C.4.b.	NO <sub>x</sub> , CO, SO <sub>2</sub> , PM, VOC, & HAPs	400 kW
F005	Emergency Generator at Scale House (propane)	5-80-720.C.4.	NO <sub>x</sub> , CO, SO <sub>2</sub> , PM, VOC, & HAPs	25 kW
F006	Emergency Generator at Main Office (propane)	5-80-720.C.4.	NO <sub>x</sub> , CO, SO <sub>2</sub> , PM, VOC, & HAPs	8 kW
T1	Organic Phase Condensate – Turbine Plant	5-80-720.B.2. & B.5.	VOC & HAPs	500 gal

<b>Emission Unit No.</b>	<b>Emission Unit Description</b>	<b>Citation<sup>1</sup> (9 VAC _)</b>	<b>Pollutant(s) Emitted (9 VAC 5-80-720B)</b>	<b>Rated Capacity (9 VAC 5-80-720C)</b>
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.	NO <sub>x</sub> , CO, SO <sub>2</sub> , PM, VOC, & HAPs	0.15 MMBtu/hr
HTR-2	Propane-fired comfort heater	5-80-720.B.	NO <sub>x</sub> , CO, SO <sub>2</sub> , PM, VOC, & HAPs	0.15 MMBtu/hr
WHTR-1	Natural gas-fired hot water heater	5-80-720.C.	NO <sub>x</sub> , CO, SO <sub>2</sub> , 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 <sub>x</sub> , CO, SO <sub>2</sub> , PM, VOC, & HAPs	23 hp
PUMP2	Diesel-fueled Water Pump Engine (1998)	5-80-720.C.1.a.	NO <sub>x</sub> , CO, SO <sub>2</sub> , PM, VOC, & HAPs	23 hp
PUMP3	Diesel-fueled Water Pump Engine (1998)	5-80-720.C.1.a.	NO <sub>x</sub> , CO, SO <sub>2</sub> , PM, VOC, & HAPs	23 hp

<b>Emission Unit No.</b>	<b>Emission Unit Description</b>	<b>Citation<sup>1</sup> (9 VAC _)</b>	<b>Pollutant(s) Emitted (9 VAC 5-80-720B)</b>	<b>Rated Capacity (9 VAC 5-80-720C)</b>
LTPLNT1	Diesel-fueled Light Plant Engine (2008)	5-80-720.C.1.a.	NOx, CO, SO <sub>2</sub> , PM, VOC, & HAPs	11 hp
LTPLNT2	Diesel-fueled Light Plant Engine (2008)	5-80-720.C.1.a.	NOx, CO, SO <sub>2</sub> , PM, VOC, & HAPs	11 hp
LTPLNT3	Diesel-fueled Light Plant Engine (2011)	5-80-720.C.1.a.	NOx, CO, SO <sub>2</sub> , PM, VOC, & HAPs	11 hp
LTPLNT4	Diesel-fueled Light Plant Engine (2011)	5-80-720.C.1.a.	NOx, CO, SO <sub>2</sub> , PM, VOC, & HAPs	11 hp
LTPLNT5	Diesel-fueled Light Plant Engine (2011)	5-80-720.C.1.a.	NOx, CO, SO <sub>2</sub> , PM, VOC, & HAPs	11 hp

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

**CONFIDENTIAL INFORMATION**

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

**PUBLIC PARTICIPATION**

A public notice was placed in The Journal newspaper on July 23, 2014, for comments to be received on the proposed Title V renewal permit from July 23, 2014 to August 25, 2014. In addition, a copy of the notice was sent to EPA Region III staff, contacts for the affected state, Maryland, District of Columbia, and individuals or organizations on the agency mailing list for Title V permits. No public comments were received by the end of the comment period on August 25, 2014. The concurrent EPA review period of the proposed permit ended on September 8, 2014. The EPA staff also did not provide any comments.

EPA Region III staff and contacts for the affected states were notified of this minor modification request on November 21, 2014. In accordance with the provisions of 9 VAC 5-80-210 D, minor permit modifications are processed without providing notice to the public or affected states. The draft modification was sent to the EPA for a 45 day review period which began March 16, 2015, and ended April 30, 2015.