

COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Valley Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS

Augusta Regional Landfill
Augusta County, Virginia
Permit No. VRO-81573

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, Augusta County Service Authority has applied for a Title V Operating Permit for the Augusta Regional Landfill in Augusta County, Virginia. The Department has reviewed the application and has prepared a Title V Operating Permit.

Engineer/Permit Contact: _____ Date: _____
Jeremy W. Funkhouser
(540)-574-7820

Air Permit Manager: _____ Date: _____
Janardan R. Pandey, P.E.

FACILITY INFORMATION

Permittee

Augusta County Service Authority
P.O. Box 859
18 Government Center Lane
Verona, Virginia 24482

Facility

Augusta Regional Landfill
749 Christians Creek Road
Staunton, Virginia 24401

County Plant Identification Number: 51-015-0157

SOURCE DESCRIPTION

NAICS Code 562212 (Refuse Systems)

The Augusta Regional Landfill is a municipal solid waste management (MSW) facility located on State Route 648 in Augusta County, east of Interstate 81 and approximately 1.5 miles east of the City of Staunton. The physical address for the facility is 749 Christians Creek Road, in Staunton, Virginia. The landfill is owned by the City of Waynesboro, City of Staunton, and Augusta County. It is operated by Augusta County Service Authority. The landfill site consists of two permitted landfills; Permit No. 21, which is closed, and Permit No. 585 which is currently open and operating. For air permitting purposes, both landfills (Solid Waste Permit Nos. 21 and 585) are considered a single waste disposal facility since the landfills are contiguous and have the same owner.

Augusta Regional Landfill was permitted as a Sanitary Landfill by the Virginia Department of Health (VDH) under Permit No. 21, and began accepting waste in 1971. No design capacity under VDH permit no. 21 was listed at time of issuance, however waste acceptance records from the facility were used to determine a waste capacity of 1.43 million Megagrams (2.37 million m³). A second area of the site was permitted as a Solid Waste Facility (Solid Waste Permit No. 585) under the Virginia Solid Waste Disposal Regulations on May 31, 1995. The Solid Waste Permit No. 585 was amended March 1, 2011 to increase the capacity of the open landfill by changing the ratio of the side slopes of Phases 1-3 to 3:1, to reflect changes in the Solid Waste Regulations. The change in the side slope ratio increases the design capacity (volume) of Phases 1-3 by approximately 721,498 cubic yards. In addition to the revised side slope ratio, the facility has implemented increased compaction strategies, resulting in a waste compaction rate of 1,500 lb/yd³, according to compaction testing. The revised design capacity of the landfill is 4,793,106 megagrams and 6,143,873 cubic meters.

Since the permitted design capacity of the Augusta Regional Landfill is greater than 2.5 million m³ and 2.5 million megagrams, and the landfill was modified after May 30, 1991, the landfill is regulated according to New Source Performance Standards (NSPS) for Municipal Solid Waste

Landfills (40 CFR 60 Subpart WWW). As stated in 40 CFR §60.752 (b), landfills above the 2.5 million m³ and 2.5 million megagrams design capacity are subject to Title V permitting requirements.

MSW landfills with a design capacity greater than or equal to 2.5 million m³ and 2.5 million Mg with estimated uncontrolled NMOC emissions equal to greater than 50 Mg/yr are subject to Maximum Achievable Control Technology (MACT) Standard (40 CFR Part 63, Subpart AAAAA) for Municipal Solid Waste Landfills. The permitted design capacity of the Augusta Regional Landfill is greater than 2.5 million m³ and 2.5 million megagrams, and Augusta Regional Landfill estimated that their annual NMOC emissions are over 50 Mg/yr using Tier 1 procedures; as a result, the facility is subject to 40 CFR 63, Subpart AAAAA.

On June 13, 2007, Draper Aden Associates, on behalf of Augusta Regional Landfill, estimated that the annual NMOC emissions are over 50 Mg/yr using Tier 1 procedures. As a result of Tier 1 estimates, the facility first conducted Tier 2 testing on October 3-5, 2007 to determine the site-specific NMOC concentration. On May 16, 1995, the Environmental Protection Agency (EPA) published a memorandum for sources subject to MACT standards. The memo outlines a “once in, always in” interpretation of the MACT standard, requiring major HAP sources to comply permanently with the MACT standards, to ensure that maximum achievable reductions in toxic emissions are achieved and maintained. The MACT, Subpart AAAAA compliance date for existing affected sources was January 16, 2004. Since the first Tier 2 test date was after the MACT compliance date (January 16, 2004), the facility is subject to the MACT according to the “once in, always in” memorandum on MACT standards. The final MACT rule required that an existing landfill comply with the NSPS (40 CFR 60 Subpart WWW) at that time (the compliance date of 1/16/04). Compliance with the *additional* requirements of the final rule (those over and above the NSPS requirements) is required by January 16, 2004, *or* the date the source is required to install a collection and control system by the NSPS, whichever is later.

Tier 2 testing is required every five years in accordance with NSPS Subpart WWW; Tier 2 testing for the facility was conducted on September 24 – 25, 2012. Results of the Tier 2 testing show the landfill NMOC average concentration was 306.2 ppmv as hexane, yielding 27.7 megagrams (Mg) per year of NMOC emissions.

The permit includes the requirements for the permittee to comply with all operational, monitoring, recordkeeping, reporting, and testing requirements of the MACT, Subpart AAAAA. No action under the MACT is triggered until the permittee is required to install a collection and control system, as provided in the NSPS, Subpart WWW.

In addition to the landfill, ARLF uses an alternative daily cover product called Posi-shell, to conserve landfill space. Materials used in the production of the Posi-shell product include Portland cement, water, fluff and a setting agent. As an alternative to using bags of Portland cement, the facility owns and operates a cement silo and its associated diesel engine. The cement silo has a maximum capacity of 50 tons of cement, and has a 35 horsepower (HP) diesel engine attached to the silo to power the auger at the base of the silo and other moving mechanisms. The Title V permit includes the applicable requirements from the NSR permit dated January 13, 2010, as well as the federal New Source Performance Standards (NSPS) 40 CFR 60, Subpart IIII,

and the Maximum Achievable Control Technology (MACT) standards 40 CFR 63, Subpart ZZZZ.

ARLF also owns and operates two emergency generators for use during period of interruption of power. The generators are subject to *40 CFR Part 63 Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engine*.

This source is located in an attainment area for all pollutants. The PSD major source threshold level is 250 tons per year (tpy) for any regulated pollutant. The potential emissions of each regulated pollutant from the facility fall below this threshold; therefore, this facility is not subject to permitting requirements under 9 VAC 5 Chapter 80, Article 8. The maximum potential emissions, based on the capacity and waste compaction, are projected to occur in the year 2028; the maximum potential emissions are based on waste acceptance data from the May 14, 2012 permit amendment.

Table 1: Potential Emissions from the Landfill (EU-1)

2028 Pollutant Emissions (Plant wide Total)	
Pollutant	Annual Tons Emitted
<i>Criteria Pollutants</i>	
PM-10	-
VOC	8.42
NO _x	-
CO	3.25
SO ₂	-
TRS	1.25
H ₂ S	2.75
<i>Non Methane Organic Compounds (NMOC)</i>	
NMOC	21.61
<i>Hazardous Air Pollutants (HAP)</i>	
Total HAP	5.60

As shown above in Table 1, emissions from the landfill are below the Major New Source Review (NSR) levels; therefore Major NSR permitting does not apply to the Augusta Regional Landfill at this time. Additional information is available in the LandGEM emission summary provided in Attachment B. The facility is currently permitted under a Minor NSR Permit issued on August 6, 2007, and amended on August 8, 2008 and May 14, 2012.

COMPLIANCE STATUS

The facility is inspected on a biennial basis. The facility was last inspected on July 17, 2013. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. The facility has not been found to be in violation of any state or federal applicable requirements at this time

CHANGES TO EXISTING TITLE V PERMIT

Since the original Augusta Regional Landfill Title V permit, the following changes were made to the renewal Title V permit:

- *Permit Formatting and General Conditions:* The format of the permit was updated to reflect changes made to the Title V boilerplate and condition numbering.
- *40 CFR Part 63 Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engine:* Changes to Subpart ZZZZ have been promulgated since the initial Title V permit issuance that affect the existing emergency generators (EU-3 and EU-4). The applicable permit conditions were added for the two existing emergency generators.

▪ **EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION**

The emissions units at this facility consist of the following:

Table 2. Significant Emission Units

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device Description (PCD)	PCD ID	Pollutant Controlled	Applicable Permit Date
Landfill							
EU-1	-	MSW Landfill	4.79 million Mg	--	--	--	08/06/2007 Permit, as amended 08/08/2008 and 05/14/2012
Landfill Roads							
LR	-	Landfill Roads	--	--	--	--	08/06/2007 Permit, as amended 08/08/2008 and 05/14/2012
Cement Silo and Engine							
EU-14	S-2	Cement Silo	50 tons/hr	Fabric filter baghouse	BF-1	PM-10	01/13/2010 Permit
	S-1	Perkins Corporation Model GK65645N Diesel Engine	35 HP	--	--	--	01/13/2010 Permit

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device Description (PCD)	PCD ID	Pollutant Controlled	Applicable Permit Date
Emergency Generators							
EU-3	EU-3	Perkins 1000 Series Diesel Emergency Generator (manufactured in 1997)	80 kW	--	--	--	--
EU-4	EU-4	Perkins 1000 Series Diesel Emergency Generator (manufactured in 1997)	80 kW	--	--	--	--

EMISSIONS INVENTORY

The Augusta Regional Landfill includes an active landfill (Solid Waste Permit 585) and a closed landfill (Solid Waste Permit 21). For air permitting purposes, both landfills (Solid Waste Permits 21 and 585) are considered a single waste disposal facility since the landfills are contiguous and have the same owner. Emissions of hydrogen sulfide (H₂S) are based on the EPA/EREF Research Bulletin emission rate of 97.24 ppmv, rather than the AP-42 default concentration of 35.50 ppmv, and a molecular weight of 34.02, as a conservative estimate since the facility disposes of construction and demolition debris (CCD). A copy of the 2012 Emissions Statement and Annual Update are provided as Attachment B. Emissions are summarized in the following table:

Table 3. 2012 Annual Emissions

2012 Pollutant Emissions (Plant wide Total)	
Pollutant	Tons Emitted
<i>Criteria Pollutants</i>	
PM-10	0.79
VOC	6.22
NO _x	0.02
CO	2.37
SO ₂	0.003
H ₂ S	1.13
<i>Non Methane Organic Compounds (NMOC)</i>	
NMOC	15.95
<i>Hazardous Air Pollutants (HAP)</i>	
Total HAP	6.98

EMISSION UNIT APPLICABLE REQUIREMENTS – (EU-1)

Limitations

Augusta Regional Landfill is subject to 40 CFR 60, Subpart WWW - New Source Performance Standards (NSPS), and 40 CFR 63, Subpart AAAAA – National Emission Standards for Hazardous Air Pollutants (NESHAP) for Municipal Solid Waste Landfills. The following limitations are state BACT and/or other applicable requirements from the minor NSR permit dated August 6, 2007, as amended August 8, 2008, and May 14, 2012, which includes requirements that are based on 40 CFR Part 60, Subpart WWW and 40 CFR 63, Subpart AAAAA requirements. Please note that the condition numbers are from the permit dated August 6, 2007, as amended August 8, 2008 and May 14, 2012. A copy of the permit is enclosed as Attachment C.

Condition 2: This condition establishes the design capacity of the landfill

Condition 3: This condition the landfill gas (LFG) collection and control system requirements in the event NMOC emission rate would ever be equal to or

greater than 50 Mg/yr

Condition 7: This condition establishes the MSW landfill shall be operated in compliance with the requirements of 40 CFR 60, Subpart WWW and 40 CFR 63, Subpart AAAA.

Condition 17: The LFG collection and control system design plan submittal requirement in the event landfill gas (LFG) collection and control system is required.

Condition 18: This condition establishes a solid waste permit amendment requirement in the event landfill gas (LFG) collection and control system is required.

The MACT (40 CFR 63, Subpart AAAA) and NSPS (40 CFR 60, Subpart WWW) requirements as provided in Condition 7 of the minor New Source Review (NSR) permit have been incorporated. In addition the Visible Emission Limits and the Visual Survey Requirements, Conditions 8 and 12, respectively, of the Minor NSR permit, are included in the facility-wide section.

Being subject to the NSPS means that Augusta Regional Landfill is also subject to 40 CFR 60, Subpart A - General Provisions. All applicable limitations from Subparts A and WWW have been included in the permit. Note that Condition 3 does not currently require the facility to install a LFG collection and control system. However, Condition 3 requires the facility to submit a collection and control design plan and install a collection and control system in compliance with 40 CFR §60.752 (b)(2) in the event NMOC emission rate would ever be equal to or greater than 50 Mg/yr.

The NSPS (40 CFR 60, Subpart WWW) includes requirements applicable to the operation and monitoring of LFG collection and control systems (e.g., 40 CFR §60.753: Operational Standards for collection and control systems; §60.755: Compliance Provisions, and §60.756: Monitoring of Operations). The requirements have not been included in the Title V permit because the facility is not currently required to operate a collection and control system. If in the future the permittee is required to install a LFG collection and control system (i.e., if its NMOC emission rate becomes equal to or greater than 50 Mg/yr), the permittee is required by 9 VAC 5-80-190 to apply for an amendment to the Title V permit. The amended permit would include the applicable Subpart WWW operational and monitoring requirements.

With respect to the NSPS and MACT, the facility's only applicable requirements at this time are monitoring, recordkeeping and reporting.

Monitoring and Recordkeeping

The monitoring and recordkeeping requirements in Conditions 6 and 13 of the minor NSR permit dated August 6, 2007, as amended August 8, 2008, and May 14, 2012, have been included in the permit. These requirements, derived from 40 CFR 60 Subpart WWW, meet Part 70 monitoring requirements for the landfill.

As required by Condition 13 of the minor NSR permit, the permittee shall maintain records including but not limited to the design capacity of the landfill, the current amount of solid waste in place, and the year-by-year waste acceptance rate.

As required by Condition 6 of the minor NSR permit, actual emissions from the operation of the landfill shall be calculated using either of the following equations (Equation 1 or 2):

$$M_{NMOC} = \sum_{i=1}^n 2kL_oM_i(e^{-kt_i})(C_{NMOC})(3.6 \times 10^{-9})$$

.....Equation 1

- M_{NMOC} = total NMOC emission rate from the landfill, megagrams per year
- k = methane generation rate constant, year⁻¹
- L_o = methane generation potential, cubic meters per megagram solid waste
- M_i = mass of solid waste in the ith section, megagrams
- t_i = age of the ith section, years
- C_{NMOC} = concentration of NMOC, parts per million by volume as hexane
- 3.6×10^{-9} = conversion factor

The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value for M_i if documentation of the nature and amount of such wastes is maintained.

$$M_{NMOC} = 2L_oR(e^{-kc} - e^{-kt})(C_{NMOC})(3.6 \times 10^{-9})$$

.....Equation 2

- M_{NMOC} = mass emission rate of NMOC from the landfill, megagrams per year
- L_o = methane generation potential, cubic meters per megagram solid waste
- R = average annual acceptance rate, megagrams per year
- k = methane generation rate constant, year⁻¹
- t = age of the landfill, years
- C_{NMOC} = concentration of NMOC, parts per million by volume as hexane
- c = time since closure, years (for an active landfill $c = 0$ and $e^{-kc} = 1$)
- 3.6×10^{-9} = conversion factor

The mass of nondegradable solid waste may be subtracted from the average annual acceptance rate when calculating a value for R , if documentation of the nature and amount of such wastes is maintained.

Compliance Assurance Monitoring (CAM) Applicability

As per 40 CFR Part 64, Compliance Assurance Monitoring (CAM), emission limitations or standards proposed after November 15, 1990 pursuant to Section 111 or 112 are exempt from CAM (40 CFR §64.2 (b)(1)). All applicable monitoring requirements from 40 CFR 60 Subpart

WWW have been included in the permit. Since Subpart WWW was promulgated on March 1996 under the authority of Section 111 of the Clean Air Act (New Source Performance Standards (NSPS)), the emission limitations or standards derived from Subpart WWW are exempt from CAM and no additional monitoring has been incorporated into the Title V permit.

Testing

The permit requires testing of the site-specific NMOC concentration using the procedures described in 40 CFR 60, Subpart WWW as required by Conditions 9 through 11 of the minor NSR permit, which have been incorporated into the Title V permit. The Title V permit includes the requirement that the permittee use appropriate method(s) in accordance with procedures approved by DEQ if further testing for compliance purposes is performed.

Reporting Requirements

The reporting required in the Title V permit has been incorporated from Conditions 14, 15, 16, and 19 of the minor NSR permit dated August 6, 2007, as amended August 8, 2008, and May 14, 2012. Since the NMOC emission rate is less than 50 Mg/yr, 40 CFR 60 Subpart WWW reporting requirements related to a collection and control system are not currently applicable and therefore have not been incorporated into the permit. However, Conditions 15 and 16 require the facility to submit a collection and control design plan and install a collection and control system in compliance with 40 CFR §60.752 (b)(2) in the event NMOC emission rate would ever equal to or greater than 50 Mg/yr.

Streamlined Requirements

The following applicable requirements have not been included for the reasons provided:

40 CFR §60.757 (a) - Initial Design Capacity Submittal Requirement

The facility first was constructed and an operating permit was issued from the Virginia Health Department on September 20, 1971. On September 21, 1996, an initial design capacity report for the section of the landfill covered under Waste Permit No. 21 was submitted; on June 5, 1996, an initial design capacity report for the section of the landfill covered under Waste Permit No. 585 was submitted.

40 CFR §60.757 (b) - Initial Non Methane Organic Compounds (NMOC) Emission Rate Report Requirement

On June 13, 2007, the facility submitted a NMOC emission rate report. As per the report, the 2007 emission estimate for the landfill was 313.5 Mg/yr, based on the maximum capacity of the landfill after all current and future phase-expansions as a conservative estimate. Since the NMOC emission rate exceeded 50 Mg/yr, the facility was required to determine a site-specific NMOC concentration and recalculate the NMOC emission rate under Tier 2 procedures, **or** submit a collection and control system design plan prepared by a professional engineer within one year of the report and comply with 40 CFR

§60.752 (b)(2). The facility conducted the initial Tier 2 sampling on October 3, 4, and 5, 2007. Subsequent Tier 2 testing was conducted on September 24 – 25, 2012; results were submitted to the DEQ and a revised NMOC emission rate was established.

40 CFR §60.757 (c)(1) - Non Methane Organic Compounds (NMOC) Emission Rate Report Requirement under Tier 2 sampling

The facility initially conducted Tier 2 sampling on October 3, 4, and 5, 2007. Subsequent Tier 2 testing was conducted on September 24 – 25, 2012. The subsequent testing results show the NMOC average concentration was 306.2 ppmv as hexane, yielding 27.7 Mg per year of NMOC emissions. Since the NMOC emission rate was under 50 Mg/yr, the facility is not required to submit a collection and control system design plan at this time.

Condition 25 of the minor NSR Permit, dated August 6, 2007, as amended August 8, 2008, and May 14, 2012

This condition has not been included as the requirement is already included in the General Conditions Section of the Title V permit (Condition 68).

The remaining general conditions of the minor NSR permit have been modified to meet the general condition requirements of 40 CFR Part 70 and 9 VAC 5-80-110

CEMENT SILO AND ENGINE (EU-14)

Limitations

The diesel engine associated with the cement silo is a 35 HP internal combustion engine, constructed after June 2006. Therefore the engine is subject to the NSPS, 40 CFR 60, Subpart IIII, and the MACT, 40 CFR 63, Subpart ZZZZ, requirements.

The following conditions have been added to the Title V permit (condition numbers refer to the NSR permit dated January 13, 2010); A copy of the minor NSR permit is included in Attachment C:

- Condition 2: Particulate emissions from the silo shall be controlled by a fabric filter.
- Condition 6: This condition limits the throughput of dry cement to 200 tons per year.
- Condition 7: The approved fuel for the diesel engine is diesel fuel.
- Condition 8: The condition limits the fuel throughput to 5,700 gallons of diesel fuel per year.
- Condition 12: The condition provides the hourly and annual emission limits based on the fuel throughput and fuel sulfur content.

Condition 13: Visible emissions from the silo's fabric filter is limited to five percent opacity, except during one six-minute period in any one hour in which emissions shall not exceed 10 percent opacity.

NSPS, Subpart IIII Requirements: The following conditions are established for the diesel engine in accordance with the NSPS, Subpart IIII (condition numbers in this part refer to the Title V permit):

Condition 20: The condition limits the fuel sulfur content of the diesel fuel. This condition has been streamlined with Condition 9 of the NSR permit, dated 1/13/10.

Condition 21: This condition establishes the NSPS Subpart IIII process emission limitations for the diesel engine; the emission limitations have been streamlined with Condition 11 of the NSR permit, dated 1/13/10.

Condition 25: This condition establishes that the diesel engine shall be operated in compliance with the applicable NSPS, Subpart IIII standards.

MACT, Subpart ZZZZ Requirements: The following conditions are established for the diesel engine in accordance with the MACT, Subpart ZZZZ (condition numbers in this part refer to the Title V permit):

Condition 26: This condition establishes that the diesel engine shall be operated in compliance with the applicable MACT, Subpart ZZZZ standards.

Condition 27: The diesel engine shall meet the requirements of 40 CFR 63 Subpart ZZZZ by meeting the requirements of 40 CFR 60, Subpart IIII.

The diesel engine is considered a new, stationary internal combustion engine at an area source of Hazardous Air Pollutants (HAPs). In accordance with the MACT Subpart ZZZZ, the engine must meet the requirements of the MACT by meeting the requirements of 40 CFR 60 Subpart IIII; no further requirements of the MACT apply for such engines (§63.6590(c)).

Monitoring and Recordkeeping

The following conditions have been added to the Title V permit (condition numbers refer to the NSR permit dated January 13, 2010):

Condition 4: This condition requires that the fabric filter on the silo be observed visually during the uploading process for at least a brief time period during normal operations to determine if there are any visible emissions. The presence of visible emissions shall indicate the need for prompt corrective action. The condition details the requirements for the log of observations. Logs of each visual observation ensure compliance with the visible emission standard, as provided in Condition 13 of the NSR permit.

Condition 10: The condition outlines the recordkeeping requirements for the fuel certifications to ensure compliance with the fuel throughput limitations and the fuel sulfur limitations.

Condition 14: The recordkeeping requirements are outlined in this condition to ensure compliance with the emission and throughput limits established in the permit.

The required logs of each visual observation establish a means of determining compliance with the visible emission standard, as provided in Condition 13 of the NSR permit. The NSR permit also allows for additional visible emissions evaluations at the request of the DEQ, as mentioned in the testing section below.

The requirements to keep records of fuel certifications ensure continued compliance with fuel throughput limitations and fuel sulfur limitations established by the NSR permit, and the NSPS, respectively. The recordkeeping requirements, outlined in Condition 14 of the NSR permit, provide a means of establishing compliance with the cement throughput limitation and proper fabric filter operation. In addition, the recordkeeping requirements also require copies of the engine manufacturer certification for the diesel engine to ensure compliance with the NSPS certifications.

The engine manufacturer certification, coupled with the fuel recordkeeping requirements ensure continued compliance with the limits established for the diesel engine. Records of visual observations, visible emission evaluations, and cement throughput ensure continued compliance with the limits established for the cement silo.

Compliance Assurance Monitoring (CAM)

As per 40 CFR Part 64, Compliance Assurance Monitoring (CAM), emission limitations or standards proposed after November 15, 1990 pursuant to Section 111 or 112 are exempt from CAM (40 CFR §64.2 (b)(1)). All applicable monitoring requirements from NSPS Subpart IIII have been included in the permit. Since Subparts IIII was promulgated after November 15, 1990 under the authority of Section 111 of the Clean Air Act (New Source Performance Standards (NSPS)), the emission limitations or standards derived from Subpart IIII are exempt from CAM and no additional monitoring has been incorporated into the Title V permit for the engine.

Post-control emissions from the cement silo are less than 100 tons per year, and enforceable through permit conditions; therefore CAM does not apply to the cement silo.

Testing

The following conditions have been added to the Title V permit (condition numbers refer to the NSR permit dated January 13, 2010):

Condition 5: This condition requires the equipment to be constructed to allow for

emissions testing.

Condition 16: Upon request by the DEQ, the permittee shall conduct additional visible emission evaluations (VEEs).

The condition allowing for additional VEEs establishes a means of determining continued compliance with the visible emission limits. The facility conducted the initial VEE on October 13, 2010 as required by Condition 15; a copy of the VEE report showing compliance with the visible emission limit was received on November 13, 2010.

EMERGENCY GENERATORS (EU-3 and EU-4)

The emergency generators (EU-3 and EU-4) are subject to the requirements of the MACT, 40 CFR 63 Subpart ZZZZ.

Limitations

The two emergency generators are both powered by diesel-fired compression ignition (CI) reciprocating internal combustion engines (RICE), each rated at 80 kW/hr. Both emergency generators were constructed and installed before June 12, 2006. Each generator is considered an emergency generator and the power rating for each is less than 500 horsepower. The two generators (EU-3 and EU-4) are subject to the requirements of the MACT, 40 CFR 63, Subpart ZZZZ.

In accordance with the MACT, 40 CFR 63 Subpart ZZZZ, the following conditions are applicable to the emergency generators (EU-3 and EU-4); condition numbers refer to the Title V permit:

Condition 33: This condition establishes that the emergency generators (EU-3 and EU-4) must be operated in accordance with MACT, Subpart ZZZZ, except where the Title V permit is more restrictive.

Condition 34: This condition establishes the hourly operational conditions for the emergency stationary RICE.

Condition 35: This condition states that each CI engine (EU-3 and EU-4) shall meet the applicable work practice standards specified in 40 CFR 63, Subpart ZZZZ (NESHAP for Stationary RICE).

Condition 36: This condition establishes that during periods of startup the permittee must minimize the time spend at idle for the emergency engines (EU-3 and EU-4) and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply, in accordance with Table 2c of the MACT, Subpart ZZZZ.

Condition 37: The condition establishes the requirements for use of an oil analysis program in order to extend the specified oil change requirements in Condition 35.

The MACT establishes maintenance requirements for the generators (EU-3 and EU-4) as specified above. Additionally, the MACT establishes the operational conditions that define emergency operation. Condition 36 of the Title V permit establishes a limitation on the amount of time the emergency engines (EU-3 and EU-4) can spend at idle. Condition 37 allows the use of an oil analysis program to meet the requirements of Condition 35. The emergency generators (EU-3 and EU-4) do not operate, and are not contractually obligated, to participate in a demand response program; the emergency generators (EU-3 and EU-4) only operate during emergency situations, or for maintenance checks and readiness testing as provided in Condition 34 of the Title V permit.

Monitoring and Recordkeeping

The following monitoring and recordkeeping conditions were established to determine compliance with the MACT limitations:

- Condition 38: This condition establishes that the permittee must install non-resettable hour meters on the emergency RICE (if one is not already installed) in accordance with 40 CFR 63.6625(f). The hour meters shall be provided with adequate access for inspection.
- Condition 39: This condition establishes that the permittee shall operate and maintain the emergency generators (EU-3 and EU-4) according to the manufacturer's emission-related written instructions or develop its own maintenance plan.
- Condition 40: The condition outlines the two ways to demonstrate compliance with the work practice standards in Conditions 35 and 36.
- Condition 41: This condition establishes the recordkeeping requirements for the generators. The permittee must keep records of all maintenance conducted on the emergency generators (EU-3 and EU-4) as well as hours of operation that are recorded on the hour meter.

The requirements for installation of non-resettable hour meters, provided in Condition 39, establishes the means of determining compliance with the hour limitations specified in Conditions 34 and 35. The required maintenance and operating plans assure compliance with MACT requirements to maintain and operate the engine in accordance with the manufacturer's written instructions. The maintenance plans also provide a means of ensuring the engines meet the maintenance and work practice standards required in Condition 34 and 35.

The recordkeeping requirements in Condition 41 establish the recordkeeping requirements necessary to demonstrate compliance with the limitations in the permit. The facility is required to maintain records of the hours of operation for each of the emergency generators (EU-3 and EU-

4), to ensure that each continues to meet the definition of emergency-use, as found in the Virginia Regulations and the MACT. The facility is also required to keep records of maintenance conducted on each emergency generator (EU-3 and EU-4) in order to demonstrate that each engine is operated and maintained according its own maintenance plan.

Compliance Assurance Monitoring (CAM)

CAM does not apply to the emergency generators because the emergency generators do not use a control device to achieve compliance with the emission limitations.

Testing

Condition 42 establishes that if testing is conducted in addition to the general monitoring specified in this permit, the permittee shall use the appropriate method(s) in accordance with procedures approved by the DEQ.

The permit does not require source tests. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

Condition 43 establishes that if the emergency engines are operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule (required in Condition 35), or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

FACILITY WIDE CONDITIONS

The general conditions in the NSR permit, dated August 6, 2007, as amended August 8, 2008, have been modified to meet the general condition requirements of 40 CFR Part 70 and 9 VAC 5-80-110 permit dated August 6, 2007, as amended August 8, 2008. Please note that the condition numbers are from the NSR permit dated August 6, 2007, as amended August 8, 2008; a copy of the permit is enclosed as Attachment C.

Limitations

The maintenance and operating requirements in Condition 24 of the minor NSR permit, dated August 6, 2007, as amended August 8, 2008 and May 14, 2012, have been included in the operating permit.

Monitoring and Recordkeeping:

The monitoring and recordkeeping requirements in Condition 25 of the minor NSR permit, dated August 6, 2007, as amended August 8, 2008 and May 14, 2012, have been included in the operating permit.

Streamlined Requirements

The remaining general conditions (other than Conditions 24 and 25, as described above) in the minor NSR permit have been modified to meet the general condition requirements of 40 CFR Part 70 and 9 VAC 5-80-110.

EMISSION UNIT APPLICABLE REQUIREMENTS - (Landfill Roads)

The requirements related to landfill roads are listed under “Facility Wide Conditions” in the permit. The “Facility Wide Conditions” in the permit also includes some of the fugitive dust conditions related to landfill work, i.e., cell construction, daily cover application, etc.

Limitations

The following limitations are state BACT and other applicable requirements from the minor NSR permit dated August 6, 2007, as amended August 8, 2008 and May 14, 2012. Please note that the condition numbers are from the permit dated August 6, 2007, as amended August 8, 2008 and May 14, 2012. A copy of the NSR permit is enclosed as Attachment C.

Condition 4: This condition establishes the fugitive dust emission control requirements.

Condition 5: This condition establishes the dust control plan requirement.

Condition 8: This condition establishes the visible emissions limit.

Monitoring and Recordkeeping

The monitoring and recordkeeping requirements in Conditions 12 and 13 of the minor NSR permit dated August 6, 2007, as amended August 8, 2008 and May 14, 2012, have been included in the permit.

In lieu of conducting periodic evaluations using EPA Method 9 to demonstrate compliance with the facility-wide visible emission limit, each day of landfill operations, the permittee shall perform a visual survey of the trafficable roads at the site and landfill activities for sources of excessive emissions (Condition 12 of the minor NSR permit). The reason for not requiring EPA Method 9 is that there is no stack on the landfill roads on which to perform the test. The presence of excessive emissions requires further investigation as to the cause of the emissions and timely corrective action is required. All observations and corrective actions taken are to be logged and recorded. These records are to be available on-site for inspection by the DEQ and

must be current for the most recent five years.

There is reasonable assurance that violations of the visible emission standard should not occur if the permittee complies with the permit condition to mitigate fugitive dust, implements the operating procedures included in the dust control plan, performs a daily visible emission survey and conducts timely corrective actions as needed.

Compliance Assurance Monitoring (CAM)

CAM does not apply to the landfill roads because the landfill roads do not use a control device to achieve compliance with the emission limitations.

Testing

The permit does not require source emission tests. The permit requires that the permittee use appropriate method(s) in accordance with procedures approved by DEQ if further testing for compliance purposes is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

No specific reporting has been included.

Streamlined Requirements

There are no streamlined requirements.

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 permit 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.

Permit Expiration (Conditions 55 – 60)

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. 2-2003”.

This general condition cite(s) the Article(s) that follow(s):

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

This general condition cites the sections that follow:

9 VAC 5-80-80. Application

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

Failure/Malfunction Reporting (Condition 66)

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.

Permit Modification (Condition 70)

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

Malfunction as an Affirmative Defense (Conditions 84– 87)

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 General Conditions 84 through 87, and General Condition 66. For further explanation see the comments on General Condition 66.

This general condition cites the sections that follow:

9 VAC 5-20-180. Facility and Control Equipment Maintenance or Malfunction

9 VAC 5-80-110. Permit Content

STATE-ONLY APPLICABLE REQUIREMENTS

Augusta Regional Landfill did not identify any state-only requirements in their application. Therefore, no state-only requirements have been included in the permit.

FUTURE APPLICABLE REQUIREMENTS

On June 30, 2014, the U.S. Environmental Protection Agency proposed updates to its (NSPS) for municipal solid waste landfills. In summary the updates would apply to MSW landfills that begin construction, modification or reconstruction on or after this proposal is published in the Federal Register. As provided in the EPA fact sheet, the proposed rules would not apply to landfills subject to the current NSPS, which was issued in 1996. Pertinent parts of the proposed updates will be applicable to the facility upon final action and incorporation into the NSPS.

INAPPLICABLE REQUIREMENTS

The provisions of 40 CFR Part 98 – Mandatory Greenhouse Gas Reporting require owners and operators of municipal solid waste landfills that generate methane (CH₄) in amounts equivalent to 25,000 metric tons CO₂e or more per year, to report greenhouse gas (GHG) emissions, annually. 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.

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 current state minor NSR permit for the facility contains no GHG-specific applicable requirements and there have been no modifications at the facility requiring a PSD permit. Therefore, there are no applicable requirements for the facility specific to GHG.

The applicant did not identify any inapplicable requirements in its application.

The source has indicated that in its October 2007 letter that the requirements of 40 CFR 63, Subpart AAAAA are not applicable due to the results of the Tier 2 testing. Augusta Regional Landfill estimated that their annual NMOC emissions are over 50 Mg/yr using Tier 1 procedures;

as a result, the facility is subject to Subpart AAAA. As a result of Tier 1 estimates, the facility conducted Tier 2 testing to determine the site-specific NMOC concentration. On May 16, 1995, the Environmental Protection Agency (EPA) published a memorandum for sources subject to MACT standards. The memo outlines a “once in, always in” interpretation of the MACT standard, requiring major HAP sources to comply permanently with the MACT standards, to ensure that maximum achievable reductions in toxic emissions are achieved and maintained. Therefore, regardless of the Tier 2 testing results, the facility is subject to MACT standards for Municipal Solid Waste Landfills.

COMPLIANCE PLAN

The facility has not been found to be in violation of any state or federal applicable requirements at this time. No compliance plan was included in the application or in the permit.

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.

Table 4. Insignificant Emission Units

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
EU-54	Portable Gas Emergency Generator	9 VAC 5-80-720 C	CO, VOC, NO _x , SO _x , PM-10	5 kW
EU-6	Leachate Management System	9 VAC 5-80-720 B	VOC	-
EU-7	Clean Burn (CB-2500) Used Oil Furnace	9 VAC 5-80-720 C	CO, VOC, NO _x , SO _x , PM-10	0.25 MMBtu/hr
EU-9	Two Waste Oil Storage Tanks	9 VAC 5-80-720 C	VOC	500 gallons each
EU-10	Unleaded Gasoline Storage Tank	9 VAC 5-80-720 B	VOC	500 gallons
EU-11	Diesel Storage Tank	9 VAC 5-80-720 B	VOC	1,000 gallons
EU-12	Two Waste Oil Storage Tanks	9 VAC 5-80-720 C	VOC	750 gallons each
EU-13	Waste Antifreeze Storage Tank	9 VAC 5-80-720 B	VOC	750 gallons
EU-15	Waste Oil Storage Tank	9 VAC 5-80-720 C	VOC	1,000 gallons

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

Calculations, provided by Augusta County Service Authority, showing the emission levels for the units in Table 4 that are insignificant due to emission rate (9 VAC 5-80-720 B) are available in Attachment E.

CONFIDENTIAL INFORMATION

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

PUBLIC PARTICIPATION

A public notice regarding the draft permit was placed in the Daily News Leader newspaper in Staunton, Virginia, on . All persons on the Title V mailing list were sent a copy of the public notice by either e-mail or mail on June 13, 2014. Public comments were accepted from June 13, 2014 to July 14, 2014. No comments were received.

The affected state of West Virginia was notified of the public notice by e-mail on June 13, 2014. No comments were received.

EPA was notified of the public notice and sent a copy of the draft permit on June 12, 2014, for concurrent review. No comments were received.

ATTACHMENTS

The following information is attached:

- ATTACHMENT A: Design Capacity of the Landfill**
- ATTACHMENT B: 2012 Emissions Statement and Annual Update, and LandGEM
Emission Summary**
- ATTACHMENT C: Minor NSR Permit dated 08/06/2007, as amended 08/08/2008
and 05/14/2012, and Minor NSR Permit dated 01/13/2010**
- ATTACHMENT D: Tier 2 Testing Results dated 11/05/2012**
- ATTACHMENT E: Insignificant Emission Calculations**