

COMMONWEALTH OF PENNSYLVANIA  
 Department of Environmental Protection  
 Southwest Regional Office

TO AQ Case File TVOP-56-00262

FROM Noor Nahar *On*  
 Air Quality

THROUGH Barbara Hatch, P.E. *BRAH* Mark A. Wayner, P.E. *MAW (sh)*  
 Environmental Engineer Manager Program Manager  
 Air Quality Air Quality

DATE May 6, 2014

RE Review Memo of Title V Renewal Application  
 Mostoller Landfill, Inc.  
 Brothers valley and Somerset Townships  
 Somerset County

APS 791971 AUTH 944158 PF 549736

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**Background**

Mostoller Landfill, Inc. which is a wholly owned subsidiary of Advanced Disposal Services East, Inc. operates Mostoller Landfill as a solid waste management facility located in Brothers valley and Somerset Township, Somerset County. The Bureau of Waste Management (BWM) issued Solid Waste Permit No. 101571 to Mostoller on December 30, 1994 to landfill municipal solid wastes, construction/demolition wastes, and approved residual and special handling wastes. The facility property encompasses approximately 1200 acres, of which 278.1 acres are permitted for landfill operations. The disposal capacity of the landfill is estimated at 3.8 million tons of waste.

On March 12, 1996, a New Source Performance Standard for certain new landfills (those constructed after May 30, 1991, with a design capacity of more than 2.75 million tons) was published in the Federal Register. The source is subject to the NSPS requirements. This source is defined as a Title V facility and is therefore subject to the Title V permitting requirements adopted in 25 Pa. Code, Chapter 127, Subchapter G.

On June 11, 2002 the Department issued initial Title V Operating Permit (TVOP) to operate the MSW landfill, LFG collection/control system (GCCS) and associated support activities. A Title V Renewal Application was issued on March 25, 2008 with an expiration date of March 25, 2013. A second Title V Renewal Application was received by the Department on September 25, 2012. The application was deemed timely and complete.

On September 8, 2009 an exemption was granted from Plan Approval/Operating Permit requirements under Pa Code §127.14 (a)(8) for explosive blasting operation to accommodate re-grading of Pads 6 &7.

On May 21, 2012 a De minimis emission increase was granted under 25 Pa Code§127.449 for the modification of the existing enclosed ground flare to include a continuous flame pilot.

On October 4, 2012 an exemption was granted from Plan Approval/Operating Permit requirements under Pa Code §127.14 (a)(8) for the installation and operation of a 210 Terex Pegson portable crushing unit powered by a 300 bhp Caterpillar Model No.C-9 DITA diesel engine.

On April 5, 2013 an exemption was granted from Plan Approval/Operating Permit requirements under Pa Code §127.14 (a)(8) for the use of petroleum contaminated soil as alternative daily cover.

Revisions were submitted to the application on May 17, 2013 and April 28, 2014 respectively to include minor changes in the facility and an alternative monitoring requirement.

## **EQUIPMENT AND EMISSIONS**

Sources and emissions at this facility consist of the landfill itself (consisting of disposal areas being constructed, disposal areas actively accepting waste, and closed disposal areas), roads, and earthmoving equipment; fugitive emissions (uncollected) VOCs and PM<sub>10</sub>, and a soil processing system (fugitive PM<sub>10</sub>). Table 1 below shows the updated facility wide criteria pollutant potential to emit.

Updated emissions estimates are based on updated projections of landfill gas generation and collection, the rated capacity of the flare, updated emission factors, correction of an error in the original calculation of SO<sub>2</sub> emissions from the flare, and consideration of updated potential emissions from the engines at the soil and stone processing plants. Updated facility wide VOC potential to emit is based on the current Title V Operating Permit emissions limits plus the approved VOC emissions from the use of petroleum contaminated soil (PCS) (1,900 tons per year) as alternate daily cover. The approved VOC emission from the PCS was 2.7 tpy. Company maintains that fugitive GHG emissions are included in the GHG emissions estimate shown below for informational purposes only. Note that GHG emissions are shown as thousand tons.

Table 1  
Updated Facility-Wide Potential to Emit

Pollutant	Current Title V Emission Limits		Updated Potential to Emit	
	lb/hr	tpy	lb/hr	tpy
CO	36.6	160.2	36.6	160.2
PM-10	15.1	34.3	15.1	34.3
NO <sub>x</sub>	3.25	14.3	19.7	28.6
SO <sub>2</sub>	0.6	2.68	2.5	7.1
VOCs (as hexane)	5.6	24.3	6.2	27.0
<b>Greenhouse Gases (GHGs)</b>				
CO <sub>2</sub>	None.		495	38.78
CH <sub>4</sub>			842	3,686
N <sub>2</sub> O			0.004	0.0003
Biogenic CO <sub>2</sub>			24,014	105,183
CO <sub>2</sub> eq (including biogenic CO <sub>2</sub> )			42,182	182,624
CO <sub>2</sub> eq (excluding biogenic CO <sub>2</sub> )			18,168	77,441
CO <sub>2</sub> eq (excluding biogenic CO <sub>2</sub> and other fugitive GHGs)			2,295	7,918

#### Landfill Gas Flare:

The Collection and Control System consists of approximately 45 vertical 8" gas extraction wells. Wells are connected by laterals to either a sub-header or the main collection header. Landfill gas is conveyed to an enclosed flare, rated at 3,500 scfm. The flare is equipped with a flue gas temperature monitor, ultraviolet flame scanner, automatic fail safe valve, auxiliary fuel supply, automatic start-re-start, flow/temperature recorder, purge blower, automatic and manual temperature control louvers, and an aluminum flame arrestor. A 90% collection efficiency was assumed for synthetically capped areas being extracted. It is estimated that the flare would achieve a 98% destruction efficiency.

The Soil Processing Plant consists of diesel engines, a screen, a crusher, conveyors and various earthmovers. The overall capacity of the system is rated at 100 tons/hour.

The portable Stone Processing Plant consists of a Terex Pegson crushing unit powered by 300 bhp diesel engine. This portable system is used at other land fill sites owned by this company. The throughput of the unit is limited to 30,000 tons per site.

The gasoline and diesel storage tanks have a capacity of 1,000 gallons each. There are no specific regulations governing this size of tank. These sources are included in the Miscellaneous Section of the permit for site inventory purposes only.

## REGULATORY ANALYSIS

All of the conditions derive from Title 25 of the Pennsylvania Code in the original Title V permit have been included in this renewal. The applicable emission limitations, monitoring, recordkeeping, reporting and work practice standard requirements of Pa. Code Title 25 Sections 123.1, 123.2, 123.13, 123.21, 123.31, 123.41, 123.42, 127.511, 127.513 and 135.5 have been included in this in this renewal Title V permit.

The collection and control system is subject to the Department's Bureau of Air Quality Permit Manual, Section 7.10; Air Quality Permitting Criteria Including Best Available Technology (BAT) Criteria for Municipal Waste Landfills New Source Performance Standards (NSPS).

Title 25 PA Code Section 122.3 adopts in entirety the Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources promulgated in 40 CFR Part 60. Per 40 CFR Part 60, Section 60.750 Municipal Solid Waste Landfills that commence construction or modification after May 30, 1991 are subject to the New Source Performance Standards Subpart WWW. The applicable requirements of Subpart WWW have been exhaustively included in this Title V renewal permit.

Part 63 National Emission Standards for Hazardous Air Pollutants (NESHAP): Title 25 PA Code Section 127.35(b), Part 63 NESHAP for Source Categories are incorporated by reference into the Department's permitting program. Per 40 CFR Part 63 Section 63.1955, the applicable requirement of 40 CFR Part 63 Subpart AAAA has been included in this Title V renewal permit.

The NSPS Subpart OOO for nonmetallic mineral processing applies to the soil/stone processing plants at this facility.

The diesel engines at the soil/stone processing plants are subject to NESHAP for Stationary Reciprocating Internal Combustion Engines (RICE) from 40 CFR Part 63 Subpart ZZZZ. Requirements include basic maintenance work practices.

Greenhouse Gases Tailoring Rule for PSD. U.S. EPA determined on December 07, 2009 that GHGs are a threat to public health and welfare. U.S. EPA issued a final Title V Greenhouse Gas Tailoring Rule on May 13, 2010. On June 3, 2010, the EPA published the Greenhouse Gas Tailoring Rule in the Federal Register. The rule established an approach to addressing GHGs from new or modified stationary sources under the Clean Air Act (CAA) Prevention of Significant Deterioration (PSD) permitting program. This rule established an applicability timeline and GHG emission thresholds for requiring facilities to be permitted for GHG emissions after January 2, 2011.

On July 20, 2011, EPA published Bioenergy and Other Biogenic Sources under the Prevention of Significant Deterioration (PSD) and Title V Programs in the Federal Register. This action defers for a period of three (3) years the consideration of CO<sub>2</sub> emissions from bioenergy and other biogenic sources (hereinafter referred to as "biogenic CO<sub>2</sub> emissions") when determining whether a stationary source meets the PSD and Title V applicability thresholds, including those for the application of BACT.

This part was promulgated on October 30, 2009, and November 30, 2010. In accordance with 40 CFR § 98.2(a), the Greenhouse Gas (GHG) reporting requirements and related monitoring, recordkeeping, and reporting requirements of this part apply to the owners and operators of any facility that is located in the United States and that meets the requirements of either paragraph 40 CFR § 98.2 (a)(1), (a)(2), or (a)(3) of this section.

However, public comments to the Greenhouse Gas Mandatory Reporting Rule (GHG MRR) questioned the requirements of this rule to meet current definitions of “applicable requirement” at 40 CFR §§ 70.2 and 71.2. The commentators requested that USEPA confirm their interpretation of the regulations. The EPA provided the following response: “As currently written, the definition of “applicable requirement” in 40 CFR §§ 70.2 and 71.2 does not include a monitoring rule such as today’s action, which is promulgated under CAA sections 114(a)(1) and 208.” The preamble of the final version of the GHG MRR, located at 74 Fed Reg 209, pp. 56287-56288, states that the GHG MRR is not considered an “applicable requirement” under the Title V Operating Permit program. Therefore, this Subpart, while it may be an obligation for Mostoller, is not considered an applicable condition for this Title V Operating Permit.

In accordance with 40 CFR §64.2(b)(i), Mostoller Landfill is not subject to the requirements of the Compliance Assurance Monitoring (CAM) requirements of 40 CFR 64 because the facility is subject to emission limitations or standards proposed by the Administrator after November 15, 1990 pursuant to section 111 or 112 of the act. This facility is subject to 40 CFR Part 63 Subpart AAAAA, which was proposed on August 30, 1999 pursuant to Section 112 of the act.

## **CONCLUSIONS AND RECOMMENDATIONS**

Mostoller Landfill has met the regulatory requirements associated with this application submittal. The attached permit reflects the applicable regulatory requirements associated with this facility. I recommend that the proposed Title V Renewal Operating Permit be issued for this site.