

COMMONWEALTH OF PENNSYLVANIA  
Department of Environmental Protection  
Southwest Regional Office

TO AQ Case File TVOP-65-00693

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DATE December 23, 2016

RE Review of Title V Operating Permit Renewal Application  
USA Valley Facility, Inc.  
Valley Landfill  
Penn Township, Westmoreland County

APS 859168 AUTH 1053160 PF 549691

**Background**

Valley Landfill (Valley) is a 257.4-acre municipal solid waste (MSW) landfill, located in Penn Township, Westmoreland County, Pennsylvania. Valley's solid waste permit (SW #100280) was modified significantly on April 9, 1989 to incorporate the new solid waste regulations requiring lined cells, leachate management, etc., and again on May 5, 1992 to increase the permitted area of the landfill. According to the Initial Design Capacity and NMOC Emission Estimate Report submitted by Valley to the Department on June 7, 1996, Valley's design capacity is estimated to be 5.5 million tons of MSW. The permitting date and Design Capacity of this facility make it subject to the Emission Guidelines and New Source Performance Standards for Municipal Solid Waste Landfills, found at 40 CFR 60, Subparts Cc and WWW. Per 40 CFR 60.752(a), this landfill is subject to Part 70 permitting requirements.

An RFD was reviewed on October 15, 2013, for the installation and operation of a paint spraying process and was exempted from Plan Approval requirements.

The initial Title V Operating Permit for Valley Landfill was issued on January 2, 2002, with an expiration date of January 2, 2007. First Title V renewal application was issued on June 18, 2010, with an expiration date of June 18, 2015. This is the second Title V renewal application

received on December 4, 2014, and was determined to be administratively complete on January 15, 2015.

Sources and the control devices at this facility are:

- Landfill Gas (Waste)
- Paved and Unpaved Roads
- Diesel generator
- Fugitive Landfill Gas
- 2500 cfm Enclosed Flare (Primary)
- 4500 cfm Flare (Backup)
- Water Truck

Other insignificant activities are listed at the end of the TVOP.

### **Regulatory Analysis**

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.

All of the conditions derived from Title 25 of the Pennsylvania Code in the original Title V operating 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, 129.57 and 135.5 have been included in this renewal Title V operating 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 Subpart WWW. The applicable requirements of Subpart WWW have been included in this Title V operating permit.

Title 25 PA Code Section 127.35(b) and 40 CFR Part 63 NESHAP for Source Categories are incorporated by reference into the Department's permitting program. The applicable requirements of 40 CFR Part 63 Subpart AAAA- National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills has been included in this Title V permit.

The landfill formerly had their own on-site crusher but decided to contract out crushing operations. On July 7, 2014 Commonwealth Contracting, Inc. submitted an RFD for use of their portable crusher at several sites including Valley Landfill. The portable crusher is a Caterpillar Model C-13 DITA rated at 150 tpy powered by a 440 bhp diesel engine, and was exempted from Plan Approval requirements. Regulatory requirements for the portable soil/stone processing plant are not included in this permit because the Crusher and the Landfill do not meet the Title V facility definition of 25 Pa Code Section 121.1. The inclusion of the crushing would not impact any regulatory threshold.

The diesel engine generator is subject to the NESHAP for Stationary Reciprocating Internal Combustion Engines (RICE) found in 40 CFR Part 63 Subpart ZZZZ. Applicable requirements from this subpart have been placed in the permit.

There are several gasoline and diesel storage tanks that vary in size from 200 -10,000 gallons each. The 10,000 gallon diesel storage tank is not subject to Pa. Code Title 25 Section 129.57 since the vapor pressure from diesel storage tank is well below 1.5 psia. Other gasoline and diesel storage tanks have capacities that vary from 900 - 200 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.

The Greenhouse Gases Tailoring and the Mandatory Greenhouse Gas Reporting rule of 40 CFR Subchapter C, Part 98 have been evaluated for applicability to this site. Requirements from these regulations may apply to certain facilities that have taken a NSR or PSD permitting action. This facility has not undertaken a NSR or PSD permitting action; consequently, the previously mentioned GHG rules do not apply. However, the Department has elected to require reporting of GHG emissions for new construction & modifications to existing sources. As this permitting does not involve new construction or modification, we are not including these requirements in this TVOP renewal.

The RACT 2 Rule was published final in the Pennsylvania Bulletin on April 23, 2016. The RACT 2 Regulations (25 PA Code Section 129.96-129.100) are applicable to existing (existing before July 20, 2012) major sources of NO<sub>x</sub> and VOC, therefore if a facility has a potential to emit (PTE) in excess of 100 tpy NO<sub>x</sub> or 50 tpy VOC, it is subject to the RACT 2 requirements. Facilities that became major after July 20, 2012 are also potentially subject to the regulation. Valley landfill is not a major source of NO<sub>x</sub> or VOC, and therefore not subject to the RACT 2 requirements.

### **Emissions and Controls:**

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; emitting fugitive (uncollected) VOCs and PM<sub>10</sub>), a landfill gas collection system (wells, manifolds, routed to a flare or gas processing facility; emitting undestroyed VOCs, NO<sub>x</sub>, CO, PM<sub>10</sub>).

A 98% destruction efficiency for the flare was shown during last stack test. VOC emissions which are collected but undestroyed, and emissions of other pollutants (products of combustion) resulting from the operation of the flare are attributed to the landfill gas collection system.

The facility has a water truck and a truck tire wash station to control fugitive emissions.

There are several gasoline and diesel storage tanks that vary in size from 10,000 - 50 gallons each. There are no specific regulations governing this size of tank which are applicable. These sources are included in the Miscellaneous Section of the permit for site inventory purposes only.

BWM's standard dust conditions and quarterly dust fall monitoring requirements have been copied from the BWM permit and included in air quality operating permit.

**Summary of Potential Emissions (tons/yr) Valley Landfill**

ID#	Source	SOx	NOx	CO	VOC	PM10	CO2e	Single HAP (HCl)	Total HAPs
101	4500 CFM Enclosed Flare	5.40	18.61	9.31	0.89	5.80	68,673	2.75	4.48
102	Paved and Unpaved Roadways					38.95			
104	Diesel Generator	0.34	5.15	1.11	0.42	0.37	76.61		1.78E-03
Z01	Landfill Fugitive Emissions					11.35			0.28
Z02	Fugitive Landfill Gas				4.58		113,238		
-	Degreasing Tank				0.33				
Total		5.74	24.45	10.42	6.22	56.46	181,987	2.75	4.77

Notes:

1. The USEPA LandGEM model was utilized to estimate the potential landfill gas generated from the maximum waste placement in the landfill. The LandGEM model estimates NMOC emissions and HAP emissions generated from maximum waste placement. Of the landfill gas generated, 80% is collected by the gas collection system and sent to the flare. This collection efficiency was utilized in the permit application to reflect site data. The remaining 20% of the landfill gas generated is emitted from the landfill as fugitive emissions. LandGEM estimates for HAP are also based on AP-42 factors. The collected landfill gas is sent to the flare, where 91-98% of the VOC and organic HAPs are destroyed, based on USEPA AP-42 Table 2.4-3.

The Landfill Gas Collection System and the Fugitive Landfill Gas are both the same source and include VOC, HAPs, and CO2e emissions from the landfill gas that is not captured and sent to the flare.

2. Control efficiency for watering from USEPA AP-42 Table 13.2.2-2 and is 50%.

**Alternative Operating Scenarios:**

Valley requests the option of diverting some or all of the landfill gas to a nearby landfill gas processing facility, which is owned by a separate, unrelated company. The processing facility will convert landfill gas to pipeline quality natural gas. When landfill gas is not being flared by Valley, alternate recordkeeping and work practice standards will be required – continuous recording of flare temperature will not be required, flare will be tested weekly for continued operability, and volumes of gas sent to processing facility will be recorded. Gas from the landfill's perimeter or declining wells, which is of an unacceptable quality for the gas processing facility, and off-gas generated by the gas processing operation will be returned to the 2500 CFM primary flare.

**Conclusions and Recommendations:**

I have completed my review of the TVOP renewal application for Valley Landfill. Applicant has met the regulatory requirements associated with this application submittal. The attached permit reflects terms and conditions as described in permit application. The last Stack test on the flare was conducted on October 8, 2014. The most recent inspection was conducted on September 21, 2015. Reports indicate that facility is in compliance with all regulatory requirements. It is my recommendation to issue a Title V Operating Permit renewal for this facility as proposed upon completion of the public comment period. Notice of intent to issue this TVOP renewal will be published in Pa Bulletin and local newspaper. EPA, the company, Air Quality District Supervisor, and Air Quality inspector will be provided with this proposed TVOP renewal.