

COMMONWEALTH OF PENNSYLVANIA  
Department of Environmental Protection  
Southwest Regional Office

May 14, 2009  
412-442-5225

**SUBJECT:** Review of Title V Renewal Application  
Shade Landfill, Inc.  
Shade Township  
Somerset County

OFFICIAL FILE COPY

**TO:** Air Quality File 56-00232

**FROM:** Noor Nahar *Nn*  
Bureau of Air Quality

**THROUGH:** Barbara Hatch, P.E. *BRAH*  
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### BACKGROUND

Shade Landfill, Inc. (Shade, formerly known as Resource Conservation Corporation) operates a municipal solid waste landfill in Shade Township, Somerset County, Pennsylvania. The landfill was previously permitted with Disposal Area A and Disposal Area B, that design was superseded with a single disposal area. The single permitted Disposal Area for this site has a total footprint area of 183.2-acres. The amended design capacity of this facility is established at 24.1 million tons of municipal solid waste. This includes the waste deposited in the existing disposal areas, and the additional 19 million tons of capacity provided by the expansion area. This includes the waste deposited in the existing disposal areas, and the anticipated capacity of the proposed expansion area (PA-56-00232B).

An initial Title V Operating Permit was issued for this site on July 31, 2001, consolidating all previously issued authorizations. A Title V Renewal Application was received by the Department on December 8, 2005. The application was deemed timely and complete. An application shield, as described in 25 Pa. Code § 127.505(e) was granted at that time.

### REGULATORY ANALYSIS

All of the conditions derived from Title 25 of the Pennsylvania Code in the original Title V permit have been included in this renewal. 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 requirements of 40 CFR Part 63 Subpart AAAA have been included in this Title V renewal permit.

Shade Landfill is not subject to the requirements of the Compliance Assurance Monitoring (CAM) rule because the facility is currently regulated under NSPS/NESHAP regulations.

### 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; emitting fugitive (uncollected) VOCs and PM<sub>10</sub>, a collection and control system emitting controlled VOCs and other products of combustion, and a soil processing system (fugitive PM<sub>10</sub>).

#### Summary of Potential Emissions (tons/yr)

ID#	Source	SOx	NOx	CO	VOC	PM10
101	Paved and Unpaved Roadways					34.16 (60% control efficiency)
102	Landfill Gas					
103	Soil Processing	0.50	7.33	1.58	.059	1.08
104	Emergency Generator	0.08	1.16	0.25	0.09	0.08
CO4	Landfill Ground Flare		31.33	95.00	1.52	9.76
Z02	Landfill Gas Fugitive emissions				29.15	
	Landfill Fugitive (material handling)					39.03
	Diesel Furnaces	1.94	0.56	0.11		1.69
Total		2.52	40.38	96.94	31.35	85.80

The Collection and Control Plan consists of 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. 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. 80% collection efficiency was assumed for synthetically capped areas being extracted. It is estimated that the flare achieves a 98% destruction efficiency. A candle flare is available to be used for a backup control device.

The Soil Processing System consists of a diesel engine, a screen, a crusher, conveyors and various earthmovers. The NSPS Subpart OOO for nonmetallic mineral processing applies to this affected facility.

The gasoline and diesel storage tanks have a capacities varies from 10,000 - 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.

#### **PREVIOUS OPERATING PERMITS AND PLAN APPROVALS:**

Air Quality Plan Approval PA-56-305-042 was issued to Shade on December 13, 1991 to allow the installation of a 250-ton per hour soil processing facility equipped with a 470 hp diesel generator. Plan Approval PA-56-322-002 was issued on June 21, 1996 to allow the construction of an interim gas collection system and a candle flare. PA-56-322-002 included conditions subjecting the facility to 40 CFR 60, Subpart WWW—Standards of Performance for Municipal Solid Waste Landfills. Plan Approval PA-56-232A was issued on July 13, 1998 to allow the installation of an enclosed flare. The enclosed flare was installed shortly thereafter and was stack tested on March 29, 2000 with acceptable results. Plan Approval PA-56-232B was issued on August 11, 2004 to allow the expansion of the landfill into a new disposal area, and to allow the expansion of the existing collection and control system into this new disposal area.

#### **CONCLUSIONS AND RECOMMENDATIONS**

Shade 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.