West Virginia Department of Environmental Protection
Division of Air Quality

Fact Sheet

For Final Renewal Permitting Action Under 45CSR30 and Title V of the Clean Air Act

Permit Number: **R30-06900071-2006**
Application Received: **June 26, 2006**
Plant Identification Number: **03-54-06900071**
Permittee: **Short Creek Landfill**
Mailing Address: **258 North Fork, Short Creek, WV 26003**

Physical Location:	Short Creek, Ohio County, West Virginia
UTM Coordinates:	530.57 km Easting • 4444.10 km Northing • Zone 17
Directions:	From the city of Wheeling, take Route 2 North, turn right onto Girty Point Road and follow Road to landfill

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Facility Description

The American Disposal Services of West Virginia, Inc.'s Short Creek Landfill (SCL) (NAICS 562212, SIC 4953) is a non-hazardous municipal solid waste (MSW) landfill that began operation in 1986. The site consists of 280 acres of permitted area, including 115 acres of permitted disposal area. Of the 115 acres, 34 acres make up the closed landfill and 81 acres make up the active landfill. Currently 22 acres of the 81 acres of active area have been developed.

Short Creek receives approximately 250,000 tons of waste per year. The landfill currently accepts municipal solid waste and in the past also accepted construction/demolition/debris (CDD) waste. Site operations include disposal of solid waste, compaction of same, and daily cover with native soil. Site waste decomposes and generates methane and non-methane VOCs.

Emissions Summary

Plantwide Emissions Summary [Tons per Year]		
Criteria Pollutants	**Potential Emissions**	**2005 Actual Emissions**
Carbon Monoxide (CO)	40.5	27.29
Nitrogen Oxides (NO_X)	9.20	3.17
Particulate Matter (PM_{10})	18.2	26.4 (1)
Total Particulate Matter (TSP)	68.6	62.8
Sulfur Dioxide (SO_2)	1.68	1.08
Volatile Organic Compounds (VOC)	38.42	14.35
Lead (Pb)	0	0
PM_{10} is a component of TSP.		
Regulated Pollutants other than Criteria and HAP	**Potential Emissions**	**2005 Actual Emissions**
Non Methane Organic Compounds (NMOC)	97.97	27.47
Hazardous Air Pollutants	**Potential Emissions**	**2005 Actual Emissions**
Total HAPs	8.47	4.0358
Some of the above HAPs may be counted as PM or VOCs.		

Non-methane organic compounds (NMOC) – The current emission rate estimate (calculated for year 2004) is 24.92 Mg/yr. The projected closure year is 2039 with a projected maximum uncontrolled NMOC emission rate estimate of 89.06 Mg/yr (97.97 TPY). The NMOC emission rate estimates were calculated using EPA's Landfill Gas Emissions Model (LandGEM) software. The values used for k and L_o were 0.050 $year^{-1}$ and 170 m^3/Mg, respectively. The NMOC concentration used in the model was 4000 ppmv. SCL has exceeded the 50 Mg/yr limit for NMOC using Tier 1. SCL's GCCS design plan was approved on January 10, 2001 by WVDEP/DAQ.

(1) The difference in the PM_{10} potential to emit and the actual 2005 emissions is that the control efficiency have changed and AP-42 Section 13.2.4 equations from the Aggregate Handling and Storage Piles for landfill operations used by the consultants for the Title V Application and 2006 CES.

Title V Program Applicability Basis

This facility has a design capacity over 2.5 million megagrams or 2.5 million cubic meters. Due to this facility's design capacity, Short Creek Landfill is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

This facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR6	Open burning prohibited.
	45CSR11	Standby plans for emergency episodes.
	45CSR13	New Source Review permits for stationary sources
	45CSR16	New Source Performance Standards
	45CSR17	To Prevent and Control Particulate Matter Air Pollution from Materials Handling, Preparation, Storage and other sources of Fugitive Particulate Matter
	45CSR23	To Prevent and Control Emissions from Municipal Solid Waste Landfills
	WV Code § 22-5-4 (a) (14)	The Secretary can request any pertinent information such as annual emission inventory reporting.
	45CSR30	Operating permit requirement.
	45CSR34	Emission Standards for Hazardous Air Pollutants
	40 C.F.R. Part 60 Subpart WWW	Standard of Performance for Municipal Solid Waste Landfills
	40 C.F.R. Part 61	Asbestos inspection and removal
	40 C.F.R. Part 63 Subpart AAAA	National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills
	40 C.F.R. Part 82, Subpart F	Ozone depleting substances
State Only:	45CSR4	No objectionable odors.

Each State and Federally-enforceable condition of the draft Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the draft Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the draft Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR15, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit *(if any)*
R30-06900071-1996	December 26, 2001	PD02-011; December 1, 2002; Permit not required
		For use soil screen
		PD05-039; April 29, 2005; Temporary permit is required (R13-2633T).
		Short term use of a rock crushing equipment.

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table B," which may be downloaded from DAQ's website.

Determinations and Justifications

The change to the December 26, 2001 Title V Permit was two permit determinations and one NSR temporary permits. The R13 temporary permit and the four permit determinations are:

1. Permit Determination 02-011 was for the use of soil screening equipment. A permit was not required.

2. Permit Determination 05-039 was for a spray painting operation. A permit was not required.

3. R13-2633T is for the Temporary permit to construct a 250 ton/hr mobile rock crusher/conveyor with a self-contained 386 Hp diesel engine at a municipal solid waste landfill. Crusher is to process no more than 270,000 ton of rock before being removed from site. Processed rock will be used on an as-needed basis as part of the landfill's construction and operation. All crushed rock will be used on-site and will not be sold or hauled off-site. The Rock Crusher equipment is no longer on site at SCL. SCL does not expect to use it in the next 2 to 3 years. R13-2633T expires on August 4, 2006. SCL does not want to incorporate it in the Title V renewal.

Flare 01-F1 Flare

The SCL's flare is to handle gas flow rate between 75 and 750 cubic feet per minute and was installed in 2001. 45CSR6 includes flares in the definition of incinerators and sets the following limits:

45CSR6 - To Prevent and Control Air Pollution from Combustion of Refuse

The allowable particulate matter limit for the flare is calculated to be 9.72 LB/hr (45CSR§6-4.1.). According to Appendix G of Short Creek Landfill's Title V Renewal Application, the flare has a potential to emit 0.39 LB/hr of particulate matter (PM). Please note that flares for landfill gas do not emit excessive amounts of PM since the landfill gas is primarily methane and carbon dioxide.

The particulate matter emission limit from each flare is determined by the following formula (45CSR§6-4.1):

PM Emissions (LB/hr) = F x Incinerator Capacity (tons/hr)

Where: F = 5.43
Incinerator Capacity = 1.79 tons/hr
PM Emissions (LB/hr) = 5.43 x 1.79 tons/hr = 9.72 LB/hr

The Volumetric design flow for the flare is 750 SCFM. To convert volumetric flow to mass flow, the density of the landfill gas is needed. The average composition of landfill gas is approximately 50% methane and 50% carbon dioxide and water vapor by volume. Using 0.67908 kg/m^3 (@ 60 ^{o}F & 14.7 psia) for the density of Methane and 1.8696 kg/m^3 (@ 60 ^{o}F & 14.7 psia) for the density of Carbon Dioxide, the estimated density of the landfill gas is 1.27434 kg/m^3. Using *Katmar Software's* "Uconeer - Units Conversion for Engineers" program, the volumetric flow rate of 750 SCFM is converted to a mass flow rate of 1.79 tons/hr.

The visible emission limit for the flare is 20% opacity (45CSR§6-4.3.) with the exception to smoke which is less than forty (40%) percent opacity, for a period or periods aggregating no more than eight (8) minutes per start-up (45CSR§6-4.4.).

This rule also prohibits from the flares, the emission of particles of unburned or partially burned refuse or ash that are large enough to be individually distinguished in the open air (45CSR§6-4.5.). The rule requires the flares, including all associated equipment and grounds, be designed, operated and maintained so as to prevent the emission of objectionable odors (45CSR§6-4.6.).

Compliance will be demonstrated through monthly visible emission checks and record keeping.

40 C.F.R. Part 63 Subpart AAAA

SCL has install a landfill gas collection and control system (GCCS) since they exceeded 50 Mg/year limit of NMOC using the Clean Air Act default values for LandGEM (k= 0.05/year; Lo = 170 m^3/Mg; and Cnmoc = 4000 ppmv) for determining NSPS applicability. Currently, the GCCS at SCL includes one open flare and approximately 15 gas extraction wells. 40 C.F.R. Part 63 Subpart AAAA requires SCL to devise and implant a startup, shutdown, and malfunction plan (SSM) for the GCCS and to submit semi-annual reports of the operation of the GCCS and open flare. A deviation occurs when a SSM plan is not developed or maintained on site and when 1 hour or more of the hours during the 3-hour block averaging period does not constitute a valid hour of data.

WVDEP/DAQ approved Short Creek Landfill's Gas Collection and Control System (GCCS) design plan on January 10, 2001.

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

40 C.F.R. §60.757 (a)(3) (March 12, 1996)	The design capacity of this facility is greater than 2.5 million megagrams and 2.5 million cubic meters. Therefore, amended design capacity reports are not required.
40 C.F.R. Part 64 (10/22/1997)	The facility does not have any pollutant specific emissions units (PSEU) at this facility that satisfy all of the applicability criteria requirements of 40 CFR §64.2(a), i.e., that: 1) have pre-control regulated pollutant potential emissions (PTE) equal to or greater than the "major" threshold limits to be classified as a major source; 2) are subject to an emission limitation or standard and; 3) have a control device to achieve compliance with such emission limitation or standard. Therefore, the facility is not subject to the Compliance Assurance Monitoring (CAM) rule.

Request for Variances or Alternatives

None

Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period

Beginning Date: August 14, 2006
Ending Date: September 13, 2006

All written comments should be addressed to the following individual and office:

Wayne Green
Title V Permit Writer
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Point of Contact

Wayne Green
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Division of Air Quality
601 57th Street SE
Charleston, WV 25304
Phone: 304/926-0499 ext. (1258) • Fax: 304/926-0478

Response to Comments (Statement of Basis)

As a result of comments from USEPA Region 3 and because Short Creek Landfill has already submitted a Landfill Gas collection and control system design plan, Section 4.1.2 in the Draft/Proposed Title V Permit was removed.