

**NORTH CAROLINA DIVISION OF  
AIR QUALITY**

**Air Permit Review**

**Permit Issue Date: Date**

**Region:** Washington Regional Office  
**County:** Wayne  
**NC Facility ID:** 9600250  
**Inspector's Name:** Steven Carr  
**Date of Last Inspection:** 06/09/2004  
**Compliance Code:** C/In Compliance With  
 Procedural Requirements

<b>Facility Data</b>			<b>Permit Applicability (this application only)</b>
<p><b>Applicant (Facility's Name):</b> Wayne County Municipal Solid Waste Landfill</p> <p><b>Facility Address:</b>                  Wayne County Municipal Solid Waste Landfill                  460B South Landfill Road                  Dudley, NC 28333</p> <p><b>SIC:</b> 4953 / Refuse Systems  <b>NAICS:</b> 562212 / Solid Waste Landfill</p> <p><b>Facility Classification: Before:</b> Title V <b>After:</b> Title V  <b>Fee Classification: Before:</b> <span style="color: red;">Title V</span> <b>After:</b> <span style="color: red;">Title V</span></p>			<p><b>SIP:</b> <span style="color: red;">2D .0516, 2D .0521</span></p> <p><b>NSPS:</b> <span style="color: red;">NA</span></p> <p><b>NESHAP:</b> <span style="color: red;">2D .1111 (Subpart AAAA)</span></p> <p><b>PSD:</b> <span style="color: red;">NA</span></p> <p><b>PSD Avoidance:</b> <span style="color: red;">NA</span></p> <p><b>NC Toxics:</b> <span style="color: red;">2Q .0705</span></p> <p><b>112(r):</b> <span style="color: red;">NA</span></p> <p><b>Other:</b> <span style="color: red;">NA</span></p>
<b>Contact Data</b>			<b>Application Data</b>
<b>Facility Contact</b>	<b>Authorized Contact</b>	<b>Technical Contact</b>	<p><b>Application Number:</b> 9600250.04A  <b>Date Received:</b> 10/04/2004  <b>Application Type:</b> Renewal  <b>Application Schedule:</b> TV-Renewal</p> <p style="text-align: center;"><b>Existing Permit Data</b></p> <p><b>Existing Permit Number:</b> 08885/T00  <b>Existing Permit Issue Date:</b> 07/12/2000  <b>Existing Permit Expiration Date:</b> 06/30/2005</p>
Tony Frazier Product Manager (919) 782-4804 7300 ACC Boulevard Raleigh NC, 27613	Lloyd Cook Solid Waste Manager (919) 689-2994 460B South Landfill Road Dudley NC, 28333	Keith Deal Maintenance Supervisor (919) 782-4804 7300 ACC Boulevard Raleigh NC, 27613	
<p><b>Review Engineer:</b> Mark Cuilla</p> <p><b>Review Engineer's Signature:</b>  <b>Date:</b></p>		<p style="text-align: center;"><b>Comments / Recommendations:</b></p> <p><b>Issue</b> 08885T01  <b>Permit Issue Date:</b> <span style="color: red;">date</span>  <b>Permit Expiration Date:</b> <span style="color: red;">date</span></p>	

**I. Purpose of Application**

The Wayne County Municipal Solid Waste Landfill is currently operating under permit 08885T00 set to expire on June 30, 2005. Per the requirements of the permit, an application for renewal was due by September 30, 2004. This application completes that requirement. The permit is deemed complete for processing. The Permittee did not request any modifications to the permit as part of this renewal process.

**II. Facility Description**

The Wayne County Municipal Solid Waste Landfill collects household, commercial, and industrial wastes. The landfill is no longer receiving any waste in the unlined units (**ID Nos. ES-01 and ES-02**) but does receive waste in the active lined unit (**ID No. ES-03**).

### III. History/Background/Application Chronology

**July 12, 2000** – First time Title V permit (**08885T00**) issued. Permit required per an approved compliance schedule for the installation of a gas collection and control system. The Permittee was required to submit the design of the collection system by September 5, 2001, begin installation by October 5, 2001, complete installation by October 5, 2002, and submit initial annual report with performance test requirements by February 5, 2003.

**October 3, 2001** – Mr. Booker Pullen of DAQ, RCO, sent facility letter approving submittal of required gas collection system.

**October 17, 2002** – Mr. Robert Fisher of DAQ, Washington Regional Office, issued a NOV indicating failure to complete installation of gas collection system.

**January 17, 2003** – Facility completed test of gas collection system and associated flare. *[The testing protocol was approved by Mr. Gregg O'Neal of DAQ, RCO, in a December 17, 2002 letter to the facility.]*

**February 5, 2003** – Completed test report submitted to WARO.

**October 4, 2004** – Permit application **9600250.04A** was received for the renewal of the Title V permit. The application was deemed complete for processing.

**November 29, 2004** – I spoke with Mr. Jonathon Pfohl of MESCO concerning the facility, responsible, and official contacts of the facility. He indicated that Mr. Larry Cook of the facility should be named as all three capacities. This change will be made in IBEAM upon completion of the permit renewal. I also requested confirmation on the size of the flare to indicate a proper description in the permit.

### IV. Permit Modifications/Changes

The following table describes the modifications to the current permit as part of the renewal process.

Page(s)	Section	Description of Change(s)
Cover	-	-amended permit revision numbers and all dates -updated shell language
TOC	-	-updated shell language
All	Header	-amended permit revision number
3	- Equipment table 2.1 A	-updated shall language -added control device description and reference to federal rules -added reference to control device in equipment description
3-4	2.1 A (table)	-added applicable requirements
4	2.1 A.1.a-c 2.1 A.2.c-c	-added applicable requirements
5	2.1 A.3.a	-added reference to control system
6-7	2.1 A.4.a-g	-added applicable requirements
7	2.1 A.5	-updated permit shell language
8	2.1 A.6	-added applicable requirements
8-16	General Conditions	-updated permit shell language

## V. Regulatory Review

The facility is currently subject to the following regulations:

15A NCAC 2D .0524, New Source Performance Standards  
15A NCAC 2D .1806, Control and Prohibition of Odorous Emissions

No regulatory review is required for these existing permit conditions as part of the renewal process.

However, as part of this renewal process and in response to the requirement that the facility install and operate a gas collection and control system with associated flare, the Permittee is now required to comply with the following regulations:

### 15A NCAC 2D .0516, Sulfur Dioxide Emissions from Combustion Sources

This new permit condition limits emissions from the combustion sources at the facility. Emissions of sulfur dioxide from the combustion of the landfill gases in the flare (**ID No. CD-F1**) shall be limited to less than 2.3 pounds per million Btu. No monitoring/recordkeeping/reporting requirements are required for the combustion of landfill gases. Compliance with the standard is expected. The flare was added mid permit term as a requirement of the existing compliance schedule in response to the requirements of Subpart WWW. No permit modification was needed at that time; as a result the new requirement is being added here.

### 15A NCAC 2D .0521, Control of Visible Emissions

This new permit condition limits visible emissions from the facility. Visible emissions from the combustion of landfill gases in the flare (**ID No. CD-F1**) shall be limited to less than 20 percent opacity. No monitoring/recordkeeping/reporting is required for visible emissions from this source. Compliance with the standard is expected. The flare was added mid permit term as a requirement of the existing compliance schedule in response to the requirements of Subpart WWW. No permit modification was needed at that time; as a result the new requirement is being added here.

### 15A NCAC 2D .1111, Maximum Achievable Control Technology

See Section VI of this document for a discussion of the requirements.

### 15A NCAC 2Q .0705, Existing Facilities and SIC Calls

See Section VII of this document for a discussion of the requirements.

## VI. NSPS, NESHAPS/MACT, PSD, 112(r), CAM

**NSPS** - The facility is subject to 40 CFR Part 60, Subpart WWW because it commenced construction, reconstruction, or had a modification after May 30, 1991. Per the Subpart, the facility is subject to Title V requirements because it has a design capacity (in place waste plus additional permitted waste) of greater than 2.5 million milligrams by mass and 2.5 million cubic meters by volume. The first time title V permit contained a compliance schedule to bring the facility into compliance with this Subpart. Per the history section of this document (See Section III), the facility has completed all requirements of this schedule of compliance; and therefore is in compliance with the Subpart. The compliance schedule has been removed as part of this permit activity. There are no required permit condition modifications for this Subpart as part of this renewal process.

**NESHAPS/MACT** – The facility is subject to 40 CFR 63, Subpart AAAAA because it is defined as an existing affected area source in accordance with 63.1935(a)(3). An area source is by definition a landfill that is not major due to the annual emission rate of HAPs, but one that has greater than 2.5 million megagrams (Mg) and 2.5 million cubic meters (m<sup>3</sup>) and has estimated uncontrolled emissions equal to or greater than 50 Mg per year nonmethane organic compounds (NMOCs) emissions. The facility shall be in compliance with this regulation by the date the landfill is required to install a collection and control system in accordance with 40 CFR 60.752(b)(2) of Subpart WWW. Compliance with this Subpart is determined in accordance with the NSPS Subpart WWW, including performance testing, monitoring of the collection system, continuous parameter monitor, and other credible evidence. In addition, continuous parameter monitoring data, collected under 40 CFR 60.756(c)(1) and (d) of Subpart WWW, is used to demonstrate compliance with the operating conditions for control systems. The Permittee is also required to develop and implement a written Start-up/Shutdown/Malfunction (SSM) Plan according to the provision in 40 CFR 63.6(e)(3). A copy of the SSM shall be maintained on site. The Permittee is required to keep records and reports as specified in the general provisions of 40 CFR 60 and in Subpart WWW (except the annual report described in 60.757(f) shall be submitted every six months).

**PSD** – The facility is not subject to any applicable PSD requirements. This renewal action does not change this status.

**112(r)** – The facility is not subject to 112(r) requirements because it does not store any of the covered chemicals. This renewal action does not affect this status.

**CAM** – 40 CFR 64 requires that a continuous assurance monitoring plan be developed for all equipment located at a major facility, that have pre-controlled emissions above the major source threshold, and use a control device to meet an applicable standard. The landfill (**ID Nos. ES-1, ES-2, and ES-3**) is controlled by a gas collection and control system (**ID No. CD-GCCS1**) feeding a candlestick-type flare (**ID No. CD-F1**). This source is subject to the sulfur dioxide emission limits in 15A NCAC 2D .0516, the visible emissions limitation in 15A NCAC 2D .0521, the federal standards for nonmethane organic compounds in 40 CFR 60, Subpart WWW, and the federal standards for hazardous air pollutants in 40 CFR 63, Subpart AAAAA.

As designed and installed, the control equipment's specific purpose is for the control of nonmethane organic compounds and hazardous air pollutants. Therefore, a CAM demonstration is not needed for the control of sulfur dioxide emissions and visible emissions. In addition, 64.2 exempts from CAM applicability, a source subject to a federal requirement proposed after November 15, 1990 pursuant to sections 111 and 112 of the Act. The new source performance standard, Subpart WWW, was first proposed in the Federal Register on May 30, 1991 (56FR24468). The proposal date of the maximum achievable control technology standard, Subpart AAAAA, was first proposed in the Federal Register on November 7, 2000 (65FR66672). Therefore, a CAM demonstration is not needed for the control of nonmethane organic compounds and hazardous air pollutants.

## **VII. Facility Wide Air Toxics**

The facility is not currently subject to air toxics permit conditions. Air toxics will come from the combustion of landfill gases and from the fugitive landfill surface; however, combustion sources are currently exempted from triggering air toxics in accordance with 15A NCAC 2Q .0702(a)(18).

Per 15A NCAC 2Q .0705, facilities subject to MACT standards shall also comply with 15A NCAC 2D .1100 at the same time it is required to comply with the MACT. The Permittee is required to submit a permit application according to the schedule in the rule. The permit application shall include an evaluation for all toxic air pollutants covered under 15A NCAC 2D .1104 for all sources at the facility (excluding those exempted sources listed in 2Q .0702). The owner or operator of a facility whose actual rate of emissions from all sources are not greater than the toxic permitting emission rates listed in Rule 2Q .0711 does not have to file a permit application to comply with 15A NCAC 2D .1100. The Permittee shall provide documentation that the facility's emissions of toxic air pollutants are below the levels in 2Q .0711 if the Director requests this documentation.

The last MACT for this facility is 40 CFR 63, Subpart AAAA. It was promulgated on January 16, 2003; therefore, the toxics demonstration/application should have been due to DAQ at the same time a permit application was due for compliance with the MACT. The latest compliance inspection did not find evidence that a toxics demonstration had been completed. Therefore; the permit will be renewed with a specific condition that requires the Permittee to submit a toxics demonstration to the DAQ by **[90 days of the issuance of this permit]** in accordance with 15A NCAC 2Q .0705 and 2D .1100.

Per AP-42 emission factors (Solid Waste Disposal/Landfills-Section 2.4) it is estimated that the typical gas collection system is between 60 and 85 percent efficient [2.4.4.2] and the typical open flare is 90 to 99+ percent efficient (Table 2.4-3). EPA further states that it is appropriate for the determination of emission calculations to use 75 percent efficiency for the gas collection system and 99.2 percent from the flare. Therefore, for the purpose of the toxics demonstration, the Permittee should account for the uncontrolled portions of the landfill (25 percent) and from the flare (0.8 percent).

### VIII. Facility Emissions Review

The following table represents the latest years emission inventory from the facility:

<b>Pollutant(s)</b>	<b>2003 Actual Emissions (tpy)</b>
CO	0.02
SO <sub>2</sub>	1.94
VOC	9.59
Combined TAPs/HAPs	1.965

### IX. Stipulation Review

There are no necessary permit stipulation modifications as a result of this permit renewal action. The compliance schedule described in Section 2.2 of the current permit has been removed because all activities have been completed.

### X. Public Notice/EPA and Affected State(s) Review

Pursuant to 15A NCAC 2Q .0521, a notice of the DRAFT Title V Permit shall be placed in a newspaper of general circulation in the area where the facility is located. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 2Q .0522, a copy of each permit application, each proposed permit and each final permit pursuant shall be provided to EPA. Also pursuant to 2Q .0522, a notice of the DRAFT Title V Permit shall be provided to each affected State at or before the time notice provided to the public under 2Q .0521 above. There are no affected States or local programs.

### XI. Conclusions, Comments, and Recommendations

WARO did not request a DRAFT prior to issuance. However, they did confirm the necessity for a compliance schedule for the submittal of an air toxics demonstration per 15A NCAC 2Q .0705.

RCO recommends issuance of the renewed title V permit with the associated compliance schedule.