

NORTH CAROLINA DIVISION OF AIR QUALITY		Region: Wilmington Regional Office County: New Hanover NC Facility ID: 6500343 Inspector's Name: Date of Last Inspection: N/A Compliance Code: C/In Compliance With Procedural Reqr	
Air Permit Review – 1 st Time Title V {processed in accordance with 15A NCAC 2Q .0501(c)(1) – one step} Permit Issue Date: XXX, 2008		Permit Applicability (this application only) SIP: 15A NCAC 2D .0501(c)(1), 2D .0524 NSPS: 40 CFR Part 60, Subpart WWW NESHAP: N/A PSD: N/A PSD Avoidance: N/A NC Toxics: N/A 112(r): N/A Other: N/A	
Facility Data			
Applicant (Facility's Name): New Hanover County Secure Landfill Facility Address: New Hanover County Secure Landfill 5210 U S Highway 421 North Wilmington, NC 28401 SIC: 4953 / Refuse Systems NAICS: 562212 / Solid Waste Landfill Facility Classification: Before: None After: Title V Fee Classification: Before: None After: Title V			
Contact Data			
Facility Contact	Authorized Contact	Technical Contact	Application Data
Paul Marlow Environ. Programs Mgr. 3002 U.S. Highway 421 N Wilmington NC, 28401 (910) 798-4400 pmarlow@nhcgov.com	Bruce Shell County Manager 230 Government Center Dr. Suite 195 Wilmington, NC 28403 (910) 798-7184 bshell@nhcgov.com	Paul Marlow Environ. Programs Mgr. 3002 U.S. Highway 421N Wilmington NC, 28401 (910) 798-4400 pmarlow@nhcgov.com	Application Number: 6500343.07A Date Received: 06/18/2007 Application Type: New Permit Application Schedule: TV-1st Time Existing Permit Data Existing Permit Number: None Existing Permit Issue Date: None Existing Permit Expiration Date: None
Consultant: SCS Engineers, P.C.		Contact: Chad Leatherwood, P.E.	Phone: 828-285-8951
Review Engineer: Booker Pullen Regional Engineer: Dean Carroll Review Engineer's Signature:		Comments / Recommendations: Issue: 09805T00 Permit Issue Date: XXXX, 2008 Permit Expiration Date: XXXX, 2013	
Begin Date: April 17, 2008			

I. Introduction/Description:

New Hanover County owns and operates a municipal solid waste (MSW) landfill located in New Hanover County, North Carolina. This landfill is located in an industrial area northwest of the City of Wilmington and adjacent to Highway 421 North. The landfill does not currently own an air quality permit. Permit application 6500343.07A was received by the Raleigh Central Office on June 18, 2007 and was considered complete on that date. This application will be processed as a "1st Time Title V" and go through the 30-day public notice and the 45-day EPA review in accordance with 15A NCAC 2Q .0501(c)(1).

II. Purpose of this application:

Apply for a 1st Time Title V permit.

III. Changes to existing Title V Permit per this application (6500343.07A):

This facility does not currently own an Air Quality permit.

IV. Facility Description:

This facility is a Municipal Solid Waste Landfill located in New Hanover County. They accept municipal solid waste from the surrounding area, ash from the nearby WASTETEC municipal waste combustor, and some asbestos (placed in a designated and separate cell) in accordance with their Solid Waste Permit (NC DSW No. 65004).

IV. Facility Description: (continued)

The landfill also has a public drop off for used oil that is sent off-site for recycling. Additionally, leachate from the landfill is routed through a package water treatment plant (aeration, clarification, sandfilter). After this treatment, some of the treated leachate is routed through a constructed wetlands area for further treatment and is spray irrigated back on the closed areas of the landfill to maintain suitable cap vegetation and moisture levels. The landfill is comprised of several cells and has been accepting waste since 1981.

V. Statement of Compliance:

The DAQ has reviewed the compliance status of this facility. This facility currently does not hold an air permit, therefore no inspections have been performed to date. The applicant has certified that the facility will be in compliance with all applicable requirements at the time of permit issuance and will continue to comply with these requirements. The applicant has also certified that the facility will be in compliance with any applicable requirements taking effect during the term of the permit and will meet such requirements on a timely basis.

VI. Summary Of The Emission Sources at this facility:

Emission Source ID	Emission Source Description	Control Device	Control Device Description
ES-1 NSPS, Subpart WWW	Municipal solid waste landfill (closed portion and active portion)	None	None

VII. Source-by Source Evaluation:

A. Municipal solid waste landfill (ID Nos. ES-1):

1. **Description:** This facility is a Municipal Solid Waste Landfill consisting of a several closed cells and some active cells. On August 21, 2006, New Hanover County submitted an application to the Division Of Solid Waste to construct cells 6E and to expand vertically above Cells 2-6. Approval of this application by the Division of Solid Waste will result in a permitted design capacity of 8.9 million cubic yards (6.8 million cubic meters) and 4.8 million megagrams (by mass) for the landfill.
2. **Applicable Regulatory Requirements for this modification:** This landfill is subject to 40 CFR Part 60, Subpart WWW because the permitted design capacity of the landfill is greater than 2.5 million megagrams and 2.5 million cubic meters. The landfill is not subject to MACT, 40 CFR Part 63, Subpart AAAA, because this landfill is not a major source of HAP emissions (10/25 tpy) and because the NMOC emission rate from the in-place waste does not currently exceed 50 megagrams (per a 2004 Tier 2 test) which would require the facility to install a gas collection and control system per NSPS, Subpart WWW.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Nonmethane organic compounds (NMOC)	Work practice standards until the 50 Megagram threshold is exceeded	15A NCAC 2D .0524 40 CFR Part 60, Subpart WWW
Odorous emissions	Apply suitable odor control measures "State-enforceable only"	15A NCAC 2D .1806

a. 15A NCAC 2D .0524, 40 CFR Part 60, Subpart WWW "New Source Performance Standards"

Regulation Analysis

- i. This municipal solid waste landfill (ID No. ES-1) was modified after May 1, 1991, and is subject to 40 CFR Part 60, Subpart WWW. It is subject to Title V because the design capacity is greater than 2.5 million megagrams (2.75 million tons) by mass and 2.5 million cubic meters by volume. New Hanover County Secure Landfill submitted an initial design capacity report in 1997, and then a revised design capacity report in 2002 based on a permitted landfill expansion. The landfill conducted Tier 2 testing in 1999 and 2004 to determine the site specific NMOC emissions concentration according to 40 CFR §60.754(a)(3) and evaluated NMOC emission rates. The results of these testing events demonstrated that the landfill NMOC emission rates have not exceeded 50 Mg/year. Current analysis of NMOC emission rates indicate that the facility will not exceed 50 Mg per year until the year 2015 based on the expected waste acceptance rates.

Design Capacity = 8.9 million yards³

$8.9 \text{ million yd}^3 \times 0.765 \text{ m}^3/\text{yd}^3 = 6.8 \text{ million m}^3$

$8.9 \text{ million yd}^3 \times 0.6 \text{ tons}/\text{yd}^3 \times 0.907 \text{ megagrams}/\text{ton} = 4.8 \text{ million megagrams}$

The landfill owner or operator shall recalculate the NMOC mass emission rate using the equations provided in paragraph (a)(1)(i) or (a)(1)(ii) of 40 CFR §60.754 “Test Methods and Procedures” and using the average NMOC concentration from the collected samples instead of the default value in the equation provided in paragraph (a)(1) of 40 CFR §60.754.

If the resulting mass emission rate calculated using the site-specific NMOC concentration is equal to or greater than 50 megagrams per year, then the landfill owner or operator shall either comply with §60.752(b)(2), or determine the site-specific methane generation rate constant and recalculate the NMOC emission rate using the site-specific methane generation rate using the procedure specified in paragraph (a)(4) of 40 CFR §60.754.

If the resulting NMOC mass emission rate is less than 50 megagrams per year, the owner or operator shall submit a periodic estimate of the emission rate report as provided in §60.757(b)(1) and retest the site-specific NMOC concentration every 5 years using the methods specified in 40 CFR §60.754.

Testing [15A NCAC 2Q .0524, 40 CFR §60.754]

- ii. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0524, 40 CFR §60.754 and General Condition JJ located in Section 3 of the Permit. If the results of this test are above the limits given in 40 CFR Part 60, Subpart WWW, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524, Subpart WWW.

There is no initial performance test for this landfill at this time. However, there will be a requirement placed into the permit to perform the Tier 2 test every five years from the date of the last test.

- iii. **Standards For Air Emissions From Municipal Solid Waste Landfills** [40 CFR Part 60, §60.752]

- (A) When this facility’s landfill has a design capacity equal to or greater than 2.5 million megagrams by mass and 2.5 million cubic meters, **with a calculated NMOC emission rate equal to or greater than 50 megagrams per year**, they shall submit a gas collection and control system design plan prepared by a professional engineer who is registered in the State of North Carolina, within one year of the annual report that shows that NMOC emissions will exceed 50 Mg per year.
 - (1) The collection and control system design plan shall include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions of §§60.753 through 60.758 proposed by the owner or operator.
 - (2) The collection and control system design plan shall either conform with specifications for active collection systems in §60.759 or include a demonstration to the Administrator's satisfaction of the sufficiency of the alternative provisions to §60.759.
- (B) After the approval of the collection and control system design plan, the owner and operator shall install a collection and control system that captures the gas generated within the landfill as required by paragraphs (b)(2)(ii)(A) or (B) and (b)(2)(iii) of this section within 30 months after the first annual report in which the emission rate equals or exceeds 50 megagrams per year, unless Tier 2 or Tier 3 sampling demonstrates that the emission rate is less than 50 megagrams per year, as specified in §60.757(c)(1) or 2.
 - (1) An active collection system shall:
 - (a) Collect gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been placed for a period of 5 years or more if active; or 2 years or more if closed or at final grade.
 - (b) Collect gas at a sufficient extraction rate and be designed to minimize off-site migration of subsurface gas.

- (c) Route all the collected gas to a control system that complies with the requirements in either paragraph (b)(2)(iii) (A), (B) or (C) of this section.
- (d) The control device shall be operated within the parameter ranges established during the initial or most recent performance test. The operating parameters to be monitored are specified in §60.756.

Monitoring/Recordkeeping [40 CFR Part 60, §60.756 and §60.758]

- iv. Except as provided in §60.752(b)(2)(i)(B), each owner or operator of an MSW landfill subject to the provisions of §60.752(b) shall keep for at least 5 years up-to-date, readily accessible, on-site records of the design capacity report which triggered §60.752(b), the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.
- v. Each owner or operator subject to the provisions of this subpart shall keep readily accessible documentation of the nature, date of deposition, amount, and location of asbestos-containing or nondegradable waste excluded from collection as provided in §60.759(a)(3)(i) as well as any nonproductive areas excluded from collection as provided in §60.759(a)(3)(ii).

Reporting [40 CFR Part 60, §60.757]

- vi. This facility is subject to the requirements of this 40 CFR Part 60, Subpart WWW and shall submit an NMOC emission rate report to the Regional Office annually, except as provided for in paragraphs (b)(1)(ii) or (b)(3) of 40 CFR §60.757. The Regional Office may request such additional information as may be necessary to verify the reported NMOC emission rate.

The NMOC emission rate report shall contain an annual or 5-year estimate of the NMOC emission rate calculated using the formula and procedures provided in §60.754(a) or (b), as applicable.

- xiv. The Permittee shall submit a **summary report** of monitoring and recordkeeping activities by January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

c. 15A NCAC 2D .1806 "Control And Prohibition Of Odorous Emissions" (State-enforceable only)

The Permittee shall not operate the facility without implementing management practices or installing and operating odor control equipment sufficient to prevent odorous emissions from the facility from causing or contributing to objectionable odors beyond the facility's boundary.

- VIII.** A Professional Engineers Seal was submitted by Mr. Chad Leatherwood, P.E. of SCS Engineers, P.C., a registered engineer in the State of North Carolina for this application.
- IX.** A consistency determination request was included with the application received on June 18, 2007. Ms. Ann S. Hines, Chief Zoning Enforcement Official, states that New Hanover County Secure landfill is located in the I-2 district, and so to the best of her knowledge, is in compliance with the New Hanover County Zoning Ordinance. The New Hanover County Zoning Division does not object to the issuance of this permit.
- X.** An application fee of \$867.00 was received by the DAQ Raleigh Central Office on June 18, 2007.
- XI.** The appropriate number of copies of the application were received by the DAQ on June 18, 2007.
- XII.** The application did contain the Reduction and Recycling Form.

XIII. The application **was not** originally signed by an authorized official as defined by 15A NCAC 2Q .0304(j). A letter dated April 21, 2008 was sent to the applicant requesting the responsible official for this facility meet the requirements of 40 CFR Part 70, §70.2, “the responsible official for a municipality, State, Federal, or public agency is to be either a principal executive officer or ranking elected official.” The letter also requested that form “A” and form “E5” in application No. 6500343.07A be re-signed by the appropriate responsible official. The application signature pages were resubmitted on May 30, 2008. The response letter designated Mr. Bruce Shell, County Manager, as the responsible official for future correspondence.

XIV. MACT (40 CFR Part 63, Subpart AAAAA):

The EPA promulgated a NESHAP (MACT) for municipal solid waste landfills on January 16, 2003. This MACT applies to landfills that are major for HAPs (10 tons per year of a single HAP or 25 tons per year of all HAP in aggregate) or to a landfill that has a mass ≥ 2.5 million megagrams and a volume of ≥ 2.5 million as well as an NMOC emission rate that exceeds 50 megagrams per year. Since New Hanover County Secure Landfill does not meet the major source definition or the NMOC emission rate threshold, it **is not subject** to MACT at this time.

XV. Air Toxics:

In accordance with 15A NCAC 2Q .0705, existing facilities (those in operation before October 1, 1993) that may be subject to a MACT standard under section 112 of the Clean Air Act Amendments, must comply with the Toxic Air Pollutant Standards (15A NCAC 2D .1100) by the deadline that the facility is required to comply with the applicable NESHAP. The date by which this landfill is required to install the collection and control system under NSPS, Subpart WWW, represents the date that the facility must submit a toxics evaluation to demonstrate compliance with the North Carolina Air Toxics Program.

XV. Public Notice

A thirty-day public notice **is required** for this one-step Significant Modification.

Public notice: The 30 day public notice period was from ____, 2008 through _____. ____ public comments were received for this permit application.

EPA 45-Day review Period: The DAQ sent copies of the appropriate information to the USEPA prior to the public notice. The EPA 45-day review period was from _____, 2008 through _____ 2008. The USEPA _____ have any comments on this modification.

XVI. NonAttainment:

New Hanover County is not designated as nonattainment for the eight-hour ozone standard.

XVII. Prevention of Significant Deterioration (PSD)

This facility is a minor source for PSD. The modifications in this permit will not increase emissions into the atmosphere. Therefore, PSD does not apply.

XVIII. This facility is not subject to 15A NCAC 2Q .0508(g) “Prevention of Accidental Releases” because it does not store chemicals that are subject to this regulation in quantities great enough to cross the threshold limits.

XIX. Recommendations

This modification issued under section 15A NCAC 2Q .0501(c)(1) for New Hanover County Secure Landfill, located at 5210 U. S. Highway 421 North, Wilmington, North Carolina, has been reviewed by the DAQ to determine compliance with all procedures and requirements. The Wilmington Regional Office did not comment on the initial application, but did comment on the draft permit. The DAQ has determined that this facility is complying or will achieve compliance as specified in the permit with all applicable requirements. The Wilmington Regional Office concurs.

Issue permit No. 09805T00.