

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Air Permit Review

Permit Issue Date: date, 2005

Region: Raleigh Regional Office
County: Wake
NC Facility ID: 9200603
Inspector's Name: Brian Bland
Date of Last Inspection: 04/23/2004
Compliance Code: W/In Violation W/regard To Proc Compliance

Facility Data			Permit Applicability (this application only)		
Applicant (Facility's Name): City of Raleigh - Wilders Grove Landfill Facility Address: City of Raleigh - Wilders Grove Landfill 4120 New Bern Avenue Raleigh, NC 27602 SIC: 4953 / Refuse Systems NAICS: 562212 / Solid Waste Landfill Facility Classification: Before: Title V After: Title V Fee Classification: Before: Title V After: Title V			SIP: 15A NCAC 2D .1111 NSPS: NESHAP: 40 CFR 63, Subpart AAAA PSD: PSD Avoidance: NC Toxics: 15A NCAC 2Q .0705 112(r): Other:		
Contact Data			Application Data		
Facility Contact	Authorized Contact	Technical Contact	Application Number: 9200603.04A Date Received: 06/30/2004 Application Type: Renewal Application Schedule: TV-Renewal Existing Permit Data Existing Permit Number: 08835/T00 Existing Permit Issue Date: 04/20/2000 Existing Permit Expiration Date: 03/31/2005		
Jimmy Johnson Solid Waste Specialist (919) 831-6133 400 West Peace Street Raleigh NC, 27602	Gerald Latta Solid Waste Director (919) 831-6890 222 West Hargett Road Raleigh NC, 27602	Jimmy Johnson Solid Waste Specialist (919) 831-6133 400 West Peace Street Raleigh NC, 27602			
Review Engineer: Mark Cuilla Review Engineer's Signature: Date:			Comments / Recommendations: Issue 08835/T01 Permit Issue Date: date, 2005 Permit Expiration Date: date, 2010		

I. Purpose of Application

The City of Raleigh – Wilders Grove Landfill is currently operating under permit 08835T00 set to expire on March 31, 2005. Per the requirements of the permit, an application for renewal was due by June 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 facility is a non-operational municipal solid waste landfill which when opened received waste from Wake County. The facility comprised of approximately 298 acres of mostly unlined landfill with a design capacity greater than 2.5 million Mg and 2.5 million cubic meters. The landfill was officially closed in 1998. The anaerobic decomposition of the buried waste produces landfill gas which is collected and conveyed to two landfill gas-fired boilers (located in an adjacent property owned by Ajinomoto USA, Inc.) and/or a candlestick-type flare. The burning of landfill gas in the boilers is the primary operating scenario. The flare is physically located on the landfill and is used to burn off excess landfill gas when the boilers are offline.

III. History/Background/Application Chronology

April 20, 2000 – First time Title V permit (**08835T00**) 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 January 24, 2001, begin installation by February 24, 2001, complete installation by October 24, 2001, and submit initial annual report with performance test requirements by April 24, 2002.

June 30, 2004 – Permit application **9200603.04A** was received for the renewal of the Title V permit. The application was deemed complete for processing.

date, 2005 – 30-day public notice and EPA review periods begun.

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 all dates and permit revision numbers
TOC	-	-updated shell Section titles
All	Header	-amended permit revision number
3	- Equipment Table	-updated shell Section title -added MACT Subpart citation -updated permit revision number of associated permit in asterisked language (04434R14)
4	2.1 A (table)	-added MACT and Air Toxics citations -updated cross reference error
5	2.1 A.1.c.iv 2.1 A.1.i	-updated NSPS language -updated NSPS language
6	2.1 A.1.m 2.1 A.2.e 2.1 A.3.a 2.1 A.3.c	-updated reporting language -corrected paragraph heading -updated shell language -corrected paragraph heading
7-8	2.1 A.4	-added MACT permit condition
8	2.1 A.5 2.1 A.6	-updated shell language -added Air Toxics demonstration permit condition
8-16	General Conditions	-updated shell conditions

Note. There are no associated ESM modifications as part of this permit renewal process.

V. Regulatory Review

The facility is currently subject to the following regulations:

15A NCAC 2D .0516, Sulfur Dioxide Emissions from Combustion Sources
15A NCAC 2D .0521, Control of Visible Emissions
15A NCAC 2D .0524, New Source Performance Standards (40 CFR 60, Subpart WWW)
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 the following new permit conditions have been added:

15A NCAC 2D .1111, Maximum Achievable Control Technology (40 CFR 63, Subpart AAAA)
15A NCAC 2Q .0705, Existing Facilities and SIC Calls

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 source in accordance with 63.1935(a)(3). An existing 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 (m³) and has estimated uncontrolled emissions equal to or greater than 50 Mg per year nonmethane organic compounds (NMOCs) emissions. As an existing source, the facility should have been in compliance with this MACT by January 16, 2004 (40 CFR 63,1945(b)). 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 No. ES-001**) is controlled by a gas collection and control system (**ID No. CD-GCCS1**) feeding either two boilers (**ID Nos. F-6102 and F-6103**) and/or a candlestick-type flare (**ID No. LFG-S4**). 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 **June 6, 2005 per your extension request submitted April 28, 2005**, 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:

Pollutant(s)	2003 Actual Emissions (tpy)
CO	13.10
NO _x	2.4
PM	0.6
SO ₂	3.7
VOC	0.27
HAPs	0.17

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

RRO was presented a DRAFT permit and review prior to public notice and issuance.

RCO recommends issuance of the renewed title V permit.