

NORTH CAROLINA DIVISION OF AIR QUALITY			Region: Fayetteville Regional Office		
Air Permit Review – (1 step) Significant Modification in accordance with 15A NCAC 2D .0501(c)(1)			County: Cumberland		
Permit Issue Date: XXXX, 2008			NC Facility ID: 2600161		
			Inspector's Name: Mitchell Revels		
			Date of Last Inspection: 09/18/2007		
			Compliance Code: B/In Violation W/regard To Em & Compl		
Facility Data			Permit Applicability (this application only)		
Applicant (Facility's Name): Cumberland County Office Of Solid Waste Management - Ann Street Landfill			SIP: 15A NCAC 2Q .0501(c)(1), 2D .0516, 2D .0521, 2D .0524, 2D .1111, 2D .1806		
Facility Address: Cumberland County Office Of Solid Waste Management - Ann Street Landfill 698 Ann Street Fayetteville, NC 28301			NSPS: 40 CFR Part 60, Subpart WWW		
SIC: 4953 / Refuse Systems			NESHAP: 40 CFR Part 63, Subpart AAAA		
NAICS: 562212 / Solid Waste Landfill			PSD: N/A		
Facility Classification: Before: Title V After: Title V			PSD Avoidance: N/A		
Fee Classification: Before: Title V After: Title V			NC Toxics: N/A		
			112(r): N/A		
			Other: N/A		
Contact Data			Application Data		
Facility Contact	Authorized Contact	Technical Contact	Application Number: 2600161.07A		
Robert Howard Director (910) 321-6913 698 Ann Street Fayetteville NC, 28301	Kenneth S. Edge, Chairman Board of Commissioners (910) 678-7771 P. O. ox 1829 Fayetteville NC, 28302	Robert Howard Director (910) 321-6913 698 Ann Street Fayetteville NC, 28301	Date Received: 10/01/2007		
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			Application Type: Modification		
			Application Schedule: Significant		
			Existing Permit Data		
			Existing Permit Number: 08846T03		
			Existing Permit Issue Date: 12/12/2005		
			Existing Permit Expiration Date: 02/28/2010		
Consultant: CDM			Contact: George Siple		
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Review Engineer: Booker Pullen			Comments / Recommendations:		
Regional Compliance/Engineers: Steven Vozzo/Robert Hayden/ Mitch Revels			Issue: 08846T04		
Review Engineer's Signature:			Permit Issue Date: XXXX, 2008		
Begin Date: January 24, 2008			Permit Expiration Date: 02/28/2010		

I. Introduction/Description:

Cumberland County Ann Street Landfill, owns and operates a municipal solid waste (MSW) landfill located in Cumberland County. Permit application 2600161.07A was received by the Raleigh Central Office on October 1, 2007. The application was not considered complete on that date because of issues with the designated "responsible official" for a municipality such as the Cumberland County Ann Street Landfill. On August 14, 2007, the Fayetteville Regional Office sent a letter to the Ann Street Landfill concerning the designated "responsible official". The following information was submitted to Cumberland County.

Designation of Responsible Official

In reviewing the regulations and recent permit non-compliance, the Division has determined that permits issued to a municipality cannot be delegated to the Landfill Director. According to 40 CFR 70.2, *Definitions*, "responsible official" means 'either a principal executive officer or ranking elected official.' As such, all future permits issued by this Division will be issued to the County Manager, Mr. James Martin.

A follow-up letter was written by the Raleigh Central Office on October 30, 2007 concerning the designated "responsible official" after the permit application was submitted to the DAQ with the Landfill Director's signature (Mr. Robert Howard).

The application signature pages were resubmitted on December 3, 2007, signed by Mr. Kenneth Edge. The response letter designated Mr. Kenneth Edge, Chairman of the Cumberland County Board of Commissioners, as the responsible official for all future correspondence. The application was considered complete on December 3, 2007. This application will be processed as a one step Significant Modification in accordance with 15A NCAC 2Q .0501(c)(1) and will go through both the 30 day public notice and the 45 day EPA review period at this time.

II. Purpose of this application:

- A. Add pertinent conditions to the current Title V Air Permit from the Special Order by Consent (SOC) written for this facility due to violations in design and operation of the gas collection and control system. SOC No. 2007-007 was signed on November 28, 2007 with an expiration date of December 2008.
- B. Add additional regulation language from NSPS, Subpart WWWW and the revised gas collection and control system design plan in order to better clarify the compliance and monitoring requirements in the body of the permit.
- C. Remove the two boilers (currently listed in IBEAM) that are located at the Cargill facility (Ann Street Landfill sells the collected landfill gas to this facility) from the IBEAM data base because the landfill is not liable for the gas after it passes through the gas treatment system. Ann Street Landfill has met the compliance obligations for the gas in accordance with NSPS, Subpart WWWW after treatment.

III. Changes to existing Title V Permit per this application (2600161.07A):

Old Page No.	New Page No.	Condition No.	Changes
Page 1	Page 1	Cover letter	Changed date, revised permit number, and revised the beginning of the first paragraph for a "Significant Modification to the permit, added the latest cover page language
Page 2	Page 2	Cover letter	Changed date on letter, effective date of permit, changed the Chief of permitting to Don van der Vaart, added EPA to copy list at page bottom
Attachment to cover letter	Attachment to cover letter	Changes to existing permit	Revised table listing the changes to the existing permit per this application, changed application number and permit number
Body of the Permit			
Page 1	Page 1	Permit	Revised permit number, changed issue date, effective date, application number, and complete application date, removed the renewal date, changed the Chief of permitting to Don van der Vaart
All pages	All pages	Heading	Changed permit revision to T04
Page 2	Page 2	Table of Contents	Added construction Section
Page 3	Page 3	Permitted Sources Table	Reformatted the table to help clarify how the sources are linked to the control devices
Page 4	Pages 4-13	Specific Limitations and Conditions	Added additional language to the permit from NSPS Subpart WWWW to clarify monitoring, recordkeeping, reporting, testing, and operational requirements
Page 8	Pages 15	Specific Limitations and Conditions	Revised the Last MACT toxics, 15A NCAC 2Q .0705 and 2Q .0711 language, Condition 2.1 A. 7.
N/A	Page 16-17	Specific Limitations and Conditions	Added Section 2.2 "Special Order of Consent" to the permit
Pages 10-18	Pages 16-24	General Conditions	Added revised set of General Conditions

IV. Facility Description:

This facility is a Municipal Solid Waste Landfill located in Cumberland County. This landfill accepts waste from the surrounding area. The landfill consists of a closed unlined portion (ES-1) and an active, lined section (ES-3). Landfill gas is collected by a gas collection and control system.

V. Statement of Compliance:

The DAQ has reviewed the compliance status of this facility. This facility was found by the DAQ to be out of compliance with the requirements of 40 CFR Part 60, Subpart WWW. Notices of violation were issued to the facility. A Special Order by Consent (SOC No. 2007-007) was signed on November 28, 2007 with an expiration date of December 1, 2008, in order to help this facility return to compliance.

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 MACT, Subpart AAAAA	Municipal solid waste landfill (closed portion)	CD-GCCS1 and CD-1	One landfill gas collection (CD-GCCS1) and control system in series with one landfill gas-fired candlestick-type flare (36 million Btu per hour heat input capacity, ID No. CD-1)
ES-3 NSPS, Subpart WWW MACT, Subpart AAAAA	Municipal solid waste landfill (active portion)	-And/or- Gas treatment system	This system compresses the landfill gas, filters it, and dewateres (refrigeration) it prior to sending the landfill gas offsite

VII. Source-by Source Evaluation (For sources for which this 2-step, Significant Modification applies):

A. Municipal solid waste landfill (ID Nos. ES-1 and ES-3) with associated control equipment;

- One gas collection and control system (GCCS1),
- One candle-stick flare (36 million Btu per hour heat input capacity, ID No. CD-1)

1. Description: This facility is a Municipal Solid Waste Landfill consisting of a closed (ES-1), unlined portion (ID No. ES-1, 1,539,293 Mg) and an active, lined portion (ID No. ES-3). This facility currently has a gas collection and control system (GCCS) that primarily routes the landfill gas to a offsite end user of the landfill gas via a gas treatment system. A candle stick flare is located on site which burns the landfill gas that is not piped offsite.

2. Applicable Regulatory Requirements for this modification: This landfill is subject to 40 CFR Part 60, Subpart WWW and 40 CFR Part 63, Subpart AAAAA.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Nonmethane organic compounds (NMOC)	Route landfill gas to a flare designed in accordance with 40CFR Part 60, 60.18 (AOS) or Route the collected landfill gas through a gas treatment system that processes the gas for subsequent sale (compresses, filters, and dewateres) (POS)	15A NCAC 2D .0524 40 CFR Part 60, Subpart WWW
Sulfur dioxide	AOS - landfill gas routed to flare 2.3 pounds per million Btu heat input	15A NCAC 2D .0516
Visible emissions	AOS - landfill gas routed to flare 20 percent opacity	15A NCAC 2D .0521
Odorous emissions	Apply suitable odor control measures “State-enforceable only”	15A NCAC 2D .1806
Hazardous air pollutants	Work practice standards, startup, shutdown, and malfunction plan	15A NCAC 2D .1111 40 CFR Part 63, Subpart AAAAA
Toxic air pollutants	Facility wide toxics evaluation	15A NCAC 2Q .0711
	Modeled limits	15A NCAC 2D .1100
PM from Fugitive dust	Work practice standards with written compliance plan	15A NCAC 2D .0540

- a. **15A NCAC 2D .0516 "Sulfur Dioxide Emissions From Combustion Sources" (For utility flare, CD-1)**
No regulatory review is required for this rule because the modifications in this application (2600161.07A) did not change this regulatory requirement.
- b. **15A NCAC 2D .0521 "Control Of Visible Emissions" (For utility flare, CD-1)**
No regulatory review is required for this rule because the modifications in this application (2600161.07A) did not change this regulatory requirement.
- c. **15A NCAC 2D .1806 "Control And Prohibition Of Odorous Emissions" (State-enforceable only)**
No regulatory review is required for this rule because the modifications in this application (2600161.07A) did not change this regulatory requirement.
- d. **15A NCAC 2D .1111, 40 CFR Part 63, Subpart AAAA: National Emission Standards for Hazardous Air Pollutants, Municipal Solid Waste Landfills (including control system)**
No regulatory review is required for this rule because the modifications in this application (2600161.07A) did not change this regulatory requirement.
- e. **15A NCAC 2D .0524, 40 CFR Part 60, Subpart WWW "New Source Performance Standards"**

Regulation Analysis

- i. This municipal solid waste landfill (ID Nos. ES-1 and ES-3) 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. This facility has a gas collection and control system, that:

Routes landfill gas to a flare designed in accordance with 40CFR Part 60, §60.18 **and/or** routes the collected landfill gas through a gas treatment system that processes the gas for subsequent sale (compresses, filters, and dewaterers).

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 the candlestick flare as long as it is designed in accordance with §60.18. However, there will be a requirement to retest the gas collection and control system since the design plan was significantly revised in the Special Order by Consent.

- iii. **Initial Performance Testing** [15A NCAC 2D .0524, 40 CFR §60.757(g)]
Each owner or operator seeking to comply with §60.752(b)(2)(iii) shall include the following information with the initial performance test report required under §60.8.
 - (A) A diagram of the collection system showing collection system positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded from collection and the proposed sites for the future collection system expansion;
 - (B) The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based;
 - (C) The documentation of the presence of asbestos or nondegradable material for each area from which collection wells have been excluded based on the presence of asbestos or nondegradable material;
 - (D) The sum of the gas generation flow rates for all areas from which collection wells have been excluded based on nonproductivity and the calculations of gas generation flow rate for each excluded area;

- (E) The provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill; and
- (F) The provisions for the control of off-site migration.

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

- (A) The owner or operator of a municipal solid waste landfill having 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, 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) If the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, 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.

iv. **Operational Standards For Collection and Control Systems** [40 CFR Part 60, §60.753]

- (A) Each owner or operator of a MSW landfill with a gas collection and control system used to comply with the provisions of §60.752(b)(2)(ii) of this subpart shall:
 - (1) Operate the collection system such that gas is collected from each area, cell, or group of cells in the MSW landfill in which solid waste has been in place for:
 - (a) 5 years or more if active; or 2 years or more if closed or at final grade;
 - (b) Operate the collection system with negative pressure at each wellhead except under the following conditions:
 - (i) A fire or increased well temperature. The owner or operator shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the annual reports as provided in §60.757(f)(1);
 - (ii) Use of a geomembrane or synthetic cover. The owner or operator shall develop acceptable pressure limits in the design plan;
 - (iii) A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes shall be submitted for approval to the DAQ Regional Office;
 - (c) Operate each interior wellhead in the collection system with a landfill gas temperature less than 55 °C and with either a nitrogen level less than 20 percent or an oxygen level less than 5 percent. The owner or operator may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.
 - (i) The nitrogen level shall be determined using Method 3C, unless an alternative test method is established as allowed by §60.752(b)(2)(i) of this subpart.
 - (ii) Unless an alternative test method is established as allowed by §60.752(b)(2)(i) of this subpart, the oxygen shall be determined by an oxygen meter using Method 3A or 3C except that:
 - (A) The span shall be set so that the regulatory limit is between 20 and 50 percent of the span;
 - (B) A data recorder is not required;
 - (C) Only two calibration gases are required, a zero and span, and ambient air may be used as the span;
 - (D) A calibration error check is not required;
 - (E) The allowable sample bias, zero drift, and calibration drift are ±10 percent.

- (d) Operate the collection system so that the methane concentration is less than 500 parts per million above background at the surface of the landfill. To determine if this level is exceeded, the owner or operator shall conduct surface testing around the perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The owner or operator may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan shall be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30 meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing.
- (e) Operate the system such that all collected gases are vented to a control system designed and operated in compliance with §60.752(b)(2)(iii). In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within 1 hour; and
- (f) Operate the control or treatment system at all times when the collected gas is routed to the system.
- (g) If monitoring demonstrates that the operational requirements of this subpart are not met, corrective action shall be taken as specified in §60.755(a)(3) through (5) or §60.755(c) of this subpart. If corrective actions are taken as specified in §60.755, the monitored exceedance is not a violation of the operational requirements in this section.

v. **Compliance Provisions** [40 CFR Part 60, §60.755]

- (A) For the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with §60.752(b)(2)(ii)(A)(3), the owner or operator shall measure gauge pressure in the gas collection header at each individual well, monthly. If a positive pressure exists, action shall be initiated to correct the exceedance within 5 calendar days, except for the three conditions allowed under §60.753(b). If negative pressure cannot be achieved without excess air infiltration within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial measurement of positive pressure. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance shall be submitted to the DAQ Regional Office for approval.
- (B) Owners or operators are not required to expand the system as required in paragraph §60.755(a)(3) of this section during the first 180 days after gas collection system startup.
- (C) For the purpose of identifying whether excess air infiltration into the landfill is occurring, the owner or operator shall monitor each well monthly for temperature and nitrogen or oxygen as provided in §60.753(c). If a well exceeds one of these operating parameters, action shall be initiated to correct the exceedance within 5 calendar days. If correction of the exceedance cannot be achieved within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial exceedance. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance shall be submitted to the Regional Office for approval.

- (D) An owner or operator seeking to demonstrate compliance with §60.752(b)(2)(ii)(A)(4) through the use of a collection system not conforming to the specifications provided in §60.759 shall provide information satisfactory to the Director as specified in §60.752(b)(2)(i)(C) demonstrating that off-site migration is being controlled.
- (E) For purposes of compliance with §60.753(a), each owner or operator of a controlled landfill shall place each well or design component as specified in the approved design plan as provided in §60.752(b)(2)(i). Each well shall be installed no later than 60 days after the date on which the initial solid waste has been in place for a period of 5 years or more if active; or 2 years or more if closed or at final grade.
- (F) The following procedures shall be used for compliance with the surface methane operational standard as provided in §60.753(d).
 - (1) After installation of the collection system, the owner or operator shall monitor surface concentrations of methane along the entire perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals (or a site-specific established spacing) for each collection area on a quarterly basis using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in paragraph (d) of this section.
 - (2) The background concentration shall be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from the perimeter wells.
 - (3) Surface emission monitoring shall be performed in accordance with section 4.3.1 of Method 21 of appendix A of 40 CFR Part 60, except that the probe inlet shall be placed within 5 to 10 centimeters of the ground. Monitoring shall be performed during typical meteorological conditions.
 - (4) Any reading of 500 parts per million or more above background at any location shall be recorded as a monitored exceedance and the actions specified in this section shall be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational requirements of §60.753(d).
 - (a) The location of each monitored exceedance shall be marked and the location recorded.
 - (b) Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance shall be made and the location shall be re-monitored within 10 calendar days of detecting the exceedance.
 - (c) If the re-monitoring of the location shows a second exceedance, additional corrective action shall be taken and the location shall be monitored again within 10 days of the second exceedance. If the re-monitoring shows a third exceedance for the same location, the action specified in paragraph §60.755(c)(4)(v) shall be taken, and no further monitoring of that location is required until the action specified in paragraph §60.755(c)(4)(v) has been taken.
 - (d) Any location that initially showed an exceedance but has a methane concentration less than 500 ppm methane above background at the 10-day re-monitoring specified in paragraph §60.755(c)(4) (ii) or (iii) shall be re-monitored 1 month from the initial exceedance. If the 1-month re-monitoring shows a concentration less than 500 parts per million above background, no further monitoring of that location is required until the next quarterly monitoring period. If the 1-month re-monitoring shows an exceedance, the actions specified in paragraph §60.755(c)(4) (iii) or (v) shall be taken.

- (e) For any location where monitored methane concentration equals or exceeds 500 parts per million above background three times within a quarterly period, a new well or other collection device shall be installed within 120 calendar days of the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be submitted to the Director for approval.
- (G) The owner or operator shall implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis.
- (H) Each owner or operator seeking to comply with the provisions in paragraph §60.755(c) of this section shall comply with the following instrumentation specifications and procedures for surface emission monitoring devices:
 - (1) The portable analyzer shall meet the instrument specifications provided in section 3 of Method 21 of appendix A of 40 CFR Part 60, except that “methane” shall replace all references to VOC.
 - (2) The calibration gas shall be methane, diluted to a nominal concentration of 500 parts per million in air.
 - (3) To meet the performance evaluation requirements in section 3.1.3 of Method 21 of appendix A of this part, the instrument evaluation procedures of section 4.4 of Method 21 of appendix A of 40 CFR Part 60 shall be used.
 - (4) The calibration procedures provided in section 4.2 of Method 21 of appendix A of this part shall be followed immediately before commencing a surface monitoring survey.
- (I) The provisions of this subpart apply at all times, except during periods of start-up, shutdown, or malfunction, provided that the duration of start-up, shutdown, or malfunction shall not exceed 5 days for collection systems and shall not exceed 1 hour for treatment or control devices.

Monitoring [40 CFR Part 60, §60.756]

- vi. If a gas collection and control system is used, the Permittee shall install a sampling port and a thermometer, other temperature measuring device, or an access port for temperature measurements at each wellhead and:
 - (A) Measure the gauge pressure in the gas collection header on a **monthly** basis as provided in 40 CFR §60.755(a)(3);
 - (B) Monitor nitrogen or oxygen concentration in the landfill gas on a **monthly** basis as provided in 40 CFR §60.755(a)(5);
 - (C) Monitor temperature of the landfill gas on a **monthly** basis as provided in §60.755(a)(5); and
 - (D) Monitor surface concentrations of methane along the entire perimeter of the collection area (or site-specific established spacing) for each collection area on a **quarterly basis**.
- vii. The owner or operator shall calibrate, maintain, and operate according to the manufacture’s recommendations the following equipment **when using an open flare** to comply with this Subpart:
 - (A) A heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame.

- (B) A device that records flow to or bypass of the flare. The owner or operator shall either:
 - (1) Install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every 15 minutes; or
 - (2) Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least **once every month** to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

- viii. The owner or operator shall calibrate, maintain, and operate according to the manufacturer's recommendations the following equipment **when using an enclosed combustor** to comply with this Subpart:
 - (A) A temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of ± 1 percent of the temperature being measured expressed in degrees Celsius or ± 0.5 °C, whichever is greater.
 - (B) A device that records flow to or bypass of the control device. The Permittee shall either install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every 15 minutes; or secure the bypass valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least **once every month** to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

- ix. The owner or operator, who is seeking to install a collection system that does not meet the specifications in 40 CFR §60.759, or seeking to monitor alternative parameters to those required by 40 CFR §60.753 through §60.756, shall provide information satisfactory to the EPA as provided in §60.752(b)(2)(i)(B) and (C) describing the design and operation of the collection system, the operating parameters that would indicate proper performance, and appropriate monitoring procedures.

Recordkeeping [40 CFR Part 60, §60.758]

- x. 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.

- xi. Except as provided in §60.752(b)(2)(i)(B), each owner or operator of a controlled landfill shall keep up-to-date, readily accessible records for the life of the control equipment of the data listed below in this section as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring shall be maintained for a minimum of 5 years. Records of the control device vendor specifications shall be maintained until removal.
 - (A) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with §60.752(b)(2)(ii):
 - (1) The maximum expected gas generation flow rate as calculated in §60.755(a)(1). The owner or operator may use another method to determine the maximum gas generation flow rate, if the method has been approved by the Administrator.
 - (2) The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in §60.759(a)(1).

- (B) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with §60.752(b)(2)(iii)(A) through use of an open flare, the flare type (i.e., steam-assisted, air-assisted, or nonassisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in §60.18; continuous records of the flare pilot flame or flare flame monitoring and records of all periods of operations during which the pilot flame of the flare flame is absent.
- (C) Except as provided in §60.752(b)(2)(i)(B), each owner or operator of a controlled landfill subject to the provisions of this subpart shall keep for 5 years up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored in §60.756 as well as up-to-date, readily accessible records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded.
- (D) Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible continuous records of the indication of flow to the control device or the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines, specified under §60.756.
- (E) Each owner or operator seeking to comply with the provisions of this subpart by use of an open flare shall keep up-to-date, readily accessible continuous records of the flame or flare pilot flame monitoring specified under §60.756(c), and up-to-date, readily accessible records of all periods of operation in which the flame or flare pilot flame is absent.
- (F) Except as provided in §60.752(b)(2)(i)(B), each owner or operator subject to the provisions of this subpart shall keep for the life of the collection system an up-to-date, readily accessible plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector.
- (G) Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified under §60.755(b).
- (H) 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).
- (I) Except as provided in §60.752(b)(2)(i)(B), each owner or operator subject to the provisions of this subpart shall keep for at least 5 years up-to-date, readily accessible records of all collection and control system exceedances of the operational standards in §60.753, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance.
The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if these records are not maintained.

Reporting [40 CFR Part 60, §60.757]

- xii. The Permittee shall submit the initial annual report within 180 days of the installation and start-up of the collection and control system, and shall include the initial performance test report required under 40 CFR §60.8.
- xiii. The Permittee shall submit annual reports of the recorded information for the gas collection and control system as follows:
 - (A) Value and length of time for exceedance of applicable parameters monitored under 40 CFR §60.756(a), (b), (c), and (d).
 - (B) Description and duration of all periods when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow as specified in 40 CFR §60.756.
 - (C) Description and duration of all periods when the control device was not operating for a period exceeding one hour and length of time the control device was not operating.
 - (D) All periods when the collection system was not operating in excess of 5 days.
 - (E) The location of each exceedance of the 500 parts per million methane concentration and the concentration recorded at each location for which an exceedance was recorded in the previous month.
 - (F) The date of installation and the location of each well or collection system expansion added in accordance with 40 CFR §60.755(a)(3), (b), and (c)(4).
- 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.

f. 15A NCAC 2D .0540 “Particulates From Fugitive Dust Emission Sources”

- i. The owner or operator of a source required to obtain a permit under 15A NCAC 2Q or 15A NCAC 2D shall not cause or allow fugitive dust emissions from process operations that do not pass through a process stack or vent and that is generated within plant property boundaries from activities such as; unloading and loading areas, process areas stockpiles, stock pile working, plant parking lots, and plant roads (including access roads and haul roads) to cause or contribute to substantive complaints, or visible emission in excess of that allowed in the following:
 - (A) Ambient air quality measurements or dispersion modeling as provided in 15A NCAC 02D .1106(e) show violation or a potential for a violation of an ambient air quality standard for particulates in 15A NCAC 2D .0400; or
 - (B) Excessive fugitive dust emissions from the facility beyond the property boundaries for six minutes in any one hour using Reference Method 22 in 40 CFR 60, Appendix A.
- ii. If fugitive dust emissions from a facility required to comply with this Rule cause or contribute to substantive complaints (complaints that are verified with physical evidence), the owner or operator of the facility shall:
 - (A) Within 30 days upon receipt of written notification from the Director of a second substantive complaint in a 12-month period, submit to the Director a written report that includes the identification of the probable source(s) of the fugitive dust emissions causing complaints and what immediate measures can be made to abate the fugitive emissions.
 - (B) Within 60 days of the initial report, submit to the Director a control plan that:
 - (1) Identifies the sources of fugitive dust emissions within the facility,
 - (2) Describes how fugitive dust will be controlled from each identified source,
 - (3) Contains a schedule by which the plan will be implemented,
 - (4) Describes how the plan will be implemented, including training of facility personnel, and
 - (5) Describes methods to verify compliance with the plan.

- (C) The Director shall approve the plan if he finds that:
- (1) The plan contains all required elements,
 - (a) Identification of the sources of fugitive dust emissions within the facility,
 - (b) Description of how fugitive dust will be controlled from each identified source,
 - (c) Schedule by which the plan will be implemented,
 - (d) Description of how the plan will be implemented, including training of personnel, and
 - (e) Description of the methods to verify compliance with the plan.
 - (2) The proposed schedule contained in the plan will reduce fugitive dust emissions in a timely manner,
 - (3) The methods used to control fugitive dust emissions are sufficient to prevent fugitive dust emissions from causing or contributing to a violation of the ambient air quality standards for particulates, and
 - (4) The described compliance verification methods are sufficient to verify compliance with the plan.

- iii. If the Director finds that the proposed plan does not meet the requirements of this Rule, he shall notify the owner or operator of the facility of any deficiencies in the proposed plan. The owner or operator shall have 30 days after receiving written notification from the Director to correct the deficiencies or submit a schedule describing actions to be taken and the time by which they will be implemented.
- iv. If after a plan has been implemented, the Director finds that the plan inadequately controls fugitive dust emissions, he shall require the owner or operator of the facility to correct the deficiencies in the plan. Within 90 days after receiving written notification from the Director identifying the deficiency, the owner or operator of the facility shall submit a revision to his plan to correct the deficiencies.

VIII. Site Specific Requirements for Ann Street Landfill

- A. The GCCS shall be operated with an acceptable negative pressure limit of 4 inches of water column or less at each wellhead per the GCCS design.
- B. The collection of landfill gas, using the leachate system headers, that are connected to the GCCS in areas of the landfill in which the initial solid waste has been in place for a period of five years or more (if active), or two years or more (if closed or at final grade), must meet the temperature, pressure, nitrogen and/or oxygen requirements of NSPS, Subpart WWW at each well head.
- C. The horizontal collection system in the Tier 1 phase of this project shall be installed on 100-foot centers, with alternate collectors using an 80-foot wide scrim-reinforced tarp above the collector, running along the length of the collector, in Cells 1-8, in which the initial waste has been in-place for five years and more.
- D. The horizontal collectors installed during the Tier 1 phase of this project, shall be placed a minimum of 5 feet below the surface of the existing waste in Cells 1-8.

IX. Well Closure [40 CFR Part 60, §60.753]

If any gas collection well qualifies for exclusion under §60.753(b)(3) as a decommissioned well, the Permittee shall provide adequate documentation and data to justify well closure. This information shall be provided to the DAQ Regional Office in a letter as a request for approval.

- X.** A Professional Engineers Seal was submitted by Mr. Michael Brinchek, P.E., of Camp Dressor and Mckee (CDM), a registered engineer in the State of North Carolina, sealed and certified compliance with this NSPS, on February 15, 2007 for the revised design plan. He also certified compliance on amended pages & drawings submitted on April 5, 2007, and on amended pages submitted on April 27, 2007 for the revised design plan.

- XI.** A consistency determination **is required** for this modification and was included with the application on October 1, 2007. The City of Fayetteville stated that the proposed operation is consistent with applicable zoning and subdivision ordinances.
- XII.** An application fee of \$867.00 **is required** and was received by the DAQ Raleigh Central Office on October 1, 2007.
- XIII.** The appropriate number of copies of the application were received by the DAQ on October 1, 2007.
- XIV.** The application did contain the Reduction and Recycling Form.
- XV.** The application **was not** originally signed by an authorized official as defined by 15A NCAC 2Q .0304(j). The application signature pages were resubmitted on December 3, 2007. The response letter designated Mr. Kenneth Edge, Chairman of the Cumberland County Board of Commissioners as the responsible official for future correspondence. The application was considered complete on that date.
- XVI.** Air toxics evaluation is not required for this modification. A facility wide toxics evaluation was submitted for the last MACT toxics evaluation on May 5, 2005. The facility modeled in compliance for the life of the landfill.
- XVII. 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.
- XVIII. NonAttainment:**
The Environmental Protection Agency worked with some communities to get clean air sooner than the date required by the Clean Air Act. As such the EPA entered into *Early Action Compacts* to reduce ground-level ozone pollution. Communities with *Early Action Compacts* started reducing air pollution one to two years earlier than required by the Clean Air Act. In December 2002, a number of states submitted compact agreements pledging to meet the 8-hour ozone standard earlier than required. The states had to meet a number of criteria, and had to agree to meet certain milestones. EPA officially designated nonattainment areas in April 2004. However, as long as *Early Action Compact Areas* meet agreed upon milestones, the impact of the designations will be deferred.
- Cumberland County was designated an Early Action Compact for the eight-hour ozone standard. This modification does not increase the emissions of VOCs or NOx which are the two precursors.
- XIX. 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.
- XX.** A revised gas collection and control system was submitted to the DAQ with proposed alternatives to the design plan. The DAQ approved the appropriated alternatives and submitted a response letter to the facility on June 29, 2007. These approved alternatives to the design will be added to the permit.
- XXI.** 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.

XXII. Recommendations

This modification issued under section 15A NCAC 2Q .0501(c)(1) for Cumberland County Office of Solid Waste Management - Ann Street Landfill, located at 698 Ann Street in Fayetteville, Cumberland County, North Carolina, has been reviewed by the DAQ to determine compliance with all procedures and requirements. The Fayetteville Regional Office did comment on the initial application, and made comments 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 Fayetteville Raleigh Regional Office concurs.

Issue permit No. 08846T04