| NORTH CAROLINA DIVISION OF AIR QUALITY<br><br>**Air Permit Review – Renewal**<br><br>Permit Issue Date: XXXX, 2010 | Region: Fayetteville Regional Office<br>County: Sampson<br>NC Facility ID: 8200139<br>Inspector's Name: Mitch Revels<br>Date of Last Inspection: 09/08/2009<br>Compliance Code: 3 / Compliance - inspection |
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| Facility Data<br><br>Applicant (Facility's Name): Sampson County Disposal, LLC<br>Facility Address: Sampson County Disposal, LLC<br>7434 Roseboro Hwy<br>Roseboro, NC 28382<br><br>SIC: 4953 / Refuse Systems<br>NAICS: 562212 / Solid Waste Landfill<br><br>Facility Classification: Before: Title V After: Title V<br>Fee Classification: Before: Title V After: Title V | Permit Applicability (this application only)<br><br>SIP: 15A NCAC 2Q .0513<br>NSPS: N/A<br>NESHAP: N/A<br>PSD: N/A<br>PSD Avoidance: N/A<br>NC Toxics: N/A<br>112(r): N/A<br>Other: N/A |

| Contact Data | | | Application Data |
|---|---|---|---|
| Facility Contact | Authorized Contact | Technical Contact | Application Number: 8200139.08A<br>Date Received: 11/25/2008<br>Application Type: TV-Renewal<br>Application Schedule: Renewal |
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| Review Engineer: Booker Pullen<br>Regional Engineer: James Moser<br><br>Review Engineer's Signature: Review Start Date: June 25, 2010 | Comments / Recommendations:<br>Issue: 09431T03<br>Permit Issue Date: XXX, 2010<br>Permit Expiration Date: XXXX, XX, 2015 |

## I. Background

Sampson County Disposal, LLC (SCD) operates an active municipal solid waste landfill near Roseboro, North Carolina under Air Permit No. 09431T02. The landfill is the source of air pollutant emissions, and is subject to NSPS in accordance with 40 CFR Part 60, Subpart WWW "Standards of Performance for Municipal Solid Waste Landfills". Subpart WWW requires that landfills above certain size thresholds install landfill gas collection and control systems. The collected landfill gas is required to be ducted to an open flare, gas treatment system, or alternative control system designed and operated to reduce NMOC emissions by 98% or an outlet concentration of less than 20 ppmvd.

## II. Purpose of applications:

Since this permit last went through the 30 day public notice and 45 day EPA review, the facility has modified the permit to include the following:

### A. Application 8200139.05A (Permit issued as Revision T01)

The application contained a facility wide toxics demonstration and was received by the DAQ on October 21, 2005. The consultant (G.N. Richardson) evaluated the toxics emitted from the landfill by using the most conservative approach possible for the emissions from the landfill. The calculations for the emission rates used in this evaluation are based on 100% fugitive emissions from the landfill with no capture and control efficiencies taken into account. However, the HCL emissions from the combustion of landfill gas in the flare were calculated using the collection and control efficiencies to route the maximum amount of landfill gas through the flare. Therefore, because of the conservative approach to calculating the emissions from the landfill, fifteen toxic pollutants (1,1,2,2-tetrachloroethane, ethylene chloride, acrylonitrile, benzene, dichlorofluoromethane, methylene chloride, ethyl mercaptan, hexane, hydrogen chloride, hydrogen sulfide, methyl mercaptan, Toluene, trichloroethene, vinyl chloride, and xylenes) were shown to be greater than the TPERs listed in 15A NCAC 2Q .0711.

**B. Application 8200139.09A (Permit issued as Revision T02)**

The purpose of this application was to request a PSD modification for the installation of eight 4-stroke, lean burn, 1,600 kW each, landfill gas-fired generators (gensets) for the combustion of collected LFG and the generation of electricity that will be sold to the local utility company. This application (8200139.09A) was received on May 14, 2009, and was considered complete for processing on that date.

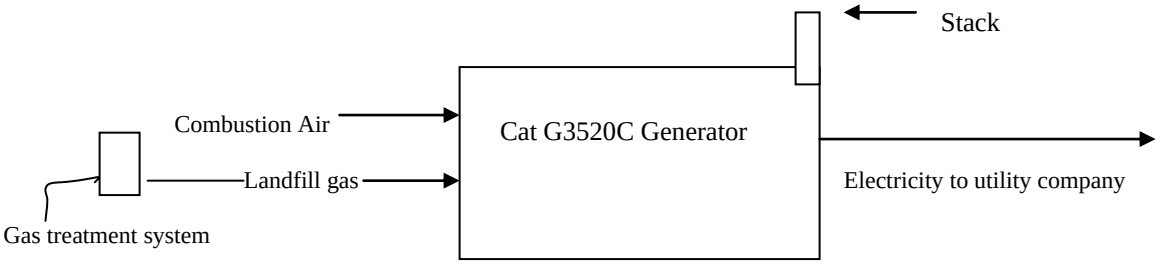
Based on projected gas generation rates, the eight new genset units and the flares will be capable of handling all collected LFG anticipated from the landfill over the remaining active life of the landfill, prior to closure and installation of the final cap and LFG collection system. It is anticipated that the burning of landfill gas in the gensets will be the primary operating scenario after installation, with the existing flare and new backup flares as secondary control devices. A new landfill gas treatment system (CD-Treatment) will be added to the facility to comply with NSPS Subpart WWW, §60.752 (a)(b)(iii)(C) for the landfill. The landfill gas treatment system should have a filtration rating of 10 microns or less, lower the water dew point of the landfill gas by at least 20 degrees Fahrenheit with a de-watering process, and compress the landfill gas. {The genset units are not being used as control devices and do not have to meet the requirements of §60.752 (a)(b)(iii)(B) for the landfill because the gas treatment system will be installed}.

The new backup flare is being installed to supplement the existing flare for any time periods when the gensets are not in operation, or are being operated at reduced capacity. Actual operation of the flare is expected to be an infrequent occurrence. The existing flare is a permitted 141 mmBtu/hr, 4700 cfm, candlestick-type open flare (CD-1). The proposed backup flare (CD-2) will also be a 141 mmBtu/hr, 4700 cfm candlestick-type open flare. The heating value of the landfill gas is 500 Btu/cf. Based on a typical candlestick flare sizing chart provided by flare vendor John Zink Company LLC, the proposed flare will have an inlet diameter of 16 inches and an inlet velocity of 56 fps at the approximately 4,700 cfm maximum LFG flow rate.

The new smaller, low gas-flow flare (CD-3) is proposed as an operating alternative to the existing large flare (CD-1) and the new large flare (CD-2), to provide the necessary combustion capability for potentially low gas-flow operating scenarios. This flare will be a 21 mmBtu/hr candlestick-type open flare capable of combusting approximately 700 cfm of LFG with a heating value of 500 Btu/cf.

The following sources are proposed:

- Eight genset units (ES-Gen-1 through ES-Gen-8, 1600 kW each, 2233 HP each)
- One utility flare (141 million Btu per hour heat input, 4,700 acfm, CD-2)
- One low gas flow utility flare (21 million Btu per hour heat input, 700 acfm, CD-3)




**1. 15A NCAC 2D .0516 "Sulfur Dioxide Emissions From Combustion Sources"**

This regulation limits sulfur dioxide emissions to 2.3 lbs per million Btu heat input or 13.1 lbs $SO_2$/hour as calculated below.

1 hp = 42.41 Btu/min genset unit = 2233 hp

$$2233\ hp \times \frac{42.41\ Btu/\min}{1\ hp} = \frac{94{,}702\ Btu}{\min ute}$$

$$\frac{94{,}702\ Btu}{\min ute} \times \frac{60\ \min utes}{1\ hour} \times \frac{1\ mmBtu}{1\times 10^{6}\ Btu} = \frac{5.68\ mmBtu}{hour}\ \ per\ engine$$

Allowable $SO_2$ emission rate → 2.3 lbs $SO_2$/mmBtu heat input x 5.68 mmBtu/hour = 13.1 lbs/hour

The emission of sulfur oxides, particularly sulfur dioxide ($SO_2$), from the engines is dependent on the inlet concentration of sulfur-bearing compounds in the landfill gas. The calculation of the estimated $SO_2$ emissions from each engine is based on the assumption that all of the total reduced sulfur (TRS) in the landfill gas is oxidized to $SO_2$. Since site-specific data for the TRS concentration in the landfill gas was not provided, $SO_2$ emissions from the engine were estimated based on the published mean concentration of TRS in landfill gas samples. AP-42 Section 2.4 (revised November 1998) lists concentrations of various compounds in uncontrolled landfill gas. This section reports that the mean concentration of TRS is landfill gas is 46.9 ppmv.

From the application: each engine has an inlet landfill gas flow rate = 30,945 scf/hour (or 15,472.5 scf/hr of methane, 50% of the landfill gas total)

The following equation from AP-42, Fifth Edition Section 2.4.4.1 "Emissions", Revised November 1998, is used to calculate the individual air pollutant flow rate ($m^3$/hour) as part of the methane generation from the landfill.

$$Q_p = 2.0 \times Q_{CH_4} \left( \frac{C_p}{1 \times 10^6} \right)$$

Where: $Q_p$ = Emission rate of pollutants, $m^3$/hour
$Q_{CH4}$ = 15,472.5 scf/hr (methane is only 50% of the maximum LFG flow into the engine)
$C_p$ = default concentration of total reduced sulfur (TRS) in landfill gas, Section 2.4.4.2
Multiplication factor = 2.0 assumes 50% landfill gas is methane

$$Q_p = 2.0 \times \frac{15{,}472.5\ ft^3\ CH_4}{hour} \times \left( \frac{46.9\ parts}{1 \times 10^6} \right) \times \frac{1\ m^3}{35.315\ ft^3} = \frac{0.041\ m^3\ SO_2}{hour}$$

The following equation from AP-42, fifth edition, Section 2.4.4.1 "Emissions", Revised November 1998, is used to calculate the uncontrolled emission rate of individual air pollutants present in landfill gas.

$$UM_p = Q_p \left[ \frac{MWs \times 1\ atmosphere}{(8.205 \times 10^{-5}\ m^3 - atmospere\ /\ gmol - {}^0K) \times (1000\ g\ /\ kg)(273 + T)\ {}^0K} \right]$$

Where: $UM_p$ = Uncontrolled mass emissions of pollutants, kg/hr
$MW_p$ = Molecular weight of pollutant, g/mol ($SO_2$ = 64.06 g/gmole)
$Q_p$ = Emission rate of pollutant, $m^3$/hour (0.041 $m^3$/hr)
$T^0$ = Default AP-42 temperature of the landfill gas (25 degrees C)

$$UM_p = \frac{0.041\ m^3 SO_2}{hour} \times \left[ \frac{64.06\ g\ /\ gmole \times 1\ atmosphere}{\left(\frac{8.205 \times 10^{-5}\ m^3 - atmospere}{gmol - {}^0K}\right) \times \frac{1000\ g}{kg} \times (273 + 25^0 C)\ {}^0K} \right] = \frac{0.108\ kg\ \ SO_2}{hour}$$

$$Q_{sulfur\ dioxide} = \frac{0.108\ \text{kg}\ SO_2}{hour} \times \left( \frac{2.2\ lbs}{kg} \right) = \frac{0.24\ SO_2\ lbs}{hour}\ \ per\ engine$$

Potential emissions of sulfur dioxide have been calculated to be 0.24 lbs per hour. This value is much lower than the allowable sulfur dioxide emission rate or 13.1 lbs per hour. Compliance is indicated.

**2. 15A NCAC 2D .0521 "Control of Visible Emissions"**

This regulation limits visible emissions from all sources to less than 20% opacity averaged over a 6-minute period with the exceptions noted in the regulation. Compliance is expected with this regulation when firing landfill gas under normal conditions.

**3. 15A NCAC 2D .0524, 40 CFR Part 60, Subpart JJJJ "Standards of Performance for Stationary Spark Ignition Internal Combustion Engines"**

The genset engines are subject to New Source Performance Standards for spark ignition engines. This regulation applies to all owners and operators of stationary spark ignition internal combustion engines that commenced construction after June 12, 2006. The applicant can meet the requirements of this regulation by purchasing a manufacture certified engine that has been tested by the manufacturer to meet the following emission standards in accordance with 40 CFR §60.4243(b)(1).

| **After 7/1/2007** | **After 7/1/2010** |
|---|---|
| • NOx emissions not to exceed 3.0 g/hp-hr | • NOx emissions not to exceed 2.0 g/hp-hr |
| • CO emissions not to exceed 5.0 g/hp-hr | • CO emissions not to exceed 5.0 g/hp-hr |
| • VOC emissions not to exceed 1.0 g/hp-hr | • VOC emissions not to exceed 1.0 g/hp-hr |

**15A NCAC 2D .1111 "Maximum Achievable Control Technology", and 40 CFR Part 63, Subpart ZZZZ "National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines"**

This facility is subject to the Reciprocating Internal Combustion Engine (RICE) NESHAP for engines. This regulation applies to all owners and operators of RICE located at major and area sources of hazardous air pollutant (HAPs) emissions. The engines at this facility will be classified as "new" sources, they are at an area source of HAPs and they will commence construction (onsite fabrication) after June 12, 2006. The applicant can meet the requirements of this regulation by purchasing a manufacturer certified engine and by meeting the requirements of 40 CFR Part 60, Subpart JJJJ in accordance with 40 CFR §63.6590(c). Record shall be kept of their daily fuel usage monitors in accordance with 40 CFR §63.6655(c).

**15A NCAC 2D .0524, 40 CFR Part 60, Subpart CCCC "Standards of Performance for Commercial and Industrial Solid Waste Incineration Units (CISWI)"**

This regulation does not apply to the 3 utility flares (CD-1, CD-2, or CD-3) that will be used as control devices at the landfill in accordance with the landfill NSPS (Subpart WWW) because a CISWI unit does not include air pollution control equipment or the stack. (Ref: 40 CFR §60.2265 "Definitions").

This regulation does not apply to the 8 generator units (gensets) because a CISWI unit does not include any of the fifteen types of units described in §60.2555 of this subpart, nor does it include any combustion turbine or reciprocating internal combustion engine per 40 CFR §60.2265 "Definitions".

**4. 15A NCAC 2D .0530 "Prevention of Significant Deterioration"**

The current landfill gas flow rate at this facility is 4,400 acfm. The collected landfill gas is ducted to an existing 141.3 million Btu per hour candlestick-type open flare (CD-1). This flare is capable of combusting approximately 4,700 acfm of landfill gas with a heating value of 500 Btu/scf. It has an inlet diameter of 16 inches and an inlet velocity of 56 fps at the maximum landfill gas flow rate. The exit height of the flare is 45 feet above the grade. The exhaust temperature at the flare exit is 1400 –1800 degrees F. Based on the manufacturer's specified good combustion, potential emissions from the existing flare for CO = 0.37 lbs/mmBtu heat input and NOx = 0.068 lbs/mmBtu heat input. The worse case pollutant emission rate from the existing facility is CO.

$$\frac{141.0\ mmBtu}{hour} \times \frac{0.37\ lbs\ CO}{mmBtu} \times \frac{8760\ hours}{year} \times \frac{1\ ton\ CO}{2000\ lbs\ CO} = \frac{229\ tons\ CO}{year}$$

**4. 15A NCAC 2D .0530 "Prevention of Significant Deterioration" (continued)**

The existing facility is classified as small for PSD purposes. However, with the requested changes at this facility, the proposed modification to install the eight genset units and the two additional flares have the potential to emit CO in excess of the PSD major source threshold of 250 tons per year. Because the modification by it self is greater than 250 tons per year, the source is considered major for PSD and the other criteria pollutants are compared to the major source significance levels (See Table 1 of this section).

The PSD estimates were based on the expected worst-case operation scenario {i.e. simultaneous operation of all eight genset engines at maximum flow}. The control devices (flares) are not included in this estimate.

CO emissions from the eight gensets = 2.75 g CO/Hp-hr
NOx emissions from the eight gensets = 0.50 g NOx/Hp-hr
PM10 emissions from the eight gensets = 0.15 g PM10/Hp-hr

$$\frac{2.75\ g\ CO}{Hp-hour}\times\frac{2233\ Hp}{unit}\times\frac{8.0\ units}{1}\times\frac{8760\ hours}{year}\times\frac{1\ lb\ CO}{453.59\ g\ CO}\times\frac{1\ ton}{2000\ lbs}=\frac{474.4\ tons\ CO}{year}$$

$$\frac{0.5\ g\ NOx}{Hp-hour}\times\frac{2233\ Hp}{unit}\times\frac{8.0\ units}{1}\times\frac{8760\ hours}{year}\times\frac{1\ lb\ NOx}{453.59\ g\ NOx}\times\frac{1\ ton}{2000\ lbs}=\frac{86.25\ tons\ NOx}{year}$$

$$\frac{0.15\ g\ PM10}{Hp-hour}\times\frac{2233\ Hp}{unit}\times\frac{8.0\ units}{1}\times\frac{8760\ hours}{year}\times\frac{1\ lb\ PM10}{453.59\ g\ PM10}\times\frac{1\ ton}{2000\ lbs}=\frac{26.0\ tons\ PM10}{year}$$

While the proposed PSD project sources (8-genset units) will have emissions of the pollutants listed above, the VOC potential emission rates will increase by a small percentage. The flare (maximum flow rate 4700 cfm, 282000 cf/hr) currently destroys NMOC (halogenated) at 98% removal efficiency (AP-42, 11/98). The landfill gas currently generated by the landfill will be rerouted to the genset units that will destroy the NMOC (halogenated) emissions at a rate of 93% (AP-42, 11/98). VOC emissions are approximately 99.7% of NMOC emissions, having a default concentration of 835 ppmv in landfill gas. The molecular weight of 86.18 for hexane will be used to express the VOC emissions.

The following equation from AP-42, Fifth Edition Section 2.4.4.1 "Emissions", Revised November 1998, is used to calculate the individual air pollutant flow rate ($m^3$/hour) as part of the methane generation from the landfill, and the increase in emissions from burning the landfill gas entirely in the existing flare and rerouting the landfill gas to the 8 new genset units.

$$Q_p = 2.0\times Q_{CH_4}\left(\frac{C_p}{1\times10^6}\right)$$

Where: $Q_p$ = Emission rate of pollutants, $m^3$/hour
$Q_{lfg}$ = 30,945 cf/hr into each genset unit (247,560 cfh total for eight units)
$Q_{CH4}$ = 15,472.5 cf/hr (methane is only 50% of the maximum LFG flow into the engine)
$C_p$ = default concentration of VOCs (835 ppmv) expressed as hexane, Section 2.4.4
Multiplication factor = 2.0 assumes 50% landfill gas is methane

$$Q_p = 2.0\times\frac{15{,}472.5\ ft^3\ CH_4}{hour}\times\left(\frac{835\ parts}{1\times10^6}\right)\times\frac{1\ m^3}{35.315\ ft^3}=\frac{0.732\ m^3\ VOC}{hour}$$

**4. 15A NCAC 2D .0530 "Prevention of Significant Deterioration" (continued)**

The following equation from AP-42, fifth edition, Section 2.4.4.1 "Emissions", Revised November 1998, is used to calculate the uncontrolled emission rate of individual air pollutants present in landfill gas.

$$UM_p = Q_p \left[ \frac{MWs \times 1\ atmosphere}{(8.205 \times 10^{-5}\ m^3 - atmospere\ /\ gmol - {}^0K) \times (1000\ g/kg)(273 + T)\ {}^0K} \right]$$

Where: $UM_p$ = Uncontrolled mass emissions of pollutants, kg/hr
$MW_p$ = Molecular weight of pollutant, g/mol ($SO_2$ = 64.06 g/gmole)
$Q_p$ = Emission rate of pollutant, $m^3$/hour (0.041 $m^3$/hr)
$T^0$ = Default AP-42 temperature of the landfill gas (25 degrees C)

$$UM_p = \frac{0.732\ m^3\ VOC}{hour} \times \left[ \frac{86.18\ g/gmole \times 1\ atmosphere}{(\frac{8.205 \times 10^{-5}\ m^3 - atmospere}{gmol - {}^0K}) \times \frac{1000\ g}{kg} \times (273 + 25^0C)\ {}^0K} \right] = \frac{2.58\ kg\ \ VOC}{hour}$$

$$VOC\ \ _{\frac{emissions}{genset\ units}} = \frac{2.58\ \text{kg}\ VOCs}{hour} \times \left( \frac{2.2\ lbs}{kg} \right) \times \frac{8\ units}{1} \times (1 - 0.93) = \frac{3.18\ lbs\ VOCs}{hour}\ \ (controlled\ \ \ from\ 8\ engines)$$

The same equations were used to calculate the VOC emissions that would escape the flare at a control efficiency of 98% except the landfill gas flow rate into the flare is 4700 scfm (282,000 cf/hour).

$$VOC\ \ _{\frac{emissions}{flare}} = \frac{23.51\ \text{kg}\ VOCs}{hour} \times \left( \frac{2.2\ lbs}{kg} \right) \times (1 - 0.98) = \frac{1.03\ lbs\ VOCs}{hour}\ \ (controlled\ \ \ from\ \ flare)$$

The increase in VOC emission under the current scenario would be 2.15 lbs VOC/hour (9.42 tons/year). When the landfill is at maximum production in the future, the existing large flare would be in operation and the landfill would support the continuous operation of the 8 genset units. Under this scenario, the increase would be 14 tons VOCs/year.

$$VOC\ \ _{\frac{emissions}{gnest\ \ units}} = \frac{3.18\ lbs\ VOCs}{hour} \times \frac{8760\ hour}{year} = \frac{14.0\ tons\ VOCs}{year}\ \ (\ for\ 8\ genset\ \ units)$$

This PSD project will include the installation of a gas treatment system that will be located between the collection system and just prior to the engines to meet compliance with NSPS Subpart WWW §60.752 (a)(b)(iii)(C) for the landfill. This means that the genset units will not be required to be evaluated as control devices to show compliance with NMOC destruction in the landfill gas even though they will perform the function of a control device.

Table 1: Potential Project Emissions

| PSD Pollutant | PSD Significance Level | Project Emissions | Modeling Required? |
|---|---|---|---|
| Carbon Monoxide | 250 tons/yr | 474.36 tons/yr | **Yes** |
| Nitrogen Oxides | 40 tons/yr | 86.25 tons/yr | **Yes** |
| Particulate Matter | 25 tons/yr | 26.02 tons/yr | --- |
| Particulate Matter (PM10) | 15 tons/yr | 26.02 tons/yr | **Yes** |
| Particulate Matter (PM2.5) | 10 tons/yr | 26.02 tons/yr | **Yes** |
| Sulfur Dioxide | 40 tons/yr | 7.84 tons/yr | No |
| VOC | 40 tons/yr | 14 tons/year | No |
| Hydrogen Sulfide | 10.0 tons/yr | 0.47 tons/yr | No |
| TRS | 10.0 tons/yr | 0.55 tons/yr | No |

**4. 15A NCAC 2D .0530 "Prevention of Significant Deterioration" (continued)**

Note: The projected potential emissions listed in Table 1, Section III, page 10 of the application is for the projected increase in VOC emissions without taking into account the emissions already emitted from the current flare (control device). If this value is subtracted from the projected emissions, the applicant calculates that the increase in emissions would be less than 20 tons VOCs per year.

The nearest Class I area is the Swan Quarter National Wildlife Refuge, which is located approximately 195 kilometers north east of the Sampson County Disposal landfill. The Federal Land Manager (FLM) was contacted on March 17, 2009 by the Air Quality Analysis group to notify the FLM of this proposed project. The Federal Land Manager responded on March 19, 2009 stating that a Class I Increment/Air Quality Related Values analysis was not required. However, a copy of the application, along with a letter describing the project, was sent by Booker T. Pullen to the FLM on June 2, 2009.

**Best available control technology (BACT)**

To comply with the best available control technology (BACT) determination pursuant to 15A NCAC 2D .0530, "Prevention of Significant Deterioration", criteria pollutant emissions shall be controlled from the eight genset units (ID Nos. ES-Gen-1 through Gen-8) such that emissions shall not exceed:

a. **Best Available Control Technology (BACT)**
   i. BACT for carbon monoxide (CO) from each genset unit = good combustion practices and (13.54 lbs/hour).
   ii. BACT for nitrogen oxides (NOx) from each genset unit = good combustion practices and (2.46 lbs/hour).
   iii. BACT for PM10 from each genset unit = good combustion practices and 0.74 lbs/hour).
   iv. BACT for PM2.5 from each genset unit = good combustion practices and 0.74 lbs/hour).

**Testing**

b. The Permittee shall perform testing in accordance with 15A NCAC 2D .2600 and follow the procedures outlined below:
   i. The Permittee shall submit a completed Protocol Submittal Form to the DAQ Regional Supervisor at least 45 days prior to the scheduled test date. A copy of the Protocol Submittal Form may be obtained from the Regional Supervisor.
   ii. The Permittee shall notify the Regional Supervisor of the specific test dates at least 15 days prior to testing in order to afford the DAQ the opportunity to have an observer on-site during the sampling program.
   iii. During all sampling periods, the Permittee shall operate the emission source(s) under maximum normal operating conditions or alternative operating conditions as deemed appropriate by the Regional Supervisor or his delegate.
   iv. The Permittee shall submit two copies of the test report to the DAQ. The test report shall contain at a minimum the following information:
      (A) a description of the training and air testing experience of the person directing the test;
      (B) a certification of the test results by sampling team leader and facility representative;
      (C) a summary of emissions results and text detailing the objectives of the testing program, the applicable state and federal regulations, and conclusions about the testing and compliance status of the emission source(s);
      (D) a detailed description of the tested emission source(s) and sampling location(s) process flow diagrams, engineering drawings, and sampling location schematics should be included as necessary;
      (E) all field, analytical, and calibration data necessary to verify that the testing was performed as specified in the applicable test methods;
      (F) example calculations for at least one test run using equations in the applicable test methods and all test results including intermediate parameter calculations; and
      (G) documentation of facility operating conditions during all testing periods and an explanation relating these operating conditions to maximum normal operation. If necessary, provide historical process data to verify maximum normal operation.

c. The testing requirement(s) shall be considered satisfied only upon written approval of the test results by the DAQ.

d. The DAQ will review emission test results with respect exclusively to the specified testing objectives as proposed by the Permittee and approved by the DAQ.

5. **PSD Performance Testing** - As required by 15A NCAC 2D .0530, the following performance tests shall be conducted. Compliance with this emission limit will be determined by an initial performance test within 60 to 180 days after normal operation testing for the "lbs per hour" of each pollutant as a surrogate for the g/hp-hour BACT limit for each pollutant.

| Affected Sources | Pollutant | Test Method |
|---|---|---|
| ES-Gen-01 | Carbon Monoxide (CO) = 13.54 lbs/hour<br>Nitrogen Oxide (NOx) = 2.46 lbs/hour<br>$PM_{10}$ = 0.74 lbs/hour<br>$PM_{2.5}$ = 0.74 lbs/hour | As determined by DAQ approved testing protocol |
| ES-Gen-02 | | |
| ES-Gen-03 | | |
| ES-Gen-04 | | |
| ES-Gen-05 | | |
| ES-Gen-06 | | |
| ES-Gen-07 | | |
| ES-Gen-08 | | |

   a. The performance test shall be conducted using the test method specified in the table above in accordance with EPA Reference Methods, contained in 40 CFR Part 60, Appendix A. Use of an alternate test method must be approved in advance by the Division of Air Quality, and must be based on a test protocol that documents the alternate method is at least as accurate as the specified method. The EPA Administrator retains the exclusive right to approve equivalent and alternative test methods, continuous monitoring procedures, and reporting requirements.
   b. Within 60 days after achieving the maximum production rate at which the genset units will be operated, but not later than 180 days after the initial start-up of the units, the Permittee shall conduct the required performance testing on the landfill gas-fired genset units and shall begin the required monitoring.
   c. The number of runs and time required for each run for the performance test shall be in accordance with the approved testing protocol. The ambient temperature for each test run shall be above 0 degree F.
   d. All associated testing costs are the responsibility of the Permittee.
   e. At least 45 days prior to performing any required emissions testing, the Permittee must submit two copies of a testing protocol to the DAQ Regional Supervisor, for review and approval. All testing protocols must be approved by the DAQ prior to performing tests.
   f. To afford the DAQ Regional Supervisor the opportunity to have an observer present, the Permittee shall provide the Regional Office, in Writing, at least 15 days notice of any required performance test(s).
   g. The Permittee shall submit two copies of a written report of the results of each performance test, postmarked no later than 60 days following the completion of the test, to the Regional Supervisor, DAQ.
   h. The Division of Air Quality retains the right to require additional performance testing for the genset units if the results of the stack tests show a small margin of compliance with a $PM_{10}$/$PM_{2.5}$, CO, or NOx emission limit.

6. **PSD Monitoring:**
   If the Permittee adjusts engine settings according to and consistent with the manufacturer's instructions, the stationary SI internal combustion engine will not be considered out of compliance. If the Permittee operates and maintains the certified landfill gas-fired stationary spark ignition internal combustion engine according to the manufacturer's emission-related written instructions, they shall keep records of conducted maintenance to demonstrate compliance.

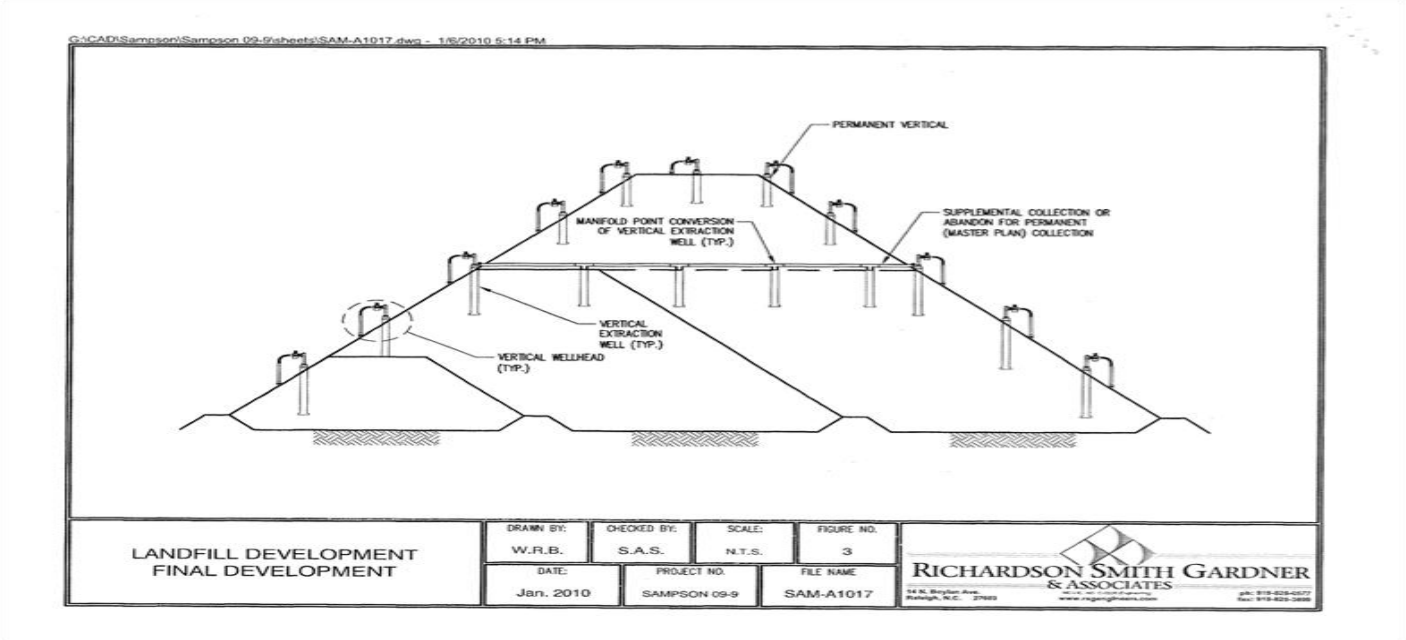
7. **Recordkeeping/Reporting** [15A NCAC 2Q .0508(f)]
   Owners and operators of all stationary spark ignition internal combustion engines shall keep records of:
   a. All notifications submitted to comply with this regulation and all documentation supporting any notifications.
   b. Maintenance conducted on the engine.
   c. Documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR Parts 90, 1048, 1054, and 1060, as applicable.

**C. Application 8200139.08A (Permit issued as Revision T03)**

The purpose of this application was to request a renewal of the existing permit for the Sampson County Landfill Disposal facility in accordance with 15A NCAC 2Q .0513.

**D. Gas Collection and Control System Design Plan:**

1. On January 7, 2010, the consultant (Richardson Smith Gardner and Associates) for the Sampson County Landfill Disposal facility submitted a letter to the US EPA Region IV (Beverly H. Banister, Director) containing changes to the design plan for the gas collection and control system at the landfill. This letter requested an applicability determination for alternative design and monitoring procedures in accordance with 40 CFR Subpart WWW for control system. The facility proposed a three stage process to install landfill gas collection devices in a temporarily inactive interior area of the landfill that first received waste less than five years ago, and is not at final grade. The staged process would include:
   a. Initial installation of typical vertical collection wells connected to a header system with individual wellhead control over temporarily inactive areas (les than 2 year during lateral expansion of the facility.
   b. When the waste progression occurs over this area (during vertical expansion of the facility), the well network will be converted to a manifold placement area) with two sampling ports and throttling valves on each end in accordance with 40 CFR §60.759(b)(3). This sequence may be repeated on successive future waste placement lifts.
   c. Once final grades are achieved, vertical well installation would re-occur in accordance with the master plan. Any additional manifold network would be considered supplemental and/or abandoned. See figure below.




2. The US EPA responded to the Division of Air Quality on February 10, 2010 in a letter to Mr. Keith Overcash, Director of the Division of Air Quality stating that they believed that the proposed changes to the gas collection and control system did not conflict with any of the design requirements of 40 CFR Subpart WWW. Also, stated in this letter was the fact that based on the US EPA review of Subpart WWW, the State of North Carolina, Division of Air Quality has been delegated the authority to approve changes and alternative methods to gas collection and control systems such as the one proposed by Sampson County Disposal Landfill.

3. All pertinent design changes, temperature variances, and operational scenarios will be placed into the Title V Air Permit as Specific Limitations and Conditions.

## III. Preliminary Impact Air Quality Modeling Analysis

An air quality preliminary impact analysis was conducted for the pollutants that require PSD analysis and have Significant Impact Levels (SIL). The modeling results were then compared to the applicable SIL as defined in the NSR Workshop Manual to determine if a full impact air quality analysis would be required for that pollutant.

SCD is located near Roseboro, North Carolina, in Sampson County. The area is a mix of forests, farmland, and residential areas. For modeling purposes, the area, including and surrounding the site, is classified "rural", based on the land use type scheme established by Auer 1978.

SCD evaluated three criteria pollutants and compared the High First-High (H1H) results to the SIL. Two EPA models were used in the air dispersion demonstration. SCREEN3 was utilized for its capability to handle flare sources, while the rest of the modeling (generators and off-site point sources) was performed with AERMOD. The first step in the SIL analysis was to individually model: 1) the new generator sets; 2) the new large flare (identical to the existing flare); and 3) the new small flare. Of these, the generator sets had the overwhelmingly largest impact by an order of magnitude. In the operating scenarios described in the preceding section, the existing large flare can be considered to net out either the large or small new flares, leaving the new generator sets as the essential project to model for comparison to the SIL.

SCD included adequate receptors in the modeling. They used a 100-meter spacing along the fenceline, part of which is to be constructed with this project. All maxima occurred in areas of 100 meter receptor spacing, and receptors were included out to about 7 km, well beyond maximum impacts. Normal regulatory defaults were used in the model, as were five years of NCDAQ processed meteorology, using surface data from the NWS surface station in Raleigh-Durham and upper air data from the Greensboro station. NCDAQ has determined that this data is representative of the facility site. As the modeling results (H1H) in Table 2 show, only NOx exceeded its SIL and required further modeling. The NOx Significant Impact Area (SIA) established by the SIL modeling was rounded up to 1 km.

**Table 2 - Class II Significant Impact Results ($ug/m^3$)**

| Pollutant | Averaging Period | Facility maximum Impact | Class II Significant Impact | Percent of SIL |
|---|---|---|---|---|
| NOx | Annual | 1.74 | 1 | 174 |
| $PM_{10}$ | Annual | 0.52 | 1 | 52 |
| | 24-hour | 3.61 | 5 | 72 |
| CO | 8-hour | 119.8 | 500 | 24 |
| | 1-hour | 170.4 | 2000 | 9 |

**Class II Area Full Impact Air Quality Modeling Analysis**

A Class II Area NAAQS and PSD increment analysis was performed for NOx and included offsite source emissions and background concentrations. SCD used AERMOD and SCREEN3 with the modeling methodology as described above. The results of the modeling were added together as appropriate to determine a conservative, modeling impact. Off-site source inventories for both increment and NAAQS modeling were obtained from NCDAQ and then refined by SCD by the NCDAQ approved "Q/D=20" guideline. Five offsite sources were included in the NAAQS modeling, two flares (Sampson County Landfill) and three point sources from DAK. The results are provided in Table 3 below.

**Table 3 - Class II Area NAAQS Modeling Results**

| Pollutant | Averaging Period | Modeled Impact (ug/m3) | Background Concentration (ug/m3) | Total Impact (ug/m3) | NAAQS (ug/m3) | % NAAQS |
|---|---|---|---|---|---|---|
| $NO_2$ | Annual | 2.38 | 26 | 28.4 | 100 | 28 |

In the Class II PSD increment analysis for NOx, the Q/D technique rule resulted in only the facility project sources being modeled (i.e. 8 generator sets). This project is the first PSD project in the county and thus will determine the minor source baseline date for Sampson County. The Class II increment results are shown in Table 4 and indicate compliance.

**III. Preliminary Impact Air Quality Modeling Analysis (continued)**

**Table 4 - Class II Area PSD Increment Modeling Results**

| Pollutant | Averaging Period | Modeled Impact (ug/m3) | PSD Increment (ug/m3) | % Increment |
|---|---|---|---|---|
| $NO_2$ | Annual | 1.74 | 25 | 7 |

**Non Regulated Pollutant Impact Analysis (North Carolina Toxics and TSP)**

SCD modeled HCL using AERMOD with the same receptor array and meteorology as in the NAAQS analysis. The eight generators (as a set) and the large onsite flare were modeled separately with the entire permitted emission rate. The generators produced the largest impact, which was then compared to the NC Acceptable Ambient Level (AAL) for HCL. The maximum concentrations (shown in Table 5) occurred along the fencelines, and indicated compliance with the HCL AAL.

**Table 5 - Toxics Modeling Results**

| Pollutant | Averaging Period | Max Impact (ug/m3) | AAL | Percent of AAL |
|---|---|---|---|---|
| HCL | 1-hr | 374 | 700 | 53 |

SCD declared that Total Suspended Particulates (TSP) emission rates are identical to the PM10 rates; subsequently, the PM10 modeling results were used to show that the TSP modeled results would also be below the TSP SIL and require no further modeling.

**Table 6 - TSP Modeling Results**

| Pollutant | Averaging Period | Modeled Impact (ug/m3) | TSP SIL (ug/m3) | % SIL |
|---|---|---|---|---|
| TSP | Annual | 0.52 | 1 | 52 |
| | 24-hour | 3.61 | 5 | 72 |

**Additional Impact Analysis**

Additional impact analyses were conducted for growth, soils and vegetation, and visibility impairment. The primary environmental benefit of the proposed project is to reduce fossil fuel generated greenhouse gases associate with electricity production by coal-fired power plants.

**Growth Impacts**

This project does not increase the operational rate of the landfill, and no area growth is anticipated. Installation of the gensets and flares will not affect the maximum disposal capacity of the landfill or waste disposal rates. This modification is not expected to have any significant effect on the existing population, associated emissions, or economic growth in the area.

**Soils and Vegetation**

The Clean Air Act has established two types of National Ambient Air Quality Standards (NAAQS). Primary standards set limits to protect public health, including the health of the sensitive population such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against visibility impairment, and damage to animals, crops, vegetation, and buildings. The NAAQS were designed to protect human health as well as animals, plants, and soils in the environment.

**Class II Visibility Impairment Analysis**

A Class II visibility impairment analysis was performed using VISCREEN. The VISCREEN modeling results showed no visibility impact in the nearest Class I area (Swan Quarter National Wildlife Refuge). The maximum Class II area change in light extinction is 0.32 at a distance 20.6 km relative to the 2.0 Level 1 screening criteria. The maximum contrast change is 0.003 relative to the 0.05 Level 1 screening criteria. The Level 1 screening criteria are not exceeded in the nearest Class I area and the Class II area at a distance of 20.6 km from the site. There are no scenic areas within 20.6 km of the landfill site. Since no screening levels were exceeded, no further visibility modeling was required.

## III. Preliminary Impact Air Quality Modeling Analysis

**Class I Increment/Air Quality Related Values (AQRV) Regional Haze Impact and Deposition Analyses**
The closest Class I area to SCD is Swan Quarter National Wildlife Refuge which is about 195 km to the northeast. The appropriate Federal Land Manager (FLM) determined that an AQRV analysis was not required for this project; subsequently, NCDAQ did not require a CLASS I SIL or increment analysis.

**PSD Air Quality Modeling Result Summary**
Based on the PSD air quality ambient impact analysis performed, the proposed Sampson County Disposal project will not cause or contribute to any violation of the Class II NAAQS, PSD increments, Class I Increments, or any FLM AQRVs. A summary of the modeling results is presented in Table 10.

**TABLE 10 – SAMPSON COUNTY LANDFILLPSD AIR QUALITY MODELING RESULTS**

**SER Evaluation**

| Pollutant | Annual E/R (Tons) | Significant Emission Rate (Tons/yr) | Modeling Required? | | | | |
|---|---|---|---|---|---|---|---|
| NOx | 86 | 40 | Yes | | | | |
| $PM_{10}$ | 26 | 15 | Yes | | | | |
| $PM_{2.5}$ | 26 | To Be Determined | Yes | | | | |
| $SO_2$ | 8 | 40 | No | | | | |
| CO | 474 | 100 | Yes | | | | |
| VOC's | ---------- | 40 | No | | | | |
| $H_2S$ | 0.47 | 10 | No | | | | |

**Class II Area SIL Analysis**

| Pollutant | Averaging Period | Maximum Impact ($ug/m^3$) | SIL ($ug/m^3$) | SIL Exceeded | | | |
|---|---|---|---|---|---|---|---|
| $NO_x$ | Annual | 1.74 | 1 | Y | | | |
| $PM_{10}$ | Annual | 0.52 | 1 | N | | | |
| | 24-hour | 3.61 | 5 | N | | | |
| CO | 8-hour | 120 | 500 | N | | | |
| | 1-hour | 170 | 2000 | N | | | |

**Class II NAAQS Analysis**

| Pollutant | Averaging Period | Maximum Onsite & Offsite Source Impacts ($ug/m^3$) | Back Ground Conc ($ug/m^3$) | Total Impact ($ug/m^3$) | NAAQS ($ug/m^3$) | % NAAQS |
|---|---|---|---|---|---|---|
| NOx | Annual | 2.38 | 26 | 28.4 | 100 | 28 |

**Class II PSD Increment Analysis**

| Pollutant | Averaging Period | Maximum Onsite & Offsite Source Impacts ($ug/m^3$) | Back Ground Conc ($ug/m^3$) | Total Impact ($ug/m^3$) | PSD Increment ($ug/m^3$) | % PSD |
|---|---|---|---|---|---|---|
| NO2 | Annual | 1.74 | N/A | 1.74 | 25 | 7 |

**Non Regulated Pollutants**

| **NC Toxic Pollutants** | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Pollutant** | **Averaging Period** | **Maximum Impact ($ug/m^3$)** | **AAL ($ug/m^3$)** | **% AAL** | | | |
| HCL | 1-Hr | 374 | 700 | 53 | | | |

| **Total Suspended Particulates** | | | | |
|---|---|---|---|---|
| **Pollutant** | **Averaging Period** | **Modeled Impact (ug/m3)** | **TSP SIL (ug/m3)** | **% SIL** |
| TSP | Annual | 0.52 | 1 | 52 |
| | 24-hour | 3.61 | 5 | 72 |

**PM2.5 Modeling**

At the request of DAQ, the facility modeled PM2.5 emissions with the procedure and standards currently recommended by DAQ. Mr. Jerry Freeman of the DAQ Air Quality Analysis Branch reviewed the modeling analysis which was received on December 17, 2009. The analysis performed was a National Ambient Air Quality Standards (NAAQs) analysis for PM2.5. Three scenarios of operations, differentiated by the locations of fugitive sources, were modeled to account for both current and future conditions. The three scenarios have the same emission rates for the generators and the operationally disturbed particulates. The haul road emissions are different due to the varying lengths in the scenarios. The analyses did demonstrate compliance with NAAQss for PM2.5.

Sampson County Disposal used a combination of AERMOD and ScreeN3 to model the facility. SCREEN3 was used for the flare (worst case flare was determined), and the results added to the AERMOD results for the remaining sources. This is a conservative use of the models. In AERMOD use, SCD correctly followed DAQ's specific guidance for PM2.5 modeling. Additionally, a background concentration, which was supplied by the DAQ, was added to the modeled results for both the 24-hour period and the annual period. Per the DAQ policy, no off-site sources were required for demonstration.

Three different fenceline locations were modeled (C7, C9, and C11). These different scenarios represent the current fenceline and the future fencelines at this facility as it continues to grow in size.

Scenario C7 (currently permitted conditions at the site)

**PM10 SIL**

| Source ID | Stack Height (m) | Temperature (K) | Exit Velocity (m/s) | Stack Diameter (m) | PM2.5 (lb/hr) |
|---|---|---|---|---|---|
| GenSet1 | 9.144 | 753.15 | 43.8253 | 0.4064 | 0.74 |
| GenSet2 | 9.144 | 753.15 | 43.8253 | 0.4064 | 0.74 |
| GenSet3 | 9.144 | 753.15 | 43.8253 | 0.4064 | 0.74 |
| GenSet4 | 9.144 | 753.15 | 43.8253 | 0.4064 | 0.74 |
| GenSet5 | 9.144 | 753.15 | 43.8253 | 0.4064 | 0.74 |
| GenSet6 | 9.144 | 753.15 | 43.8253 | 0.4064 | 0.74 |
| GenSet7 | 9.144 | 753.15 | 43.8253 | 0.4064 | 0.74 |
| GenSet8 | 9.144 | 753.15 | 43.8253 | 0.4064 | 0.74 |

| Source ID | Release Height (m) | Easterly Length (m) | Northerly Length (m) | PM2.5 (lbs/hour) |
|---|---|---|---|---|
| Bulldozing | 3.048 | 45.72 | 45.72 | 0.072 |
| Wind blown | 3.048 | 38.1 | 7.62 | 0.016 |
| | | | | |
| Volume Sources | | | | |
| PR1 | 4 | 4.2 | 3.7 | 0.4025 |
| URF | 4 | 4.2 | 3.7 | 1.496 |

Volume sources = haul roads comprised of numerous smaller volumes

SCREEN 3

| Source | | Emission Rate |
|---|---|---|
| Flare CD1 | = | 2.64 lbs/hour |

Scenario C9 (future conditions at the site)

**PM10 SIL**

| Source ID | Stack Height (m) | Temperature (K) | Exit Velocity (m/s) | Stack Diameter (m) | PM2.5 (lb/hr) |
|---|---|---|---|---|---|
| GenSet1 | 9.144 | 753.15 | 43.8253 | 0.4064 | 0.74 |
| GenSet2 | 9.144 | 753.15 | 43.8253 | 0.4064 | 0.74 |
| GenSet3 | 9.144 | 753.15 | 43.8253 | 0.4064 | 0.74 |
| GenSet4 | 9.144 | 753.15 | 43.8253 | 0.4064 | 0.74 |
| GenSet5 | 9.144 | 753.15 | 43.8253 | 0.4064 | 0.74 |
| GenSet6 | 9.144 | 753.15 | 43.8253 | 0.4064 | 0.74 |
| GenSet7 | 9.144 | 753.15 | 43.8253 | 0.4064 | 0.74 |
| GenSet8 | 9.144 | 753.15 | 43.8253 | 0.4064 | 0.74 |

| Source ID | Release Height (m) | Easterly Length (m) | Northerly Length (m) | PM2.5 (lbs/hour) |
|---|---|---|---|---|
| Bulldozing | 3.048 | 45.72 | 45.72 | 0.072 |
| Wind blown | 3.048 | 38.1 | 7.62 | 0.016 |
| | | | | |
| Volume Sources | | | | |
| PR1 | 4 | 4.2 | 3.7 | 0.4025 |
| URF | 4 | 4.2 | 3.7 | 1.496 |
| UR9 | 4 | 4.2 | 3.7 | 1.5708 |

Volume sources = haul roads comprised of numerous smaller volumes

SCREEN 3

| Source | | Emission Rate |
|---|---|---|
| Flare CD1 | = | 2.64 lbs/hour |

PM2.5 Modeling Results

| | Modeled Impact ug/m3 | Background ug/m3 | Total Impact | Standard ug/m3 | Percent of Standard | Worse Case Scenario |
|---|---|---|---|---|---|---|
| PM2.5 24-hr | 20.4 | 14.06 | 34.5 | 35 | 99 | C7 |
| PM2.5 annual | 10.4 | 3.98 | 14.4 | 15 | 96 | C9 |

*background supplied by NCDAQ*

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**IV. 15A NCAC 2Q .0700 "Toxic Air Pollutant Procedures"**

The proposed installation of the 8 genset units and the two additional flares will emit quantities of North Carolina regulated toxic air pollutants (TAPs) from the facility. In December 2005, Sampson County Disposal Landfill performed a facility wide toxic modeling exercise using the maximum gas generation from the facility over the lifetime of the landfill. The consultant (G.N. Richardson) evaluated the toxics emitted from the landfill by using the most conservative approach possible for the emissions from the landfill.

The calculations for the emission rates used in this evaluation are based on 100% fugitive emissions from the landfill with no capture and control efficiencies taken into account. However, the HCL emissions from the combustion of landfill gas in the flare were calculated using the collection and control efficiencies to route the maximum amount of landfill gas through the flare.

In this modification to install the eight genset units, the combustion of landfill gas in the generators will also create HCL emissions. However, the landfill gas that will be burned in the genset units is the same potential amount that would have been burned in the flares. When the facility was modeled in 2005, it took into account the combustion of all of the future landfill gas that would be generated at the facility through the life of the landfill whether the gas is combusted in the flare or the internal combustion engines.

This conservative approach to calculating the emissions from the landfill in 2005 yielded fifteen toxic pollutants (1,1,2,2-tetrachloroethane, ethylene chloride, acrylonitrile, benzene, dichlorofluoromethane, methylene chloride, ethyl mercaptan, hexane, hydrogen chloride, hydrogen sulfide, methyl mercaptan, Toluene, trichloroethene, vinyl chloride, and xylenes) that were shown to be greater than the TPERs listed in 15A NCAC 2Q .0711.

The SCREEN3 model was run in simple and complex terrain to evaluate one landfill area source and one flare. The facility ran the model as a volume source, but the Air Quality Analysis Branch re-modeled the facility as an area source. A unity run was performed using an emission rate of 1g/s for each source to find the worst-case source. Receptors were located out to 5,000 meters, beginning at one meter from the source. There are no significant structures on site, so a cavity analysis was not required. The DAQ Air Quality Analysis Branch Comments (Toxics memo dated November 8, 2005, from Jamie Sellman, Meteorologist) indicated that the toxics modeling analysis for the Sampson County Disposal, LLC landfill was is in compliance for all 15 toxic air pollutants (including HCL) modeled. The DAQ Air Quality Analysis Branch Comments (Toxics memo dated June 18, 2009, revised on September 22, 2009), from Jerry Freeman, Meteorologist) indicated that the toxics modeling analysis for HCL from the Sampson County Disposal, LLC landfill was in compliance for HCL from the worse case scenario of burning the landfill gas in the eight genset units.

| **NC Toxic Pollutants** | | | | | | |
|---|---|---|---|---|---|---|
| **Pollutant** | **Averaging Period** | **Maximum Impact ($ug/m^3$)** | **AAL ($ug/m^3$)** | **% AAL** | | Emission Rate |
| HCL | 1-Hr | 374 | 700 | 53 | | 238 lbs/hr |

**V.** NOx Rules under 15A NCAC 2D .1400:
This regulation does not apply to this project or this modification.

**VI.** Non-Attainment:
Sampson County has not been designated nonattainment for the eight-hour ozone standard.

**VII.** A consistency determination is not required for this Title V renewal.

**VIII.** A Professional Engineer's seal is not required for this Title V renewal. A PE seal was included with the previous PSD application for revision T02. Mr. Stacy G. Smith, PE. a Professional Engineer, who is currently registered in the State of North Carolina, sealed the application for the portions containing the engineering plans, calculations, and all supporting documentation.

**IX.** An application fee is not required for this renewal application.

**X.** This facility is not subject to Section 112(r) of the Clean Air Act requirements because it does not store any of the regulated substances in quantities above the thresholds in the Rule.

**XI. Public Notice**
A thirty-day public notice **is required** for this renewal.

**Public notice:** The 30 day public notice period was from ____ 2010 through ____2010. ____public comments were received by the DAQ 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 _____through _____, 2010. The USEPA ____any comments on this modification.

**XII. Changes to existing Title V Permit No. 09431T02 per applications (8200139.08A):**

| Old Page No. | New Page No. | Condition No. | Changes |
|---|---|---|---|
| Page 1 | Page 1 | Cover letter | Changed date, revised permit number, added 'renewal to the first sentence to indicate the type of permit renewal, changed received date, removed 12 month re-submittal of application language, |
| Page 2 | Page 2 | Cover letter | Changed: date on letter, effective date of permit, issue date of permit,<br><br>Revised cc list at bottom of page, removed the PSD increment tracking statement |
| Page 3 | Page 3 | Cover letter | Changed revision number, revised table of the changes to the permit per application No. 8200139.08A, removed the note concerning the expiration date of the permit |
| **Body of the Permit** | | | |
| Page 1 | Page 1 | Cover page | Changed: Permit No., "Replaces Permit No.", effective date of permit, application No., permit issue date, |
| All pages | All pages | Top of pages | Changed permit revision number |
| Page 5 | Page 5 | Specific Limitations and Conditions | Added temperature variances for wells EW-6, 7, 8, 14, 15, 21, 25, 26, 29, 58, 134, and 136 |
| Page 10 | Page 10 | Specific Limitations and Conditions | Added requirements for "Temporarily Inactive Interior Areas" in Section 2.1 A. 1. i. |

**XIII. Conclusion:**

This application modification issued under section 15A NCAC 2Q .0513 for Sampson County Disposal Landfill, located at 7434 Roseboro Highway, Roseboro, North Carolina, has been reviewed by the DAQ to determine compliance with all procedures and requirements. The Fayetteville Regional Office made comments on the initial application, and 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 Regional Office concurs.

**Issue Permit 0943T03**