



Landfill Project Submittal Form

Instructions:

This form must be submitted to the Reserve and to the verifier in the first year of reporting prior to verification. In some cases, it may be necessary to update parts of the Project Submittal Form in subsequent years. **All information in this form will be made publicly available.**

These forms are to be used for reporting general Landfill Project information to the Climate Action Reserve in order to initiate the project listing process. All fields must be completed as thoroughly as possible. If the project in question is still in the planning/ development phase, all fields must be completed using best available data and estimates based on the proposed system design. Upon receipt of completed submittal forms, Reserve staff will perform a general eligibility screen (in accordance with the protocol version under which the project is submitted) based on the information provided. Project Developers can expect an Invoice for the \$500 project listing fee within 15 days of receipt of the completed forms, and a letter regarding the status of project within 15 days of the receipt of the project listing fee. If a project passes the eligibility screen, it will be officially "listed" with the Climate Action Reserve

This is an interactive Word form. Upon completion, please save this form as a PDF prior to returning it to the Reserve. This will lock your answers and protect the document from any further changes. All fields must be completed, even if the answer is also provided elsewhere; if a field is not applicable insert N/A in the space provided. The completed form must be saved and uploaded to your Climate Action Reserve account. Submit all questions regarding the project submittal process to: reserve@climatereserve.org.

Version 2.4
February 2009

Project Name: Gaston County Landfill Gas Destruction Project

Project Developer: EcoSecurities Group plc

Facility Owner: Gaston County Department of Public Works Solid Waste & Recycling Division

Technical Consultants: Olver Incorporated (consulting engineer)

Other Parties with a Material Interest: N/A

Date of form completion: July 10, 2009

Form completed by (name): Noora Singh (EcoSecurities)

Section 1: General Site Information

1. Name of Landfill: Gaston County Landfill
2. Approximate Latitude/Longitude of Landfill Project (degrees/minutes/seconds):
35°23'14"N/ 81°10'32"W
3. Address (including county):
3155 Philadelphia Church Rd, Dallas, NC 28034, Gaston County
4. Owner of Landfill and owner contact information:
Gaston County - Ray Maxwell, PE, Director of Public Works, PO Box 1578, Gastonia, NC 28053
5. Type of landfill (sanitary, controlled, or open dump): sanitary
6. Landfill size – designed area for waste placement (acre or hectare):
130.5 acres where,
Area C & Area D - 42.7 acres; Unit I - 38 acres; Unit II cells 1A & 1B - 5.7 acres
Unit II Phase I Cell 1 - 4.4 acres; Unit II Phase I Cell 2 - 12.70 acres; Unit II Phase II - 15 acres;
and Unit III - 12 acres
7. Total waste in place (cubic meters or tons): 2,229,500 tonnes (July 1, 2008)
8. Designed landfill capacity (cubic meters or tonnes): 6,129,300 tonnes
9. Year landfill opened: 1988
10. Year landfill closed or estimated date of closure: 2029
11. Average annual quantity of waste accepted at landfill (cubic meters or tonnes):
108,168 tonnes/yr
12. Waste Characteristics Table

Waste Types	Estimated Percent of Waste Stream
Paper and Paperboard	42%
Glass	5%
Metals	7%
Plastics	11%
Rubber and Leather	0%
Textiles	2%
Wood	0%
Food Scraps	7%
Yard Trimmings	14%
Misc. Inorganic Wastes	12%
Other	

Explain basis of estimates (i.e. site specific information, regional or national studies, EPA, etc.):
Modified North Carolina DENR percentages based on waste characterization done at the facility.

Section 2: Project Eligibility and Monitoring

13. Initial verification period: December 4, 2008 - July 31, 2009 (project began 11/18/2008 but monitoring data begins 12/4/08)

14. When did the project first commence operation, or when is the project expected to commence operation?
November 18, 2008

15. Have any vintage reduction tonnes from the project ever been registered with or claimed by another registry or program, or sold to another third party prior to registering with the Reserve?

No

If the answer is yes, you must complete and return a "Project Transfer" form.

16. Description of any regulatory framework for landfill methane capture and control (include an estimate of the date which the landfill will meet or exceed the 50 megagrams per year threshold of calculated NMOC emissions per NSPS/EG regulations and the type of testing that justifies the estimate (i.e. Tier 1 or Tier 2 NMOC emission rate estimates)):

The Tier 2 NMOC emission rate estimate included in the August 2008 Design Capacity Report & Emissions Projection demonstrates that the landfill is expected to pass the 50 Mg/yr threshold in year 2019. The 2009 NMOC emission rate is 32.2 Mg/yr. Neither North Carolina nor Gaston County have any additional laws regarding LFG emissions that would make the proposed project involuntary.

17. Description and citation of all local and state air and water quality, explosive gas, or other regulations pertinent to the landfill or project:

15A North Carolina Administrative Code 13B section 1600 defines the state regulations pertaining to municipal solid waste landfill facilities. The code is not any more stringent than federal NSPS regulations. This landfill has had a migratory gas issue and has had one violation of the explosive gas limit, both of which were addressed through the installation of a passive gas venting system, consisting of wells and cut-off trenches. The County decided to go above what was required by the state and replace the passive venting system with an active gas collection and flare system, with the hope in the future to build a beneficial use project. (<http://www.wastenotnc.org/swhome/rules.asp>)

18. Is this project being implemented and maintained as the result of any law, statute, regulation, court order, or other preexisting legally binding mandate?

☐ Yes

☒ No

Comments (if any):

N/A

19. Has a detailed monitoring plan been developed for this project? If not, what date will a monitoring plan be in place?

Yes

20. What Version or publication date of the Landfill Project Reporting Protocol is the project documentation based upon? Version 2.1 (2.0 if 2.1 is not released by verification date)

Section 3: Pre-project landfill gas control system information (fill out only if there was a landfill gas collection and/or control system in place that is separate from the Project system)

21. Type of pre-project landfill gas collection and control system in place, if any (e.g., open flare, enclosed flare, energy recovery etc.):

Passive venting through wells and cut-off trenches to control migratory and explosive gas

i. If Landfill gas collection system is in place, is the system actively collecting or passively venting gas?

Passive

ii. If flare or energy project is in place, what is the landfill gas flow rate (in scfm) and methane content?

N/A

iii. Name of system designer, address and other contact information.

HDR Engineering Inc.

Ed Shuffler

128 S. Tyron Street

Suite 1400

Charlotte, NC 28202

Tel: 704-248-3604

iv. Supply a copy of the as built drawings for the pre-project system. Be sure to include in the diagram the location of all pre-project wells and/or other collection equipment and the location of all project-related wells and/or other collection equipment. (Attach as a separate PDF file titled: Pre-project LFG System Diagram)

22. When was this pre-project control system installed and operational?

Passive gas venting wells were constructed during 1995-1996 and first phase of the gas cut-off trench was installed in 1998 and the last phase was installed in 2008.

23. Provide a summary of the permits obtained to build and operate this Landfill Gas Control System).

The landfill owner holds a facility permit (36-06) and an air permit (09884R01).

Section 4: Landfill gas utilization information for project activity

24. Landfill gas utilization (e.g., open-flared, enclosed flare, generation of electricity, use on-site as a boiler or furnace fuel, or sale to a third party):

Open flare

25. When was this combustion/LFG utilization system installed and operational, or when is it expected to be installed and operational?

November 18, 2008

26. If designed to generate electricity:

- i. Type of engine-generator set (e.g., internal combustion engine, micro turbine or fuel cell with the name of the manufacturer, model, power output rating (kW or MJ) for biogas, and nominal voltage :

N/A

- ii. Pretreatment of landfill gas (e.g., none, condensate trap, dryer, hydrogen sulfide removal, etc. with the names of manufacturers, models, etc.):

N/A

- iii. Exhaust gas emission control (e.g., none, catalytic converter, etc.):

N/A

- iv. If interconnected with an electric utility:

- Name of the utility: N/A
- Type of utility contract (e.g., sell all/buy all, surplus sale, or net metering):

N/A

v. If engine-generator set waste heat utilization:

- Heat source (e.g., cooling system or exhaust gas or both) and heat recovery capacity (Btu or kJ/hr):

N/A

- Waste heat utilization (e.g., water heating, space heating, etc.):

N/A

27. If designed to use on-site as a boiler or furnace fuel, a description of the boiler or furnace including manufacturer, model, and rated capacity (Btu or kJ/hr):

N/A

28. If designed for biogas sale to a third party, a description of the methods of processing, transport, and end use:

N/A

- i. Pretreatment of Biogas (e.g., none, condensate trap, dryer, hydrogen sulfide removal, etc.) include names of manufacturer, model etc.:

N/A

- ii. Exhaust gas emission controls from gas processing step:

N/A

29. Provide a summary and citation of the permits obtained to build and operate this Landfill Gas Utilization System).

The landfill owner holds a facility permit (36-06) and an air permit (09884R01), which has been modified to allow the facility to flare the landfill gas.