



Fac/Perm/Co ID #	Date	Doc ID#
44-03	3/30/11	13438

RECEIVED

March 23, 2011

MAR 24 2011

Mr. Allen Gaither, PE  
Solid Waste Permitting Section  
Division of Waste Management  
North Carolina Department of Environment and Natural Resources  
2090 U.S. Highway 70  
Swannanoa, North Carolina 28778

SOLID WASTE SECTION  
ASHEVILLE REGIONAL OFFICE

RE: Methane Gas Collection and Combustion  
System  
Francis Farm Landfill  
Haywood County, North Carolina  
Permit # 44-03

Dear Mr. Gaither:

On March 17, 2010 Haywood County received the document titled *LFG Project – Construction Approval* (DIN 10035) from the Division of Waste Management, Solid Waste Section (Section) authorizing the construction of the Landfill Gas Collection and Combustion System at the Francis Farm Landfill. This project generally consisted of installing landfill gas extraction wells, HDPE collection piping, extraction well dewatering pumps and associated drain lines, a leachate pumping station connected to the Town of Waynesville sewer system and a skid-mounted landfill gas flare system. Once construction of the project is complete a construction report will be prepared and submitted to the Section for review and issuance of the Authorization to Operate. The submission requirements for the Authorization to Operate were received by the County in the document titled *Request for Additional Information*, January 27, 2010 (DIN 9476).

In April 2010 the County solicited and received bids for Phase 1 of the approved Landfill Gas Collection and Combustion System. This phase was for the construction of twenty-one (21) landfill gas extraction wells at the landfill. The construction of these wells was completed in accordance with the approved design in the fall of 2010. These extraction wells have been functioning as passive extraction wells since their completion.

Haywood County has recently been awarded a grant through the North Carolina Department of Commerce, Energy Division under the American Recovery and Reinvestment Act to complete the gas collection and combustion system. As a requirement of this grant the County will utilize the collected landfill gas to fuel a generator(s) to produce power for sale back to the local electrical grid system and/or for use on-site by the County. The generator(s) will be

Engineering • Planning • Finance

McGill Associates, P.A. • P.O. Box 2259, Asheville, NC 28802 • 55 Broad Street, Asheville, NC 28801

828-252-0575 • Fax: 828-252-2518

the intended primary user of the collected landfill gas with the previously approved skid-mounted landfill gas flare system being used as a back-up system or as an accessory system to burn off any excess landfill gas.

With this in mind, Haywood County requests the approval to construct the Landfill Gas Collection and Combustion System at the Francis Farm Landfill (DIN 10035) be amended to include the installation of an internal combustion type engine and generator set (or sets) for the generation of electrical power for sale to the local grid system and/or use on-site by the County. The actual number of generator sets installed will be dependent of the quality and quantity of landfill gas extracted from the landfill facility once the flare system is installed and operational. The engine and generator set(s) would be located on the western side of the proposed skid-mounted landfill gas flare system shown on Sheet 101, Methane Gas Collection System and further detailed on Sheet 503, Flare Pad Plan & Details submitted as a part of the original document titled *Request for Construction Plan Approval, Gas Collection and Combustion System*, November 6, 2009 (DIN 8901). The generator set(s) would be enclosed in the same security fence system as the flare system. The present plan is for the blower system for the skid-mounted landfill gas flare system to also serve as the blower system for supplying landfill gas to the generator set(s). The piping and valve systems on the flare station will be engineered such that the generator set(s) will be the primary users of the landfill gas.

The skid-mounted landfill gas flare system, associated collection piping and the leachate pumping, collection and disposal system would be constructed as Phase 2 of the Landfill Gas Collection and Combustion System. Phase 3 of the overall project would be the installation of the generator set(s) and associated switch gear, meters, etc. Ideally the County would complete construction of the Phase 2 portion of the project, submit the required completion report and receive the Authorization to Operate prior to placing the blower and flare system in operation. The blower and flare station would then be operated for a reasonable period of time to allow the extraction and collection system to stabilize prior to selecting and installing the proposed generator set(s). However, given the time constraints on the use of the grant funds and the anticipated construction time frame associated with the Phase 2 and Phase 3 portions of the project, the County will be performing several of these tasks concurrently.

Therefore the County requests a variance to the normal approval procedure in order to allow the blower and flare system to be started once the collection system piping, extraction well dewatering pumps and associated drain lines and leachate pumping station are constructed and tested for conformance with the project specifications. This could be prior to the actual submission of the required completion report. In addition, the County requests permission to allow the blower and flare system in remain in operation while the completion report is being reviewed by the Solid Waste Section. This would allow some initial balancing of the collection system as well as a preliminary determination of the quantity and quality of the landfill gas supply. The data collected during this period should allow minor adjustments and/or modifications to be made to the engine's fuel intake systems prior to the generator set(s) being placed in full-time operation.

At this time, it is not anticipated that the generator set(s) will need to be placed in full-time operation for the generation of power until after the receipt of the Authorization to Operate. However, the time frame for actually generating electrical power and utilizing the grant funds will be relatively tight. Therefore the County would like to reserve the right to proceed with the generation of power in order to meet the grant requirements should that need arise. The Section would be notified prior to beginning any full-time electrical power generation ahead of the receipt of the Authorization to Operate.

The required completion report will be prepared and promptly submitted to the Section for review and approval once all construction quality assurance tasks have been completed. The report will include, at a minimum, the information listed in the document titled *Request for Additional Information*, January 27, 2010 (DIN 9476). The Operations Plan will be expanded to include protocols of operation, inspection, monitoring and maintenance of the proposed generator set(s).

We appreciate your consideration of the County's request to included generator set(s) as a part of the previously approved Landfill Gas Collection and Combustion System at the Francis Farm Landfill. We also appreciate your understanding of the County's need for a minor variance to the normal end-of-project approval process. The receipt of this grant and the subsequent use of the funds within the applicable time frame is very important to Haywood County as this project will be a measurable environmental benefit to the Francis Farm Landfill. Thanks again for your consideration of our requests and please do not hesitate to contact us if you have any further questions regarding this submittal or if you require additional information.

Sincerely,  
McGILL ASSOCIATES, P.A.



WILLIAM H. SPERRY, PE  
Project Manager

cc: Mr. Marty Stamey, County Manager, Haywood County  
Mr. David B. Francis, Director, Haywood County Tax Administration  
Mr. Stephen King, Director, Haywood County Solid Waste Department  
Mr. Jeff Bishop, PE, McGill Associates