



Florida Department of Environmental Protection

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Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

Mr. Daniel Gray, Director
Manatee County Utility Operations
4410 66th Street West
Bradenton, Fl. 34210

May 21, 2008

RE: Lena Road Landfill, Manatee County
Stage III landfill gas recovery system construction
Pending Permit No. 39884-016-SC/08

Dear Mr. Gray:

This is to acknowledge receipt of the additional information dated April 17, 2008 (received April 22, 2008) submitted in support of your permit application, dated January 31, 2008, prepared by Post, Buckley, Schuh & Jernigan (PBSJ), to construct a landfill gas extraction and recovery system for Stage III at the existing Class I landfill referred to as the Lena Road Class I Landfill, located at 3333 Lena Road, Bradenton, Manatee County, Florida.

This letter constitutes notice that a permit will be required for your project pursuant to Chapter(s) 403, Florida Statutes. Your application for a permit modification is incomplete. This is the Department's second request for information. Please provide the information listed below promptly. Evaluation of your proposed project will be delayed until all requested information has been received. The following information is needed in support of the solid waste application [Chapter 62-701, Florida Administrative Code (F.A.C.)]:

GENERAL:

1. Please submit **4 copies** of all requested information. Please specify if revised information is intended to supplement or replace previously submitted information. Please submit all revised plans and reports as a complete package. For revisions to the narrative reports, deletions may be struckthrough (~~struckthrough~~) and additions may be shaded shaded or similar notation method. This format will expedite the review process. Please include revision date on all revised pages.
2. Please provide a summary of all revisions to drawings, and indicate the revision on each of the applicable plan sheets. Please use a consistent numbering system for drawings. If new sheets must be added to the original plan set, please use the same numbering system with a prefix or suffix to indicate the sheet was an addition, e.g. Sheet 1A, 1B, P1-A, etc.
3. Please be advised that although some comments do not explicitly request additional information, the intent of all comments shall be to request revised calculations, narrative, technical specifications, QA documentation, plan sheets, clarification to the item, and/or other information as appropriate. **Please be reminded that all calculations must be signed and sealed by the registered professional engineer (or geologist as appropriate) who prepared them.**

The following information is needed in support of the solid waste permit application [Chapter 62-701, Florida Administrative Code (F.A.C.)].

1. **Application form, Rule 62-701.320(7), F.A.C.**

a. Part 0.4. Response #1.a. indicates that the application form was revised to reference the appropriate information. The revised application form references the 2004 Operation permit renewal application. However, the gas recovery system was not approved by the Department as part of the operation permit application, and the information regarding the gas recovery system is "not relevant" for that application (as stated in Part 0 of that application). Please provide a revised application form that includes the information for the gas recovery system.

2. **Landfill Gas Recovery System, Rule 62-701.530(5), F.A.C.**

a. Response #2.a. states, "the sludge drying system and engines are not considered a 'gas recovery facility' as defined in Chapter 701. The Department has already issued construction permits for these projects through the air section. Our application did not request construction permits for these facilities. Our application was only for expansion of the landfill gas recovery system to the Stage III Landfill."

Rule 62-701.200(43), F.A.C., defines gas recovery facilities as "a system of wells, trenches, pipes,... that collect and transport the gas produced.. to one or more gas processing points or flares. [emphasis added]" Since Response #2.a. indicates that these details were part of the Air permit application, those documents were briefly reviewed to verify that the information submitted to the Air Section includes sufficient detail to comply with Rule 62-701.530, F.A.C., concerning the "gas processing points or flares." However, that information does not show the piping (and associated appurtenances) required to convey the LFG to the sludge dryer system on the figures/drawings provided in the air permit application, and therefore, does not meet the requirements of the solid waste rule.

As previously requested, please provide construction plans and design information for the "gas processing points or flares" (i.e., gas conditioning system, radiators, gas piping and connections for the sludge drying system and gas engines and building shown on the Site Plan, Sheet C-2 submitted as part of the pending operations permit modification request (#39884-015-SO/MM)).

b. Please provide all information required by Rule 62-701.530, F.A.C., for gas recovery systems. See Comment #2.a., above.

c. No additional information is requested concerning the bottom elevation of the borings/gas wells. Please provide one full-sized set of drawings. See Comment #2.g.

(Comment #2, cont'd)

d. Tables 1, 2, 3, 4. The information submitted does not provide a reasonable basis for the landfill gas system design/capacity as discussed below. Please submit sample calculations, supporting references, and assumptions that provide a reasonable basis for the values presented in these tables.

1) Response #2.d. indicates that the design method was taken from an article in MSW Magazine (Daniel P. Duffy, MSW Management, March/April 2006), and provided a copy of that article. The article states, "these assumed characteristics can only be used as a rough average for planning purposes... The LFG management system design will almost certainly have to be modified to accommodate actual field conditions. (page 2)" The article also indicates that the values used are "empirical and based on field observations." The article presents the author's observations and empirical conclusions, and while the Department does not disagree that the article may be suitable for "planning purposes," since the article is not from a refereed publication or textbook, does not provide references for the equations and values used (other than "empirical" as stated above), and explicitly states that the article is intended to provide a "rough average for planning purposes" (instead of design purposes), the Department does not consider the article to be reasonable for design of the LFG system.

2) Response #2.d also indicates that the LFG estimate provided using the method in the article is "validated by closely matching the actual reading[s]" at the Lena Road landfill. However, based on the data provided for 2008, the summation of the flow at the wellheads (2319 SCFM) does not correlate well with the flowrate measured at the flare flowmeter (1455 SCFM). The response indicates that the average of these flowrates validates the method used by Duffy. The Department disagrees with this conclusion. It does not seem that averaging disparate data (2319 SCFM vs. 1455 SCFM) over a year's time is a reasonable assessment of the validity of the proposed methodology. The Department also disagrees that based on the data presented in the response that the proposed methodology "is validated by closely matching the actual reading[s]" from the Lena Road landfill.

3) The Department accepts the explanation for Columns 1, 2 and 3 of the Tables.

e. Section 2, Part O.

1) Response #2.e(1) indicates that the calculations submitted for the Stage I gas collection system expansion are valid for the Stage III gas system. However, a complete copy of the calculations for pipe crushing, buckling and ring deformation could not be located in the "Calculation Book" revised June 16, 2006 in the Department's files. Please provide calculations that demonstrate that the lateral and header piping in Stage III will not collapse under the expected loading.

f. Section 3, Specifications.

1) See Comment #2.a. Please provide specifications for the gas conditioning system, radiators, gas piping and connections for the sludge drying system and gas engines and building shown on the Site Plan, Sheet C-2 submitted as part of the pending operations permit modification request (#39884-015-SO/MM).

2) §01015. No additional information is requested for this item.

(Comment #2.f., cont'd)

3) §01030. The revised information changed the pagination such that some information was not included on the revised pages. Please provide a complete Section 01030.

4) §02610. Response #2.f(4) states, "Section 2.01.A has the gradation for the gas well aggregate. It is graded between 1-inch to 3-inch diameter size." While "3-inch to 1-inch diameter" describes the size range for the aggregate, the Department disagrees that this is the gradation of the material since it does not specify the percentage of each size that is expected for the material. Please provide the gradation requirement for the gas well aggregate (§2.01.A.). The revised information changed the pagination such that some information was not included on the revised pages. Please provide a complete Section 02610.

g. Section 4, Drawings. Reduced size plan sheets are acceptable, however, please provide at least one set of full-sized, signed and sealed drawings, in addition to reduced-size drawings for the Department's files.

1) See Comment #2.a. Please provide construction drawings for the gas conditioning system, radiators, gas piping and connections for the sludge drying system and gas engines and building shown on the Site Plan, Sheet C-2 submitted as part of the pending operations permit modification request (#39884-015-SO/MM).

2) *Sheet C-2, General Site Plan.* No additional information is requested for this item.

3) *Sheet C-3.* No additional information is requested for this item.

4) *Sheet C-3A.* Please verify the location of Section A referenced to Sheet C-4 in the northwestern portion of this plan view sheet.

5) *Sheet C-4.* No additional information is requested for this item.

6) *Sheet C-5.* A new Detail B ("Typical Pipe Section") referenced to Sheets C-4 and C-3 was added to this sheet. Since there is also a Detail B referenced to Sheets C-3 and C-4 shown on Sheet C-4, please identify the locations of these different configurations on the plan view sheets.

7) *Sheet C-6.* No additional information is requested for this item.

3. **Notice of Application, Rule 62-701.320(8), F.A.C.** Proof of publication of Notice of Application was received by the Department on May 19, 2008. No additional information is requested for this item.

This staff assessment is preliminary and is designed to assist in the review of the application prior to final agency action. The comments provided herein are not the final position of the department and may be subject to revision pursuant to additional information and further review.

Please respond **by June 18, 2008**, responding to all of the information requests and indicating when a response to any unanswered questions will be submitted. If the response will require longer than **the date noted above**, you should develop an alternate specific time table for the submission of the requested information for Department review and consideration. Pursuant to the provisions of Rule 62-4.055(1), F.A.C., if the Department does not receive a timely, complete response to this request for information the Department may issue a final order denying your application. A denial for lack of information or response will be unbiased as to the merits of the application. The applicant may reapply as soon as the requested information is available.

You are requested to submit your responses to this letter together, as one complete package. Please contact me at (813)632-7600 ext. 386 if you have any questions.

Sincerely,



Susan J. Pelz, P.E.
Solid Waste Manager
Southwest District

sjp
cc:

Gus DiFonzo, Manatee County, 4410 66th Street West, Bradenton, Fl. 34210 (email)
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