

7004 1350 0002 5571 4237

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City, State, ZIP+

Mr. Daniel Gray, Director
Manatee County Government
Util. Opr. Dept., Solid Waste Section
4410 66th Street West
Bradenton, FL 34210

PS Form 3800

SENDER: ISSUED PERMIT # 39884-011-SF/01

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b. *16th Rd - on Manatee County*
- Fill in your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
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I also wish to receive the following services (for an extra fee):

- ☐ Addressee's Address
- ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Mr. Daniel Gray, Director
Manatee County Government
Util. Opr. Dept., Solid Waste Section
4410 66th Street West
Bradenton, FL 34210

5. Received By: (Print Name)

6. Signature: (Addressee or Agent)

PS Form 3811, December 1994

4a. Article Number

7004 1350 0002 5571 4237

4b. Service Type

- | | |
|--|---|
| <input type="checkbox"/> Registered | <input checked="" type="checkbox"/> Certified |
| <input type="checkbox"/> Express Mail | <input type="checkbox"/> Insured |
| <input checked="" type="checkbox"/> Return Receipt for Merchandise | <input type="checkbox"/> COD |

7. Date of Delivery

10.20.06

8. Addressee's Address (Only if requested and fee is paid)

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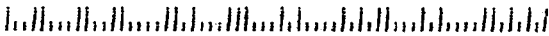
Dept. of Environmental Protection

• Print your name, address, and ZIP Code in this box •

OCT 23 2006

Florida Department of Environmental Protection
Southwest District
c/o Susan Pelz – Solid Waste
13051 North Telecom Parkway
Temple Terrace, FL 33637-0926

Southwest District



Is your RETURN ADDRESS completed on the reverse side?

SENDER: *Intert to Issue # 39884-011-SF/D1*

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b. *LENA RD LT*
- Print your name and address on the reverse of this form so that we can return this card to you. *MANATEE COUNTY*
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Mr. Daniel Gray, Director
Manatee County Government
Util. Opr. Dept., Solid Waste Section
4410 66th Street West
Bradenton, FL 34210

4a. Article Number

7004 0750 0003 0516 7449

4b. Service Type

- ☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☒ Return Receipt for Merchandise ☐ COD

7. Date of Delivery

9.15.06

5. Received By: (Print Name)

KATHRYN Meyers

6. Signature: (Addressee or Agent)

Kathryn Meyers

8. Addressee's Address (Only if requested and fee is paid)

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First-Class Mail
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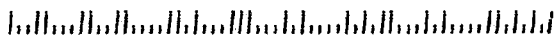
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Florida Department of Environmental Protection
Southwest District
c/o Susan Pelz - Solid Waste
13051 North Telecom Parkway
Temple Terrace, FL 33637-0926

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION

SEP 18 2006

SOUTHWEST DISTRICT
TAMPA



ATTENTION MAIL ROOM

PLEASE ROUTE THIS DOCUMENT:

w/2 board docs & 1 set plans

TO: RICHARD TEDDER

DEPT.: SOLID WASTE

BLDG.: TWIN TOWERS

A.S. 4565

Bradenton, Fl. 34210

10/23/06

ent of Protection

District
om Parkway
L 33637-0926
3-632-7600

Colleen M. Castille
Secretary

4237

October 19, 2006

PERMIT

DEP File No. 39884-011-SF/01,
Manatee County

NOTICE OF PERMIT

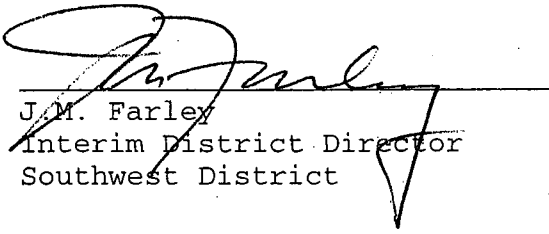
Dear Mr. Gray:

Enclosed is **Closure Permit No.: 39884-011-SF/01**, issued pursuant to Section(s) 403.087(1), Florida Statutes.

Any party to this Order (permit) has the right to seek judicial review of the Order pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 3900 Commonwealth Blvd., Mail Station 35, Tallahassee, 32399-3000; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this Notice is filed with the Clerk of the Department.

Executed in Hillsborough County, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION


J.M. Farley
Interim District Director
Southwest District

"More Protection, Less Process"

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Memorandum

Florida Department of Environmental Protection

PERMIT COVER MEMO

TO: x *10/19* J.M. Farley, Interim District Director

FROM/THROUGH: *WKR*
William Kutash, ENVIRONMENTAL ADMINISTRATOR
Susan Pelz, P.E. *10/19/06*, SOLID WASTE MANAGER

DATE: October 19, 2006

FILE NAME: Manatee County Lena Road LF PERMIT #: 39884-011-SF/01
PROGRAM : Solid Waste COUNTY : Manatee

TYPE OF PERMIT ACTION: ISSUE FINAL PERMIT

PUBLIC NOTICE PERIOD CLOSED? Yes PETITION FILED? No

PERMIT SUMMARY: This permit authorizes construction of a partial closure (approximately 58 acres) at the existing Lena Road Class I landfill. The partial closure includes construction of the final cover system, related active gas extraction system and stormwater management system.

PROFESSIONAL RECOMMENDATION: X APPROVE DENY

EVALUATION SUMMARY: After internal discussion with Division staff, it was determined that the geomembrane seam strengths shall meet the requirements of GRI-GM19 instead of complying with Rule 62-701.400(3)(d)1., F.A.C., since the LLDPE material does not have a consistently reproducible yield point. This issue will be clarified in the pending rule revisions to Chapter 62-701, F.A.C. The applicant has provided sufficient information to demonstrate compliance with Department Rules.

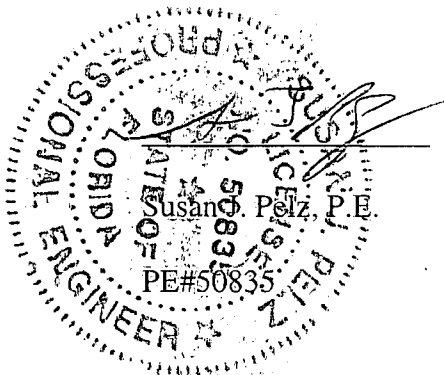
To 10/19/06, TIH=512	TTP=175		TTP
Application received	05/25/05		
RAI #1 sent	06/23/05		28
Response received	09/14/05		
Review suspended due to seam strength issue email from applicant	10/06/05		
Review resumed - information rec'd	01/25/06		
RAI #2 sent	02/24/06		30
Response rec'd	04/07/06		
RAI #3 sent	05/05/06		29
Response rec'd	06/19/06		
Application complete	06/19/06		
Intent to Issue sent (day=87)	09/14/06		87
Proof of publication rec'd	10/05/06		
Active (day=88)	10/19/06		
Final permit for routing	10/19/06		1

DAY 90/30 FOR THIS ACTION IS: ASAP- Day 90=10/21/06

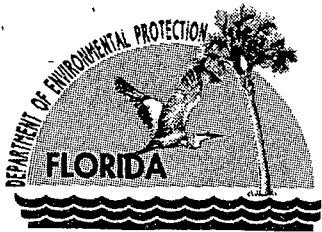
CERTIFICATION

Application #39884-011-SF/01, Manatee County Lena Road Landfill, Stage I, Partial Closure #2

I hereby certify that the engineering features described in the above-referenced application **provide** reasonable assurance of compliance with applicable provisions of Chapter 403, Florida Statutes, and Chapters 62-701, Florida Administrative Code. However, I have not evaluated and I do not certify aspects of the proposal outside my area of expertise (including but not limited to the electrical, mechanical and structural features).



10/19/06
date



Jeb Bush
Governor

Department of Environmental Protection

Southwest District
13051 North Telecom Parkway
Temple Terrace, FL 33637-0926
Telephone: 813-632-7600

Colleen M. Castille
Secretary

CERTIFIED MAIL 7004 1350 0002 5571 4237
RETURN RECEIPT REQUESTED

October 19, 2006

NOTICE OF PERMIT

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

DEP File No. 39884-011-SF/01,
Manatee County

NOTICE OF PERMIT

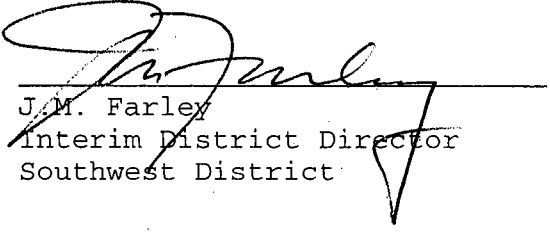
Dear Mr. Gray:

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Executed in Hillsborough County, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION


J.M. Farley
Interim District Director
Southwest District

"More Protection, Less Process"

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CERTIFICATE OF SERVICE

This undersigned duly designated deputy clerk hereby certifies that this **NOTICE OF PERMIT** and all copies were mailed before the close of business on October 19, 2006 to the listed persons.

FILING AND ACKNOWLEDGMENT
FILED, on this date, pursuant to Section 120.52(10), Florida Statutes, with the designated Department, Clerk, receipt of which is hereby acknowledged.

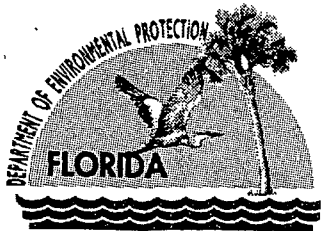
Anna Black 10/19/2006
Clerk Date

JMF/sjp

Attachment

Copies furnished to:

Manatee County Board of County Commissioners
Manatee County Notification List
Gus DiFonzo, Manatee Co., 4410 66th St. West, Bradenton, Fl. 34210
Joseph L. Miller, P.E., PBSJ, 482 South Keller Rd., Orlando, Fl. 32810
Chris McGuire, OGC Tallahassee
Fred Wick, FDEP Tallahassee
Richard Tedder, P.E., FDEP Tallahassee
(Permit Notebook)



Jeb Bush
Governor

Department of Environmental Protection

Southwest District
13051 North Telecom Parkway
Temple Terrace, FL 33637-0926
Telephone: 813-632-7600

Colleen M. Castille
Secretary

PERMITTEE

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

PERMIT/CERTIFICATION

WACS ID No: SWD-41-44795
Permit No: 39884-011-SF/01
Date of Issue: 10/19/2006
Expiration Date: 10/19/2011
County: Manatee
Lat/Long: 27°28'10"N
82°26'35"W
Sec/Town/Rge: 1/35S/18E
31/34S/19E
6&7/35S/19E
Project: Lena Road Class I LF
Stage I, Partial Closure #2

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rule(s) 62-4, 62-302, 62-330, 62-522, 62-550, and 62-701. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans and other documents, attached hereto or on file with the Department and made a part hereof and specifically described as follows:

To **construct** a final cover system at a Class I landfill (approximately 58 acres), referred to as the **Lena Road Landfill (Stage I, Partial Closure #2)**, subject to the specific and general conditions attached, located at 3333 Lena Road, Bradenton, Fl. The specific conditions attached are for the **construction** of:

1. Final cover system
2. Active gas extraction system within (Stage I) lined landfill area

Top elevation for this closure (including cover).	max. +135 feet NGVD [ref. SC#A.2.c., Sheet C-8]
Sideslopes max.	5H:1V [ref. SC#A.2.c., Sheet C-9]
Final cover system (bottom to top) [Ref. SC#A.2.a, Part P.4.]	Slopes flatter than 5H:1V - 6-inch thick subgrade, 40 mil smooth LLDPE geomembrane, 24-inch protective soil (max. 2×10^{-4} cm/sec), Bahia sod. Sideslopes (slopes steeper than 5H:1V) - 6-inch thick subgrade, 40 mil textured LLDPE geomembrane, double-sided geocomposite (triaxial, w/nonwoven GT on both sides), 24-inch protective soil (max. 2×10^{-4} cm/sec), Bahia sod.
Gas extraction system	Vertical wells (HDPE SDR 11 w/ 5/8 inch perforations) [ref. SC#A.2.c., Sheet C-5], laterals (8-inch HDPE SDR 17 solid wall pipe) sloped min. 2% to drain to condensate knockouts [ref. SC#A.2.c., Sheet C-6]

Replaces Permit No.: N/A, new

This permit contains compliance items summarized in **Attachment 1** that shall be complied with and submitted to the Department by the dates noted. If the compliance dates are not met and submittals are not received by the Department on the dates noted, enforcement action may be initiated to assure compliance with the conditions of this permit.

"More Protection, Less Process"

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.161, 403.727, or 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of rights, nor any infringement of federal, State, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, are required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:
 - (a) Have access to and copy any records that must be kept under conditions of the permit;
 - (b) Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
 - (c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

GENERAL CONDITIONS:

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

- (a) A description of and cause of noncompliance; and
- (b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Rule 62-4.120 and 62-730.300, Florida Administrative Code, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

- (a) Determination of Best Available Control Technology (BACT)
- (b) Determination of Prevention of Significant Deterioration (PSD)
- (c) Certification of compliance with State Water Quality Standards (Section 401, PL 92-500)
- (d) Compliance with New Source Performance Standards

GENERAL CONDITIONS:

14. The permittee shall comply with the following:

(a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

(b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

(c) Records of monitoring information shall include:

1. the date, exact place, and time of sampling or measurements;
2. the person responsible for performing the sampling or measurements;
3. the dates analyses were performed;
4. the person responsible for performing the analyses;
5. the analytical techniques or methods used;
6. the results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

SPECIFIC CONDITIONS: PART A -Solid Waste Facility General Requirements

1. **Facility Designation.** This site shall be classified as a Class I landfill and shall be constructed, operated, closed, monitored and maintained in accordance with all applicable requirements of Chapters 62-4, 62-302, 62-330, 62-520, 62-522, 62-550, and 62-701, Florida Administrative Code (F.A.C.) and all applicable requirements of Department rules.

2. **Permit Application Documentation.** This permit is valid for **construction** of the Stage I, Partial Closure #2 and related systems (including final cover, stormwater drainage system and active gas extraction system), and long-term care, monitoring and maintenance of the closed portions of the Lena Road Class I landfill in accordance with Department rules and the reports, plans and other information prepared by Post, Buckley, Schuh & Jernigan (PBSJ) (unless otherwise specified) as follows:

a. Manatee County Solid Waste Management Facility, Lena Road Landfill, Application and Engineering Report for Renewal of Landfill Closure Permit,... (one 3-ring binder) dated May 24, 2005 (received May 25, 2005), as revised, replaced or amended (information inserted into original) dated September 9, 2005 (received September 14, 2005), March 22, 2006 (received April 7, 2006), and June 16, 2006 (received June 19, 2006). This information includes, but is not limited to:

1) Construction Quality Assurance Plan for Installing and Testing Final Cover for Lena Road Stage I Landfill, Partial Closure #2,... [CQAP], (spiral bound document inserted into Part P, Appendix A);

2) Lena Road Landfill Stage I - Partial Closure #2, Technical Specifications, [Specs.] (spiral bound document inserted into Part P, Appendix A);

3) Long-Term Care Plan, Part P.8.;

b. Responses to Requests for Additional Information,... dated September 9, 2005 (received September 14, 2005), March 22, 2006 (received April 7, 2006), and June 16, 2006 (received June 19, 2006) inserted into original [ref.SC#A.2.a];

c. Plan Sheets titled, Construction Drawings for Lena Road Landfill Stage I Landfill, Partial Closure #2,... (14 Sheets) dated July 2005 (received April 7, 2006) including revised sheets (C-3, C-4, C-5, C-6, C-8, C-9, C-10, C-11, C-12, C-13) received June 19, 2006;

d. Manatee County Lena Road Landfill, Pending Permit No. 39884-011-SF/01, Closure, Stage I Landfill, Partial Closure #2, Calculation Book,... (spiral bound document) dated June 16, 2006 (received June 19, 2006), including Section 5 dated March 22, 2006 (received April 7, 2006).

3. **Permit Modifications.**

a. Any construction or operation not previously approved as part of this permit shall require a separate Department permit unless the Department determines a permit modification to be more appropriate. Any significant changes to the construction or operation at the facility shall require a permit modification. Permits shall be modified in accordance with the requirements of Rule 62-4.080, F.A.C. A modification which is reasonably expected to lead to substantially different environmental impacts which require a detailed review by the Department is considered a substantial modification.

SPECIFIC CONDITIONS: PART A -Solid Waste Facility General Requirements

(Specific Condition #A.3., cont'd)

- b. This permit does not authorize landfill operation. Construction, operation, or other activities not previously approved as part of this permit shall require a separate Department permit unless the Department determines a permit modification to be more appropriate, or unless otherwise approved in writing by the Department.
 - c. This permit authorizes the construction of the Stage I, Partial Closure #2 final cover system and related active gas extraction system and other related appurtenances, only.
4. **Permit Renewal.** No later than one hundred eighty (180) days before the expiration of the Department Permit, the permittee shall apply for a renewal of a permit on forms and in a manner prescribed by the Department, in order to assure conformance with all applicable Department rules. Permits shall be renewed at least every five years as required by Rule 62-701.320(10)(b), F.A.C.
 5. **Professional Certification.** Where required by Chapter 471 (P.E.) or Chapter 492 (P.G.), Florida Statutes, applicable portions of permit applications and supporting documents which are submitted to the Department for public record shall be signed and sealed by the professional(s) who prepared or approved them.
 6. **General Conditions.** The permittee shall be aware of and operate under the "General Conditions." General Conditions are binding upon the permittee and enforceable pursuant to Chapter 403, Florida Statutes.
 7. **Permit Acceptance.** By acceptance of this Permit, the Permittee certifies that he/she has read and understands the obligations imposed by the Specific and General Conditions contained herein and also including date of permit expiration and renewal deadlines. It is a violation of this permit for failure to comply with all conditions and deadlines.
 8. **Regulations.** Chapter 62-701, F.A.C., effective May 27, 2001, is incorporated into this permit by reference. In the event that the regulations governing this permitted operation are revised, the Department shall notify the permittee, and the permittee shall request modification of those specific conditions which are affected by the revision of regulations to incorporate those revisions.
 9. **Prohibitions.** The prohibitions of Rule 62-701.300, F.A.C., shall not be violated by the activities at this facility.
 - a. In the event that limestone is encountered during excavation or construction activities, the excavation/construction activities shall cease and the Department shall be notified **within 24 hours of discovery**. Written notification shall be submitted **within 7 days of discovery**. The written notification shall include the location, elevation, and extent of limestone noted on a plan sheet, a description of the materials encountered, and a plan of action which ensures that groundwater will not be adversely affected by the continued construction and operation of the facility. Excavation or construction activities shall not resume in the affected area until the Department-approved plan of action has been completed.

SPECIFIC CONDITIONS: PART A -Solid Waste Facility General Requirements

(Specific Condition #A.9., cont'd)

b. In the event that surface depressions or other occurrences which may be indicative of sinkhole activity or subsurface instability, are discovered on-site, or within 500 feet of the site, the Department shall be notified in accordance with Specific Condition #C.6.b. The written notification shall include a description of the incident, the location and size of the affected area shown on an appropriate plan sheet, and a corrective action plan which describes the actions necessary to prevent the unimpeded discharge of waste or leachate into ground or surface water.

c. Open burning of solid waste is prohibited except in accordance with Rule 62-701.300(3) and Chapter 62-256, F.A.C. All fires which require longer than one (1) hour to extinguish must be promptly reported to the Department in accordance with Specific Condition #C.6.b.

SPECIFIC CONDITIONS: PART B - Construction Requirements

1. **Construction.** All significant construction activities shall be approved by the Department prior to initiating work, unless specifically authorized otherwise.

a. This permit authorizes the construction of the Stage I, Partial Closure #2, including the final cover system and active gas extraction system in the partial closure area.

2. **Certification of Construction Completion.** All information required by this Specific Condition shall be signed and sealed by a registered professional engineer or land surveyor as appropriate.

a. **Within sixty (60) days** after the specified construction has been completed, the following activities shall be completed and submitted by the permittee for Department approval:

- 1) The owner or operator shall submit a Certification of Construction Completion, Form 62-701.900(2), signed and sealed by the professional engineer in charge of construction and quality assurance to the Department for approval, and shall arrange for Department representatives to inspect the construction in the company of the permittee, the engineer, and the facility operator.
- 2) The owner or operator shall submit Record Drawings/Documents showing all changes (i.e. all additions, deletions, revisions to the plans previously approved by the Department including site grades and elevations). The Record Documents shall include as-built plans details and elevations (survey) as appropriate.
- 3) The owner or operator shall submit a narrative indicating all changes in plans, the cause of the deviations, and certification of the Record Drawings/Documents by the Engineer to the Department.
- 4) The professional engineer of record shall submit to the Department a final report to verify conformance with the plans and specifications in accordance with Rules 62-701.400(7) and (8), F.A.C.

3. **Record Drawings/Documents.**

a. The Record Drawings/Documents shall include, but not be limited to, the following information:

- 1) Location of all anchor trenches, i.e. limits of liner [Spec. 02776-5.01.B.2.],
- 2) As-built locations and details (elevations) of repairs to or penetrations through the slurry wall;
- 3) Daily construction reports;
- 4) As-built drawings showing the geomembrane panel installation layout, locations of fabricated and field seams, type of seams, destructive sampling locations, locations of all repairs, panel designations [CQAP 1.2.6.2.], geomembrane booting and connection details [Spec. 02776-5.01.A.2(c)];
- 5) All geomembrane destructive test results;

SPECIFIC CONDITIONS: PART B - Construction Requirements

(Specific Condition #B.3.a., cont'd)

- 6) A compact disc or other electronic media that includes all available photographs documenting all stages of the construction project [Spec. 01380-1.01.A., 1.05.A.];
- 7) Permeability testing of the protective soil materials and each slurry wall repair;
- 8) An operation and maintenance manual for the gas extraction system [Spec. 01730-1.03.2];
- 9) Internal friction angle testing of the protective cover soil [Spec. 02220-2.01.C.1.];
- 10) Gas well construction diagrams, including elevation at top of ground, total depth of well, static water level, temperature of spoils, depth, thickness and description of soil or waste strata and the occurrences of any water-bearing zones. [Spec. 02610-1.03.C.]

4. Pre-Construction Submittals.

a. **At least thirty (30) days prior** to initiation of any construction activity, unless otherwise specified, the permittee shall submit the following information to the Department:

- 1) A **complete set** of Plans, Specifications and CQA Plan to be used for construction which includes all changes (i.e., all additions, deletions, revisions to the plans previously approved by the Department). All changes shall be noted using strikethrough (~~strikethrough~~) for deletions, and shading (~~shading~~) or underline (underline) for additions. All changes in the plans, specifications and CQA Plan shall be accompanied by a narrative indicating the change. Significant changes in the plans, as determined by the Department, shall require a permit modification. All changes in the plans shall be noted on the plans and the cause of the deviation and a re-certification of the alternate design by the design engineer shall be provided. These alternate designs shall be approved by the Department prior to construction. If **no** changes have been made to the construction plans, Specifications or CQA Plan, the permittee shall notify the Department in writing that no changes have been made, and re-submittal of these documents will not be required prior to construction;

- 2) The role and name of the specific company/organization for each of the parties in the Project team [ref. CQAP, Tables 1-1 and 1-2];

b. **At least 30 days prior to initiation** of installation of the liner, the results of the interface friction testing using actual construction materials shall be submitted to the Department. The results must demonstrate that the all interfaces each exhibit a minimum safety factor of 1.5 against sliding. Placement of the geomembrane shall not proceed prior to the Engineer's receipt of the results of the interface friction testing which meet the requirements of this condition.

SPECIFIC CONDITIONS: PART B - Construction Requirements

(Specific Condition #B.4., cont'd)

c. **No later than 2 weeks** prior to construction of the following components of the project, the Department shall be notified of the initiation of construction of these components (for each phase of construction) to allow the Department to observe the construction of:

- 1) penetrations through the slurry wall;
- 2) seaming performed using a method other than double-fusion (wedge) or extrusion welding;

5. **Pre-Construction Meeting Notification.** Department Solid Waste Permitting staff shall be notified **at least one (1) week prior** to all pre-construction meetings. Prior to initiating construction activities, the permittee shall make arrangements for the Engineer of Record to meet on site and discuss all plan changes with Department Solid Waste Permitting Staff of the Southwest District Office. A copy of the minutes from the pre-construction conference shall be submitted to the Department within two (2) weeks of the conference.

6. **Construction Schedule and Progress Report.**

a. **No later than one (1) week after** the pre-construction conference, the owner or operator shall submit a construction schedule which includes estimated dates for each portion of the construction to the Department. The Engineer of Record or another qualified professional engineer shall make periodic inspections during construction to ensure that design integrity is maintained.

b. An updated construction schedule and progress report shall be submitted to the Department **monthly, by the 15th of each month.** [Spec. 01310-2.06.A] The monthly progress report should be submitted in an appropriately labeled three-ring binder of sufficient size to store the monthly progress reports for the entire project. The monthly progress reports shall include, but not be limited to:

- 1) A narrative explaining the status (and any delays) of major stages of the construction (i.e., liner, piping, liner penetrations, etc.),
- 2) A summary of submittals and change order requests,
- 3) Weekly progress meeting minutes [CQAP 1.3.1., 1.3.3.; Spec. 01200-1.03.A.] and
- 4) Color copies of photographs which are representative of the typical construction activities for the reporting period, and photographs which show overall views and details of major stages of construction (e.g., liner penetrations, lift station construction, etc.).

7. **Construction Tolerances.**

a. Gas collection pipe slopes shall be a minimum of 2%. Invert elevations of the gas collection pipes shall be recorded every 100 feet to demonstrate that the gas collection system has been constructed to the slopes and grades shown on the drawings. [Spec. 02221-3.02., 15051-3.01.C.] This information shall be included with the Record Documents.

b. The construction tolerance for elevations shall be ± 0.10 ft. [Spec. 02220-3.04.A.]

SPECIFIC CONDITIONS: PART B - Construction Requirements

(Specific Condition #B.7., cont'd)

c. As-built topographic surveys shall demonstrate that the liner and protective soil cover were constructed within the tolerance required by the Drawings and Specifications.

d. All soil layer thicknesses are minimum requirements. [Spec.01005-1.07.A., 02220-3.02.A.]

8. **Laboratory and Field Testing Requirements.** Field and laboratory testing during the construction activities shall be conducted by a qualified testing laboratory, independent of the manufacturer or installer, representing the owner. A qualified field technician representing the owner shall provide full time, on-site inspection during construction. The field technician shall work under the supervision of a professional engineer registered in the State of Florida with experience in landfill liner construction.

9. **Construction Quality Assurance.**

a. Liner systems shall have a construction quality assurance plan to provide personnel with adequate information to achieve continuous compliance with the construction requirements. The Construction Quality Assurance Plan shall be in accordance with Rules 62-701.400(7) and (8), F.A.C., the CQA Plan [ref.SC#A.2.a(1)], and the conditions of this permit. The professional engineer or his designee shall be on-site at all times during construction (including liner system and gas management system) to monitor construction activities.

b. A complete set of construction drawings and shop drawings, which include daily additions, deletions and revisions, shall be maintained on-site at all times for reference. Drawings which show the locations of geomembrane panel seams and repairs shall be kept on-site at all times for reference. Work shall not be concealed until required information is recorded.

c. All liquid encountered during construction inside the slurry wall is leachate and shall be managed appropriately [see Spec.01030-1.09, 02221-1.02.B.]. Leachate shall not be deposited, injected, dumped, spilled, leaked, or discharged in any manner to the land, surface water or groundwater outside the slurry wall (liner system) at any time during the construction activities.

d. Unsatisfactory, defective or non-conforming work shall be reported to the Engineer and shall be corrected, or the reasons for not correcting the work shall be recorded and maintained on-site for reference and inspections. Documentation of the corrections or reasons for not correcting the work shall be submitted with the Record Documents required by Specific Conditions #B.2 and #B.3. All areas not meeting the requirements of the contract specifications and CQA Plan shall be reworked by the Contractor to meet the specifications, CQA Plan and requirements of this permit.

e. Construction activities such as geomembrane seaming, QA/QC testing of the geosynthetics or soil materials, surveying, etc. shall not be carried out in non-daylight hours without prior Department approval. [see Spec.01005-1.08.C., 01310-1.02.B, 02776-1.03.A.2(b)] If these activities will be conducted during nighttime hours, the Department shall be notified **at least 1 week** in advance to allow for Department observation. This notification shall include a description of the methods which will be used to provide adequate illumination to ensure that the quality of the construction is not compromised.

SPECIFIC CONDITIONS: PART B - Construction Requirements

(Specific Condition #B.9., cont'd)

f. Where sod is used over lined areas, pegging of sod shall not damage the liner. [Spec. 02276-3.01.A.3., 02485]

g. All portions of the final cover system and gas management system construction, shall be observed and documented by the CQA Consultant [CQAP 1.2.7.].

h. CQA daily reports shall include weather conditions (e.g., precipitation, temperature).

i. Runoff from stockpiled soils shall not discharge to surface water bodies or wetlands such that Department surface water standards are violated at the point of discharge.

j. All excavations shall be maintained free from standing water. Except for the stormwater management system construction, no construction, including pipe laying, shall be allowed in water. The surface shall be graded such that there is no ponding of water [CQAP 3.1.1.; Spec. 02221-1.02.B.].

k. The CQAM shall receive and record the date Shop Drawings and samples are received and notify the Engineer [CQAP 1.2.7.4.a.]. The CQAM shall review the geosynthetics conformance test results [CQAP 1.2.7.5]. In addition to the observations listed in CQAP 3.5.4., the CQAM shall also note all locations of geomembrane damage.

l. Unless otherwise specified in this permit, the documents listed in CQAP 1.2.7.8. shall be maintained on-site and copies shall be provided to the Department upon request.

m. The Department shall be notified in accordance with Specific Condition #C.6.b. of all fuel, oils, greases, solvents, lubricants, etc., that are spilled or leaked in areas that may discharge outside the slurry wall. The permittee shall ensure that all personnel working on the landfill site (including contractors and subcontractors) shall utilize all appropriate measures to prevent spills and leaks of fuel, solvents, lubricants, oils, etc. [see Spec. 01005-1.11.D]

n. All waste exposed by excavations or other construction activity shall be covered or removed for disposal at the active working face daily. [see Spec. 01015-1.05; 02610-3.03.A.] All wastes generated during the construction shall be disposed of in the on-site, active Class I landfill. No solid waste shall be used for backfill. [Spec. 01150-1.07]

o. Gas well drilling shall be in accordance with Specification Section 02610-3.01 and the conditions of this permit. In the event that the gas well installation indicates that the clay confining unit under the landfill may have been encountered during gas well installation, the gas well drilling **shall cease** in the affected area and the Department shall be notified in accordance with Specific Condition #C.6.b. The information required by Specification 02610-1.03.C. shall be provided with the written notification. Gas well installation shall not resume until specifically approved by the Department.

SPECIFIC CONDITIONS: PART B - Construction Requirements

10. Soil Materials.

a. The liner subgrade shall be compacted to a minimum of 93% Standard Proctor maximum dry density. [CQAP Table 4-1; Spec. 02220-3.03.A.] Surfaces adjacent to geosynthetics shall be smooth and free of depressions, rocks/stones (greater than ½ inch dia.), sticks, roots, sharp objects, or debris of any kind.

b. The protective cover soil shall have a maximum permeability of 2×10^{-4} cm/sec [Spec. 02220-2.01.C.] and shall be a minimum of 24-inches thick. [Spec. 02220-3.02.A.]. A sufficient number of permeability tests shall be performed on the drainage sand material to demonstrate the required permeability. The internal friction angle of the protective cover soil shall be a minimum of 23 degrees [Spec. 02220-2.01.C.].

c. The soil bedding surface shall be non-cohesive, non-plastic granular local silty sand, a minimum of 6-inches thick [CQAP 3.1.1.], and free of rocks (greater than ½ inch diameter) [CQAP 3.5.2., Spec. 02220-1.01.B.5., 02220-2.01.B.], debris, sharp objects, organic materials and other deleterious materials.

d. Soil cover material shall be placed over the geocomposite such that the geocomposite is not damaged and no tensile stress is induced in the materials. [CQAP 3.3.2.]

e. Earthwork shall be tested by the CQAM for the tests and frequencies specified in CQAP Table 4-1.

f. The protective cover soil shall be a minimum of 24-inches thick and shall be free of rocks (greater than ½ inch diameter) [CQAP 4.3.1.], debris, sharp objects, organic materials and other deleterious materials.

g. Repairs to the slurry wall shall be in accordance with Specification Section 01015-1.03. The Department shall be notified of repairs to the slurry wall in accordance with Specific Condition #B.4.c.

h. Pipe bedding materials for pipes installed within the limits of the geomembrane shall not contain any angular stone [see Spec. 02221-2.01.C.].

i. The aggregate used for the gas system installation shall be non-calcareous washed well graded granite. [Spec. 02610-2.01.A.]

11. Geosynthetic Materials.

a. Conformance testing.

1) The CQA Consultant or designee (independent from the Contractor) shall take conformance samples of the geosynthetics materials. CQA Conformance testing for the geosynthetic materials shall be in accordance with the following. In all cases, the test results shall meet or exceed the property values in the Specifications and CQA Plan.

a) Geomembrane - properties listed CQAP Table 2-1 (Spec. Table 02776-A), one sample per 100,000 sf of material [CQAP 2.1.1.; Spec. 02776-4.01.B.]

b) Geocomposite - properties listed in CQAP Table 2-2 (Spec. 02712-Table 3), one sample per 100,000 sf of material

SPECIFIC CONDITIONS: PART B - Construction Requirements

(Specific Condition #B.11., cont'd)

b. Seaming.

- 1) Seaming processes other than fusion or extrusion welding shall be approved by the Engineer and submitted to the Department prior to implementation. [see CQAP 4.2.2.]
- 2) Seaming apparatus or personnel which have failed trial welds shall not be used for seaming until passing welds are achieved. [see CQAP 4.2.4.3.3b]
- 3) Geomembrane seaming activities shall only be conducted during daylight hours and within the weather requirements of the Specifications, unless otherwise specifically approved by the Department. [see Spec. 02776-1.03.A.2(b), 02776-5.01.D.8(d)] Seaming shall only take place with the "master seamer" present. [CQAP 1.2.6.2., 3.4.8.] No geomembrane seaming shall be performed unless the CQA manager/inspector is on-site. [CQAP 3.5.6.; Spec. 02776-1.02.D.2(d)]
- 4) The full-time resident CQA inspector shall observe no more than two geosynthetics seaming crews at any given time. [CQAP 3.5.7.]
- 5) The procedure used to temporarily bond adjacent geomembrane panels together shall not damage the geomembrane. Solvent or adhesive shall not be used to bond geomembrane panels. [see CQAP 3.4.3.]
- 6) All seaming operations shall cease upon the presence of any precipitation (drizzle, sprinkle, fog, dew, etc.). [CQAP 3.4.6.; Spec. 02776-5.01.D.6(c)]
- 7) Seams shall be oriented parallel to the line of maximum slope, i.e., oriented along, not across the slope. [Spec. 02776-5.01.D.1.]

c. Destructive testing.

- 1) Destructive tests of the geomembrane seams shall be taken at random locations, at a minimum frequency of one test location per 500 feet of seam. This frequency shall not be based on an average throughout the entire facility. [CQAP Table 3-4, 4.2.3.1.; Spec. 02776-5.01.D.10(e)]
- 2) Geomembrane seams shall meet the requirements of Geomembrane Specifications, Table 02776-A, and in all cases destructive tests conducted on the geomembrane field seams shall demonstrate that the failure is outside of the seam area. All of the samples shall meet the requirements for each test method (peel and shear) listed in Geomembrane Specifications, Table 02776-A. The strength results shall not be averaged and both sides of fusion welds shall be tested. [Spec. 02776-5.01.D.10(f)]
- 3) Work shall not proceed with any materials which will cover locations which have been destructively tested or repaired until laboratory test results which demonstrate passing values are provided to the on-site CQA manager/inspector. [CQAP 4.2.3.1., 4.2.4.2.]
- 4) All areas that fail nondestructive testing shall be marked by the on-site CQA inspector.

SPECIFIC CONDITIONS: PART B - Construction Requirements

(Specific Condition #B.11.c., cont'd)

- 5) All welds shall be tested in shear and peel. Geomembrane seams shall not be tested by "hand" exclusively. [see CQAP 3.4.3., 4.2.3.2.; Spec. 02776-5.01.D.10(e)]
- d. Transmissivity.
 - 1) The transmissivity test results required by the Specifications shall be submitted to the Engineer for review before the proposed materials are approved for use on the project.
 - 2) The transmissivity of the geocomposite shall be a minimum of $4 \times 10^{-3} \text{ m}^2/\text{sec}$ based upon a gradient of 0.33% and a normal load of 240 psf. [CQAP Table 2-2] Transmissivity testing shall be conducted on the actual materials that will be used in the project.
- e. Interface friction angles. The minimum interface friction angle for cover soil/geocomposite, geomembrane/geocomposite, and geomembrane/soil interfaces shall be **22 degrees**. Separate tests shall be conducted for smooth and textured geomembrane. [CQAP Table 2-1].
- f. The construction methods used shall minimize wrinkles. Excessive wrinkles are wrinkles that fold over when stepped on or are 12 inches high [CQAP 4.2.4.5.; Spec. 02712-D.1.]. Excessive wrinkles shall be removed, and the areas repaired. Areas where wrinkles are removed shall be repaired and re-tested in accordance with the Specifications and CQA Plan.
- g. The liner system shall not be damaged by excessive traffic.
- h. The geocomposite drainage net (CDN) material and geotextile shall be handled (stored, placed, etc.) in a manner which prevents the infiltration of dirt and protects the CDN and geotextile from abrasion, punctures and excessive moisture. Geocomposite that is clogged by dirt shall be cleaned prior to placement. [CQAP 3.3.2.5.]
- i. In areas where stakes are used, stakes shall not be of a type or used in a way that may damage the geomembrane.
- j. Prior to placement of materials on the subgrade, an as-built topographic survey shall be provided to the Engineer to verify conformance with the Drawings and Specifications. The subgrade shall be accepted by the Liner Installer and Engineer in writing before placement of the next layer. [CQAP 1.2.6.2.]
- k. During the construction of, and until the geomembrane are placed on the subgrade, the subgrade shall be inspected daily for signs of desiccation, excessive moisture, or other damage. In the event that the condition of the subgrade deteriorates, corrective actions shall be implemented immediately. Washouts or erosion of the geomembrane subgrade shall be repaired immediately. The CQAM shall observe the condition of the subgrade and note areas of inadequacy, erosion or other deterioration in the Daily Reports [see CQAP Table 3-3].
- l. No geomembrane shall be placed in an area that has become softened by precipitation or desiccated and cracked due to lack of moisture. No standing water or excessive moisture shall be allowed on the area to be lined before the geomembrane installation.

SPECIFIC CONDITIONS: PART B - Construction Requirements

(Specific Condition #B.11., cont'd)

m. Temporary loading and/or anchoring devices (such as sand bags) shall be removed prior to placing the next layer (i.e., geocomposite or soil) over the geomembrane. [see CQAP 3.3.1.3. 3.3.2.2; Spec. 02776-5.01C.4.]

n. The geocomposite shall be adequately anchored at the top of the slope. [Spec. 02712-D.1.]

o. The geomembrane shall always be kept dry and protected from wind damage. [CQAP 3.4.6.] Sandbags or other temporary anchoring devices shall be removed prior to subsequent placement of materials over the geosynthetics. [Spec. 02712-D.1.]

p. The geomembrane materials shall not be accepted for use on the project until the results of the CQA conformance testing that indicate that the geomembrane meets the specifications have been received. [Spec. 02776-4.02.A.3.]

SPECIFIC CONDITIONS: PART C - Operation Requirements

1. Facility Operation Requirements.

a. The permittee shall operate the active portions of this facility in accordance with Chapter 62-701, F.A.C., and Operation Permit 39884-010-SO/01 (including modifications, if any), or its successors.

b. Leachate shall not be deposited, injected, dumped, spilled, leaked, or discharged in any manner to soils, surface water or groundwater outside the liner and leachate management systems at any time during the construction or operation of this facility.

c. The gas flare shall be kept in operation at all times during construction. [Spec. 01005-1.11.B.]

2. Facility Personnel. The owner or operator shall provide adequate personnel for constructing, operating, monitoring and maintaining the facility in an orderly, safe, and sanitary manner.

3. Control of Access. Access to, and use of, the facility shall be controlled as required by Rule 62-701.500(5), F.A.C.

4. Monitoring of Waste. Wastes shall be monitored as required by operation permit no. 39884-010-SO/01, or its successors.

5. Control of Nuisance Conditions. The owner or operator shall control odors, vectors (mosquitoes, other insects, rodents), and fugitive particulates (dust, smoke) arising from the construction and operation so as to protect the public health and welfare. Such control shall minimize the creation of nuisance conditions on adjoining property. Complaints received from the general public, and confirmed by Department personnel upon site inspection, shall constitute a nuisance condition, and the permittee must take immediate corrective action to abate the nuisance.

6. Facility Maintenance and Repair.

a. The site shall be properly maintained including maintenance of access roads to disposal areas, equipment, stormwater and leachate management systems, cover systems and berms, gas monitoring and management systems, surface water monitoring system, and groundwater monitoring system. Erosion and ponded water in disposal areas shall be prevented.

b. In the event of damage to any portion of the landfill site facilities, unauthorized leachate discharges, failure of any portion of the landfill systems (including damaged or dry groundwater monitoring wells), fire, explosion, the development of sinkhole(s) or other subsurface instability at the site, the permittee shall **immediately (within 24 hours)** notify the Department explaining such occurrence and remedial measures to be taken, method to prevent reoccurrence, and time needed for repairs. **Written, detailed notification shall be submitted to the Department within seven (7) days following the occurrence.** Routine maintenance does not require notification but shall be noted on daily reports.

7. Stormwater Management. The site shall have a surface water management system designed, constructed, operated, and maintained to prevent surface water from running on to waste filled areas, and a stormwater runoff control system designed, constructed, operated, and maintained to collect and control stormwater to meet the requirements of Chapter 62-330, F.A.C., and the requirements for management and storage of surface water in accordance with Rule 62-701.500(10), F.A.C., to meet applicable standards of Chapters 62-3, 62-302, and 62-330, F.A.C. The stormwater management system shall be inspected for damage and proper operation daily.

SPECIFIC CONDITIONS: PART D - Recordkeeping

1. **Report submittals.** Unless otherwise specified, all submittals, notifications, requests for permit modification, reports for compliance with this permit, etc. shall be sent to: Solid Waste Section, Department of Environmental Protection, Southwest District Office, 13051 North Telecom Parkway, Temple Terrace, Fl. 33637-0926.
2. **Operation Plan and Operating Record.** Each landfill owner or operator shall have an operational plan which meets the requirements of Rule 62-701.500(2), F.A.C. A copy of the Department approved permit, operational plan, construction reports and record drawings, and supporting information shall be kept at the facility at all times for reference and inspections. Operating records as required by Rule 62-701.500(3), F.A.C., are part of the operations plan, and shall also be maintained at the site.
3. **Waste Records.** The permittee shall maintain all records required by the construction specifications, CQA Plan and this permit on-site, and shall provide copies to the Department upon request, unless specified otherwise.
4. **Financial Assurance.** The permittee shall provide adequate financial assurance for this facility and related appurtenances in accordance with Rule 62-701.630, F.A.C.
 - a. All costs for closure shall be adjusted and submitted **annually, by September 1st each year** to: Solid Waste Manager, Solid Waste Section, Department of Environmental Protection, 13051 North Telecom Parkway, Temple Terrace, Fl. 33637-0926.
 - b. Proof that the financial mechanism has been adequately funded shall be submitted **annually** to: Financial Coordinator, Solid Waste Section, Department of Environmental Protection, 2600 Blair Stone Road, MS#4565, Tallahassee, Florida 32399-2400.

PERMITTEE: Manatee Co y Utilities Dept.
Mr. Dan Gray, Director

PER NO: 39884-011-SF/01
Lena Road Class I Landfill

SPECIFIC CONDITIONS: PART E - Water Quality Monitoring Requirements

1. **Water Quality Monitoring Quality Assurance.** Water quality monitoring shall be conducted as required by operation permit number 39884-010-SO/01, or its successors.

SPECIFIC CONDITIONS: PART F - Landfill Gas Management

1. Landfill Gas - NSPS and Title V Air Requirements.

a. This solid waste permit will meet the statutory requirement to obtain an air construction permit before modifying or constructing a source of air pollution, except for those landfills that are subject to the prevention of significant deterioration (PSD) requirements of Chapter 62-212, F.A.C. Facilities that are subject to the PSD requirements shall obtain an air construction permit from the Bureau of Air Regulation prior to beginning construction or modification pursuant to Rule 62-210.400, F.A.C.

b. The permittee shall comply with any applicable Title V air operation permit application requirements of Chapter 62-213, F.A.C., and 40 CFR 60, Subparts WWW and CC, as adopted by reference at Rule 62-204.800, F.A.C. Title V Permit applications shall be submitted to the District Air Program Administrator or County Air Program Administrator with air permitting authority for the landfill.

c. The permittee shall submit to the Division of Air Resources Management, Department of Environmental Protection, Mail Station 5500, 3900 Commonwealth Blvd., Tallahassee, FL 32399-3000, any amended design capacity report and any Non-Methane Organic Compound (NMOC) emission rate report, as applicable, pursuant to 40 CFR 60.757(a)(3) and (b).

2. Gas Monitoring and Control. Landfill gas shall be monitored and controlled as required by operation permit no. 39884-010-SO/01, or its successors.

3. Gas Monitoring Locations. Gas monitoring probes shall be located as listed in operation permit no. 39884-010-SO/01, or its successors.

4. Gas Remediation. In the event that the Lower Explosive Limit (LEL) is greater than 25% inside structures both on or off of the landfill site, or greater than 100% at the property boundary, the owner shall submit to the Department, **within 7 days of detection**, a remediation plan detailing the nature and extent of the problem and the proposed remedy. The remedy shall be completed **within 60 days of detection** unless otherwise approved by the Department.

SPECIFIC CONDITIONS: PART G - Closure and Long-Term Care Requirements

1. Closure Requirements.

a. **No later than ninety (90) days** prior to the date when wastes will no longer be accepted for portions of the landfill which have reached closure design dimensions, the landfill owner or operator shall submit a closure permit application to the Department, in order to assure conformance with all applicable Department rules. A closure permit is required prior to implementing closure related activities.

b. **Long-Term Care Requirements.** The owner or operator shall perform long-term care for the site in accordance with Rule 62-701.620, F.A.C., and the Long-Term Care Plan [ref. SC#A.2.a(3)]. Long-term care includes, but is not limited to, water quality, leachate and gas monitoring; maintenance of the final cover system; maintenance of the leachate collection and removal system; maintenance and operation of the gas collection system; erosion control; and the prevention of ponding within disposal areas.

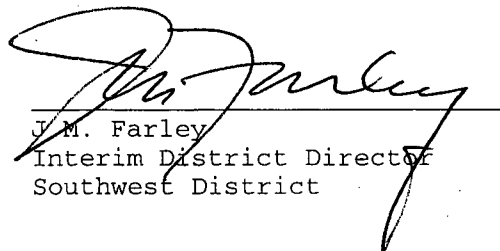
c. After final cover construction for all areas of the landfill is completed, and construction is approved by the Department, the permittee shall file a declaration to the public in the deed records in the office of the county clerk.

2. Future use of closed landfill areas. Prior to implementation, the owner or operator shall submit a plan for any proposed uses of the closed portions of the landfill to the Department for approval. This plan shall include a description of the proposed use, and evaluation of the impact on the existing landfill systems (e.g. final cover, leachate collection, bottom liner), engineering designs, calculations and plans as appropriate, etc. The proposed activity shall not be initiated without prior Department approval.

3. Final Cover. Portions of the landfill which have been filled with waste to the extent of designed dimensions shall be closed (shall receive final cover) within 180 days after reaching design dimensions, in accordance with Rule 62-701.500(7)(g), F.A.C. and all applicable requirements of Department rules.

Executed in Hillsborough County, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION


J.M. Farley
Interim District Director
Southwest District

ATTACHMENT 1		
Specific Condition	Submittal Due Date	Required Item
A.4.	180 days prior to permit expiration	Submit permit renewal application
A.9.a.	Within 24 hours of discovery	Notification of sinkholes or subsurface instability
	Within 7 days of verbal notification	Written notification & corrective action plan
B.2.a.	Within 60 days of completion	Submit certification of construction completion, record drawings, etc.
B.4.a.	At least 30 days prior to construction	Submit complete plans, specification, CQA plan, or statement that no changes have occurred, org. chart with parties/roles,
B.4.b.	At least 30 days prior to installation of the liner	Submit interface friction testing results
B.4.c.	No later than 2 weeks prior to construction of penetrations of the slurry wall and alternate seaming methods	Notify of construction initiation to allow for observation
B.5.	At least 1 week prior	Notify of preconstruction meeting
B.6.a.	No later than 1 week after pre-construction meeting	Submit meeting minutes
B.6.b.	Monthly, by the 15 th each month	Submit monthly progress report & schedule
B.9.e.	At least 1 week prior	Notify of night work
C.6.b.	Within 24 hours of discovery	Notification of: hazardous waste receipt, failure of landfill systems or equipment
	Within 7 days of verbal notification	Written notification & corrective action plan
D.4.a.	Annually, by September 1 st each year	Submit revised cost estimates
D.4.b.	Annually	Submit proof of funding

ATTACHMENT 1, cont'd		
Specific Condition	Submittal Due Date	Required Item
F.4.	Within 7 days of detection	Submit gas remediation plan
	Within 60 days of detection	Complete corrective actions
G.1.a.	No later than 90 days prior to the date when wastes will no longer be received in active LF areas	Submit Closure Permit application



An employee-owned company

October 4, 2006

Susan J. Pelz, P.E.
Solid Waste Manager
Southwest District
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926

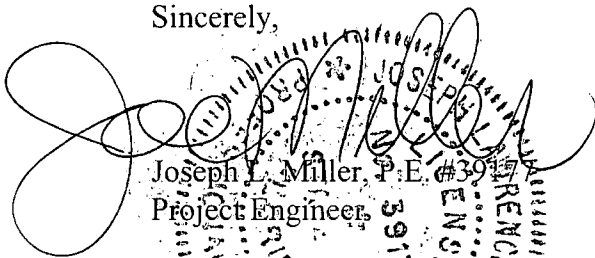
Re: Lena Road Landfill, Manatee County
Pending Permit No.: 39884-011-SF/01, Closure,
Stage I, Partial Closure #2

Dear Ms Pelz:

Enclosed please find the proof of publication for the above referenced pending permit.

If you have any questions, please call me at 407-806-4153, or e-mail me at jlmiller@pbsj.com.

Sincerely,

A large, stylized handwritten signature in black ink, appearing to read 'Joe Miller', is written over a circular official stamp.

Joseph L. Miller, P.E. #39177
Project Engineer

U:\SO\Projects\Manatee County\SW-46 Renew Closure Permit for Lena Ldf\Susan Pelz Ltr Oct 4 2006.doc

Dept. of Environmental
Protection
OCT 05 2006
Southwest District

THE HERALD


WWW.HERALDTODAY.COM
P.O. Box 921
Bradenton, FL 34206-0921
102 Manatee Avenue West
Bradenton, FL 34205-8894
941/748-0411 ext. 7065

The Herald
Published Daily
Bradenton, Manatee, Florida

STATE OF FLORIDA
COUNTY OF MANATEE;

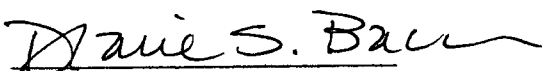
Before the undersigned authority personally appeared Sandy Riley, who on oath says that she is a Legal Advertising Representative of The Herald, a daily newspaper published at Bradenton in Manatee County, Florida; that the attached copy of the advertisement, being a Legal Advertisement in the matter of **STATE OF FLORIDA** in the Court, was published in said newspaper in the issues of, **9/21/06**

Affiant further says that the said publication is a newspaper published at Bradenton, in said Manatee County, Florida, and that the said newspaper has heretofore been continuously published in said Manatee County, Florida, each day and has been entered as second-class mail matter at the post office in Bradenton, in said Manatee County, Florida for a period of 1 year next preceding the first publication of the attached copy of advertisement; and affiant further says that she has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.


(Signature of Affiant)

Sworn to and subscribed before me this
22nd Day of Sept., 2006

DIANE S. BACRO
Notary Public
State of Florida
My comm. exp. 08-15-2007
Comm. No. DD 206531



SEAL & Notary Public

Personally Known X OR Produced Identification _____
Type of Identification Produced _____

State of Florida Department of Environmental Protection Notice of Proposed Agency Action on Permit Application

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
OCT - 5 2006
SOUTHWEST DISTRICT
TAMPA

The Department of Environmental Protection, hereby gives notice of its intent to issue a permit to Manatee County Utilities Operations Department, Mr. Daniel T. Gray, Director, who applied on May 25, 2005, to the Department of Environmental Protection for a permit to close portions (Stage 1, Partial Closure #2) of a the existing Leng Road Class I Landfill, located at 3333 Leng Road, Bradenton, Manatee County, Florida. This permit application includes construction of the Stage 1, Partial Closure #2 final cover system and related landfill gas control system and stormwater improvements.

Persons whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below, and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Blvd., MS#35, Tallahassee, Florida 32399-3000, within fourteen (14) days of publication of this notice. Failure to file a request for hearing within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The petition shall contain the following information:

- The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
- A statement of how and when each petitioner received notice of the Department's action;
- A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
- A statement of the material facts disputed by Petitioner, if any;
- A statement of facts which petitioner contends warrants reversal or modification of the Department's action or proposed action;

(f) A statement of the of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and
(g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wants the Department to take with respect to the Department's action or proposed action.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice of intent. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above. Mediation is not available in this proceeding.

Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, Florida Statutes, and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rules 62-110.106, 28-106-201, and 28-106.301 F.A.C.

The application is available for public inspection during normal business hours, 8:00a.m. to 5:00p.m., Monday through Friday, except legal holidays, at 13051 N. Telecom Parkway, Temple Terrace, FL 33637-0926.
9/21/06

THE HERALD

CLASSIFIED ADVERTISING

Legal Advertising Memo Bill

Order Information					
Order #:	131592543	Class:	4995	P.O. #:	
Phone:	(941) 792-8811	Start Date:	09/21/2006	Rate:	LE
Account:	12370	Stop Date:	09/21/2006	Charges:	\$ 0.00
Name:	n/a,	Insertions:	2	Net Price:	\$ 217.58
Firm:	MANATEE CO UTILITY	Lines:	174	Payments:	\$ 0.00
Run-	9/21 1x	Inches:	16.948	Balance:	\$ 217.58
Text					
State of Florida Department of Environmental Protection Notice of Proposed Agency Action on Permit Application The Department of Environmental Protection hereby gives notice of its Intent to Issue a permit to Manatee County Utilities Operations Departme					

102 Manatee Avenue West
Bradenton, FL 34205
Classified Dept. (941) 746-SELL (7355)
Classified Legal and Official Advertising (941) 745-7064
Fax: (941) 745-7090 E-mail: bhclassified@bradentonherald.com

Pelz, Susan

From: Pelz, Susan
Sent: Thursday, September 14, 2006 5:40 PM
To: Dan Gray (E-mail)
Cc: Gus Difonzo (E-mail); Joe Miller (E-mail); Morgan, Steve
Subject: Lena Road Stage I, Partial Closure #2

Dan,

Please find attached the draft pending closure permit. Also please find attached the Notice of Agency Action that needs to be published in a newspaper of general circulation in the area of the project. Hard copies were mailed today.

Many of the conditions are typical of our landfill construction/closure permits. If you have any comments regarding the draft permit conditions, please let me know.

After the Department receives proof of publication of the Notice, there is a 14 day petitioning period, after which if there are no petitions, the permit will be issued.

If you have any questions, please call or email (email is better).

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

13051 N. Telecom Parkway
Temple Terrace, FL 33637
813-632-7600 x 386
susan.pelz@dep.state.fl.us



39884-011-SF- LenaRd-Notice
11.09-11-06.DOCagencyAction.DOC

Memorandum

Florida Department of Environmental Protection

PERMIT COVER MEMO

TO: x J.M. Farley, Interim District Director

FROM/THROUGH:

William Kutash

Susan Pelz, P.E.

ENVIRONMENTAL ADMINISTRATOR

SOLID WASTE MANAGER

DATE: September 14, 2006

FILE NAME: Manatee County Lena Road LF

PERMIT #: 39884-011-SF/01

PROGRAM : Solid Waste

COUNTY : Manatee

TYPE OF PERMIT ACTION: INTENT TO ISSUE

PUBLIC NOTICE PERIOD CLOSED?

PETITION FILED?

PERMIT SUMMARY: This permit authorizes construction of a partial closure (approximately 58 acres) at the existing Lena Road Class I landfill. The partial closure includes construction of the final cover system, related active gas extraction system and stormwater management system.

PROFESSIONAL RECOMMENDATION: x APPROVE DENY

EVALUATION SUMMARY: After internal discussion with Division staff, it was determined that the geomembrane seam strengths shall meet the requirements of GRI-GM19 instead of complying with Rule 62-701.400(3)(d)1., F.A.C., since the LLDPE material does not have a consistently reproducible yield point. This issue will be clarified in the pending rule revisions to Chapter 62-701, F.A.C. The applicant has provided sufficient information to demonstrate compliance with Department Rules.

To 09/14/06, TIH=477	TTP=174		TTP
Application received		05/25/05	
RAI #1 sent		06/23/05	28
Response received		09/14/05	
Review suspended due to seam strength issue email from applicant		10/06/05	
Review resumed - information rec'd		01/25/06	
RAI #2 sent		02/24/06	30
Response rec'd		04/07/06	
RAI #3 sent		05/05/06	29
Response rec'd		06/19/06	
Application complete		06/19/06	
Intent to Issue sent (day=87)		09/14/06	87
Proof of publication rec'd			
Active (day=88)			
Final permit for routing			

DAY 90/30 FOR THIS ACTION IS: ASAP- Day 90=09/16/06

7004 0750 0003 0516 7449

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com®

OFFICIAL USE

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Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	

mailed
9-14-2006
 Postmark Here *95*

Total Postage &

Mr. Daniel Gray, Director
 Manatee County Government
 Util. Opr. Dept., Solid Waste Section
 4410 66th Street West
 Bradenton, FL 34210

Sent To
 Street, Apt. No.,
 or PO Box No.
 City, State, ZIP+4



Department of Environmental Protection

Jeb Bush
Governor

Southwest District
13051 North Telecom Parkway
Temple Terrace, FL 33637-0926
Telephone: 813-632-7600

Colleen M. Castille
Secretary

CERTIFIED MAIL 7004 0750 0003 0516 7449
RETURN RECEIPT REQUESTED

September 14, 2006

In the matter of an
Application for Permit by:

DEP File No. 39884-011-SF/01,
Manatee County

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

INTENT TO ISSUE

The Department of Environmental Protection hereby gives notice of its Intent to Issue a permit (copy attached) for the proposed project as detailed in the application specified above, for the reasons stated below. The applicant, Manatee County Utilities Operations Department, Mr. Daniel T. Gray, Director, applied on May 25, 2005, to the Department of Environmental Protection for a permit to close portions (Stage I, Partial Closure #2) of a the existing Lena Road Class I Landfill, located at 3333 Lena Road, Bradenton, Manatee County, Florida. **This permit application includes construction of the Stage I, Partial Closure #2 final cover system and related landfill gas control system and stormwater improvements.**

The Department has permitting jurisdiction under 403.707 and 403.861, Florida Statutes, and Rules 62-4, and 62-701, Florida Administrative Code (F.A.C.). The project is not exempt from permitting procedures. The Department has determined that a construction permit is required for the proposed work.

"More Protection, Less Process"

Printed on recycled paper.

The Department intends to issue this permit based on its belief that reasonable assurances have been provided to indicate that the proposed project will not adversely impact water quality and the proposed project will comply with appropriate provisions of Chapters 62-4, 62-301, 62-330, 62-520, 62-522, and 62-701, F.A.C., subject to the specific conditions attached in the permit. Pursuant to Section 403.815, Florida Statutes and Rule 62-110.106, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Notice of Proposed Agency Action on Permit Application. The notice must be published one time only within thirty (30) days of receipt of this intent in the legal ad section of a newspaper of general circulation in the area affected. Proof of publication must be provided to the Department **within seven (7) days** of publication of the notice. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit. The Department will issue the permit with the attached conditions unless petition for administrative proceeding (hearing) is filed pursuant to the provisions of Section 120.57, Florida Statutes.

The Department's proposed agency action shall become final unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, Florida Statutes (F.S.), before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the

Department at 3900 Commonwealth Boulevard, Mail Station 35,
Tallahassee, Florida 32399-3000.

Petitions by the applicant or any of the parties listed below must be filed within 14 days of receipt of this written notice. Petitions filed by other persons must be filed within 14 days of publication of the notice or receipt of the written notice, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of such notice, regardless of the date of publication. The petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Department's action is based must contain the following information:

- (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department File Number and the county in which the project is proposed;
- (b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
- (c) A statement of how each petitioner's substantial interests are or will be affected by the Department's action or proposed action;
- (d) A statement of all material facts disputed by petitioner or a statement that there are no disputed facts;

(e) A statement of the ultimate facts alleged, including a statement of the specific facts, which the petitioner contends, warrant reversal or modification of the Department's action or proposed action;

(f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the Department's action or proposed action; and

(g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wants the Department to take with respect to the Department's action or proposed action.

A petition that does not dispute the material facts on which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

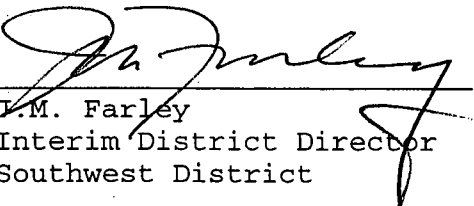
In accordance with Section 120.573, F.S., the Department advises that mediation is not available in this case under the provisions of that statute. This does not prevent any interested parties from agreeing to other forms of alternate dispute resolution.

Any party to this order has the right to seek judicial review of it under Section 120.68, F.S., by filing a notice of appeal under Rule 9.110, Florida Rules of Appellate Procedure, with the clerk of the Department in the Office of General Counsel, Mail Station 35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing

fees with the appropriate district court of appeal. The notice of appeal must be filed within thirty days after this order is filed with the clerk of the Department.

Executed in Hillsborough County, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION


J.M. Farley
Interim District Director
Southwest District

JMF/sjp
Attachment

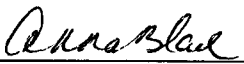
Copies furnished to:

Manatee County Elected Officials notification list
Manatee County Notification List
Gus DiFonzo, Manatee Co., 4410 66th St. West, Bradenton, Fl. 34210
Joseph L. Miller, P.E., PBSJ, 482 South Keller Rd., Orlando, Fl. 32810
Fred Wick, FDEP Tallahassee
Richard Tedder, P.E., FDEP Tallahassee
Mara Nasca, FDEP Tampa, Air
CeCe McKiernan, FDEP Tampa, WARM
Jeff Greenwell, P.E., FDEP Tampa, WF
(Permit Notebook)

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this **NOTICE OF INTENT TO ISSUE** and all copies were mailed before the close of business on Sept 14, 2006 to the listed persons.
Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED,
on this date, pursuant to
Section 120.52(11), Florida
Statutes, with the designated
Department Clerk, receipt of which
is hereby acknowledged.


(Clerk)

9/14/2006
(Date)

State of Florida
Department of Environmental Protection
Notice of Proposed Agency Action on Permit Application

The Department of Environmental Protection hereby gives notice of its Intent to Issue a permit to Manatee County Utilities Operations Department, Mr. Daniel T. Gray, Director, who applied on May 25, 2005, to the Department of Environmental Protection for a permit to close portions (Stage I, Partial Closure #2) of a the existing Lena Road Class I Landfill, located at 3333 Lena Road, Bradenton, Manatee County, Florida. **This permit application includes construction of the Stage I, Partial Closure #2 final cover system and related landfill gas control system and stormwater improvements.**

Persons whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below, and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Blvd., MS#35, Tallahassee, Florida 32399-3000, within fourteen (14) days of publication of this notice. Failure to file a request for hearing within this time period shall constitute a waiver any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

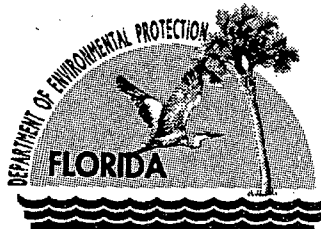
The petition shall contain the following information:

- (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
- (b) A statement of how and when each petitioner received notice of Department's action, or proposed action;
- (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
- (d) A statement of the material facts disputed by Petitioner, if any;
- (e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;
- (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and
- (g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice of intent. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above. Mediation is not available in this proceeding.

Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, Florida Statutes, and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rules 62-110.106, 28-106.201, and 28-106.301 F.A.C.

The application is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at 13051 N. Telecom Parkway, Temple Terrace, Fl. 33637-0926.



Department of Environmental Protection

Jeb Bush
Governor

Southwest District
13051 North Telecom Parkway
Temple Terrace, FL 33637-0926
Telephone: 813-632-7600

Colleen M. Castille
Secretary

PERMITTEE

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

PERMIT/CERTIFICATION

WACS ID No: SWD-41-44795
Permit No: **39884-011-SF/01**
Date of Issue:
Expiration Date:
County: Manatee
Lat/Long: 27°28'10"N
82°26'35"W
Sec/Town/Rge: 1/35S/18E
31/34S/19E
6&7/35S/19E
Project: Lena Road Class I LF
Stage I, Partial Closure #2

DRAFT

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rule(s) 62-4, 62-302, 62-330, 62-522, 62-550, and 62-701. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans and other documents, attached hereto or on file with the Department and made a part hereof and specifically described as follows:

To **construct** a final cover system at a Class I landfill (approximately 58 acres), referred to as the **Lena Road Landfill (Stage I, Partial Closure #2)**, subject to the specific and general conditions attached, located at 3333 Lena Road, Bradenton, Fl. The specific conditions attached are for the **construction** of:

1. Final cover system
2. Active gas extraction system within (Stage I) lined landfill area

Top elevation for this closure (including cover)	max. +135 feet NGVD [ref. SC#A.2.c., Sheet C-8]
Sideslopes max.	5H:1V [ref. SC#A.2.c., Sheet C-9]
Final cover system (bottom to top) [Ref. SC#A.2.a, Part P.4.]	Slopes flatter than 5H:1V - 6-inch thick subgrade, 40 mil smooth LLDPE geomembrane, 24-inch protective soil (max. 2×10^{-4} cm/sec), Bahia sod. Sideslopes (slopes steeper than 5H:1V)- 6-inch thick subgrade, 40 mil textured LLDPE geomembrane, double-sided geocomposite (triaxial, w/nonwoven GT on both sides), 24-inch protective soil (max. 2×10^{-4} cm/sec), Bahia sod.
Gas extraction system	Vertical wells (HDPE SDR 11 w/ 5/8 inch perforations) [ref. SC#A.2.c., Sheet C-5], laterals (8-inch HDPE SDR 17 solid wall pipe) sloped min. 2% to drain to condensate knockouts [ref. SC#A.2.c., Sheet C-6]

Replaces Permit No.: N/A, new

This permit contains compliance items summarized in **Attachment 1** that shall be complied with and submitted to the Department by the dates noted. If the compliance dates are not met and submittals are not received by the Department on the dates noted, enforcement action may be initiated to assure compliance with the conditions of this permit.
"More Protection, Less Process"

DRAFT

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.161, 403.727, or 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of rights, nor any infringement of federal, State, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, are required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:
 - (a) Have access to and copy any records that must be kept under conditions of the permit;
 - (b) Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
 - (c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

GENERAL CONDITIONS:

DRAFT

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

- (a) A description of and cause of noncompliance; and
- (b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Rule 62-4.120 and 62-730.300, Florida Administrative Code, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

- (a) Determination of Best Available Control Technology (BACT)
- (b) Determination of Prevention of Significant Deterioration (PSD)
- (c) Certification of compliance with State Water Quality Standards (Section 401, PL 92-500)
- (d) Compliance with New Source Performance Standards

DRAFT

GENERAL CONDITIONS:

14. The permittee shall comply with the following:

(a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

(b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

(c) Records of monitoring information shall include:

1. the date, exact place, and time of sampling or measurements;
2. the person responsible for performing the sampling or measurements;
3. the dates analyses were performed;
4. the person responsible for performing the analyses;
5. the analytical techniques or methods used;
6. the results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

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Lena Road Class I Landfill

SPECIFIC CONDITIONS: PART A -Solid Waste Facility General Requirements

1. **Facility Designation.** This site shall be classified as a Class I landfill and shall be constructed, operated, closed, monitored and maintained in accordance with all applicable requirements of Chapters 62-4, 62-302, 62-330, 62-520, 62-522, 62-550, and 62-701, Florida Administrative Code (F.A.C.) and all applicable requirements of Department rules.
2. **Permit Application Documentation.** This permit is valid for construction of the Stage I, Partial Closure #2 and related systems (including final cover, stormwater drainage system and active gas extraction system), and long-term care, monitoring and maintenance of the closed portions of the Lena Road Class I landfill in accordance with Department rules and the reports, plans and other information prepared by Post, Buckley, Schuh & Jernigan (PBSJ) (unless otherwise specified) as follows:
 - a. Manatee County Solid Waste Management Facility, Lena Road Landfill, Application and Engineering Report for Renewal of Landfill Closure Permit,... (one 3-ring binder) dated May 24, 2005 (received May 25, 2005), as revised, replaced or amended (information inserted into original) dated September 9, 2005 (received September 14, 2005), March 22, 2006 (received April 7, 2006), and June 16, 2006 (received June 19, 2006). This information includes, but is not limited to:
 - 1) Construction Quality Assurance Plan for Installing and Testing Final Cover for Lena Road Stage I Landfill, Partial Closure #2,... [CQAP], (spiral bound document inserted into Part P, Appendix A);
 - 2) Lena Road Landfill Stage I - Partial Closure #2, Technical Specifications, [Specs.] (spiral bound document inserted into Part P, Appendix A);
 - 3) Long-Term Care Plan, Part P.8.;
 - b. Responses to Requests for Additional Information,... dated September 9, 2005 (received September 14, 2005), March 22, 2006 (received April 7, 2006), and June 16, 2006 (received June 19, 2006) inserted into original [ref.SC#A.2.a];
 - c. Plan Sheets titled, Construction Drawings for Lena Road Landfill Stage I Landfill, Partial Closure #2,... (14 Sheets) dated July 2005 (received April 7, 2006) including revised sheets (C-3, C-4, C-5, C-6, C-8, C-9, C-10, C-11, C-12, C-13) received June 19, 2006;
 - d. Manatee County Lena Road Landfill, Pending Permit No. 39884-011-SF/01, Closure, Stage I Landfill, Partial Closure #2, Calculation Book,... (spiral bound document) dated June 16, 2006 (received June 19, 2006), including Section 5 dated March 22, 2006 (received April 7, 2006).
3. **Permit Modifications.**
 - a. Any construction or operation not previously approved as part of this permit shall require a separate Department permit unless the Department determines a permit modification to be more appropriate. Any significant changes to the construction or operation at the facility shall require a permit modification. Permits shall be modified in accordance with the requirements of Rule 62-4.080, F.A.C. A modification which is reasonably expected to lead to substantially different environmental impacts which require a detailed review by the Department is considered a substantial modification.

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SPECIFIC CONDITIONS: PART A -Solid Waste Facility General Requirements

(Specific Condition #A.3., cont'd)

b. This permit does not authorize landfill operation. Construction, operation, or other activities not previously approved as part of this permit shall require a separate Department permit unless the Department determines a permit modification to be more appropriate, or unless otherwise approved in writing by the Department.

c. This permit authorizes the construction of the Stage I, Partial Closure #2 final cover system and related active gas extraction system and other related appurtenances, only.

4. **Permit Renewal.** No later than one hundred eighty (180) days before the expiration of the Department Permit, the permittee shall apply for a renewal of a permit on forms and in a manner prescribed by the Department, in order to assure conformance with all applicable Department rules. Permits shall be renewed at least every five years as required by Rule 62-701.320(10)(b), F.A.C.

5. **Professional Certification.** Where required by Chapter 471 (P.E.) or Chapter 492 (P.G.), Florida Statutes, applicable portions of permit applications and supporting documents which are submitted to the Department for public record shall be signed and sealed by the professional(s) who prepared or approved them.

6. **General Conditions.** The permittee shall be aware of and operate under the "General Conditions." General Conditions are binding upon the permittee and enforceable pursuant to Chapter 403, Florida Statutes.

7. **Permit Acceptance.** By acceptance of this Permit, the Permittee certifies that he/she has read and understands the obligations imposed by the Specific and General Conditions contained herein and also including date of permit expiration and renewal deadlines. It is a violation of this permit for failure to comply with all conditions and deadlines.

8. **Regulations.** Chapter 62-701, F.A.C., effective May 27, 2001, is incorporated into this permit by reference. In the event that the regulations governing this permitted operation are revised, the Department shall notify the permittee, and the permittee shall request modification of those specific conditions which are affected by the revision of regulations to incorporate those revisions.

9. **Prohibitions.** The prohibitions of Rule 62-701.300, F.A.C., shall not be violated by the activities at this facility.

a. In the event that limestone is encountered during excavation or construction activities, the excavation/construction activities shall cease and the Department shall be notified **within 24 hours of discovery**. Written notification shall be submitted **within 7 days of discovery**. The written notification shall include the location, elevation, and extent of limestone noted on a plan sheet, a description of the materials encountered, and a plan of action which ensures that groundwater will not be adversely affected by the continued construction and operation of the facility. Excavation or construction activities shall not resume in the affected area until the Department-approved plan of action has been completed.

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SPECIFIC CONDITIONS: PART A -Solid Waste Facility General Requirements

(Specific Condition #A.9., cont'd)

b. In the event that surface depressions or other occurrences which may be indicative of sinkhole activity or subsurface instability, are discovered on-site, or within 500 feet of the site, the Department shall be notified in accordance with Specific Condition #C.6.b. The written notification shall include a description of the incident, the location and size of the affected area shown on an appropriate plan sheet, and a corrective action plan which describes the actions necessary to prevent the unimpeded discharge of waste or leachate into ground or surface water.

c. Open burning of solid waste is prohibited except in accordance with Rule 62-701.300(3) and Chapter 62-256, F.A.C. All fires which require longer than one (1) hour to extinguish must be promptly reported to the Department in accordance with Specific Condition #C.6.b.

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SPECIFIC CONDITIONS: PART B - Construction Requirements

1. **Construction.** All significant construction activities shall be approved by the Department prior to initiating work, unless specifically authorized otherwise.

a. This permit authorizes the construction of the Stage I, Partial Closure #2, including the final cover system and active gas extraction system in the partial closure area.

2. **Certification of Construction Completion.** All information required by this Specific Condition shall be signed and sealed by a registered professional engineer or land surveyor as appropriate.

a. **Within sixty (60) days** after the specified construction has been completed, the following activities shall be completed and submitted by the permittee for Department approval:

1) The owner or operator shall submit a Certification of Construction Completion, Form 62-701.900(2), signed and sealed by the professional engineer in charge of construction and quality assurance to the Department for approval, and shall arrange for Department representatives to inspect the construction in the company of the permittee, the engineer, and the facility operator.

2) The owner or operator shall submit Record Drawings/Documents showing all changes (i.e. all additions, deletions, revisions to the plans previously approved by the Department including site grades and elevations). The Record Documents shall include as-built plans details and elevations (survey) as appropriate.

3) The owner or operator shall submit a narrative indicating all changes in plans, the cause of the deviations, and certification of the Record Drawings/Documents by the Engineer to the Department.

4) The professional engineer of record shall submit to the Department a final report to verify conformance with the plans and specifications in accordance with Rules 62-701.400(7) and (8), F.A.C.

3. **Record Drawings/Documents.**

a. The Record Drawings/Documents shall include, but not be limited to, the following information:

1) Location of all anchor trenches, i.e. limits of liner [Spec. 02776-5.01.B.2.],

2) As-built locations and details (elevations) of repairs to or penetrations through the slurry wall;

3) Daily construction reports;

4) As-built drawings showing the geomembrane panel installation layout, locations of fabricated and field seams, type of seams, destructive sampling locations, locations of all repairs, panel designations [CQAP 1.2.6.2.], geomembrane booting and connection details [Spec. 02776-5.01.A.2(c)];

5) All geomembrane destructive test results;

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SPECIFIC CONDITIONS: PART B - Construction Requirements

(Specific Condition #B.3.a., cont'd)

- 6) A compact disc or other electronic media that includes all available photographs documenting all stages of the construction project [Spec. 01380-1.01.A., 1.05.A.];
- 7) Permeability testing of the protective soil materials and each slurry wall repair;
- 8) An operation and maintenance manual for the gas extraction system [Spec. 01730-1.03.2];
- 9) Internal friction angle testing of the protective cover soil [Spec. 02220-2.01.C.1.];
- 10) Gas well construction diagrams, including elevation at top of ground, total depth of well, static water level, temperature of spoils; depth, thickness and description of soil or waste strata and the occurrences of any water-bearing zones. [Spec. 02610-1.03.C.]

4. Pre-Construction Submittals.

a. **At least thirty (30) days prior** to initiation of any construction activity, unless otherwise specified, the permittee shall submit the following information to the Department:

- 1) A **complete set** of Plans, Specifications and CQA Plan to be used for construction which includes all changes (i.e., all additions, deletions, revisions to the plans previously approved by the Department). All changes shall be noted using strikethrough (~~strikethrough~~) for deletions, and shading (~~shading~~) or underline (underline) for additions. All changes in the plans, specifications and CQA Plan shall be accompanied by a narrative indicating the change. Significant changes in the plans, as determined by the Department, shall require a permit modification. All changes in the plans shall be noted on the plans and the cause of the deviation and a re-certification of the alternate design by the design engineer shall be provided. These alternate designs shall be approved by the Department prior to construction. If **no** changes have been made to the construction plans, Specifications or CQA Plan, the permittee shall notify the Department in writing that no changes have been made, and re-submittal of these documents will not be required prior to construction;

- 2) The role and name of the specific company/organization for each of the parties in the Project team [ref. CQAP, Tables 1-1 and 1-2];

b. **At least 30 days prior to initiation** of installation of the liner, the results of the interface friction testing using actual construction materials shall be submitted to the Department. The results must demonstrate that the all interfaces each exhibit a minimum safety factor of 1.5 against sliding. Placement of the geomembrane shall not proceed prior to the Engineer's receipt of the results of the interface friction testing which meet the requirements of this condition.

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SPECIFIC CONDITIONS: PART B - Construction Requirements

(Specific Condition #B.4., cont'd)

c. **No later than 2 weeks** prior to construction of the following components of the project, the Department shall be notified of the initiation of construction of these components (for each phase of construction) to allow the Department to observe the construction of:

- 1) penetrations through the slurry wall;
- 2) seaming performed using a method other than double-fusion (wedge) or extrusion welding;

5. **Pre-Construction Meeting Notification.** Department Solid Waste Permitting staff shall be notified **at least one (1) week prior** to all pre-construction meetings. Prior to initiating construction activities, the permittee shall make arrangements for the Engineer of Record to meet on site and discuss all plan changes with Department Solid Waste Permitting Staff of the Southwest District Office. A copy of the minutes from the pre-construction conference shall be submitted to the Department within two (2) weeks of the conference.

6. **Construction Schedule and Progress Report.**

a. **No later than one (1) week after** the pre-construction conference, the owner or operator shall submit a construction schedule which includes estimated dates for each portion of the construction to the Department. The Engineer of Record or another qualified professional engineer shall make periodic inspections during construction to ensure that design integrity is maintained.

b. An updated construction schedule and progress report shall be submitted to the Department **monthly, by the 15th of each month**. [Spec. 01310-2.06.A] The monthly progress report should be submitted in an appropriately labeled three-ring binder of sufficient size to store the monthly progress reports for the entire project. The monthly progress reports shall include, but not be limited to:

- 1) A narrative explaining the status (and any delays) of major stages of the construction (i.e., liner, piping, liner penetrations, etc.),
- 2) A summary of submittals and change order requests,
- 3) Weekly progress meeting minutes [CQAP 1.3.1., 1.3.3.; Spec. 01200-1.03.A.] and
- 4) Color copies of photographs which are representative of the typical construction activities for the reporting period, and photographs which show overall views and details of major stages of construction (e.g., liner penetrations, lift station construction, etc.).

7. **Construction Tolerances.**

a. Gas collection pipe slopes shall be a minimum of 2%. Invert elevations of the gas collection pipes shall be recorded every 100 feet to demonstrate that the gas collection system has been constructed to the slopes and grades shown on the drawings. [Spec. 02221-3.02., 15051-3.01.C.] This information shall be included with the Record Documents.

b. The construction tolerance for elevations shall be ± 0.10 ft. [Spec. 02220-3.04.A.]

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SPECIFIC CONDITIONS: PART B - Construction Requirements

(Specific Condition #B.7., cont'd)

c. As-built topographic surveys shall demonstrate that the liner and protective soil cover were constructed within the tolerance required by the Drawings and Specifications.

d. All soil layer thicknesses are minimum requirements. [Spec. 01005-1.07.A., 02220-3.02.A.]

8. **Laboratory and Field Testing Requirements.** Field and laboratory testing during the construction activities shall be conducted by a qualified testing laboratory, independent of the manufacturer or installer, representing the owner. A qualified field technician representing the owner shall provide full time, on-site inspection during construction. The field technician shall work under the supervision of a professional engineer registered in the State of Florida with experience in landfill liner construction.

9. **Construction Quality Assurance.**

a. Liner systems shall have a construction quality assurance plan to provide personnel with adequate information to achieve continuous compliance with the construction requirements. The Construction Quality Assurance Plan shall be in accordance with Rules 62-701.400(7) and (8), F.A.C., the CQA Plan [ref. SC#A.2.a(1)], and the conditions of this permit. The professional engineer or his designee shall be on-site at all times during construction (including liner system and gas management system) to monitor construction activities.

b. A complete set of construction drawings and shop drawings, which include daily additions, deletions and revisions, shall be maintained on-site at all times for reference. Drawings which show the locations of geomembrane panel seams and repairs shall be kept on-site at all times for reference. Work shall not be concealed until required information is recorded.

c. All liquid encountered during construction inside the slurry wall is leachate and shall be managed appropriately [see Spec. 01030-1.09, 02221-1.02.B.]. Leachate shall not be deposited, injected, dumped, spilled, leaked, or discharged in any manner to the land, surface water or groundwater outside the slurry wall (liner system) at any time during the construction activities.

d. Unsatisfactory, defective or non-conforming work shall be reported to the Engineer and shall be corrected, or the reasons for not correcting the work shall be recorded and maintained on-site for reference and inspections. Documentation of the corrections or reasons for not correcting the work shall be submitted with the Record Documents required by Specific Conditions #B.2 and #B.3. All areas not meeting the requirements of the contract specifications and CQA Plan shall be reworked by the Contractor to meet the specifications, CQA Plan and requirements of this permit.

e. Construction activities such as geomembrane seaming, QA/QC testing of the geosynthetics or soil materials, surveying, etc. shall not be carried out in non-daylight hours without prior Department approval. [see Spec. 01005-1.08.C., 01310-1.02.B, 02776-1.03.A.2(b)] If these activities will be conducted during nighttime hours, the Department shall be notified **at least 1 week** in advance to allow for Department observation. This notification shall include a description of the methods which will be used to provide adequate illumination to ensure that the quality of the construction is not compromised.

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SPECIFIC CONDITIONS: PART B - Construction Requirements

(Specific Condition #B.9., cont'd)

- f. Where sod is used over lined areas, pegging of sod shall not damage the liner. [Spec. 02276-3.01.A.3., 02485]
- g. All portions of the final cover system and gas management system construction, shall be observed and documented by the CQA Consultant [CQAP 1.2.7.].
- h. CQA daily reports shall include weather conditions (e.g., precipitation, temperature).
- i. Runoff from stockpiled soils shall not discharge to surface water bodies or wetlands such that Department surface water standards are violated at the point of discharge.
- j. All excavations shall be maintained free from standing water. Except for the stormwater management system construction, no construction, including pipe laying, shall be allowed in water. The surface shall be graded such that there is no ponding of water [CQAP 3.1.1.; Spec. 02221-1.02.B.].
- k. The CQAM shall receive and record the date Shop Drawings and samples are received and notify the Engineer [CQAP 1.2.7.4.a.]. The CQAM shall review the geosynthetics conformance test results [CQAP 1.2.7.5]. In addition to the observations listed in CQAP 3.5.4., the CQAM shall also note all locations of geomembrane damage.
- l. Unless otherwise specified in this permit, the documents listed in CQAP 1.2.7.8. shall be maintained on-site and copies shall be provided to the Department upon request.
- m. The Department shall be notified in accordance with Specific Condition #C.6.a. of all fuel, oils, greases, solvents, lubricants, etc., that are spilled or leaked in areas that may discharge outside the slurry wall. The permittee shall ensure that all personnel working on the landfill site (including contractors and subcontractors) shall utilize all appropriate measures to prevent spills and leaks of fuel, solvents, lubricants, oils, etc. [see Spec. 01005-1.11.D]
- n. All waste exposed by excavations or other construction activity shall be covered or removed for disposal at the active working face daily. [see Spec. 01015-1.05; 02610-3.03.A.] All wastes generated during the construction shall be disposed of in the on-site, active Class I landfill. No solid waste shall be used for backfill. [Spec. 01150-1.07]
- o. Gas well drilling shall be in accordance with Specification Section 02610-3.01 and the conditions of this permit. In the event that the gas well installation indicates that the clay confining unit under the landfill may have been encountered during gas well installation, the gas well drilling **shall cease** in the affected area and the Department shall be notified in accordance with Specific Condition #C.6.a. The information required by Specification 02610-1.03.C. shall be provided with the written notification. Gas well installation shall not resume until specifically approved by the Department.

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SPECIFIC CONDITIONS: PART B - Construction Requirements

10. Soil Materials.

a. The liner subgrade shall be compacted to a minimum of 93% Standard Proctor maximum dry density. [CQAP Table 4-1; Spec. 02220-3.03.A.] Surfaces adjacent to geosynthetics shall be smooth and free of depressions, rocks/stones (greater than ¼ inch dia.), sticks, roots, sharp objects, or debris of any kind.

b. The protective cover soil shall have a maximum permeability of 2×10^{-4} cm/sec [Spec. 02220-2.01.C.] and shall be a minimum of 24-inches thick [Spec. 02220-3.02.A.]. A sufficient number of permeability tests shall be performed on the drainage sand material to demonstrate the required permeability. The internal friction angle of the protective cover soil shall be a minimum of 23 degrees [Spec. 02220-2.01.C.].

c. The soil bedding surface shall be non-cohesive, non-plastic granular local silty sand, a minimum of 6-inches thick [CQAP 3.1.1.], and free of rocks (greater than ¼ inch diameter) [CQAP 3.5.2., Spec. 02220-1.01.B.5., 02220-2.01.B.], debris, sharp objects, organic materials and other deleterious materials.

d. Soil cover material shall be placed over the geocomposite such that the geocomposite is not damaged and no tensile stress is induced in the materials. [CQAP 3.3.2.]

e. Earthwork shall be tested by the CQAM for the tests and frequencies specified in CQAP Table 4-1.

f. The protective cover soil shall be a minimum of 24-inches thick and shall be free of rocks (greater than ¼ inch diameter) [CQAP 4.3.1.], debris, sharp objects, organic materials and other deleterious materials.

g. Repairs to the slurry wall shall be in accordance with Specification Section 01015-1.03. The Department shall be notified of repairs to the slurry wall in accordance with Specific Condition #B.4.c.

h. Pipe bedding materials for pipes installed within the limits of the geomembrane shall not contain any angular stone [see Spec. 02221-2.01.C.].

i. The aggregate used for the gas system installation shall be non-calcareous washed well graded granite. [Spec. 02610-2.01.A.]

11. Geosynthetic Materials.

a. Conformance testing.

1) The CQA Consultant or designee (independent from the Contractor) shall take conformance samples of the geosynthetics materials. CQA Conformance testing for the geosynthetic materials shall be in accordance with the following. In all cases, the test results shall meet or exceed the property values in the Specifications and CQA Plan.

a) Geomembrane - properties listed CQAP Table 2-1 (Spec. Table 02776-A), one sample per 100,000 sf of material [CQAP 2.1.1.; Spec. 02776-4.01.B.]

b) Geocomposite - properties listed in CQAP Table 2-2 (Spec. 02712-Table 3), one sample per 100,000 sf of material

SPECIFIC CONDITIONS: PART B - Construction Requirements

(Specific Condition #B.11., cont'd)

b. Seaming.

- 1) Seaming processes other than fusion or extrusion welding shall be approved by the Engineer and submitted to the Department prior to implementation. [see CQAP 4.2.2.]
- 2) Seaming apparatus or personnel which have failed trial welds shall not be used for seaming until passing welds are achieved. [see CQAP 4.2.4.3b]
- 3) Geomembrane seaming activities shall only be conducted during daylight hours and within the weather requirements of the Specifications, unless otherwise specifically approved by the Department. [see Spec. 02776-1.03.A.2(b), 02776-5.01.D.8(d)] Seaming shall only take place with the "master seamer" present. [CQAP 1.2.6.2., 3.4.8.] No geomembrane seaming shall be performed unless the CQA manager/inspector is on-site. [CQAP 3.5.6.; Spec. 02776-1.02.D.2(d)]
- 4) The full-time resident CQA inspector shall observe no more than two geosynthetics seaming crews at any given time. [CQAP 3.5.7.]
- 5) The procedure used to temporarily bond adjacent geomembrane panels together shall not damage the geomembrane. Solvent or adhesive shall not be used to bond geomembrane panels. [see CQAP 3.4.3.]
- 6) All seaming operations shall cease upon the presence of any precipitation (drizzle, sprinkle, fog, dew, etc.). [CQAP 3.4.6.; Spec. 02776-5.01.D.6(c)]
- 7) Seams shall be oriented parallel to the line of maximum slope, i.e., oriented along, not across the slope. [Spec. 02776-5.01.D.1.]

c. Destructive testing.

- 1) Destructive tests of the geomembrane seams shall be taken at random locations, at a minimum frequency of one test location per 500 feet of seam. This frequency shall not be based on an average throughout the entire facility. [CQAP Table 3-4, 4.2.3.1.; Spec. 02776-5.01.D.10(e)]
- 2) Geomembrane seams shall meet the requirements of Geomembrane Specifications, Table 02776-A, and in all cases destructive tests conducted on the geomembrane field seams shall demonstrate that the failure is outside of the seam area. All of the samples shall meet the requirements for each test method (peel and shear) listed in Geomembrane Specifications, Table 02776-A. The strength results shall not be averaged and both sides of fusion welds shall be tested. [Spec. 02776-5.01.D.10(f)]
- 3) Work shall not proceed with any materials which will cover locations which have been destructively tested or repaired until laboratory test results which demonstrate passing values are provided to the on-site CQA manager/inspector. [CQAP 4.2.3.1., 4.2.4.2.]
- 4) All areas that fail nondestructive testing shall be marked by the on-site CQA inspector.

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SPECIFIC CONDITIONS: PART B - Construction Requirements

(Specific Condition #B.11.c., cont'd)

- 5) All welds shall be tested in shear and peel. Geomembrane seams shall not be tested by "hand" exclusively. [see CQAP 3.4.3., 4.2.3.2.; Spec. 02776-5.01.D.10(e)]
- d. Transmissivity.
 - 1) The transmissivity test results required by the Specifications shall be submitted to the Engineer for review before the proposed materials are approved for use on the project.
 - 2) The transmissivity of the geocomposite shall be a minimum of 4×10^{-3} m²/sec based upon a gradient of 0.33% and a normal load of 240 psf. [CQAP Table 2-2] Transmissivity testing shall be conducted on the actual materials that will be used in the project.
- e. Interface friction angles. The minimum interface friction angle for cover soil/geocomposite, geomembrane/geocomposite, and geomembrane/soil interfaces shall be **22 degrees**. Separate tests shall be conducted for smooth and textured geomembrane. [CQAP Table 2-1].
- f. The construction methods used shall minimize wrinkles. Excessive wrinkles are wrinkles that fold over when stepped on or are 12 inches high [CQAP 4.2.4.5.; Spec. 02712-D.1.]. Excessive wrinkles shall be removed, and the areas repaired. Areas where wrinkles are removed shall be repaired and re-tested in accordance with the Specifications and CQA Plan.
- g. The liner system shall not be damaged by excessive traffic.
- h. The geocomposite, drainage net (CDN) material and geotextile shall be handled (stored, placed, etc.) in a manner which prevents the infiltration of dirt and protects the CDN and geotextile from abrasion, punctures and excessive moisture. Geocomposite that is clogged by dirt shall be cleaned prior to placement. [CQAP 3.3.2.5.]
- i. In areas where stakes are used, stakes shall not be of a type or used in a way that may damage the geomembrane.
- j. Prior to placement of materials on the subgrade, an as-built topographic survey shall be provided to the Engineer to verify conformance with the Drawings and Specifications. The subgrade shall be accepted by the Liner Installer and Engineer in writing before placement of the next layer. [CQAP 1.2.6.2.]
- k. During the construction of, and until the geomembrane are placed on the subgrade, the subgrade shall be inspected daily for signs of desiccation, excessive moisture, or other damage. In the event that the condition of the subgrade deteriorates, corrective actions shall be implemented immediately. Washouts or erosion of the geomembrane subgrade shall be repaired immediately. The CQAM shall observe the condition of the subgrade and note areas of inadequacy, erosion or other deterioration in the Daily Reports [see CQAP Table 3-3].
- l. No geomembrane shall be placed in an area that has become softened by precipitation or desiccated and cracked due to lack of moisture. No standing water or excessive moisture shall be allowed on the area to be lined before the geomembrane installation.

SPECIFIC CONDITIONS: PART B - Construction Requirements

(Specific Condition #B.11., cont'd)

m. Temporary loading and/or anchoring devices (such as sand bags) shall be removed prior to placing the next layer (i.e., geocomposite or soil) over the geomembrane. [see CQAP 3.3.1.3. 3.3.2.2; Spec. 02776-5.01C.4.]

n. The geocomposite shall be adequately anchored at the top of the slope. [Spec. 02712-D.1.]

o. The geomembrane shall always be kept dry and protected from wind damage. [CQAP 3.4.6.] Sandbags or other temporary anchoring devices shall be removed prior to subsequent placement of materials over the geosynthetics. [Spec. 02712-D.1.]

p. The geomembrane materials shall not be accepted for use on the project until the results of the CQA conformance testing that indicate that the geomembrane meets the specifications have been received. [Spec. 02776-4.02.A.3.]

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SPECIFIC CONDITIONS: PART C - Operation Requirements

1. Facility Operation Requirements.

a. The permittee shall operate the active portions of this facility in accordance with Chapter 62-701, F.A.C., and Operation Permit 39884-010-SO/01 (including modifications, if any), or its successors.

b. Leachate shall not be deposited, injected, dumped, spilled, leaked, or discharged in any manner to soils, surface water or groundwater outside the liner and leachate management systems at any time during the construction or operation of this facility.

c. The gas flare shall be kept in operation at all times during construction. [Spec. 01005-1.11.B.]

2. Facility Personnel. The owner or operator shall provide adequate personnel for constructing, operating, monitoring and maintaining the facility in an orderly, safe, and sanitary manner.

3. Control of Access. Access to, and use of, the facility shall be controlled as required by Rule 62-701.500(5), F.A.C.

4. Monitoring of Waste. Wastes shall be monitored as required by operation permit no. 39884-010-SO/01, or its successors.

5. Control of Nuisance Conditions. The owner or operator shall control odors, vectors (mosquitoes, other insects, rodents), and fugitive particulates (dust, smoke) arising from the construction and operation so as to protect the public health and welfare. Such control shall minimize the creation of nuisance conditions on adjoining property. Complaints received from the general public, and confirmed by Department personnel upon site inspection, shall constitute a nuisance condition, and the permittee must take immediate corrective action to abate the nuisance.

6. Facility Maintenance and Repair.

a. The site shall be properly maintained including maintenance of access roads to disposal areas, equipment, stormwater and leachate management systems, cover systems and berms, gas monitoring and management systems, surface water monitoring system, and groundwater monitoring system. Erosion and ponded water in disposal areas shall be prevented.

b. In the event of damage to any portion of the landfill site facilities, unauthorized leachate discharges, failure of any portion of the landfill systems (including damaged or dry groundwater monitoring wells), fire, explosion, the development of sinkhole(s) or other subsurface instability at the site, the permittee shall **immediately (within 24 hours)** notify the Department explaining such occurrence and remedial measures to be taken, method to prevent reoccurrence, and time needed for repairs. **Written, detailed notification shall be submitted to the Department within seven (7) days following the occurrence.** Routine maintenance does not require notification but shall be noted on daily reports.

7. Stormwater Management. The site shall have a surface water management system designed, constructed, operated, and maintained to prevent surface water from running on to waste filled areas, and a stormwater runoff control system designed, constructed, operated, and maintained to collect and control stormwater to meet the requirements of Chapter 62-330, F.A.C., and the requirements for management and storage of surface water in accordance with Rule 62-701.500(10), F.A.C., to meet applicable standards of Chapters 62-3, 62-302, and 62-330, F.A.C. The stormwater management system shall be inspected for damage and proper operation daily.

SPECIFIC CONDITIONS: PART D - Recordkeeping **DRAFT**

1. **Report submittals.** Unless otherwise specified, all submittals, notifications, requests for permit modification, reports for compliance with this permit, etc. shall be sent to: Solid Waste Section, Department of Environmental Protection, Southwest District Office, 13051 North Telecom Parkway, Temple Terrace, Fl. 33637-0926.
2. **Operation Plan and Operating Record.** Each landfill owner or operator shall have an operational plan which meets the requirements of Rule 62-701.500(2), F.A.C. A copy of the Department approved permit, operational plan, construction reports and record drawings, and supporting information shall be kept at the facility at all times for reference and inspections. Operating records as required by Rule 62-701.500(3), F.A.C., are part of the operations plan, and shall also be maintained at the site.
3. **Waste Records.** The permittee shall maintain all records required by the construction specifications, CQA Plan and this permit on-site, and shall provide copies to the Department upon request, unless specified otherwise.
4. **Financial Assurance.** The permittee shall provide adequate financial assurance for this facility and related appurtenances in accordance with Rule 62-701.630, F.A.C.
 - a. All costs for closure shall be adjusted and submitted **annually, by September 1st each year** to: Solid Waste Manager, Solid Waste Section, Department of Environmental Protection, 13051 North Telecom Parkway, Temple Terrace, Fl. 33637-0926.
 - b. Proof that the financial mechanism has been adequately funded shall be submitted **annually** to: Financial Coordinator, Solid Waste Section, Department of Environmental Protection, 2600 Blair Stone Road, MS#4565, Tallahassee, Florida 32399-2400.

PERMITTEE: Manatee County Utilities Dept.
Mr. Dan Gray, Director

PER NO: 39884-011-SF/01
Lena Road Class I Landfill

SPECIFIC CONDITIONS: PART E - Water Quality Monitoring Requirements

1. **Water Quality Monitoring Quality Assurance.** Water quality monitoring shall be conducted as required by operation permit number 39884-010-SO/01, or its successors.

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SPECIFIC CONDITIONS: PART F - Landfill Gas Management

1. Landfill Gas - NSPS and Title V Air Requirements.

a. This solid waste permit will meet the statutory requirement to obtain an air construction permit before modifying or constructing a source of air pollution, except for those landfills that are subject to the prevention of significant deterioration (PSD) requirements of Chapter 62-212, F.A.C. Facilities that are subject to the PSD requirements shall obtain an air construction permit from the Bureau of Air Regulation prior to beginning construction or modification pursuant to Rule 62-210.400, F.A.C.

b. The permittee shall comply with any applicable Title V air operation permit application requirements of Chapter 62-213, F.A.C., and 40 CFR 60, Subparts WWW and CC, as adopted by reference at Rule 62-204.800, F.A.C. Title V Permit applications shall be submitted to the District Air Program Administrator or County Air Program Administrator with air permitting authority for the landfill.

c. The permittee shall submit to the Division of Air Resources Management, Department of Environmental Protection, Mail Station 5500, 3900 Commonwealth Blvd., Tallahassee, FL 32399-3000, any amended design capacity report and any Non-Methane Organic Compound (NMOC) emission rate report, as applicable, pursuant to 40 CFR 60.757(a)(3) and (b).

2. Gas Monitoring and Control. Landfill gas shall be monitored and controlled as required by operation permit no. 39884-010-SO/01, or its successors.

3. Gas Monitoring Locations. Gas monitoring probes shall be located as listed in operation permit no. 39884-010-SO/01, or its successors.

4. Gas Remediation. In the event that the Lower Explosive Limit (LEL) is greater than 25% inside structures both on or off of the landfill site, or greater than 100% at the property boundary, the owner shall submit to the Department, **within 7 days of detection**, a remediation plan detailing the nature and extent of the problem and the proposed remedy. The remedy shall be completed **within 60 days of detection** unless otherwise approved by the Department.

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SPECIFIC CONDITIONS: PART G - Closure and Long-Term Care Requirements

1. Closure Requirements.

a. **No later than ninety (90) days** prior to the date when wastes will no longer be accepted for portions of the landfill which have reached closure design dimensions, the landfill owner or operator shall submit a closure permit application to the Department, in order to assure conformance with all applicable Department rules. A closure permit is required prior to implementing closure related activities.

b. **Long-Term Care Requirements.** The owner or operator shall perform long-term care for the site in accordance with Rule 62-701.620, F.A.C., and the Long-Term Care Plan [ref.SC#A.2.a(3)]. Long-term care includes, but is not limited to, water quality, leachate and gas monitoring; maintenance of the final cover system; maintenance of the leachate collection and removal system; maintenance and operation of the gas collection system; erosion control; and the prevention of ponding within disposal areas.

c. After final cover construction for all areas of the landfill is completed, and construction is approved by the Department, the permittee shall file a declaration to the public in the deed records in the office of the county clerk.

2. Future use of closed landfill areas. Prior to implementation, the owner or operator shall submit a plan for any proposed uses of the closed portions of the landfill to the Department for approval. This plan shall include a description of the proposed use, and evaluation of the impact on the existing landfill systems (e.g. final cover, leachate collection, bottom liner), engineering designs, calculations and plans as appropriate, etc. The proposed activity shall not be initiated without prior Department approval.

3. Final Cover. Portions of the landfill which have been filled with waste to the extent of designed dimensions shall be closed (shall receive final cover) within 180 days after reaching design dimensions, in accordance with Rule 62-701.500(7)(g), F.A.C. and all applicable requirements of Department rules.

Executed in Hillsborough County, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

DRAFT

J.M. Farley
Interim District Director
Southwest District

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ATTACHMENT 1		
Specific Condition	Submittal Due Date	Required Item
A.4.	180 days prior to permit expiration	Submit permit renewal application
A.9.a.	Within 24 hours of discovery	Notification of sinkholes or subsurface instability
	Within 7 days of verbal notification	Written notification & corrective action plan
B.2.a.	Within 60 days of completion	Submit certification of construction completion, record drawings, etc.
B.4.a.	At least 30 days prior to construction	Submit complete plans, specification, CQA plan, or statement that no changes have occurred, org. chart with parties/roles,
B.4.b.	At least 30 days prior to installation of the liner	Submit interface friction testing results
B.4.c.	No later than 2 weeks prior to construction of penetrations of the slurry wall and alternate seaming methods	Notify of construction initiation to allow for observation
B.5.	At least 1 week prior	Notify of preconstruction meeting
B.6.a.	No later than 1 week after pre-construction meeting	Submit meeting minutes
B.6.b.	Monthly, by the 15 th each month	Submit monthly progress report & schedule
B.9.e.	At least 1 week prior	Notify of night work
C.6.b.	Within 24 hours of discovery	Notification of: hazardous waste receipt, failure of landfill systems or equipment
	Within 7 days of verbal notification	Written notification & corrective action plan
D.4.a.	Annually, by September 1 st each year	Submit revised cost estimates
D.4.b.	Annually	Submit proof of funding

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ATTACHMENT 1, cont'd		
Specific Condition	Submittal Due Date	Required Item
F.4.	Within 7 days of detection	Submit gas remediation plan
	Within 60 days of detection	Complete corrective actions
G.1.a.	No later than 90 days prior to the date when wastes will no longer be received in active LF areas	Submit Closure Permit application



An employee-owned company

June 16, 2006

Susan J. Pelz, P.E.
Solid Waste Manager
Southwest District
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926

Dept. of Environmental
Protection
JUN 19 2006
Southwest District

Re: Lena Road Landfill, Manatee County
Pending Permit No.: 39884-011-SF/01, Closure,
Stage I, Partial Closure #2
Response 3 to FDEP Letter Dated May 5, 2006

Dear Ms Pelz:

This letter is in response to your request for additional information regarding the above referenced permit application. Your requests are typed in italics followed by our responses in normal bold type. Four copies of this response with each revision, replacement, or additional new document are included.

2. **Part P, Rule 62-701.600, F.A.C.**

b. Closure design (Rule 62-701.600(5), F.A.C.).

1) *See Comment 8 below. Please provide slope stability calculations for the proposed final cover design and configuration. Please provide all inputs, printouts for models, etc. to support the conclusions. Please include slope stability with equipment loading, horizontal and parallel seepage. The calculations do not appear to include the combination of these forces.*

(Response: See Response 8 below.)

4) *See Comment #8 below. Please provide calculations (transmissivity, long-term creep, clogging), HELP models etc., for the geocomposite design/use.*

(Response: See Response 8 below.)

5) *See Comment #8 below. Please provide pipe calculations for crushing, buckling and deflection for all pipes proposed to be used in the project.*

(Response: See Response 8 below.)

3. **Part P, Appendix A, CQA Plan. (Rules 62-701.600(5)(f)1., 62-701.400(7) and 62-701.400(8), F.A.C.)** Please be advised that the CQA Plan and Technical Specifications will be reviewed again in their entirety after the responses to this request for information are submitted.

(see bond
request
FILE



Department of Environmental Protection

Jeb Bush
Governor

Southwest District
13051 North Telecom Parkway
Temple Terrace, FL 33637-0926
Telephone: 813-632-7600

Colleen M. Castille
Secretary

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

May 5, 2006

RE: Lena Road Landfill, Manatee County
Pending Permit No.: 39884-011-SF/01, Closure, Stage I, Partial Closure 2

Dear Mr. Gray:

This is to acknowledge receipt of the information dated March 22, 2006 (received April 7, 2006) submitted in support of your permit application dated May 24, 2005 (received May 25, 2005), prepared by Post, Buckley, Schuh & Jernigan (PBSJ), to construct a partial final cover system and related appurtenances 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 is incomplete. This is the Department's third 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.)] Please note that comments are numbered the same as the Department's June 23, 2005 and February 24, 2006 letters. No additional information is requested regarding Comments #1, 2.a(2), 2.a(3), 2.b(2), 2.b(3), 2.c(1), 2.c(3), 6, 7, 2.a(1), 2.c(2), 3.a(2), 3.a(4), 3.a(8), 3.a(13), 3.g., 4, 5.a.

GENERAL:

1. Due to magnitude of the proposed project, the requested information and comments below do not repeat the information submitted by the applicant. However, every effort has been made to concisely refer to the section, page, drawing detail number, etc. where the information has been presented in the original submittal.
2. 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.
3. 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.

"More Protection, Less Process"

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4. 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 applications [Chapter 62-701, Florida Administrative Code (F.A.C.)]:

2. **Part P, Rule 62-701.600, F.A.C.**

b. Closure design (Rule 62-701.600(5), F.A.C.).

- 1) See Comment 8 below. Please provide slope stability calculations for the proposed final cover design and configuration. Please provide all inputs, printouts for models, etc. to support the conclusions. Please include slope stability with equipment loading, horizontal and parallel seepage. The calculations do not appear to include the combination of these forces.
- 4) See Comment #8 below. Please provide calculations (transmissivity, long-term creep, clogging), HELP models etc., for the geocomposite design/use.
- 5) See Comment #8 below. Please provide pipe calculations for crushing, buckling and deflection for all pipes proposed to be used in the project.

3. **Part P, Appendix A, CQA Plan. (Rules 62-701.600(5)(f)1., 62-701.400(7) and 62-701.400(8), F.A.C.)** Please be advised that the CQA Plan and Technical Specifications will be reviewed again in their entirety after the responses to this request for information are submitted.

a. Technical Specifications.

- 1) Section 01005. Please revise this section to include requirements for spill prevention, control and reporting.
- 3) Section 01015. Please explain how the slurry wall material will be salvaged and how it will be determined that the salvaged material is suitable for use as the landfill barrier layer (§1.03.A.). Please clarify where pipes will penetrate the slurry wall in this project (§1.03.B.). Please specify the ASTM method that will be used for permeability testing of the repaired areas of the slurry wall (§1.03.C.). Please clarify if groundwater monitoring wells and piezometers will be protected during construction (§1.06). Please clarify where "floors" and "structures" are located in this project (§1.11.B.).
- 5) Section 01045. Please explain why "cutting and patching" is not relevant to this project.
- 6) Section 01150. Please clarify where "rock" will be excavated in the project (§1.07, Bid Item 3). Please clarify which underdrains are referenced in Bid Item 14.
- 7) Section 01200. Please provide Specifications that correlate with the CQA plan (see §1.3.3.). Please specify the expected duration of this construction project.

(Comment #3.a., cont'd)

9) *Section 02064.* Please explain why "modifications to existing structures, piping and equipment" is not relevant to this project since the stormwater let downs will be connected to existing pipes/structures and the geosynthetics will be attached to existing Partial Closure #1 geosynthetics. Please resubmit this section, revised as appropriate, to address the following comments from the February 24, 2006 letter: Please specify the disposal location for all wastes resulting from this project (§3.01.A.). Please clarify where valves for existing piping are shown on the drawings (§3.01.C.). Please clarify where pumps will be installed in this project (§3.01.K) and provide a specification for pumps. Please clarify where asbestos cement pipe is located in this project (§3.03, §3.04) and show the locations on the drawings. Please specify where water and wastewater utility pipes will be abandoned in place in this project (§3.05).

10) *Section 02220.* Please provide specifications that correlate (see §2.01.B and §1.01.B.5.). Please explain the term "protective soil bedding" (§3.01). Please specify the permeability of the protective cover soil. Please provide a specification for the bedding soil. Please specify that the soil layer thickness "indicators" shall not damage the liner (§3.02.A.). Please specify who will conduct the tests listed in §3.03.A. Please include permeability of the protective cover soil in the table in §3.03.A. It has been the Department's experience that most grading tolerances are ± 0.1 ft. Please revise the construction tolerance accordingly or explain why a 1 foot tolerance is acceptable (§3.04.A.). Please explain how "graders or other power equipment" will not damage the liner (§3.04.C.).

11) *Section 02221.* Please clarify where #57 stone is used (§2.01.C.2.). Please explain the difference between "coarse aggregate" and "crushed stone" (§2.01.C.), and explain where each is used in the project.

12) *Section 02276.* Please provide a copy of the SWFWMD or ERP permit for the project.

14) *Section 02610.* Please specify that the gas wells are "perforated" and not "slotted" pipe (§3.04.A.1.).

15) *Section 02712.* Please provide calculations that support a compressive load of 1000 psf. Please provide specifications that include the actual layers that will be used in the project for the transmissivity testing. Please specify conformance testing for all geosynthetic components. Table 3 does not specify the required values. Please include testing in the transverse direction as well as machine direction.

16) *Section 02776.* Please revise the specifications to clearly identify that the Contractor's activities are not CQA (§1.02.D). Please include interface friction angle testing for the actual materials that will be used at the site. Although the Specifications and CQA Plan indicate that the seams shall meet GRI-GM19, the values listed do not correlate GRI-GM19. Please provide revised Specifications and CQA Plan that correlate the seam strengths to GRI-GM19 at a minimum (Table 02776-A). Please include the thickness required for the smooth geomembrane. Please include interface friction angle testing by the CQA consultant for the actual materials used in the project. Please include interface friction angle testing requirements for smooth and textured geomembrane, with and without geocomposite, as the design requires. Please provide specifications

(Comment #3.a(16), cont'd)

for pipes that penetrate the geomembrane (e.g., booting details, etc.). Although the response indicated that references to concrete on the geomembrane were deleted, these changes do not appear to have been made. Please specify where concrete is used in this project (§6.01.C.).

17) Section 15051. Please revise this section to correlate with the drawings and specification Section 02720 that indicate that some pipes are corrugated and some pipes (e.g., stormwater) are slotted. Please provide specifications for the gas header pipe installation. Please specify the survey frequency and invert elevation tolerances for the gas header piping.

b. Department permits are issued for specific activities pursuant to Rule 62-4.160(2), F.A.C. Rule 62-701.320(5)(b), F.A.C., requires that all applications shall be of sufficient detail to show how the facility will be constructed in accordance with Department rules. Please provide technical specifications ("contract specifications") for all portions of the proposed final cover system (including liner, subgrade, stormwater piping and inlets, dewatering, spill prevention and control, submittals, construction certification/contract closeout, etc.). It appears that several relevant specification sections (01580, 01620, 02064, 02575) were deleted from the application. Please resubmit these sections with the response to this request for information.

c. §1.0. Please revise §1.2.6.3. or Table 1-1 to correlate regarding the geocomposite manufacturer's qualifications. Please include conformance testing as a responsibility of the CQA Monitor (§1.2.7.). Please provide CQA requirements for soils testing. It has been the Department's experience that construction projects of this magnitude typically hold weekly progress meetings between the contractor, CQA team, design engineer and owner. Please clarify if weekly progress meetings are anticipated, and provide a revised CQA Plan accordingly (§1.3.1., §1.3.3.).

d. §2.0. Please provide revised CQA Plan that references the appropriate GRI specification for LLDPE geomembranes (§2.1.1). Although the Specifications and CQA Plan indicate that the seams shall meet GRI-GM19, the values listed do not correlate with GRI-GM19. Please provide revised Specifications and CQA Plan that correlate the seam strengths to GRI-GM19 at a minimum. Please provide revised CQA Plan and Specifications that include interface friction angle testing for each of the interfaces and the actual materials that will be present in the final cover system. Please include CQA sections regarding the protective cover soil. Please clarify who performs the testing listed on page 2-3. Please provide required values for Table 2-2. Please revise Table 2-2, page 3 of 3 to correlate with page 1 of 3.

e. §3.0. Please provide CQA requirements and technical specifications for the soil above the geomembrane. Please specify if the contractor is responsible for correcting the "supporting soil" or soils above the geomembrane if damage is caused by erosion (§3.1.1.). Please specify the activities that the CQA monitor will observe "for compliance with the specifications" (Table 3-2). Please clarify where concrete pads will be in contact with the geomembrane (Table 3-3). Please revise §3.3.3 to correlate with Table 4-1. Please specify the "test results for compliance with the specifications" (Table 3-5). Please provide drawings that show the limits of the geomembrane and the locations of all monitoring wells, piezometers and gas probes. Please provide a revised CQA Plan that includes Section 3.5.7., Certification of Completion, and Section 3.5.8., Engineer's full-time resident inspector. It appears that these sections were deleted from the previous submittal. Although Response #3.e. indicates that this information is included in §5.2 and §1.2.7., it does not appear that this information is included.

(Comment #3, cont'd)

f. §4.0. Please provide CQA conformance testing for all soil components of the final cover system. Please include permeability in the conformance testing of the protective cover soil. Please clarify if wrinkles in the geocomposite will be removed prior to placement of the protective soil layer.

5. **Permit Drawings for Manatee County Lena Road Landfill Final Closure, January 2005** (Rules 62-701.320(5)(b), 62-701.320(7)(f), F.A.C.) The following comments correlate with the comments in the Department's February 24, 2006 letter.

b. Sheets C-3 and C-4. Please clarify the connections of all gas header and condensate piping. It does not appear that condensate will drain appropriately in some areas. For example, the lateral from GW-118 to GW-135 terminates at elevation +35.7 which appears to be a low point for header GW-193 to the main condensate knockout but is not located at the main knockout. Please provide invert elevations for all gas header and lateral piping and connections.

c. Sheet C-5. Please provide specifications for "pea gravel."

d. Sheet C-6. Please specify the material under the header pipe in Detail E. Please specify the pipe size and type in Detail C. Please provide dimensions for the pipe trench/bedding in Sections A, B and E. Please clarify if the pipe gravel is wrapped with geotextile.

e. Sheets C-9 and C-10. Please provide a cross-section or detail and specify the high points for the stormwater conveyances.

f. Sheet C-11. Although Detail G shows an anchor trench for the geocomposite, this detail is in a portion of the closure that is less than 5H:1V and would therefore not include a geocomposite. Please provide a detail that shows the limits of the Partial Closure #2 in the flat areas. Please provide a plan view that shows the limits of the geocomposite and textured geomembrane. Please explain how the existing geocomposite will be anchored after the anchor trench in Detail H is removed. Since the geocomposite will only be located on the slopes and not the top, please revise detail H to clearly distinguish between the slope and top of landfill. Please provide calculations that demonstrate that the geocomposite will be adequately anchored. Please show how the geocomposite is installed relative to the stormwater piping shown in Detail I.

g. Sheet C-13. Please clarify the piping shown in Section N1 and Section N. It does not appear that the piping shown correlates between these details. Please specify the material below the stormwater inlet that will prevent the stormwater inlet from damaging the liner (Section N). Please provide specifications for the geotextile shown in Detail N3.

h. Please provide a scale and north arrow on all sheets.

8. **Calculations, Rules 62-701.320(7)(e), 62-701.320(6), F.A.C.** Please be advised that the calculations will be reviewed in their entirety after receipt of the response to this request for information.

a. Please provide calculations that are signed and sealed by the registered professional engineer who prepared them.

b. Please provide the references and/or basis for all calculations provided. Some parameters were not clearly defined, sources of equations were not provided, and assumptions were not clearly stated or supported.

(Comment #8, cont'd)

c. Section 1. The specifications provided do not correlate with the calculations. Please provide specifications that required the protective sand to have a permeability of 1×10^{-3} cm/sec and be classified as a silty sand with an internal friction angle of at least 26 degrees. Please include testing requirements that conform to these properties. Please provide the reference for the runoff coefficient of 0.7. Please provide the basis for using a 1-hour, 25-year storm for the design instead of a 24-hour, 25-year storm.

d. Section 2. It appears that the "Run #2 with transmissivity reduced for factors of safety" calculation (5 pages) was deleted from the Calculations. Please provide this calculation as revised by θ_{ult} calculation. It appears that the Manning's coefficient used is for clean ADS pipe. Please provide an operation plan that includes frequent cleaning of the stormwater pipes, or provide revised calculations that include n values adjusted for "debris collection and sedimentation." Please provide the formula used to calculate Q. Please explain how 3.6 mm/hr is a volumetric flow rate. Please provide calculations for all drainage areas. It does not appear that all of the contributing areas are accurately represented by an area of approximately 200 ft. x 131 ft.

e. Section 3. Please provide calculations that include loading from equipment (such as mowers) that may be used after closure. Please provide calculations in English units. Please provide equipment cut sheets supporting the loading used. Please include slope stability that considers horizontal and parallel seepage. Please specify the reference for the friction angles used.

f. Section 4. Although the calculations assume that the pipe bedding constant, $k=0.1$, the drawings do not show the pipe bedding, but show the pipes placed directly on geocomposite ($k > 0.1$). Please revise the drawings, specifications or calculations as appropriate. Please provide calculations that include loading from equipment (e.g., mowers) that may be used after closure. Please specify the reference for each of the values used. Please clarify how $W=1200$ lbs/cf is converted to 67 lbs/lf. Please specify the detail in the drawings that supports this calculation. The calculation provided does not correlate with the reference provided for modulus of elasticity. Please explain why the AASHTO formula for pipe buckling was used instead of Moser's equation which is reportedly more conservative. Please provide a diagram (or reference the detail in the drawings) that shows how "B" is derived. It does not seem that the design intent is for 3 feet of water to have accumulated above the pipe in the terrace drains. Please explain why box trucks or semi-tractor trailers are expected to be on the landfill after closure (see page 20/24).

g. Section 6. The revised calculation states, "For P_L see 30 attached." However, information on the live loading could not be located in this section. Please provide the basis, reference or calculation for the live loading.

h. Section 7. Please provide the reference for the broad-crested weir formula and coefficient, k_w . Please provide the basis for assuming an 8 minute, 25-year rainfall event (See also comment #8.c.). Please provide the reference for using 0.70 for the runoff coefficient.

i. Section 8. Please provide calculations that correlate with Detail G/C-11. Since the same soils are proposed to be used for the bedding layer and protective soil layer, please explain why different values for δ_L and δ_U provided are different. Since specifications for geotextiles were not provided, please explain why geotextile properties (instead of geocomposite properties) were used in this calculations.


(Comment #8, cont'd)

j. Section 9. Please provide specifications for "pea gravel." Please provide calculations for the static, live and internal (vacuum) loading of the gas piping. Please provide the basis for assuming 48 inches of water for the internal pressure of the pipe.

Please **respond within 30 days** after you receive this letter, 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 30 days to develop, you should develop a 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.

Please be advised that since this permit application has been pending for 345 days, if the responses to this request for information are not complete and sufficient, the Department may deny the pending application. 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
Joseph Miller, P.E., PBSJ, 482 S. Keller Road, Orlando, Fl. 32810-6101
John Morris, P.G., FDEP Tampa
Ted Murray, FDEP Tampa- ERP
David Zell, FDEP Tampa- Air



An employee-owned company

March 22, 2006

Susan J. Pelz, P.E.
Solid Waste Manager
Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Dept. of Environmental
Protection

APR 07 2006

Re: Lena Road Landfill, Manatee County
Pending Permit No.: 39884-011-SF/01, Closure
Response 2 to FDEP Letter Dated February 24, 2006

Southwest District

Dear Ms Pelz:

This letter is in response to your request for additional information regarding the above referenced permit application. Your requests are typed in italics followed by our responses in normal bold type. Four copies of this response with each revision, replacement, or additional new document are included.

2. **Part P, Rule 62-701.600, F.A.C.**

a. Gas migration report and report on effectiveness of the landfill design. (Rules 62-701.600(4)(d) and (e), F.A.C.)

1) *Please provide a revised Figure L-8 (currently attached to the Operation permit) that shows the locations of the property boundaries. Please clarify if "Gary Seely office" (gas well location 18) is in an enclosed structure. In the event that this location is in an enclosed structure, it appears that the 25% LEL threshold for landfill gas has been exceeded in several sampling events. Please clarify the corrective actions taken to prevent the accumulation of landfill gas (LFG) in this structure.*

Response: Included with this response is Figure L-8A which shows the property boundaries, limits of the landfill and the location of the landfill gas monitoring wells and points.

"Gary Seely office" is Gas Monitoring Point 1 (GMP-1), and not Gas Monitoring Well 18 (GMW-18). GMW-18 was located in that portion of the Stage III Landfill with old solid waste and GMW-18 was removed with the filling of Stage III Landfill.

b. Closure design (Rule 62-701.600(5), F.A.C.).

1) *See Comment 8 below. Please provide slope stability calculations for the proposed final cover design and configuration. Please provide all inputs, printouts for models, etc. to support the conclusions. Please include slope stability with equipment loading, horizontal and parallel seepage. The calculations do not appear to include the combination of these forces.*

Response: See response 8 below.

(See Brand Report)

4) *See Comment #8 below. Please provide calculations (transmissivity, long-term creep, clogging), HELP models etc., for the geocomposite design/use.*

Response: See response 8 below.

5) *See Comment #8 below. Please provide pipe calculations for crushing, buckling and deflection for all pipe proposed to be used in the project.*

Response: See response 8 below.

c. Closure Operation Plan (Rule 62-701.600(6), F.A.C.)

2) Long-term care plan. (Section P.8) Although pages P-8 and P-9 were revised, the revisions only restated the requirements of the current permit and did not address each of the items listed in Section P.8.1 (e.g., settlement, dead vegetation, need to cut vegetation, illegal dumping, trespassing, etc.). Please specify the timeframe for implementing repairs for damage that is observed during the monthly inspections. Please describe the procedures for repairing the gas management system, and timeframe for implementing the repairs, if deficiencies are found (See Section P.8.12.)

Response: Section P.8 was revised to respond to your request for additional descriptions and time frames for repair.

3. **Part P, Appendix A, CQA Plan.** (Rules 62-701.600(5)(f)1., 62-701.400(7) and 62-701.400(8), F.A.C.) Please be advised that the CQA Plan and Technical Specifications will be reviewed again in their entirety after the responses to this request for information are submitted.

a. Technical Specifications.

1) Section 01005. Please clarify the reference to a "railroad permit" (§1.01.A). Please specify a tolerance for all grades, thicknesses of soil components and piping in the project (§1.07.A.)

Response: The reference to the railroad permit was deleted. Tolerances were added to Section 1.07.A. Section was revised to delete information not pertinent to this project.

2) Section 01010. Please clarify if the contractor will water sod until it is established (§1.01.A.).

Response: The section was revised to add "water sod until it is established," and delete all information not pertinent to this project.

3) Section 01015. Please provide procedures for identifying and protecting the slurry wall.

Response: A section was added on procedures for identifying, protecting and repairing the slurry wall.

4) *Section 01030. Please specify that water located inside the slurry wall is leachate and shall be managed accordingly (§1.09.A.). Please specify how leachate will be managed during construction (§1.09.B.).*

Response: Section 01030 was revised to specify that water located inside the slurry wall is leachate, and must be pumped to the leachate collection manhole.

5) *Section 01045. Please clarify where electrical conduit is included in the project (§1.01.A.5.).*

Response: The section was not needed, and was deleted from the revised set of specifications.

6) *Section 01150. Please clarify where "rock" will be excavated in the project (§1.07, Bid Item 3). Please clarify which underdrains are referenced in Bid Item 14.*

Response: The reference to "rock" was deleted. The reference to the underdrains was also clarified.

7) *Section 01200. Please clarify if weekly progress meetings will be held (1.03).*

Response: Monthly progress meeting are held to review the contractor's monthly request for payment, schedule and problems that may delay the project or increase the costs. The section was revised to include daily progress meetings between the Resident Project Representative and the Contractor's Site Superintendent.

8) *Section 01710. Please specify the disposal location for all wastes resulting from this project (§3.01.C.).*

Response: Section 3.01.C was revised to call for all solid waste to be disposed of in the on-site Class I Lena Road Landfill.

9) *Section 02064. Please specify the disposal location for all wastes resulting from this project (§3.01.A.). Please clarify where valves for existing piping are shown on the drawings (§3.01.C.). Please clarify where pumps will be installed in this project (§3.01.K) and provide a specification for pumps. Please clarify where asbestos cement pipe is located in this project (§3.03, §3.04) and show the locations on the drawings. Please specify where water and wastewater utility pipes will be abandoned in place in this project (§3.05).*

Response: After reviewing Section 02064 Modifications to Existing Structures, Piping and Equipment, the section is not needed. The section was deleted from the revised set of specifications.

10) *Section 02220. Please specify where "foundations for structures" are located in this project and show the locations on the drawings (§1.01.A). Please define the term*

"structural excavation" (§1.01.C). Please specify where trees are located in this project (§1.01.D). Please specify where dewatering water (leachate) will be discharged (§1.03.A.). Please clarify where "slush" is expected to be encountered in this project (§1.03.C.). Please specify where "controlled fill" is used in this project and show it on the drawings (§2.01.). Please specify where concrete or masonry, footings, base slabs and exterior walls are located in this project and show the locations on the drawings (§3.03, §3.05, §02221-2.01.B.).

Response: After reviewing Section 02220 Excavation, Backfill, Fill and Grading for Structures, the section is not needed. The section was deleted from the set of revised specifications.

11) *Section 02221. Please specify where trees are located in this project (§1.01.C). (Response: Reference was deleted.) Please specify that water located inside the slurry wall is leachate and shall be managed accordingly (§1.02.B.5 through B.8.). (Response: Revision made.) Please provide specifications for the subgrade soils and cover soils (§2.01). (Response: Specifications were added.) Please specify where each of the soil types listed are used in the project. (Response: Soil types not used in the project were deleted.) Please clarify where manhole bases will be installed as part of this project (§2.01.D.2). (Response: There are no new manholes required for this project. The reference was deleted.) Please specify the maximum size of objects, sticks, etc. in the subgrade to correlate with the CQA Plan (§2.01.D.1). (Response: The reference was revised.) Please explain where peat will be excavated in this project (§3.02.B.). (Response: Reference was deleted.) Please clarify where "rock" will be excavated in the project (§3.03.B). (Response: Reference was deleted.) Please clarify which lines will be abandoned (§3.04.G.) (Response: Reference was deleted.)*

12) *Section 02276. Please provide a copy of the SWFWMD permit for erosion and sedimentation control (§1.02). (Response: Reference was deleted.) Please clarify if soils above the liner will be scarified to a depth of 6 inches (§3.01.A.1.). (Response: In areas where there is vegetation, the vegetation will be stripped, but not scarified.) Please provide the "approved descriptions and working drawings" (§3.02.A.). (Response: No drawings are needed. The reference was deleted.)*

13) *Section 02485. Please specify the source of water (§2.01.E.).*

Response: The water will be reclaimed water and come from the adjacent Manatee County Wastewater Plant by way of the water reuse pipeline.

14) *Section 02610. Please provide procedures for ensuring that the confining clay layer under the landfill will not be impacted by the installation of gas wells (§3.01.B.2.). (Response: The section was rewritten to require the contractor to check the ground elevation at the location of the boring and verify the boring depth based on a landfill invert of El. 29. The boring as designed to penetrate the solid waste approximately 75% at the boring location.) Please provide specifications for the gas header pipe installation. (Response: This section applies only to the gas well and*

well head. The header pipe is addressed in Section 15051.) Please specify the survey frequency and invert elevation tolerances for the gas header piping. Please specify surveying requirements for all gas management system piping. (Response: This section applies only to the gas well and well head. The header pipe is addressed in Section 15051.)

15) Section 02712. Please define the "SIM" method. (Response: "SIM" stands for "stepped isothermal method" as explained on Page GC8-6 of GRI Standard –GC8 Determination of the Allowable Flow Rate of a Drainage Geocomposite. A complete copy of GRI Standard –GC8 is enclosed for your information. Please provide calculations that support a compressive load of 1000 psf. (Response: The two foot soil cover over the double-sided capping geocomposite drainage layer at an average soil density of 120 pounds per cubic foot is a compressive load of 240 psf. The manufacturer tests the geocomposite at a standard compressive load of 1000 psi. This is approximately 4 times the actual compressive load, which is conservative, and represents a factor of safety of 4. Per 62-701.400 Landfill Construction Requirements, in (3) (d) 8, which discusses the requirements for determining the transmissivity of geonets, the last sentence reads: "For geonets used in final covers, only one test shall be conducted for a minimum period of one hour using the expected maximum design normal load from the cover soils and the actual boundary materials intended for the geonet." This requirement was added to Table 1.) Please provide specifications that include the actual layers that will be used in the project for the transmissivity testing. (Response: One test shall be conducted for a minimum period of one hour using the expected maximum design normal load from the cover soils, and the actual boundary materials intended for the geonet.) Please provide specifications for the "Ottawa sand" (Table 1). (Response: The specification for Ottawa sand is included with this response for your information.) Please specify conformance testing for all geosynthetic components. (Response: The Manufacturer's quality control test frequency is given in Table 4 of Section 02712.) Please specify if "the project contains long, steep slopes." (Response: The reference to long steep slopes was deleted. There are no long step slopes for this closure project.) Please specify how the geocomposite will be "properly anchored." (Response: The sentence was rewritten to clarify the meaning.) (§D.1) Please provide a MSDS for the "spray adhesive." (Response: MSDS for 3M Super Spray Adhesive is included with this response.) (§D.3.) Please specify the CQA tests referenced in §E. (Response: The CQA testing was added to Table 4.)

16) Section 02776. Please provide a revised specification section that uses the term "performed" instead of "preformed." (Response: The section was revised to correct the spelling.) Please clarify if the Installers quality control program is considered to be CQA (Response: The Installer is responsible for the construction quality control (CQC) program. The Owner is responsible for the construction quality assurance (CQA) program which is done by the Engineer or a separate company employed by the Owner.) (§1.02.C). Please clarify if the "site supervisor" or "foreman" is the "master seamer." (Response: The master seamer is a seamer with at least 1,000,000 linear feet of geomembrane seams. He is responsible for the seaming, and must be

on-site while the seaming is in process. The site superintendent and/or foreman for the project may be master seamers, but do not have to be master seamers. The master seamer works under the direction of the superintendent and/or foreman. The specifications require that a superintendent and/or foreman must also be on site while seaming is in process. This allows the QA Monitor the means to communicate with a supervisor if there is a problem. The QA Monitor is not responsible for directing the activity of the seamers, and should communicate through the site superintendent and/or foreman.) (§1.02.C.2 (d)) Please include interface friction angle testing for the actual materials that will be used at the site. (Response: This requirement was added to the specifications in Table 02776-A.) Please clarify how textured geomembrane will not exhibit "roughness" (§2.02.A.2.). (Response: Both textured and smooth geomembrane are included on this project. The sentence was revised. The word "roughness" was changed to "abrasions.") Although the Specifications and CQA Plan indicate that the seams shall meet at least 90% of the sheet strength, the values listed do not correlate with 90% of the sheet strength. As discussed with the County, the Department will accept seam strengths for LLDPE liner material equivalent to the values listed in GRI-GM19, or 90% of the sheet strength. Please provide revised Specifications and CQA Plan that correlate the seam strengths to GRI-GM19 at a minimum. (Table 02776-A) (Response: The specifications in Table 02776-A were revised to meet GRI-GM19.) Please provide revised specifications that reference EPA Method 9100 for leachate compatibility testing (§2.02.B.7.) (Response: The specifications were revised to reference EPA Method 9100.) Please specify where the neoprene sponge will be used (§2.03.B.). (Response: Reference was deleted.) Please specify that the CQA Monitor shall inspect the delivered materials for damage (§3.01.C.). (Response: We added the CQA Monitor.) Please specify that the CQA Monitor shall confirm that the proper procedures are followed (§4.01.A.). (Response: We added the term CQA Monitor.) Please specify the tests that §4.01.B. reference. (Response: The tests were added to Table 02776-A.) Please clarify if conformance test results must be received and approved by the Engineer prior to geomembrane installation (§4.02.A.). (Response: The conformance test results must be received prior to acceptance of the geomembrane.) Please explain why access roads and berms would be shown on a panel layout drawing (§5.01.A.2(b)). (Response: Access roads and beams are shown on the panel layout drawings for reference, and to show the location of seams in critical areas for consideration of stress on the geomembrane.) Please define "excessive wrinkling" (§5.01.B.4(d)(7), §5.01.D.12(e)) and "seriously damaged" (§5.01.B.4(d)(9)). (Response: The definitions were added.) Please provide Table 2 (§5.01.D.10(e)). (Response: The table reference was corrected to Table 02776-A.) Please clarify where leachate collection pipes will penetrate the liner (§5.01.D.11.). (Response: No leachate pipes will penetrate the liner. The reference was deleted.) Please clarify which specification references the granular materials that will be used above the geomembrane (§6.01.B.). (Response: A reference to the specification section was added.) Please specify where concrete is used in this project (§6.01.C.). (Response: The reference to concrete was deleted.)

17) *Section 15051. Please specify which piping this section is for (i.e., stormwater piping, gas header piping, gas extraction well piping). Please clarify if the piping in this section is corrugated or smooth wall, perforated or solid wall.*

Response: This section applies to all HDPE pipe used for the stormwater pipe, landfill gas collection pipe and landfill gas wells.

b. *Department permits are issued for specific activities pursuant to Rule 62-4.160(2), F.A.C. Rule 62-701.320(5)(b), F.A.C., requires that all applications shall be of sufficient detail to show how the facility will be constructed in accordance with Department rules. Please provide technical specifications ("contract specifications") for all portions of the proposed final cover system (including liner, subgrade, stormwater piping and inlets, dewatering, spill prevention and control, submittals, construction certification/contract closeout, etc.).*

Response: Revised specification pages or sections as applicable are included with this response.

c. *§1.0. It does not appear that all parties are included in Table 1-1 (e.g., soils CQA). Please include all of the parties and their qualifications in Table 1-1. (Response: The Geotechnical Engineer reference in the table was changed to Soils CQA Engineer.) Please specify when each of the submittals are required to be submitted. (Response: Please provide specifications for the bedding layer that correlate with the CQA plan (§1.1). (Response: A specification section was added for the bedding sand.) Please include the CQA for the soils component of the final cover on Table 1-1 and the Organizational Chart (Table 1-2). (Response: The reference to the Geotechnical Engineer was changed to CQA Soils Monitor.) It has been the Department's experience that general contractors generally subcontract out portions of the project (i.e., liner installation). Please explain under what circumstance the general contractor would directly employ earthwork and geosynthetic crews (Table 1-2, §1.2.5.) (Response: The general contractor would directly employ earthwork and geosynthetic crews if the general contractor is qualified to do both. For example, Comanco Environmental Corporation, which started as a subcontractor for geosynthetics installation, now is a general contractor with the capacity and capabilities to do both.) Please clarify when the information listed in Section 1.2.6.2. will be submitted. (Response: A time for submittal was added to the section.) Please specify the "pre-installation information" required to be submitted (page 1-8). (Response: The reference was deleted.) Please include the earthwork contractor on Table 1-1 (see §1.2.6.4.). (Response: Reference was added.) Please provide specifications that correlate with the CQA Plan for the earthwork contractors responsibilities (§1.2.6.4.). (Response: The specifications were revised as necessary to correlate the CQA Plan for the earthwork subcontractor's responsibilities.) Please clarify which sections of the CQA Plan and/or Specifications include CQA conformance testing for each of the geosynthetics (§1.2.7.). (Response: Section 1.2.7 describes the responsibility of the CQA monitors. A reference was added that the CQA conformance testing for the geomembrane can be found in Section 2.) Please provide CQA requirements for soils testing. (Response: The requirements are in Section 4.3.2) Please explain the role of the geotechnical engineer (§1.2.10.). (Response: The geotechnical engineer is the professional in charge of the soils testing. The term geotechnical engineer was deleted and*

replace with CQA Monitor. The CQA Monitor for soils testing may be a geotechnical engineer, or works for a geotechnical engineer.) *It has been the Department's experience that construction projects of this magnitude typically hold weekly progress meetings between the contractor, CQA team, design engineer and owner. Please clarify if weekly progress meetings are anticipated, and provide a revised CQA Plan accordingly (§1.3.1.).* **(Response: Monthly progress meetings are held with the Owner to review the progress, schedule, contractor's monthly pay request, change orders, and problems that may delay the work. The Resident Project Representative meets daily with the Contractor's Superintendent to review the project progress. The CQA monitor meets daily with the Supervisor in charge of installation of the geosynthetics to review project progress.)**

d. *§2.0. Please specify the value and testing parameters (i.e., loading conditions, time) for transmissivity of the CDN (Table 2-2).* **(Response: Table was revised per previous comment. Per 62-701.400 Landfill Construction Requirements, in (3) (d) 8, which discusses the requirements for determining the transmissivity of geonets, the last sentence reads: "For geonets used in final covers, only one test shall be conducted for a minimum period of one hour using the expected maximum design normal load from the cover soils and the actual boundary materials intended for the geonet." This requirement was added.) Please clarify if the final cover includes the geocomposite on slopes flatter than 5H:1V.** **(Response: The geocomposite is used only on the side slopes.) Please explain how textured geomembrane will not have "roughness," or provide revised Specifications and CQA Plan that delete this requirement (e.g., §2.1.1.).** **(Response: Both textured and smooth geomembrane are included on this project. The sentence was revised. The word "roughness" was changed to "abrasions.")** **(Response: Please provide revised CQA Plan that references the appropriate GRI specification for LLDPE geomembranes (§2.1.1).)** **(Response: The change was made.) Please provide a revised CQA Plan that includes Oxidative Induction Time CQA conformance testing (§2.1.1.).** **(Response: Testing was added to the CQA conformance testing.) Please specify the asperity height for the textured geomembrane on Table 2-1.** **(Response: The asperity height for textured geomembrane was added.) Although the Specifications and CQA Plan indicate that the seams shall meet at least 90% of the sheet strength, the values listed do not correlate with 90% of the sheet strength. As discussed with the County, the Department will accept seam strengths for LLDPE liner material equivalent to the values listed in GRI-GM19, or 90% of the sheet strength. Please provide revised Specifications and CQA Plan that correlate the seam strengths to GRI-GM19 at a minimum.** **(Response: The change was made.) Please clarify which CQA section or Specifications section includes the CQA conformance testing for each of the geosynthetics.** **(Response: The CQA conformance testing was added to both the specification and the CQA Manual by adding another column to the tables.) Please specify in the CQA plan the type of geotextile (woven, non-woven) and geonet (bi-planar, tri-planar) used in the geocomposite (§2.1.2.).** **(Response: The description was expanded to include the words non-woven and tri-planar.) Please provide revised CQA Plan and Specifications that include interface friction angle testing for each of the interfaces and the actual materials that will be present in the final cover system.** **(Response: This requirement was added to the specifications and the CQA Manual in the tables.) Please verify that the testing frequencies on Table 2-2 correlates with page 2-4.** **(Response: Table 2-2 was revised to give both the manufacturer's quality control testing, and the CQA testing. The description on page 2-4 was deleted.) Please include CQA sections regarding the**

protective cover soil. It appears that §2.1.1.2. and §2.2.2 were deleted from the previous submittal. (Response: Section 2.0 describes the geosynthetics manufacturing and delivery. The protective cover soils are describes in Section 3.0 Geosynthetics Installation.)

e. §3.0. Please specify the tolerances for the grades and thicknesses each of the soil layers (§3.1.1.). (Response: The tolerances for grades and thicknesses were specified.) Please provide a specification for the "supporting soil" (§3.1.1.). (Response: The reference to supporting soil was deleted, and replaced with bedding soil, and minimum tolerances were added.) Please specify how the thickness of the "supporting soil" will be verified (§3.1.1, Table 3-1). (Response: The thickness will be verified by probing the bedding soil.) Please provide CQA requirements and technical specifications for the soil above the geomembrane. (Response: A section was added to the CQA Manual. See Specification Section 02220, and CQA Manual Section 4.1.) Please specify if the contractor is responsible for correcting the "supporting soil" or soils above the geomembrane if damage is caused by erosion (§3.1.1.). (Response: The section was rewritten to clarify the contractor's responsibilities.) Please specify the activities that the CQA monitor will observe "for compliance with the specifications" (Table 3-2). (Response: The term CQA Monitor was added to observe.) Please explain and provide details for how the geocomposite will be anchored (§3.3.2.). (Response: The section was rewritten to clarify the details.) Please clarify where concrete pads will be in contact with the geomembrane (Table 3-3). (Response: The reference was deleted.) Please provide a specification for the "protective soil cover material" (§3.3.3). (Response: The specifications were added to the CQA Manual.) Please specify how the CQA Monitor will "check" the cover soil (§3.3.3). (Response: The method of checking was added to the CQA Manual.) Please provide specifications for the repair of erosion of the protective soil layer (§3.3.3). (Response: Specification requiring repair of erosion by replacing the soil eroded were added.) Please explain the reference to "curing time" for the geomembrane welds (Table 3-4). (Response: The reference was deleted, and no curing time is required.) Please specify the "test results for compliance with the specifications" (Table 3-5). (Response: The location for the test results referenced was added to the table.) Please specify how the thickness will be measured (Table 3-5). (Response: The method for measuring the thickness was added to the table.) Please clarify where monitoring wells and piezometers will be secured to the geomembrane (§3.5.3.). (Response: The reference was clarified, and the locations added to the drawings.) Please provide drawings that show the limits of the geomembrane and the locations of all monitoring wells, piezometers and gas probes. (Response: The monitoring wells, piezometers and gas probes locations were added on the drawings.) Please provide a revised CQA Plan that includes Section 3.5.7., Certification of Completion, and Section 3.5.8., Engineer's full-time resident inspector. It appears that these sections were deleted from the previous submittal. (Response: Section 3.5.7 Certification of Completion was a duplication of the information in Section 5.2 Construction Certification. Section 3.5.8 Engineer's Full-Time Resident Inspector was a duplication of the information in Section 1.2.7 Construction Quality Assurance Monitors.)

f. §4.0. Please provide CQA conformance testing for all geosynthetic components of the final cover system. (Response: The conformance testing for the Geosynthetic materials is included in Section 2.0. This section was retiled to clarify that this testing and sampling is during construction.) Please provide a revised CQA Plan that requires at least one

destructive test every 500 ft. of constructed seam (§4.2.3.1.). (Response: The interval for seam testing was changed to 500-ft.) Please provide a revised CQA Plan that requires a minimum of 5 replicate specimens for each destructive test. (Response: The testing was revised to require all five to pass.) Please provide Table 4-1 (§4.2.3.2.). (Response: The table reference was corrected to Table 2-1.) Please specify how "long seam lengths greater than 5 feet" will be repaired (§4.2.4.3.). (Response: The sentence was rewritten to clarify the meaning.) Please explain how "all seaming equipment used in repairing procedures" will "be satisfied" (§4.2.4.3.). (Response: The sentence was rewritten to clarify the meaning.) Please define "excessive wrinkles" (§4.2.4.5). (Response: Excessive wrinkles are wrinkles that will crease when covered by soil.) Please specify how the cover soil thickness will be checked (§4.3.1.). (Response: The method for verifying the cover soil thickness was added. See Table 4-1.)

g. §5.0. Please provide Attachment A (§5.1.). (Response: Attachment A was included with the revised CQA Plan.) Please clarify who will submit the Certification of Construction Completion to the Department (§5.2, §1.2.8.). (Response: The Professional Engineer in charge of construction quality assurance will be responsible for submitting the Certification of Construction Completion.) Please include a list of deviations from the permitted plans, geomembrane repair logs, surveys, monthly and weekly progress meeting minutes, and limits of the slurry wall and anchor trench in the Certification documents (§5.2.). (Response: The requirement to submit a list of deviations was added.)

4. *Appendix B. Please provide the information that was intended to be in this section. Although Response #4 indicates that the Table of Contents identified Appendix B, the CQA Plan Table of Contents does not reference Appendix B and the permit application submittal does not appear to have a Table of Contents.*

Response: The permit application uses page 3 of 40 of FDEP Form 62-701.900(1) as a table of contents. This is the form required by FDEP for submitting the permit application. Page 3 of 40 is the table of contents for the permit application form, and is the table of contents we use to submit the permit application. We use this table of contents so we follow the application exactly. On the page 3 of 40 at the bottom of the page are indicated Appendix A and B to the application. Appendix B is entitled "Location for Filling FDEP Requests for Additional Information and Responses As Required." There was nothing in Appendix B at the time we filled the application. Included with this response is a revised page 3 of 40 with the reference to Appendix B deleted.

5. *Permit Drawings for Manatee County Lena Road Landfill Final Closure, January 2005 (Rules 62-701.320(5) (b), 62-701.320(7)(f), F.A.C.) Since additional drawings have been added, and the previous drawings have been renumbered, the following comments do not correlate with the comments in the Department's June 23, 2005 letter.*

a. Please provide a current topographic survey of the site and the proposed final closure contours for the Stage I-Partial Closure #2.

Response: The drawings were revised to add the most recent aerial photograph and topographic map, which are based on a July 26, 2005 aerial photograph.

b. Sheets C-3 and C-4. Please provide invert elevations for all gas header piping and connections.

Response: Elevations were added to the gas header piping and connections on the drawings as requested. Due to landfill settlement, the contractor will adjust all elevations as needed based on the actual topographic elevations found at the time of construction.

c. Sheet C-5. Please reference the location of the gas wellhead on the gas extraction well detail on this sheet. Please provide a specification for the granite.

Response: A note was added that the gas well head detail is located on Sheet C-5. The specification for granite was expanded in Section 02610 – Landfill Gas Well and Wellhead.

d. Sheet C-6. Please provide details for how the geocomposite will be anchored. Please provide calculations that demonstrate that the geocomposite will be adequately anchored. Please specify the material under the header pipe in Detail E. Please specify the pipe bedding material in Detail C.

Response: Sheet 6 is entitled “Landfill Gas Collection System – Typical Sections and Details.” The geocomposite is shown for reference only. The details for how the geocomposite is anchored are shown on the drawings pertaining to the landfill cap.

A calculation was added to the calculation book that demonstrates that the geocomposite will be adequately anchored.

The pipe bedding material in Detail C and E was clarified.

e. Sheets C-9 and C-10. Please specify the invert elevations and ditch elevations for all of the stormwater ditches, inlets and discharge points.

Response: Elevations were added to the drawings as requested. Due to landfill settlement, the contractor will adjust all elevations as needed based on the actual topographic elevations found at the time of construction.

f. Sheet C-11. Since the anchor trench shown in Detail G does not include a containment berm, please clarify how leachate from the active portions of Phase I will not discharge above the partial closure cap. Please provide details for how the geocomposite will be anchored. Since the geocomposite will only be located on the slopes and not the top, please revise detail H to clearly distinguish between the slope and top of landfill.

Response: Since the Stage I Landfill is closed, there is no active portion of the Stage I Landfill to generate leachate that could discharge above the partial closure cap. Also, a review of the limits of the geomembrane cap for Partial Closure 2, which is shown on

Sheets C-9 and C-10, indicate that the cap is extended over the highest portion of the landfill. There are no active portions above the partial closure cap.

The geocomposite is placed on top of the textured geomembrane. The geotextile locks onto the textured geomembrane and is anchored in place. The textured geomembrane and geocomposite are anchored on the terraces and top of the landfill. The textured geomembrane and geocomposite extended over the top of the berms located along the top of the landfill and the terraces, down the back slope of the berms.

The geocomposite will only be located on the slopes. The geocomposite ends at the toe of each slope at each terrace. The geocomposite is discontinued in the terrace. The purpose of doing this is to collect the water on each terrace, and prevent the potential for pressure to build up in the geocomposite that could extend from the toe of the landfill to the top of the landfill. The tie-in of Partial Closure 2 to Partial Closure 1 is being made on a terrace. The geocomposite for Partial Closure 2 ends at the toe of the slope and does not continue across the terrace to connect with the geocomposite installed for Partial Closure 1. We extended the limits of Detail H to make this concept clearer.

g. Sheet C-13. Please clarify the piping shown in Section N1 and Section N. It does not appear that the piping shown correlates between these details. Please provide a specification for 8-inch slotted ADS pipe. Please specify the depth of material over this pipe in Detail N3.

Response: Section N is taken through the stormwater inlet structure and parallel to the terrace. The section shows the hole for the connection of the stormwater drain pipe. The stormwater drain pipe runs up and down the slope. Perpendicular to the stormwater drain pipe is the terrace under drain pipes. The terrace under drain pipes enter the stormwater inlet structure 90 degrees from the stormwater drain pipes.

A specification for ADS pipe is included with this response.

Detail N3 indicates that the depth of gravel over the pipe is 4". We added another dimension to indicate that the minimum soil cover over the geomembrane must be 2-feet.

8. *Calculations, Rules 62-701.320(7)(e), 62-701.320(6), F.A.C. Please be advised that the calculations will be reviewed in their entirety after receipt of the response to this request for information.*

a. Please provide calculations that are signed and sealed by the registered professional engineer who prepared them. The "calculation book" submitted was not signed and sealed.

Response: Four copies of the "Calculation Book" are included with this response. The cover page for each of the four copies was signed and sealed.

b. Please provide the references and/or basis for all calculations provided. Some parameters were not clearly defined, sources of equations were not provided, and assumptions were not clearly stated or supported.

Response: The calculations were reviewed and additional references and/or basis for all calculations were provided as necessary to clearly define the parameters, sources of calculations and assumptions.

c. Section 1. These calculations (and those in Section 2) appear to include soil properties of "silty sand with sod" for the cover soil. However, the specifications indicate that the "Ottawa sand" (§02712, Table 1) will be used. (Response: Section 02712 is a specification for "Double-sided Capping Geocomposite Drainage Layer." The Ottawa sand in Table 1 is the designated testing sand required by GRI Standard – GC8 Determination of the Allowable Flow Rate of a Drainage Geocomposite. This standard test is used to evaluate, compare and index geocomposite drainage layers. The procedure determines the drainage composite's flow rate, and then this value is modified by means of creep reduction and clogging reduction factors.) Please provide revised calculations that are based on the materials required by the specifications. (Response: The calculations are based on the materials required by the specifications. The calculations use allowable flow rates determined by a standardized test, and creep reduction and clogging reduction factors. The calculation uses the permeability of the proposed cover soils which are silty sands.) Please provide calculations for the range of values for the transmissivity. (Response: Additional calculations were included in the revised calculation book for the range of Transmissivity.) Please provide a copy of the appropriate portions of the Giroud, Zhao & Richardson (2000) reference. (Response: Four complete copies of Giroud, Zhao & Richardson (2000) were included with this response.)

d. Section 2. Please provide calculations that include Rf_{in} values between 1.3-1.5 (Koerner, 4th ed, 1998). (Response: The calculations were revised and the Rf_{in} value was increased from 1.2 to 1.5.) Please provide the basis for the RF_{cr} values. (Response: The RF_{cr} value of 1.4 is as recommended by Koerner, 1998, and repeated in Table 3.1 of Giroud, Zhao & Richardson (2000)). The interface friction angle in the calculations in Section 2 does not appear to correlate with the calculations in Section 1. Please clarify. (Response: Section 1 uses the actual interface friction angle in the calculations to calculate the factor of safety. In Section 2, the reduction factors (RF) are used to calculate the required minimum interface friction angle.) Please provide the reference for the value 3.31×10^{-3} in the θ_{req} calculation. (Response: The 3.31×10^{-3} is θ_{ult} from the previous calculation for θ_{ult} . Since the reduction factors were increase in the revised calculations, θ_{ult} changed.) It appears that the pipe calculations in Section 2 are for 8 inch pipe. However, the detail provided in this section indicates that the pipe is 6-inch. Please provide the basis for $n=0.012$. (Response: The detail attached was from a design example of a typical lateral drain with a 6-inch pipe. We used this example for the calculations, but a 6 inch pipe was marginal so we increased the pipe size to 8 inch pipe. We deleted the detail from the calculations. We attached a reference for HDPE as the basis for $n=0.012$.)

e. Section 3. Please provide calculations that include loading from equipment that may be used after closure.

Response: The calculation in Section 3 does include loading from equipment that may be used after closure. The calculation is for equipment with a total load of 55 metric tons,

which is 61 short tons or 122,000 pounds. The legal road limit is 80,000 pounds. After closure, no equipment over 80,000 pounds maximum is anticipated.

f. Section 4. *Although the calculations assume that the pipe bedding will be crushed gravel, it does not appear that a specification for gravel was provided and the drawings do not show the pipes bedded in gravel. Please revise the drawings, specifications or calculations as appropriate. (Response: The drawings, specifications and calculations were revised as appropriate.) Please provide calculations that include loading from equipment that may be used after closure. (Response: The calculation in Section 3 does include loading from equipment that may be used after closure. The calculation is for equipment with a total load of 55 metric tons, which is 61 short tons or 122,000 pounds. The legal road limit is 80,000 pounds. After closure, no equipment over 80,000 pounds maximum is anticipated.) Please provide the reference for the P_{cr} formula. (Response: The reference for P_{cr} formula is ADS Technical Report 4.103" which is included with the calculations. The formula is on page 17/24 of the calculations.)*

g. Section 6. *Please provide calculations for all piping that will be used in this project. Please discuss the appropriateness of using Chart 24 since the pie "assumes no external loads" but the pipes may be subject to external loading.*

Response: The stormwater pipe strength calculations are in Section 6. The terrace under drain pipe strength calculations are in Section 4. Section 8 was added entitled "Pipe Strength Calculations for the Landfill Gas Collection System Pipe."

In Section 6, on page 2 of 18, calculation item 1 is a calculation of the safety factor for the maximum burial depth using Chart 24. Calculation item 2 is a check of the safety factor for maximum external pressure on the pipe. The maximum external pressure is calculated on page 1 where $P_t = P_s + P_L + P_i$. P_t is the total pressure on the pipe. P_s is the external soil pressure on the pipe. P_L is the live load pressure on the pipe. P_i is the internal pressure on the pipe due to vacuum. In calculation item 2, the maximum allowable external pressure in psi for an SDR 32.5 pipe with a soil modulus of 1000 psi, which is given in Table 24 as 17 psi, is divided by the maximum external pressure of 6.7 psi to give a factor of safety of 4.8. This is in addition to the factor of safety already built into the maximum allowable external pressure of 17 psi for the pipe.

Sincerely,



Joseph L. Miller, P.E. #39177
Project Engineer

Cc: Gus DiFonzo, Manatee County w/ 2 copies

List of Attachments

1. Revised Page 3 of 40 of the application with Reference to Appendix B deleted.
2. New Figure L-8A Landfill Gas Migration Monitoring Locations
3. Section P.8, pages P-8, P-9, P-10 and P-11.
4. Material Safety Data Sheet for 3M Super 77 Spray Adhesive
5. Specifications for Ottawa Sand
6. Geosynthetic Research Institute (GRI) Standard – GC8
7. Revised Specifications (Complete Set)
8. Revised “Calculation Book” dated March 22, 2006 (Complete Book)
9. Revised CQA Plan with Appendix
10. Revised Drawings (Complete Set)

Lena Rd closure
permit file

Pelz, Susan

From: Pelz, Susan
Sent: Friday, February 24, 2006 6:38 PM
To: Dan Gray (E-mail); Gus Difonzo (E-mail)
Cc: Joe Miller (E-mail); Morgan, Steve
Subject: Lena Rd Closure RAI #2

Dan,

Please find attached RAI #2 for the pending permit for the partial closure of Stage I. Hard copy was mailed today.

If you have any questions, please call or email (email is better).

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

13051 N. Telecom Parkway
Temple Terrace, FL 33637
813-632-7600 x 386
susan.pelz@dep.state.fl.us



LenaRdStageI-
closure-2.RAI2.02

Tracking:

Recipient

Dan Gray (E-mail)
Gus Difonzo (E-mail)
Joe Miller (E-mail)
Morgan, Steve

Read

Read: 2/24/2006 6:44 PM



Department of Environmental Protection

Jeb Bush
Governor

Southwest District
13051 North Telecom Parkway
Temple Terrace, FL 33637-0926
Telephone: 813-632-7600

Colleen M. Castille
Secretary

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

February 24, 2006

RE: Lena Road Landfill, Manatee County
Pending Permit No.: 39884-011-SF/01, Closure

Dear Mr. Gray:

This is to acknowledge receipt of the information dated January 23, 2006 (received January 25, 2006) and September 9, 2005 (received September 14, 2005) submitted in support of your permit application dated May 24, 2005 (received May 25, 2005), prepared by Post, Buckley, Schuh & Jernigan (PBSJ), to construct a partial final cover system and related appurtenances 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 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.)]. Please note that comments are numbered the same as the Department's June 23, 2005 letter. No additional information is requested regarding Comments #1, 2.a(2), 2.a(3), 2.b(2), 2.b(3), 2.c(1), 2.c(3), 6, 7:

GENERAL:

1. Due to magnitude of the proposed project, the requested information and comments below do not repeat the information submitted by the applicant. However, every effort has been made to concisely refer to the section, page, drawing detail number, etc. where the information has been presented in the original submittal.
2. 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.
3. 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.
4. 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.

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

2. **Part P, Rule 62-701.600, F.A.C.**

a. Gas migration report and report on effectiveness of the landfill design. (Rules 62-701.600(4)(d) and (e), F.A.C.)

1) Please provide a revised Figure L-8 (currently attached to the Operation permit) that shows the locations of the property boundaries. Please clarify if "Gary Seely office" (gas well location 18) is in an enclosed structure. In the event that this location is in an enclosed structure, it appears that the 25% LEL threshold for landfill gas has been exceeded in several sampling events. Please clarify the corrective actions taken to prevent the accumulation of landfill gas (LFG) in this structure.

b. Closure design (Rule 62-701.600(5), F.A.C.).

1) See Comment 8 below. Please provide slope stability calculations for the proposed final cover design and configuration. Please provide all inputs, printouts for models, etc. to support the conclusions. Please include slope stability with equipment loading, horizontal and parallel seepage. The calculations do not appear to include the combination of these forces.

4) See Comment #8 below. Please provide calculations (transmissivity, long-term creep, clogging), HELP models etc., for the geocomposite design/use.

5) See Comment #8 below. Please provide pipe calculations for crushing, buckling and deflection for all pipe proposed to be used in the project

c. Closure Operation Plan (Rule 62-701.600(6), F.A.C.)

2) Long-term care plan (Section P.8) Although pages P-8 and P-9 were revised, the revisions only restated the requirements of the current permit and did not address each of the items listed in Section P.8.1 (e.g., settlement, dead vegetation, need to cut vegetation, illegal dumping, trespassing, etc.). Please specify the timeframe for implementing repairs for damage that is observed during the monthly inspections. Please describe the procedures for repairing the gas management system, and timeframe for implementing the repairs, if deficiencies are found (See Section P.8.12.)

3. **Part P, Appendix A, CQA Plan. (Rules 62-701.600(5)(f)1., 62-701.400(7) and 62-701.400(8), F.A.C.)** Please be advised that the CQA Plan and Technical Specifications will be reviewed again in their entirety after the responses to this request for information are submitted.

a. Technical Specifications.

1) Section 01005. Please clarify the reference to a "railroad permit" (§1.01.A). Please specify a tolerance for all grades, thicknesses of soil components and piping in the project (§1.07.A.)

2) Section 01010. Please clarify if the contractor will water sod until it is established (§1.01.A.).

3) Section 01015. Please provide procedures for identifying and protecting the slurry wall.

4) Section 01030. Please specify that water located inside the slurry wall is leachate and shall be managed accordingly (§1.09.A.). Please specify how leachate will be managed during construction (§1.09.B.).

(Comment #3.a., cont'd)

5) Section 01045. Please clarify where electrical conduit is included in the project (\$1.01.A.5.).

6) Section 01150. Please clarify where "rock" will be excavated in the project (\$1.07, Bid Item 3). Please clarify which underdrains are referenced in Bid Item 14.

7) Section 01200. Please clarify if weekly progress meetings will be held (1.03).

8) Section 01710. Please specify the disposal location for all wastes resulting from this project (\$3.01.C.).

9) Section 02064. Please specify the disposal location for all wastes resulting from this project (\$3.01.A.). Please clarify where valves for existing piping are shown on the drawings (\$3.01.C.). Please clarify where pumps will be installed in this project (\$3.01.K) and provide a specification for pumps. Please clarify where asbestos cement pipe is located in this project (\$3.03, \$3.04) and show the locations on the drawings. Please specify where water and wastewater utility pipes will be abandoned in place in this project (\$3.05).

10) Section 02220. Please specify where "foundations for structures" are located in this project and show the locations on the drawings (\$1.01.A). Please define the term "structural excavation" (\$1.01.C). Please specify where trees are located in this project (\$1.01.D). Please specify where dewatering water (leachate) will be discharged (\$1.03.A.). Please clarify where "slush" is expected to be encountered in this project (\$1.03.C.). Please specify where "controlled fill" is used in this project and show it on the drawings (\$2.01.). Please specify where concrete or masonry, footings, base slabs and exterior walls are located in this project and show the locations on the drawings (\$3.03, \$3.05, \$02221-2.01.B.).

11) Section 02221. Please specify where trees are located in this project (\$1.01.C). Please specify that water located inside the slurry wall is leachate and shall be managed accordingly (\$1.02.B.5 through B.8.). Please provide specifications for the subgrade soils and cover soils (\$2.01). Please specify where each of the soil types listed are used in the project. Please clarify where manhole bases will be installed as part of this project (\$2.01.D.2). Please specify the maximum size of objects, sticks, etc. in the subgrade to correlate with the CQA Plan (\$2.01.D.1). Please explain where peat will be excavated in this project (\$3.02.B.). Please clarify where "rock" will be excavated in the project (\$3.03.B). Please clarify which lines will be abandoned (\$3.04.G.)

12) Section 02276. Please provide a copy of the SWFWMD permit for erosion and sedimentation control (\$1.02). Please clarify if soils above the liner will be scarified to a depth of 6 inches (\$3.01.A.1.). Please provide the "approved descriptions and working drawings" (\$3.02.A.).

13) Section 02485. Please specify the source of water (\$2.01.E.).

14) Section 02610. Please provide procedures for ensuring that the confining clay layer under the landfill will not be impacted by the installation of gas wells (\$3.01.B.2.). Please provide specifications for the gas header pipe installation. Please specify the survey frequency and invert elevation tolerances for the gas header piping. Please specify surveying requirements for all gas management system piping.

(Comment #3.a., cont'd)

15) Section 02712. Please define the "SIM" method. Please provide calculations that support a compressive load of 1000 psf. Please provide specifications that include the actual layers that will be used in the project for the transmissivity testing. Please provide specifications for the "Ottawa sand" (Table 1). Please specify conformance testing for all geosynthetic components. Please specify if "the project contains long, steep slopes." Please specify how the geocomposite will be "properly anchored." (§D.1) Please provide a MSDS for the "spray adhesive." (§D.3.) Please specify the CQA tests referenced in §E.

16) Section 02776. Please provide a revised specification section that uses the term "performed" instead of "preformed." Please clarify if the Installers quality control program is considered to be CQA (§1.02.C). Please clarify if the "site supervisor" or "foreman" is the "master seamer." (§1.02.C.2(d)) Please include interface friction angle testing for the actual materials that will be used at the site. Please clarify how textured geomembrane will not exhibit "roughness" (§2.02.A.2.). Although the Specifications and CQA Plan indicate that the seams shall meet at least 90% of the sheet strength, the values listed do not correlate with 90% of the sheet strength. As discussed with the County, the Department will accept seam strengths for LLDPE liner material equivalent to the values listed in GRI-GM19, or 90% of the sheet strength. Please provide revised Specifications and CQA Plan that correlate the seam strengths to GRI-GM19 at a minimum. (Table 02776-A) Please provide revised specifications that reference EPA Method 9100 for leachate compatibility testing (§2.02.B.7.) Please specify where the neoprene sponge will be used (§2.03.B.). Please specify that the CQA Monitor shall inspect the delivered materials for damage (§3.01.C.). Please specify that the CQA Monitor shall confirm that the proper procedures are followed (§4.01.A.). Please specify the tests that §4.01.B. reference. Please clarify if conformance test results must be received and approved by the Engineer prior to geomembrane installation (§4.02.A). Please explain why access roads and berms would be shown on a panel layout drawing (§5.01.A.2(b)). Please define "excessive wrinkling" (§5.01.B.4(d)(7), §5.01.D.12(e)) and "seriously damaged" (§5.01.B.4(d)(9)). Please provide Table 2 (§5.01.D.10(e)). Please clarify where leachate collection pipes will penetrate the liner (§5.01.D.11.). Please clarify which specification references the granular materials that will be used above the geomembrane (§6.01.B). Please specify where concrete is used in this project (§6.01.C.).

17) Section 15051. Please specify which piping this section is for (i.e., stormwater piping, gas header piping, gas extraction well piping). Please clarify if the piping in this section is corrugated or smooth wall, perforated or solid wall.

b. Department permits are issued for specific activities pursuant to Rule 62-4.160(2), F.A.C. Rule 62-701.320(5)(b), F.A.C., requires that all applications shall be of sufficient detail to show how the facility will be constructed in accordance with Department rules. Please provide technical specifications ("contract specifications") for all portions of the proposed final cover system (including liner, subgrade, stormwater piping and inlets, dewatering, spill prevention and control, submittals, construction certification/contract closeout, etc.).

Comment #3., cont'd

c. §1.0. It does not appear that all parties are included in Table 1-1 (e.g., soils CQA). Please include all of the parties and their qualifications in Table 1-1. Please specify when each of the submittals are required to be submitted. Please provide specifications for the bedding layer that correlate with the CQA plan (§1.1). Please include the CQA for the soils component of the final cover on Table 1-1 and the Organizational Chart (Table 1-2). It has been the Department's experience that general contractors generally subcontract out portions of the project (i.e., liner installation). Please explain under what circumstance the general contractor would directly employ earthwork and geosynthetic crews (Table 1-2, §1.2.5.) Please clarify when the information listed in Section 1.2.6.2. will be submitted. Please specify the "pre-installation information" required to be submitted (page 1-8). Please include the earthwork contractor on Table 1-1 (see §1.2.6.4.). Please provide specifications that correlate with the CQA Plan for the earthwork contractors responsibilities (§1.2.6.4.). Please clarify which sections of the CQA Plan and/or Specifications include CQA conformance testing for each of the geosynthetics (§1.2.7.). Please provide CQA requirements for soils testing. Please explain the role of the geotechnical engineer (§1.2.10.). It has been the Department's experience that construction projects of this magnitude typically hold weekly progress meetings between the contractor, CQA team, design engineer and owner. Please clarify if weekly progress meetings are anticipated, and provide a revised CQA Plan accordingly (§1.3.1.).

d. §2.0. Please specify the value and testing parameters (i.e., loading conditions, time) for transmissivity of the CDN (Table 2-2). Please clarify if the final cover includes the geocomposite on slopes flatter than 5H:1V. Please explain how textured geomembrane will not have "roughness," or provide revised Specifications and CQA Plan that delete this requirement (e.g., §2.1.1.). Please provide revised CQA Plan that references the appropriate GRI specification for LLDPE geomembranes (§2.1.1). Please provide a revised CQA Plan that includes Oxidative Induction Time CQA conformance testing (§2.1.1.). Please specify the asperity height for the textured geomembrane on Table 2-1. Although the Specifications and CQA Plan indicate that the seams shall meet at least 90% of the sheet strength, the values listed do not correlate with 90% of the sheet strength. As discussed with the County, the Department will accept seam strengths for LLDPE liner material equivalent to the values listed in GRI-GM19, or 90% of the sheet strength. Please provide revised Specifications and CQA Plan that correlate the seam strengths to GRI-GM19 at a minimum. Please clarify which CQA section or Specifications section includes the CQA conformance testing for each of the geosynthetics. Please specify in the CQA plan the type of geotextile (woven, non-woven) and geonet (bi-planar, tri-planar) used in the geocomposite (§2.1.2.). Please provide revised CQA Plan and Specifications that include interface friction angle testing for each of the interfaces and the actual materials that will be present in the final cover system. Please verify that the testing frequencies on Table 2-2 correlates with page 2-4. Please include CQA sections regarding the protective cover soil. It appears that §2.1.1.2. and §2.2.2 were deleted from the previous submittal.

e. §3.0. Please specify the tolerances for the grades and thicknesses each of the soil layers (§3.1.1.). Please provide a specification for the "supporting soil" (§3.1.1.). Please specify how the thickness of the "supporting soil" will be verified (§3.1.1, Table 3-1). Please provide CQA requirements and technical specifications for the soil above the geomembrane. Please specify if the contractor is responsible for correcting the "supporting soil" or soils above the geomembrane if damage is caused by erosion (§3.1.1.). Please specify the activities that the CQA monitor will observe "for compliance with the specifications" (Table 3-2). Please explain and provide details for how the geocomposite will be anchored (§3.3.2.). Please clarify where concrete pads will be in contact with the geomembrane (Table 3-3). Please provide a specification for the "protective soil cover material" (§3.3.3).

(Comment #3.e., cont'd)

Please specify how the CQA Monitor will "check" the cover soil (§3.3.3). Please provide specifications for the repair of erosion of the protective soil layer (§3.3.3). Please explain the reference to "curing time" for the geomembrane welds (Table 3-4). Please specify the "test results for compliance with the specifications" (Table 3-5). Please specify how the thickness will be measured (Table 3-5). Please clarify where monitoring wells and piezometers will be secured to the geomembrane (§3.5.3.). Please provide drawings that show the limits of the geomembrane and the locations of all monitoring wells, piezometers and gas probes. Please provide a revised CQA Plan that includes Section 3.5.7., Certification of Completion, and Section 3.5.8., Engineer's full-time resident inspector. It appears that these sections were deleted from the previous submittal.

f. §4.0. Please provide CQA conformance testing for all geosynthetic components of the final cover system. Please provide a revised CQA Plan that requires at least one destructive test every 500 ft. of constructed seam (§4.2.3.1.). Please provide a revised CQA Plan that requires a minimum of 5 replicate specimens for each destructive test. Please provide Table 4-1 (§4.2.3.2.). Please specify how "long seam lengths greater than 5 feet" will be repaired (§4.2.4.3.). Please explain how "all seaming equipment used in repairing procedures" will "be satisfied" (§4.2.4.3.). Please define "excessive wrinkles" (§4.2.4.5). Please specify how the cover soil thickness will be checked (§4.3.1.).

g. §5.0. Please provide Attachment A (§5.1.). Please clarify who will submit the Certification of Construction Completion to the Department (§5.2, §1.2.8.). Please include a list of deviations from the permitted plans, geomembrane repair logs, surveys, monthly and weekly progress meeting minutes, and limits of the slurry wall and anchor trench in the Certification documents (§5.2.).

4. **Appendix B.** Please provide the information that was intended to be in this section. Although Response #4 indicates that the Table of Contents identified Appendix B, the CQA Plan Table of Contents does not reference Appendix B and the permit application submittal does not appear to have a Table of Contents.

5. **Permit Drawings for Manatee County Lena Road Landfill Final Closure, January 2005** (Rules 62-701.320(5)(b), 62-701.320(7)(f), F.A.C.) Since additional drawings have been added, and the previous drawings have been renumbered, the following comments do not correlate with the comments in the Department's June 23, 2005 letter.

a. Please provide a current topographic survey of the site and the proposed final closure contours for the Stage I-Partial Closure #2.

b. Sheets C-3 and C-4. Please provide invert elevations for all gas header piping and connections.

c. Sheet C-5. Please reference the location of the gas wellhead on the gas extraction well detail on this sheet. Please provide a specification for the granite.

d. Sheet C-6. Please provide details for how the geocomposite will be anchored. Please provide calculations that demonstrate that the geocomposite will be adequately anchored. Please specify the material under the header pipe in Detail E. Please specify the pipe bedding material in Detail C.

e. Sheets C-9 and C-10. Please specify the invert elevations and ditch elevations for all of the stormwater ditches, inlets and discharge points.


(Comment #5., cont'd)

- f. Sheet C-11. Since the anchor trench shown in Detail G does not include a containment berm, please clarify how leachate from the active portions of Phase I will not discharge above the partial closure cap. Please provide details for how the geocomposite will be anchored. Since the geocomposite will only be located on the slopes and not the top, please revise detail H to clearly distinguish between the slope and top of landfill.
- g. Sheet C-13. Please clarify the piping shown in Section N1 and Section N. It does not appear that the piping shown correlates between these details. Please provide a specification for 8-inch slotted ADS pipe. Please specify the depth of material over this pipe in Detail N3.
- 8. Calculations, Rules 62-701.320(7)(e), 62-701.320(6), F.A.C.** Please be advised that the calculations will be reviewed in their entirety after receipt of the response to this request for information.
- a. Please provide calculations that are signed and sealed by the registered professional engineer who prepared them. The "calculation book" submitted was not signed and sealed.
- b. Please provide the references and/or basis for all calculations provided. Some parameters were not clearly defined, sources of equations were not provided, and assumptions were not clearly stated or supported.
- c. Section 1. These calculations (and those in Section 2) appear to include soil properties of "silty sand with sod" for the cover soil. However, the specifications indicate that the "Ottawa sand" (§02712, Table 1) will be used. Please provide revised calculations that are based on the materials required by the specifications. Please provide calculations for the range of values for the transmissivity. Please provide a copy of the appropriate portions of the Giroud, Zhao & Richardson (2000) reference.
- d. Section 2. Please provide calculations that include $R_{f_{in}}$ values between 1.3-1.5 (Koerner, 4th ed, 1998). Please provide the basis for the $R_{f_{cr}}$ values. The interface friction angle in the calculations in Section do not appear to correlate with the calculations in Section 1. Please clarify. Please provide the reference for the value 3.31×10^{-3} in the θ_{req} calculation. It appears that the pipe calculations in Section 2 are for 8 inch pipe. However, the detail provided in this section indicates that the pipe is 6-inch. Please provide the basis for $n=0.012$.
- e. Section 3. Please provide calculations that include loading from equipment that may be used after closure.
- f. Section 4. Although the calculations assume that the pipe bedding will be crushed gravel, it does not appear that a specification for gravel was provided and the drawings do not show the pipes bedded in gravel. Please revise the drawings, specifications or calculations as appropriate. Please provide calculations that include loading from equipment that may be used after closure. Please provide the reference for the P_{cr} formula.
- g. Section 6. Please provide calculations for all piping that will be used in this project. Please discuss the appropriateness of using Chart 24 since the pie "assumes no external loads" but the pipes may be subject to external loading.

"NOTICE! Pursuant to the provisions of Section 120.60, F.S. if the Department does not receive a complete response to this request for information within 45 days of the date of this letter, the Department may issue a final order denying your application. You need to respond within 45 days after you receive this letter, 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 45 days to develop, you should develop a specific time table for the submission of the requested information for Department review and consideration. Failure to comply with a time table accepted by the Department will be grounds for the Department to issue a Final Order of Denial for lack of a timely response. A denial for lack of information or response will be unbiased as to the merits of the application. The applicant can reapply as soon as the requested information is available."

Due to the magnitude of the above comments, the Department suggests that a meeting with the applicant, applicant's consultant and the Department be scheduled to discuss the outstanding items. You are requested to submit your responses to this letter together, as one complete package. Please contact me at (813)632-7600 ext. 386 to schedule the meeting.

Sincerely,



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

sjp

cc: Gus DiFonzo, Manatee County, 4410 66th Street West, Bradenton, Fl. 34210
Joseph Miller, P.E., PBSJ, 482 S. Keller Road, Orlando, Fl. 32810-6101
John Morris, P.G., FDEP Tampa
Douglas Hyman, P.E., FDEP Tampa- ERP
David Zell, FDEP Tampa- Air



MANATEE COUNTY GOVERNMENT

Utility Operations Department

January 23, 2006

Susan J. Pelz, P.E.
Solid Waste Program Manager
Florida Department of Environmental Protection
Southwest District Office, Solid Waste Section
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926

JAN 25 2006
SOUTHWEST DISTRICT

**RE: Lena Road Landfill
Closure Permit Application**

Dear Ms. Pelz:

With regard to the Lena Road Landfill Closure Permit Application, it is my understanding that the LLDPE Geomembrane Liner issue has been resolved to the District's satisfaction.

Please accept this letter as a request to officially re-open the review of the Lena Road Landfill Closure Permit Application.

Thank you for your time and cooperation in this matter. It is greatly appreciated.

Sincerely,

Daniel T. Gray
Director, Utility Operations

cc: Joe Miller, PBS&J
Howard Leyo, Project Management
Gus DiFonzo, Utility Operations *GA*
Mike Gore, Utility Operations

Pelz, Susan

From: gus.difonzo@co.manatee.fl.us
Sent: Thursday, October 06, 2005 10:29 AM
To: Pelz, Susan
Cc: Deans, David E.; Miller, Joseph L.; Martin, Lee; Tedder, Richard; Morgan, Steve; Kutash, William; dan.gray@co.manatee.fl.us; mike.gore@co.manatee.fl.us; tim.hochuli@co.manatee.fl.us; charlie.bishop@co.manatee.fl.us
Subject: RE: Lena Road Landfill Permit Modification for Stage III Landfill Leachate Collection System

Susan, thank you again for your timely response and follow through with this issue and request. In response to your e-mail, the County request removal of the liner repair from the pending modification. In addition, in lieu of present circumstances, the County also request the pending closure permit application review be suspended until the liner issue is resolved. Respectfully, Gus DiFonzo.

"Pelz, Susan" <Susan.Pelz@dep.state.fl.us>

10/05/2005 12:45 PM

To <gus.difonzo@co.manatee.fl.us>

cc "Deans, David E." <DEDeans@pbsj.com>, "Miller, Joseph L." <JLMiller@pbsj.com>, "Tedder, Richard" <Richard.Tedder@dep.state.fl.us>, "Martin, Lee" <Lee.Martin@dep.state.fl.us>, "Kutash, William" <William.Kutash@dep.state.fl.us>, "Morgan, Steve" <Steve.Morgan@dep.state.fl.us>

Subject RE: Lena Road Landfill Permit Modification for Stage III Landfill Leachate Collection System

Gus,

I have completed my review of the information submitted by PBSJ (received 9/20/05) concerning the LCS modification at Lena Road.

The request for modification is complete. The only item cannot be approved is the repair of the "closure liner" due to the seam strength not meeting the requirements of the Rule.

Please let me know if the County will be resubmitting specifications that comply with the rule, or if the County prefers to remove this activity from the pending modification. In this case, the modified permit will specifically state that installation of geosynthetic liner materials are not approved as part of the construction.

Since the liner seam strength issue is common to this modification and the pending closure permit application, please let me know if review of that application should be suspended until the issue is resolved and additional information submitted.

Due to the County's scheduling constraints, the contractor may initiate excavation activities at their own risk. I will expedite issuance of the modified permit and try to get it out next week.

I will be out of the office the rest of today, but will be back tomorrow.

Susan J. Pelz, P.E.
 Solid Waste Program Manager
 Southwest District
 813-744-6100 x 386
 susan.pelz@dep.state.fl.us

10/10/2005

-----Original Message-----

From: Miller, Joseph L. [mailto:JLMiller@pbsj.com]

Sent: Tuesday, October 04, 2005 10:34 AM

To: Pelz, Susan

Cc: gus.difonzo@co.manatee.fl.us; Deans, David E.

Subject: Lena Road Landfill Permit Modification for Stage III Landfill Leachate Collection System

Susan,

Are there any remaining issues that will hold up your approval of this permit modification? If there are could you please send me an e-mail, and I will response right away. If the yield point and seam strength for the LLDPE geomembrane are an issue, could we please get a permit modification for the replacement of the leachate collection system only? We will then have more time to resolve the issue with the replacement of the geomembrane without holding up the contractor. I want to avoid paying the contractor standby time or demobilization costs while we resolve the geomembrane issue if the rest of the work can be approved.

Thanks,

Joe Miller

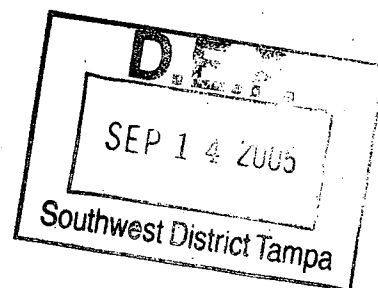
10/10/2005



An employee-owned company

September 9, 2005

Susan J. Pelz, P.E.
Solid Waste Manager
Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619



Re: Lena Road Landfill, Manatee County
Pending Permit No.: 39884-011-SF/01, Closure
Response 1 to FDEP Letter Dated June 23, 2005

Dear Ms Pelz:

This letter is in response to your request for additional information regarding the above referenced permit application. Your requests are typed in italics followed by our responses in normal type. Four copies of this response with each revision, replacement, or additional new information are included.

Comment: 1. ***Application form. [Rule 62-701.320(7)(b), F.A.C.]***

a. Item #A.5. Please provide a revised application form that references DEP Id# SWD-41-44795.

Response: Form was revised to reference DEP ID# SWD-41-44795.

Comment: 1. *b. Item B.18. Please provide a revised application form that references 18 monitoring wells as indicated in the current Operation permit.*

Response: Item B.18 was revised to indicate 18 monitoring wells.

Comment: 2. ***Part P, Rule 62-701.600, F.A.C.***

a. Gas migration report and report on effectiveness of the landfill design. (Rules 62-701.600(4) (d) and (e), F.A.C.)

Comment: 2. *a. 1. Please provide a summary of exceedances in the gas migration monitoring system (including subsurface monitoring probes and onsite structures) and a report evaluating the effectiveness of the landfill design to prevent gas migration.*

Response: Included with this response is a table entitled: "Manatee County Lena Road Landfill – Summary of Readings for Subsurface Monitoring Probes and Onsite Structures – From December 2001 through June 2005." The table summarizes the gas readings in percent of lower explosive limit (LEL)

(See Band report)



Department of Environmental Protection

Jeb Bush
Governor

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

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Colleen M. Castille
Secretary

June 23, 2005

RE: Lena Road Landfill, Manatee County
Pending Permit No.: 39884-011-SF/01, Closure

Dear Mr. Gray:

This is to acknowledge receipt of your permit application and supporting information, dated May 24, 2005 (received May 25, 2005), prepared by Post, Buckley, Schuh & Jernigan (PBSJ), to construct a partial final cover system and related appurtenances 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 is incomplete. This is the Department's first 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. Due to magnitude of the proposed project, the requested information and comments below do not repeat the information submitted by the applicant. However, every effort has been made to concisely refer to the section, page, drawing detail number, etc. where the information has been presented in the original submittal.
2. 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.
3. 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.
4. 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.**

"More Protection, Less Process"

Printed on recycled paper.

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

1. **Application form.** [Rule 62-701.320(7)(b), F.A.C.]
 - a. Item #A.5. Please provide a revised application form that references DEP Id# SWD-41-44795.
 - b. Item B.18. Please provide a revised application form that references 18 monitoring wells as indicated in the current Operation permit.
2. **Part P, Rule 62-701.600, F.A.C.**
 - a. Gas migration report and report on effectiveness of the landfill design. (Rules 62-701.600(4)(d) and (e), F.A.C.)
 - 1) Please provide a summary of exceedances in the gas migration monitoring system (including subsurface monitoring probes and onsite structures) and a report evaluating the effectiveness of the landfill design to prevent gas migration.
 - 2) Please provide a discussion of the effectiveness of the active gas extraction system. Please include the date it was installed, a description of any problems encountered and corrective actions taken, and any other information that demonstrates that the system is working as designed.
 - 3) Please specifically discuss the basis for determining that "the landfill design and operation has proved effective in protecting the environment..." (page P-3)
 - b. Closure design (Rule 62-701.600(5), F.A.C.)
 - 1) Please provide slope stability calculations for the proposed final cover design and configuration. Please provide all inputs, printouts for models, etc. to support the conclusions. Figure J-1 in the Operation Renewal Application does not appear to pertain to the final cover system and calculations (including all assumptions and references) do not appear to have been provided in Part J of the Operation Renewal Application. Please include slope stability with equipment loading, horizontal and parallel seepage.
 - 2) Please provide stormwater calculations that demonstrate that the ditches, swales, downcomers, etc. are sized appropriately to manage the expected quantity of stormwater from the closed areas.
 - 3) Please provide calculations that demonstrate that the composite drainage net (CDN) geotextile will not clog.
 - 4) Please provide calculations (transmissivity, long-term creep, clogging), HELP models etc., for the CDN design/use.
 - 5) Please provide pipe calculations for crushing, buckling and deflection of the 18" corrugated Detail (2/C-4) and 6-inch SDR-17 (Detail 9/C-5) HDPE pipe. Please provide calculations that demonstrate that the FDOT #7 stone will not clog the terrace underdrain (Detail 9/C-5).
 - c. Closure Operation Plan (Rule 62-701.600(6), F.A.C.)
 - 1) Please clarify the schedule for the Stage I, Partial Closure
 2. In Item "m" (page P-6) the submittal states, "...the final closure work will take two years. The closure should be completed by January 2041, and the 30-year long-term care and monitoring will continue until 2071."

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

2) Long-term care plan. Please specify the timeframe for implementing repairs for damage that is observed during the monthly inspections. Please describe the procedures for repairing the gas management system, and timeframe for implementing the repairs, if deficiencies are found.

3) Please explain how monitoring wells and piezometers will be protected during construction.

3. Part P, Appendix A, CQA Plan. (Rules 62-701.600(5)(f)1., 62-701.400(7) and 62-701.400(8), F.A.C.)

a. Please provide technical specifications ("contract specifications") for all portions of the proposed final cover system (including liner, subgrade, CDN, stormwater piping and inlets, sod, dewatering, submittals, contract closeout, etc.). Please be advised that the CQA Plan will be reviewed again in its entirety after the technical specifications are submitted.

b. Department permits are issued for specific activities pursuant to Rule 62-4.160(2), F.A.C. Rule 62-701.320(5)(b), F.A.C., requires that all applications shall be of sufficient detail to show how the facility will be constructed in accordance with Department rules. The CQA Plan states, "following completion of the design, plans, specifications and the selection of the General Contractor, a preconstruction meeting will be held." (§1.3.1.) Please clarify if the information submitted is the complete design, plans, and specifications for the project. If not, please provide this information.

c. §1.0. Please provide an organizational chart that shows the relationship of all the parties to the project. It does not appear that all parties are included in Table 1-1 (e.g., general contractor). Please include all of the parties and their qualifications in Table 1-1. Please specify when each of the submittals (e.g., §1.2.6.5.) are required to be submitted. Please clarify where "granular drainage layers" are included in this project (§1.2.6.7.; §3.3.3.). Please clarify where the "resume of the CQA Program manager for this project is included as part of this package" (§1.2.8.).

d. §2.0. Please clarify if the composite drainage net (CDN) includes non-woven geotextile on both sides. Please clarify if the CDN is bi-planar or triplanar (§2.1.1.3.). Please specify the value and testing parameters (i.e., loading conditions, time) for transmissivity of the CDN (Table 2-2). Please provide seam strength requirements that meet the requirements of Rule 62-701.400(3)(d)1., F.A.C. (Table 2-3). Please provide conformance testing requirements for each geosynthetic material. Please provide storage and handling requirements for the geomembrane & CDN (§2.2.1.).

e. §3.0. Please specify the compaction required for the subgrade (§3.1.1.). Please clarify where geomembrane liner will be placed over the CDN (§3.3.2.). Please clarify if overlaps must be sufficient for shear testing of the seams (§3.4.3.). Please verify the maximum size for roots, sticks or sharp-edges stones (§3.5.2.; §3.1.1., §2.1.1.2.). Please clarify where sumps will be constructed in this project (§3.5.4.).

f. §4.0. Please include thickness testing for the subgrade. Please specify the compaction required (§4.1.). Please clarify the length of the geomembrane rolls (§4.3.1.).

(Comment #3, cont'd)

- g. §5.0. Please clarify who will submit the Certification of Construction Completion to the Department (§5.2; §1.2.8; §1.2.9.). Please include surveys and stormwater system as-built information in the Certification documents (§5.2.).
4. **Appendix B.** Please provide the information that was intended to be in this section.
5. **Permit Drawings for Manatee county Lena Road Landfill Final Closure, January 2005** (Rules 62-701.320(5)(b), 62-701.320(7)(f), F.A.C.)
 - a. Please provide a current topographic survey of the site and the proposed final closure contours for the Stage I-Partial Closure #2.
 - b. Sheet C-2. Please provide additional cross-sections of the proposed final closure (e.g., north-south, northeast-southwest). Please provide a cross-section showing the tie-in between the cap liner and the slurry wall. Since Stage III is not part of the proposed Stage I-Partial Closure #2 (S1-PC#2) project, please explain the purpose of cross-section A-A on this sheet. Please provide cross-sections of the northern and western tie-in between the Stage I-Partial Closure #1 (S1-PC#1) and S1-PC#2 and the northern bench of S1-PC#1. Please provide a detail of the connection of the stormwater letdown pipes in the S1-PC#2 with the existing pipes in the S1-PC#1. Please clarify the location of the landfill gas flare on this sheet and reference the appropriate detail on other sheets. Please provide a detail of the anchor trench for the northern extent of the S1-PC#2. Please clarify which layer of the final cover system the contours on this sheet represent.
 - c. Sheet C-3. It appears that Section A-A is not included in this project. Please clarify why gas vents are not shown in Phase I in Section B-B.
 - d. Sheet C-4. Please show the tie-in for the cap liner and the slurry wall on Detail 1. It appears that Details 2 and 5 on this sheet are in areas that are not included in this project.
 - e. Sheet C-5. Please clarify the reference to "double composite" drainage net in Detail 6. Please clarify the reference to stormwater "inlet" in Section A. Please provide additional details for the "Stormwater inlet structure" in Detail 7A. Please specify the stormwater downcomer pipe size and type in Detail 7A. It appears that Detail 10 is in a location that is not in this project. Please specify the pipe slope for the 6-inch perforated pipe in Detail 10.
 - f. Sheet C-6. Please clarify where the "existing" 8-inch lateral, "proposed" 8-inch lateral, "proposed 18-inch header" pipes and horizontal gas collection trench are shown on this drawing.
 - g. Sheet C-8. Please provide specifications for all piping and gravel. Please verify the boot detail in the typical wellhead detail. On the "typical wellhead detail" it appears that a strap is used to secure the boot, but the close-up detail shows the boot welded to the pipe. Please clarify where Section A, "Typical Pipe Section" is referenced. There appear to be two different Sections A/C-8 on this sheet.
6. **Rule 62-701.320(8), F.A.C.** Please provide proof of publication of the attached Notice of Application to the Department.

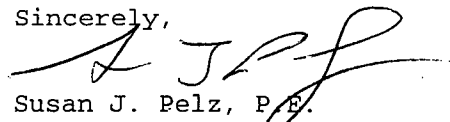
Manatee County Solid Waste Management Facility, Lena Road Landfill,
Application and Engineering Report for Renewal of Landfill Operation Permit,
dated April 2004 (received May 14, 2004) including pages subsequently revised,
amended or replaced (see Operation Permit 39884-010-SO/01 for full reference).
Several portions of the pending closure permit application reference this document.

7. **Part O, Gas Management System Requirements.** [Rule 62-701.530, F.A.C.]
- a. Section 3.3. Please clarify how the "routine odor monitoring program to determine the timing and extent of any offsite odors" is different than the daily inspections by the landfill manager.
- b. PBSJ Memorandum dated April 26, 2004.
- 1) Please clarify the basis for using 840 scfm for the model. It appears that the model "methane.txt" indicates that in 2005 the expected gas flow rate is 3.585×10^7 cm/yr (2409 cfm).
- 2) Please complete the statement, "The results showed..." on page 2 in the last paragraph.

"NOTICE! Pursuant to the provisions of Section 120.60, F.S. if the Department does not receive a complete response to this request for information within 45 days of the date of this letter, the Department may issue a final order denying your application. You need to respond within 45 days after you receive this letter, 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 45 days to develop, you should develop a specific time table for the submission of the requested information for Department review and consideration. Failure to comply with a time table accepted by the Department will be grounds for the Department to issue a Final Order of Denial for lack of a timely response. A denial for lack of information or response will be unbiased as to the merits of the application. The applicant can 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)744-6100 ext. 386 to schedule the meeting.

Sincerely,


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

sjp

Attachment

cc: Gus DiFonzo, Manatee County, 4410 66th Street West, Bradenton, Fl. 34210
Joseph Miller, P.E., PBSJ, 482 S. Keller Road, Orlando, Fl. 32810-6101
John Morris, P.G., FDEP Tampa
Douglas Hyman, P.E., FDEP Tampa- ERP
David Zell, FDEP Tampa- Air

62-110.106 (6) Public Notice of Application and Proposed Agency Action
Publication of a notice of application shall be required for those projects that, because of their size, potential effect on the environment or natural resources, controversial nature, or location, are reasonably expected by the Department to result in a heightened public concern or likelihood of request for administrative proceedings. If required, the notice shall be published by the applicant one time only within fourteen days after a complete application is filed and shall contain the name of the applicant, a brief description of the project and its location, the location of the application file, and the times when it is available for public inspection. The notice shall be prepared by the Department and shall comply with the following format:

State of Florida
Department of Environmental Protection
Notice of Application

The Department announces the receipt of an application for permit from Manatee County Utilities Operations Department, Mr. Daniel Gray, Director for construction of a partial closure of the existing solid waste class I landfill, referred to as the Manatee County Lena Road Class I Landfill, located at 3333 Lena Road, Bradenton, Manatee County, Florida.

This application is being processed and is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m. Monday through Friday, except legal holidays, at the Department of Environmental Protection, Southwest District Office, 3804 Coconut Palm Drive, Tampa, Florida 33619-8318.

Pelz, Susan

From: Miller, Joseph L. [JLMiller@pbsj.com]
Sent: Monday, May 09, 2005 10:51 AM
To: Pelz, Susan
Subject: RE: Manatee County Lena Road Landfill Closure Permit Renewal

Susan,

Thanks for the quick reply. We submitted the CQA plan with the specifications for the geomembrane. Please look at what we already submitted for the closure plan. We submitted specific information required by Rules 62-701.600, .610, .620, .630, and Rule 62-701.400 specifications and CQA for the liner construction. Actually, I was thinking we already have an approved closure plan. I am not sure we even need a permit modification to proceed with the "close-as-you-go" concept. It seems that all we have to do is advise FDEP 60-days before installing the geomembrane cap so you can visit the site during construction. I think it is confusing to issue a separate closure permit. Do we have two separate long-term care cost estimates? I am just trying to simplify the process, and save us all some work. The requirements are confusing. In some districts for the operation permit we only submit a typical cap detail as a basis for the closure cost estimate. We do not submit anything else related to closure. If the landfill owner wants to use the "close-as-you-go" concept, then we submit the closure plan, CQA plan and all the other information. Then we close the side slopes, or other portions as the landfill is ready without any separate closure permit. It seems to me that the closure permit is for final closure when the landfill is closing and no longer taking any solid waste.

We are ready to submit for renewal of the closure permit, and we will do so if that is what you think is necessary. I just think it is simpler and cleaner if the site has only one permit.

Thanks for your consideration in this matter.

Joe Miller

-----Original Message-----

From: Pelz, Susan [mailto:Susan.Pelz@dep.state.fl.us]
Sent: Saturday, May 07, 2005 8:09 AM
To: Miller, Joseph L.
Cc: gus.difonzo@co.manatee.fl.us; Core, Simone; Morgan, Steve; Morris, John R.
Subject: RE: Manatee County Lena Road Landfill Closure Permit Renewal

Joe,

Although I have not reviewed the Operation renewal application, typically operation permits include only general information about closure (I will check with Simone about this). It is unlikely that it includes all the information required to authorize the closure construction (e.g., technical specifications, CQA plan, etc.). You should submit a renewal (or separate permit) application for the closure permit. The application will need to include specific information required by Rules 62-701.600, .610, .620, and .630. Rule 62-701.400 applies as far as the specifications and CQA for the liner construction.

If you want to modify the operation permit to function as the closure permit, a major modification will be required. The fee is \$10,000 and the expiration date will be the expiration date of the existing permit. If you apply for a closure permit, the fee is \$7,500 and the expiration date is 5 years from

date of issuance. Including all of the information required for closure construction in an operation permit is very unusual.

Since the Rule has changed since your last closure permit was issued, any new closure construction will have to comply with the current rule. If you proceed with closure work prior to obtaining the new closure permit, it is at the County's own risk and may have to be modified/reconstructed depending on a proposed design that complies with the current rule.

I hope that this answers your questions. If not, please call or email (email is better).

Susan J. Pelz, P.E.
Solid Waste Program Manager
Southwest District
813-744-6100 x 386
susan.pelz@dep.state.fl.us

-----Original Message-----

From: Miller, Joseph L. [mailto:JLMiller@pbsj.com]
Sent: Friday, May 06, 2005 11:42 AM
To: Pelz, Susan
Cc: 'gus.difonzo@co.manatee.fl.us'
Subject: Manatee County Lena Road Landfill Closure Permit Renewal

Susan,

I am preparing to submit the application for renewal of the Lena Road Landfill Closure Permit #39884-004-SF, which expires on July 27, 2005. This permit was issued prior to the latest revised 62-701 regulations issued 5-27-01. Since we just renewed the Lena Road Landfill Operation Permit and submitted a closure plan, drawings, CQA Plan, etc., I was wondering if we need to renew this closure permit? Can we proceed with closure work as permitted by the closure plan submitted for the Operation Permit renewal?

I was reading in 62-701.600 Landfill Final Closure (3) Closure permit requirements..... "If the landfill is operating under a Department permit, the owner or operator shall request a modification of the permit in lieu of submitting a closure permit application. The application or request for modification shall include a closure plan which is made up of the following:....."

Since we already submitted all the "following" documentation for closure for the Operation Permit renewal, and I understand our application is complete, can we proceed with the Lena Road Landfill Stage I Landfill Partial Closure #2 under the closure plan for the Operation Permit? Can we make it as simple as just sending you a letter stating we plan to close a specific portion of the landfill according to our approved plan?

Please give it some consideration. It would save us all a lot of work and I think make the process simpler.

Thanks,

Joe Miller

**MANATEE COUNTY
SOLID WASTE MANAGEMENT FACILITY
GMS ID No: 4041C02025**

**LENA ROAD LANDFILL
3333 Lena Road
Bradenton, FL 34202**

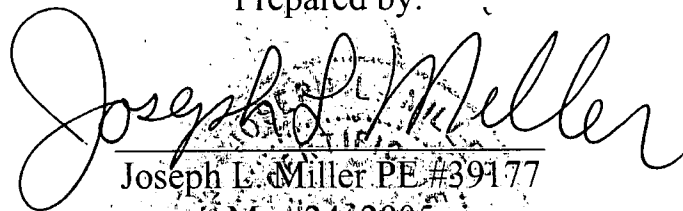
**APPLICATION AND ENGINEERING REPORT
FOR RENEWAL OF
LANDFILL CLOSURE PERMIT**

May 24, 2005

Prepared for:

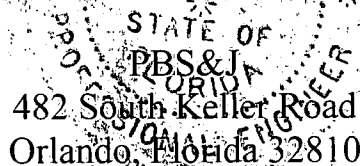
Manatee County Government
Utility Operations Department
Solid Waste Division
4410 66th Street West
Bradenton, FL 34210

Prepared by:



Joseph L. Miller PE #39177

May 24, 2005


STATE OF
FLORIDA
P.E. #39177
482 South Keller Road
Orlando, Florida 32810

PBS&J Project Number: 120498.46

see Board Report

SO
Susan

**Southwest District
Permitting Application**

New Site

Site Name:
Site ID:
County:
Type/Subcode:
Fee submitted: () correct () incorrect
Total Fee Required \$ _____ Need \$ _____ Refund \$ _____

Existing Site

Site ID: <div style="text-align: center;">39884-011</div>
Project Name: <div style="text-align: center;">Lena Road LF Closure</div>
Type/Subcode: <div style="text-align: center;">SF 01</div>
Fee submitted: \$7500 <input checked="" type="checkbox"/> correct () incorrect
Total Fee Required \$ _____ Need \$ _____ Refund \$ _____

Applicant Information

Name: <div style="text-align: center;">Dan Gray</div>	
Role: <div style="text-align: center;">Applicant</div>	
Company: <div style="text-align: center;">Manatee Co</div>	
Address: <div style="text-align: center;">ON File</div>	
City:	Zip Code:
Phone:	

Fee verified by: _____

Application Assigned To: PELTZ Date: _____