

April 4, 2014

Ms. El Kromhout, P.G.  
Florida Department of Environmental Protection ("Department")  
2600 Blairstone Road, MS 4565  
Tallahassee, Florida 32399



**Subject: Request for Minor Modification- FDEP Permit No. 0078767-030-SO-01  
Use of Glass Cullet for Media as Landfill Alternative Cover Material  
Tomoka Farms Road Landfill (TFRLF)  
Volusia County Public Works Solid Waste Division**

**Dear Ms. Kromhout**

On behalf of Volusia County Public Works Solid Waste Division, Neel-Schaffer is submitting a request for minor modification of the above referenced permit. The purpose of this request is to obtain Department approval for:

- The use of inert cullet glass as a component of the six-inch thick daily cover layer required for coverage of Class I waste; and
- The use of inert cullet glass as a component of the minimum twelve-inch thick intermediate cover layer required for coverage of Class I waste.
- The use of inert cullet glass as a substitute for non-calcareous media in the envelope surrounding Landfill Gas (LFG) horizontal collector pipe in the Class I landfill. Gradation of the cullet would be at least ¼ inch larger than the LFG collector pipe perforations or slot width to limit clogging of the HDPE collector pipe. The top of the glass cullet layer will be covered by geotextile.

The first and second bulleted items represent a modification of operational procedures for daily and intermediate cover as approved in the February 2013 TFRLF Operations Plan submitted in February 2013 within the First Response to Request for Information for Operations Permit No. 0078767-030-SO-01. We hereby submit the modified reference page from Operations Plan (page 2-9) with the requested modification underlined.

The third bulleted item represents a modification of Detail 1 of Sheet 01LFG-06 of the Landfill Gas Master Plan dated November 2012, Revised December 2013. Detail 1 already addresses equivalent backfill around the horizontal collector pipe, indicating in Note 1 that tire chips may be substituted for non-calcareous #57 stone. If approved by FDEP, Glass cullet would be added to the future construction plans as an alternate media.

In accordance with Section 62-4.050(4)(s)(5) F.A.C., these changes appear to constitute a minor modification. The required permit fee in the amount of \$250.00, a Volusia County check payable to the FDEP, accompanies this minor modification request.

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If you have any questions or need additional information, please advise.

**Sincerely,**  
**NEEL-SCHAFFER, INC.**



Mehran (Ron) S. Beladi, PE  
Sr. Engineer Manager  
Florida Registration No. 41819

Attachment

Copy: Mr. F. Thomas Lubozynski, P.E., Waste Program Administrator, FDEP Central District  
Mr. Lenny Marion, Director, Volusia County Solid Waste Division (SWD)  
Mr. Junos Reed, P.E., Operations Manager, Volusia County SWD  
Ms. Jenifer Stirk, Permit Compliance, Volusia County SWD

- Waste will be placed against the working face of the previous day's waste, so that the first row will act as a means of access and a berm to guide the placement of waste material for the remaining rows.
- Class I waste will be spread and completed in 2-foot lifts and compacted to approximately 1 foot in thickness by a minimum of five passes using a landfill compactor.
- Class III waste will be spread and completed in 2 to 5-foot lifts and compacted by a minimum of five passes using a landfill compactor or dozer.

### 2.8.2 Initial and Intermediate Cover

Cover material will be utilized to minimize vector breeding, animal attraction, and fire potential, as well as to prevent blowing litter and control odors. Initial cover will be composed of a 50/50 mixture by volume of mulch and soil from the on-site stockpile, soils, soil amended with glass cullet not exceeding a 50/ 50 mixture by volume, or synthetic materials such as tarps and geomembranes. Initial cover will be compacted to a minimum thickness of 6 inches or equivalent. The intermediate cover will be comprised of local soil, or local soil amended with glass cullet in a ratio not to exceed 50 percent by volume, which will be placed and compacted to a minimum thickness of 12 inches.

### 2.8.3 Final Cover

The final cover system for the Class I landfill will be designed in accordance with Rule 62-701.600(5), F.A.C. The final cover will be placed on the intermediate cover as phases of the facility are closed. The conceptual final cover system for landfill closure, from top to bottom includes the following:

- 6-inch layer of topsoil material with surface vegetation
- 18-inch soil layer
- Composite drainage net layer (geosynthetic filter fabric with drainage net)
- 40-mil textured geomembrane

## **2.9 OPERATION OF GAS, LEACHATE, AND STORMWATER CONTROLS (RULE 62-701.500(2) (H), F.A.C.)**

### 2.9.1 Landfill Gas Controls

An active gas collection system is being installed in the Class I cell. Passive gas vents will be installed as part of final closure for the Class III cell. If it becomes apparent prior to or at the time of closure that passive vents are not adequate to control odors or migration of landfill gas from the landfill, an active landfill gas control system will be installed will be updated as necessary to provide for operation and maintenance of the landfill gas controls.

## 2.9.2 Leachate Controls

Leachate is collected by a leachate collection and transfer system. The leachate is conveyed by gravity to leachate sumps located as shown in the Tomoka Farms Road Landfill Construction Plans. Collected leachate is currently pumped from the leachate sumps in the landfill to the north leachate impoundment (pond) or to the leachate treatment facility.

The second (south) leachate storage pond is normally used for the storage of leachate treatment plant effluent, should the effluent quantities temporarily exceed the capacity of the spray fields, in conjunction with requirements for dust control and irrigation. The south leachate storage pond can be used to provide additional raw leachate storage capacity, should the quantities of leachate delivered by the leachate collection system temporarily exceed north pond storage capacity and treatment plant capacity. Please refer to Chapter 4 of the Preliminary Design Report (PDR), provided with the minor permit modification application for the leachate treatment facility submitted to FDEP in August, 2008, for a process flow diagram that details the future management of leachate flows. Additional information is also provided in Section 8.0 of this operations plan.

During normal operations, the collected leachate is pumped to the north pond for temporary storage. When the treatment plant control system determines that the treatment plant needs a batch of leachate, telemetry instructs leachate pumps at the impoundment (pond) to pump leachate from the north pond to the plant for treatment.

Leachate generation will be minimized by operating a single working face and keeping the working face as small as possible. The County's goal is to operate a working face no larger than approximately 150' by 200' under normal operating conditions. Daily and/or intermediate cover will be placed on slopes to promote stormwater runoff. The mixing of stormwater with leachate will be minimized by grading the daily and/or intermediate cover away from the working face and by using soil berms to direct stormwater runoff away. Swales and conveyance ditches will also be used to collect and transport stormwater to stormwater management facilities.

## 2.9.3 Stormwater Controls

Operation of the existing stormwater system is discussed in Section 10.0 of this operations plan. The stormwater system will be managed as required by Rule 62-701.500(10), F.A.C., to meet applicable standards for Rule 62-302, F.A.C., and Rule 62-330, F.A.C. The system shall minimize stormwater from entering waste filled areas and avoid the mixing of stormwater with leachate. All stormwater conveyances shall be inspected at least weekly to verify adequate performance. Conveyances not performing adequately will be repaired within three (3) working days. Documentation of all inspections and repairs will be kept on file at the landfill office.

**2.10 WATER QUALITY MONITORING (RULE 62-701.500(2) (I), F.A.C.)**

Groundwater, surface water, and leachate monitoring will be conducted as described in the Tomoka Farms Road Landfill Groundwater and Leachate Monitoring Plan, which is kept in the landfill office.

**2.11 MAINTAINING AND CLEANING THE LEACHATE COLLECTION SYSTEM (RULE 62-701.500(2) (J), F.A.C.)**

The leachate system at the landfill consists of collection, pumping, storage, and disposal facilities. A sequencing batch reactor (SBR) was placed in service in 2010 to provide on-site leachate treatment. Maintenance of the leachate pumping facilities is performed as specified in the manufacturer's manuals kept on file in the landfill office. Inspection and cleaning of the leachate collection system will be performed every 5 years.