

**Attachment**

**Addendum to  
Best Available Control Technology (BACT) Analysis**

**Okeechobee Landfill, Inc.  
Okeechobee, FL**

Facility No. 0930104  
AC Permit Application No. 1270-3

February 27, 2007  
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## 1.0 INTRODUCTION

This document is an addendum to the Best Available Control Technology (BACT) analysis provided in Appendix D of the Application 1270-2 on February 27, 2007. In a letter from the Florida Department of Environmental Protection dated December 11, 2008, it was requested that a BACT analysis be addressed for the new turbines, Titan 130 and Centaur 40. The letter stated that the selected BACT for sulfur dioxide was acceptable and did not have to be revised for the new turbines. Section 2.0 of this Addendum reiterates the BACT regulation and definition. Sections 3.0, 4.0 and 5.0 address BACT analysis for the criteria pollutants, Nitrogen Dioxide (NO<sub>2</sub>), Carbon Monoxide (CO) and particulate matter (PM). These sections have been taken from the previous BACT report and revised where necessary.

## 2.0 Best Available Control Technology Analysis

Under Florida's Preconstruction Review Process (PCR), a PSD permit process requires a BACT analysis in order to identify the pollution control device or system that is most suitable with respect to technological and economic considerations [F.A.C. 62-212.400(4)(c)]. The code defines and provides the general approach to support a BACT analysis under Definitions [F.A.C. 62-210.200(39)].

- (a) *An emission limitation, including a visible emissions standard, based on the maximum degree of reduction of each pollutant emitted which the Department, on a case by case basis, taking into account:*
  - 1. *Energy, environmental and economic impacts, and other costs;*
  - 2. *All scientific, engineering, and technical material and other information available to the Department; and*
  - 3. *The emission limiting standards or BACT determinations of Florida and any other state; determines (what) is achievable through application of production processes and available methods, systems and techniques (including fuel cleaning or treatment or innovative fuel combustion techniques) for control of each such pollutant.*
- (b) *If the Department determines that technological or economic limitations on the application of measurement methodology to a particular part of an emissions unit or facility would make the imposition of an emission standard infeasible, a design, equipment, work practice, operational standard or combination thereof, may be prescribed instead to satisfy the requirement for the application of BACT. Such standard shall, to the degree possible, set forth the emissions reductions achievable by implementation of such design, equipment, work practice or operation.*
- (c) *Each BACT determination shall include applicable test methods or shall provide for determining compliance with the standard(s) by means which achieve equivalent results.*
- (d) *In no event shall application of best available control technology result in emissions of any pollutant which would exceed the emissions allowed by any applicable standard under 40 CFR Parts 60, 61, and 63.*

The definition above describes a PCR project and how BACT is developed. The construction project and other MSW landfill projects are substantially different than other PCR projects. In most PCR projects the facility has not been built or it has been built is operational but a definable expansion is proposed. In the case of an MSW landfill project, the facility has been permitted and construction is congruent to the operation. As the

"community", whatever the may be relative to vicinity or waste produced, grows, the landfill must increase its disposal area. Currently, air permits are not required for the processing of permit applications for MSW facility expansions. Historically, many agencies have looked at the flares or other combustion devices as emission sources along with the landfill and each control device is permitted as they are needed. For the project, it is expected that up to a three year period will be necessary for permit approval, procurement, design and construction for the selected prior to BACT installation.

### 3.0 BACT: NO<sub>2</sub>

Oxides of nitrogen (NO, NO<sub>2</sub> and NO<sub>3</sub> – jointly referred to as NO<sub>x</sub>) are products of thermal combustion processes. There are two components of NO<sub>x</sub> formation:

“Fuel NO<sub>x</sub>” is caused by the direct oxidation of fuel-bound-nitrogen; i.e., nitrogen that is chemically part of the fuel molecules.

“Thermal NO<sub>x</sub>” is formed at high temperatures (generally in excess of 2100°F) by the dissociation of N<sub>2</sub> in the combustion air and recombination with oxygen. Thermal NO<sub>x</sub> is predominantly NO, though NO converts to NO<sub>2</sub> in the presence of oxygen and with time. Trace amounts of NO<sub>3</sub> may also be formed, but the fraction is so small that it can be ignored for most practical purposes regarding NO<sub>x</sub> control.

Fuel-bound-nitrogen is a concern only in liquid and solid fuels and some refinery fuel gases. There is essentially no fuel-bound-nitrogen in gaseous fuels such as natural gas or landfill gas. Nitrogen in these gaseous fuels is free nitrogen, N<sub>2</sub>, which acts like the N<sub>2</sub> in the combustion air. Combustion air is the source of 99% of the free nitrogen involved in the combustion process. Therefore, referrals to NO<sub>x</sub> in the remainder of this report are to thermal NO<sub>x</sub>.

Although NO<sub>x</sub> emissions from a combustion source are a mix of NO and NO<sub>2</sub>, it is NO<sub>2</sub> that is the pollutant of concern. Stack measurements of NO<sub>x</sub> are therefore reported as NO<sub>2</sub>.

### 3.1 USEPA TECHNOLOGY CLEARINGHOUSE DATABASE FOR NO<sub>2</sub>

A review was made of the USEPA RACT BACT LAER Clearinghouse by using the USEPA web site [www.epa.gov/ttn/catc/rblc](http://www.epa.gov/ttn/catc/rblc). The data base was searched for process information related to landfill gas with the pollutant NO<sub>x</sub>. The results are summarized in the **Table 3-1**.

**Table 3-1**  
**USEPA TTN Database search parameters and results for NO<sub>x</sub>**

Process Information	Result
<b>Fuel Combustion</b>	
<i>Utility and Large Industrial Boiler/ Furnaces</i>	
11.320 LF/ Digester/ Bio-gas	1 Facility
<i>Industrial Size Boilers/ furnaces (&gt; 100 mi)</i>	
Gaseous fuel and mixtures	
12.320 LF/ Digester/ Bio-Gas	2 Facilities
<i>Commercial/ Industrial size boilers/ furnaces</i>	
Gaseous fuel and mixtures	
13.320 LF/ Digester/ Bio-Gas	None
<i>Large combustion Turbines (&gt; 25 MW)</i>	
Simple Cycle	
15.120 LF/ Digester/ Bio-Gas	None
Combined Cycle and Co-generation	
15.220 LF/ Digester/ Bio-Gas	None
<i>Small Combustion Turbines (&lt;25 MW)</i>	
Simple Cycle	

Process Information	Result
16.120 LF/ Digester/ Bio-Gas Combined Cycle and Co-generation	3 Facilities
16.220 LF/ Digester/ Bio-Gas <i>Internal Combustion Engine</i>	None
Large Internal Combustion Engine (> 500 HP)	
17.140 LF/ Digester/ Bio-Gas Small Internal Combustion Engine	18 Facilities
17.240 LF/ Digester/ Bio-Gas <i>Miscellaneous Combustion</i>	1 Facility
Flares	
19.320 Digester & LF Gas Flares	17 Facilities and 19 Processes

There are no BACT determinations for CTGs using solely landfill gas.

### 3.2 OVERVIEW OF NO<sub>x</sub> CONTROL TECHNOLOGIES

Approaches to NO<sub>x</sub> control for combustion turbines burning gaseous fuels are of two types:

Combustion modifications aimed generally at reducing the effective flame temperature. Since NO<sub>x</sub> formation is temperature-sensitive, lowering the flame temperature reduces NO<sub>x</sub> formation.

### 3.3 NO<sub>x</sub> CONTROL TECHNOLOGY DESCRIPTIONS

Conventional CTG combustors utilize a diffusion flame, essentially mixing air with a gaseous fuel to obtain a flammable mixture and then burning it. The result is a very hot central region to the flame, cooling as it continues to diffuse more air into the combustion process. That hot zone is where most of the NO<sub>x</sub> is formed. Typical NO<sub>x</sub> emission rates from a natural gas-fired CTG with traditional diffusion burners are on the order of 150 to 250 ppm depending on other design parameters of the engines.

#### 3.3.1 Combustion Modification

There are three general approaches to combustion modification to reduce the effective temperature of that flame, staged combustion, catalytic combustion and the addition of diluents.

##### 3.3.1.1 Staged Combustion

In staged combustion, a limited amount of air is combined thoroughly with the fuel and combustion is started in a sub-stoichiometric mixture at low temperature. Subsequent stages add more air and complete the combustion process. In this manner, there is no hot central core to the flame; the combustion process occurs uniformly across the entire combustor. Staged combustion is known by various trade names associated with specific CTG manufacturers; e.g., Dry Low-NO<sub>x</sub><sup>TM</sup> (General Electric), Dry-Low Emissions<sup>TM</sup> (Rolls-Royce) and SoLoNO<sub>x</sub><sup>TM</sup> (Solar Turbines). Although there are differences in actual combustor design, the principals are the same. Staged combustors have routinely achieved NO<sub>x</sub> emission rates in the single digits in natural gas-fired CTGs. However, combustor design is highly fuel-specific. Even regional variations in natural gas composition lead to variations in combustor design.

Staged combustion is being developed for landfill gas combustion in CTGs but has not been commercially demonstrated. Additionally, staged combustion is not commercially available for the Solar Titan and Centaur 40 CTGs proposed for this project. Therefore, this technology is not considered as viable for the proposed turbines.

### 3.3.1.2 Catalytic Combustion

Catalytic combustion, such as Xonon™, places a catalyst within the combustion chamber of a gas-fired CTG. This is a combustion technology which combusts fuel at temperatures below that at which thermal NOx is formed. This technology, though promising, is yet to be commercialized. Also, it has not been applied to a landfill gas-fired CTG and is not available on the selected Titan and Centaur 40 CTG.

### 3.3.1.3 Diluent Injection

Various diluents have been used for NOx control in fossil-fuel-fired CTGs. Water is the most common diluent and has been commonly used since the 1970s. Water is introduced into the combustion chamber, either by a finely atomized spray or by physical mixing with the fuel (limited to liquid fuels). The water absorbs heat from the combustion process as it evaporates, lowering the flame temperature while not significantly interfering with the combustion process.

With landfill gas-fired CTGs, however, the flame temperature is already considerably lower than in a natural gas-fired CTG because the gas is already diluted by about 50 percent or greater with CO<sub>2</sub>, a natural product of landfill gas production. CO<sub>2</sub> operates in the flame just as water or steam would; it reduces the flame temperature that is achieved during combustion. A turbine manufacturer has indicated that natural variability in landfill gas quality and the already-diluted character of the fuel would make water injection a technical challenge, potentially leading to flame instability, which in turn can severely shorten the life of turbine components, create a safety hazard, and greatly increase CO emissions due to combustion interference, hence incomplete combustion. Water injection is therefore not recommended for low-Btu gas used with any CTG including the Titan and Centaur 40 CTGs.

The Titan 100 and the Centaur 40 are high-efficiency engines with high compression ratio and "firing temperature" (firing temperature is not the same as flame temperature – it generally refers to the gas temperature entering the power turbine section of the CTG, not the temperature in the combustion zone), its emissions are slightly higher than some of the lower efficiency models. Solar has quoted 72 and 42 ppm NOx as a guaranteed emission rate for the Titan and Centaur units respectively; actual emission rate may be somewhat lower. This is below the recent New Source Performance Standard for Stationary Combustion Turbines, 40 CFR 60 Subpart KKKK, which limits NOx for small simple-cycle CTGs burning other than natural gas or oil to 74 ppm NOx.

### 3.3.2 Post-Combustion Control

There are a number of processes available for NOx removal in a gas stream; however, almost all are designed to operate in the chemical manufacturing and refining

industries processing streams with concentrations from hundreds to tens of thousands of ppm NO<sub>x</sub> and are not applicable to processing highly dilute gas flows. Examples include Single and Multiple Stage High Efficiency Nitrogen Oxide (NO<sub>x</sub>) Control Scrubbing Systems, similar to those produced by Duall and low temperature oxidation technology, LoTOx™ Technology, from BELCO® under license from BOC. This latter technology has strong synergy with EDV® scrubbing for refinery applications such as Fluid Catalytic Cracking Unit (FCCU), fluid cokers, heaters and boilers. Some of the common technologies used for post combustion NO<sub>x</sub> control are discussed below:

#### 3.3.2.1 SNCR

The Wheelabrator NO<sub>x</sub>OUT™ Process and other similar selective non-catalytic reduction (SNCR) technologies that have been utilized commercially to reduce NO<sub>x</sub> emissions in boiler and applications using natural gas. Natural gas combustion provides the temperature window (namely 1600-2100 F) and the residence time required for SNCR. LFG combustion does not provide the required residence time and the required temperature window due to the dilution effect of CO<sub>2</sub>. There is no commercially available SNCR system using LFG in a combustion turbine. Thus, this technology is not considered for the proposed turbines.

#### 3.3.2.2 SCONOX™

SCONOX is a catalytic NO<sub>x</sub> reduction technology. A mesh or honeycomb substrate coated with a regenerable catalyst is placed in the CTGs exhaust gas path. NO<sub>x</sub> is catalytically reacted resulting in formation of a nitrogen-based compound that remains in the coating. The catalyst is periodically taken out of service and regenerated, releasing the nitrogen that was formerly NO<sub>x</sub> as nitrogen gas. Its apparent advantage over selective catalytic reduction (SCR), which is discussed later herein, is that ammonia is not required in the process.

This technology was technically demonstrated on a 20MW natural gas-fired CTG in the mid-1990s. It was later applied commercially to a Solar Mars turbine installation in MA that was fired with natural gas and occasionally distillate oil. After several years of continuous development, that unit was reportedly recently shut down having not continuously achieved its target performance, and plans for a second identical unit have been canceled. Results are expected to be similar for any of the landfill-gas fired CTG including the Titan and the Centaur.

The technology was offered for several years for larger U.S. power plant applications under license to ABB (later Ahlstrom) Environmental Systems, but was never utilized, in part because its cost was extreme.

This technology is not applicable to the proposed project. It requires gas temperatures that are much lower than those from a simple cycle combustion turbine installation. The process is also highly sensitive to sulfur in compounds in the gas stream. It has not been demonstrated burning landfill gas and is considered technically infeasible as well as commercially undemonstrated.

#### 3.3.2.3 SCR

Selective catalytic reduction (SCR) is a catalytic NO<sub>x</sub> removal process. Ammonia is injected into the exhaust gas flow which then passes over a catalyst coated mesh or honeycomb placed in the exhaust dust. Ammonia and NO<sub>x</sub> react to N<sub>2</sub>



and H<sub>2</sub>O. Excess ammonia passes through unreacted and is emitted to the atmosphere.

There are two general categories of SCR systems, referred to herein as conventional and high-temperature systems. Conventional catalyst systems are limited to operation at <850°F. Even short-term excursions above that temperature can permanently damage the catalyst structure. The exhaust temperature of simple cycle CTGs varies with make, model, fuel and ambient conditions; the landfill gas-fired Titan and Centaur is 900 to 925 °F during the majority of the year (i.e., at ambient temperatures of 60°F or greater).

A few installations of conventional SCR on simple cycle CTGs have been accomplished by adding fresh air to the exhaust flow using dilution air fans, lowering the exhaust temperature to below 850°F. In those cases, the specific engines had peak exhaust temperatures in the range of 870 to 880°F. These are generally fossil-fuel-fired CTGs in utility peaking service, operated only a few hours per year. The energy penalty of adding dilution air makes the technique impractical of for continuously operated units.

High temperature SCR uses a different type of catalyst which comprises the entire catalyst structure; i.e., is not just a coating. It can be used at operating temperatures exceeding the expected exhaust temperatures of the Project's CTGs. This technology has been only rarely applied, however, because it is considerably more expensive than conventional SCRs.

Virtually all SCR experience is on fossil fuel-fired CTGs. Landfill gas contains siloxanes, a silicone-carbon compound that oxidizes to silicone dioxide, SiO<sub>2</sub>, when combusted. SiO<sub>2</sub> will then coat downstream components, fouling a catalyst placed in the gas path.

"There are numerous examples where SiO<sub>2</sub> deposits from siloxane have resulted in catalyst deactivation in hours or days. ....their rapid destructive effects makes this [use of a catalyst for emission control] a difficult application."<sup>1</sup>

For this reason, use of SCR is not technically feasible for use with landfill gas-fired engines.

### 3.4 NO<sub>2</sub> CONTROL TECHNOLOGY ANALYSIS

The natural diluent effects of CO<sub>2</sub> in landfill gas greatly reduce NO<sub>x</sub> formation that would otherwise occur from burning the methane component. Other combustion modifications, such as water injection or staged combustion, have not been applied to landfill gas-fired CTGs.

Post-combustion controls are not technically feasible for landfill gas-fired CTGs due to contaminants in the landfill gas that will coat and damage catalysts.

### 3.5 NO<sub>2</sub> BACT SELECTION

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<sup>1</sup> "Siloxanes in Landfill and Digester Gas Update", Wheless, Ed, Los Angeles County Sanitation District and Pierce, Jeffrey, SCS Energy (date unknown)

### 3.5.1 Combustion Turbines

The turbines selected for the project were selected because of their ability to burn landfill gas efficiently and steadily. Good combustion practice is selected as BACT for NO<sub>2</sub> for the proposed turbines. Using the BACT, the emissions from the turbines will be limited to 72 and 42 ppm for the Titan and Centaur, respectively, which is lower than the applicable requirement of NSPS subpart KKKK.

### 3.5.2 Flares

The application also reviewed the literature for BACT that had been applied to flares. The project will utilize flares as back up devices for the turbines. The flares will also be the initial control devices until the turbines are installed. The RBLC was queried for control systems to be applied to flares. The flares are the control devices. The RBLC lists flares as control devices for the petroleum industry, chemical industry, waste water treatment and landfill gas. They are generally employed where waste gas would be discharged untreated to the atmosphere. That will be the application of the flares in this project.

There are two techniques which are discussed for the better operation of the flares. The techniques are steam assisted flares and air assisted flares<sup>2</sup>. These techniques are used to create a smokeless flare when the material being flared is difficult to combust when passively mixed with air. Flares developed for landfill gas are smokeless by design.

Smokeless design is selected as the BACT for NO<sub>2</sub> for flares.

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<sup>2</sup> Air and Waste Management association, Air pollution Engineering Manual, Second Edition, Davis, Wayne,ed.,2000

**4.0 BACT: CO**

- Carbon monoxide is a product of incomplete combustion. A combustion turbine-generator ("CTG"), as a technology, is inherently highly efficient in combusting fuel

**4.1 USEPA Technology Clearinghouse Database for CO**

A review was made of the USEPA RACT BACT LAER Clearinghouse at the USEPA web site [www.epa.gov/ttn/catc/rblc](http://www.epa.gov/ttn/catc/rblc). The data base was searched for landfills with the pollutant CO. The results are summarized in **Table 4-1**. No facilities were found in the database using landfill gas to operate a combustion turbine.

**Table 4-1  
 USEPA TTN Database: Search Parameters And Results For CO**

<b>Process Information</b>	<b>Result</b>
<b>Fuel Combustion</b>	
<i>Utility and Large Industrial Boiler/ Furnaces</i>	
11.320 LF/ Digester/ Bio-gas	1 Facility
<i>Industrial Size Boilers/ furnaces (&gt; 100 mi)</i>	
Gaseous fuel and mixtures	
12.320 LF/ Digester/ Bio-Gas	2 Facilities
<i>Commercial/ Industrial size boilers/ furnaces</i>	
Gaseous fuel and mixtures	
13.320 LF/ Digester/ Bio-Gas	None
<i>Large combustion Turbines (&gt; 25 MW)</i>	
Simple Cycle	
15.120 LF/ Digester/ Bio-Gas	None
Combined Cycle and Co-generation	
15.220 LF/ Digester/ Bio-Gas	None
<i>Small Combustion Turbines (&lt;25 MW)</i>	
Simple Cycle	
16.120 LF/ Digester/ Bio-Gas	3 facilities
Combined Cycle and Co-generation	
16.220 LF/ Digester/ Bio-Gas	None
<i>Internal Combustion Engine</i>	
Large Internal Combustion Engine (> 500 HP)	
17.140 LF/ Digester/ Bio-Gas	18 Facilities
Small Internal Combustion Engine	
17.240 LF/ Digester/ Bio-Gas	1 Facility
<i>Miscellaneous Combustion</i>	
Flares	
19.320 Digester & LF Gas Flares	15 Facilities and 17 Processes

As shown above, there were no BACT determinations for CO for CTGs using landfill gas in the database.

## 4.2. OVERVIEW OF CO CONTROL TECHNOLOGIES

CO emissions are controlled by either combustor design or by add-on flue gas treatment.

Generation of CO is a function of the efficiency of the combustion process. Combustion turbines, as a technology, are inherently highly efficient in combusting fuel, resulting in very low CO emissions compared, for example, to conventional boilers and IC engines.

Add-on systems for CO control are comprised of oxidation catalysts placed in the hot exhaust gas flow.

## 4.3 CO CONTROL TECHNOLOGY DESCRIPTIONS

### 4.3.1 Post Combustion Catalytic Controls

Oxidation catalysts have been commonly used on natural gas-fired combustion turbines. However, this technology is not applicable to units burning landfill gas. Landfill gas contains contaminants, specifically siloxanes that convert to SiO<sub>2</sub> in the combustion process. The SiO<sub>2</sub> will quickly foul downstream components, including catalysts. This is summarized in a U.S. EPA memorandum.<sup>3</sup>

"Oxidation Catalyst systems can be used on combustion turbines which combust all types of gaseous and liquid fuels except for landfill and digester gases, which foul the catalyst very quickly because of a compound called siloxanes contained in these fuels. Siloxanes are difficult and very costly to remove from these fuels. Therefore, the application of oxidation catalyst systems to combustion turbines that burn landfill or digester gas does not appear to be feasible. Also there are no known installations of oxidation catalysts on combustion turbines burning landfill or digester gas." Thus, this technology was not considered in the BACT analysis for CO for the proposed turbines.

### 4.3.2 Combustion Controls

Good combustion practices are commonly used in controlling CO for fossil fuel combustion systems. Generally, NO<sub>x</sub> and CO generation in fossil fuel combustion are interdependent; lower NO<sub>x</sub> generation leads to higher CO generation. However, with good combustion control practices, the current generation of combustion turbines is able to control both pollutants within required limits.

Because burner and combustion chamber design are the principal features ensuring high combustion efficiency in a CTG, fuels of variable quality, such as digester or landfill gas and refinery fuel gas, can affect CO emission rates. Thus manufacturers' data include higher CO emission rates than for natural gas or oil-fired CTGs. Furthermore, there are relatively few CTGs burning landfill gas, therefore, there is less confidence in the available data, further increasing the emission rates that manufacturers will guarantee.

In addition, CO emission rates can be sensitive to very slight differences in manufacturing and operation; hence CO emission rates may vary from installation to installation of the same make and model combustion turbine. As a result, combustion turbine manufacturers include significant margin in their CO emissions guarantees.

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<sup>3</sup>"Hazardous Air Pollutant (HAP) Emission Control Technology for New Stationary Combustion Turbines", U.S. EPA memorandum from Sims Roy, Emission Standards Division, Combustion Group, to Docket A-95-51, August 21, 2001.

#### **4.4 CO BACT SELECTION**

Good combustion control is selected the BACT for CO for the proposed turbines. Solar Turbines, the manufacturer of the proposed CTGs, has provided a guaranteed CO emission rate of 100 and 250 parts per million, by volume, dry, corrected to 15% O<sub>2</sub> ("ppmc") for the Titan 130 and Centaur 40, respectively. This will be considered the BACT emission rate.

**5.0 BACT: PM<sub>10</sub>**

The primary method of controlling PM<sub>10</sub> emissions from a CTG is use of clean-burning fuels. PM<sub>10</sub> emissions from gas-fired CTGs are extremely low and are generally comprised of trace contaminants in the fuel and uncombusted VOCs that form condensable particulate matter in the turbine exhaust. Trace amounts of filterable PM<sub>10</sub> may also occur from combustion products. PM<sub>10</sub> concentrations in the exhaust of gas-fired CTGs are so small that it takes special test procedures (exceptionally large sample volumes) to measure them.

**5.1 USEPA TECHNOLOGY CLEARINGHOUSE DATABASE FOR PM<sub>10</sub>**

A review was made of the USEPA RACT/BACT/LAER Clearinghouse at the USEPA web site [www.epa.gov/ttn/catc/rblc](http://www.epa.gov/ttn/catc/rblc). The data base was searched for landfills with the pollutant PM<sub>10</sub>. The results are summarized in Table 5-1. No facilities were found in the database using landfill gas to operate a combustion turbine.

**Table 5-1  
 USEPA TTN Database search parameters and results for PM**

Process Information	Result
<b>Fuel Combustion</b> <i>Utility and Large Industrial Boiler/ Furnaces</i> 11.320 LF/ Digester/ Bio-gas	None
<i>Industrial Size Boilers/ furnaces (&gt; 100 mi)</i> Gaseous fuel and mixtures 12.320 LF/ Digester/ Bio-Gas	None
<i>Commercial/ Industrial size boilers/ furnaces</i> Gaseous fuel and mixtures 13.320 LF/ Digester/ Bio-Gas	None
<i>Large combustion Turbines (&gt; 25 MW)</i> Simple Cycle 15.120 LF/ Digester/ Bio-Gas	None
Combined Cycle and Co-generation 15.220 LF/ Digester/ Bio-Gas	None
<i>Small Combustion Turbines (&lt;25 MW)</i> Simple Cycle 16.120 LF/ Digester/ Bio-Gas	3 facilities
Combined Cycle and Co-generation 16.220 LF/ Digester/ Bio-Gas	None
<i>Internal Combustion Engine</i> Large Internal Combustion Engine (> 500 HP) 17.140 LF/ Digester/ Bio-Gas	16 Facilities

Process Information	Result
Small Internal Combustion Engine 17.240 LF/ Digester/ Bio-Gas	1 Facility
<i>Miscellaneous Combustion</i> Flares, Landfill 19.320 Digester & LF Gas Flares	12 Facilities and 14 Processes

As shown above, there were no BACT determinations in the database for CTGs using LFG.

## 5.2 OVERVIEW OF PM<sub>10</sub> CONTROL TECHNOLOGIES

PM<sub>10</sub> emissions are controlled by minimizing particulate matter in the fuel, filtering the combustion air entering the engine, and insuring high efficiency combustion. There are no add-on technologies that have been applied to CTG exhaust.

## 5.3 PM<sub>10</sub> CONTROL TECHNOLOGY DESCRIPTIONS

### 5.3.1 Combustion Control Using Clean Fuel

The use of clean-burning gas fuels effectively minimizes PM10 generation. Landfill gas contains some contaminants that may contribute to PM10 emissions, such as siloxane, but further control of fuel quality is impractical, particularly considering the very low PM10 emission rate.

All combustion turbines utilize high efficiency inlet air filters to remove ambient particulate matter. Although this measure is taken primarily to protect the surfaces of their blades and rotors and to keep the compressor clean to maximize its efficiency, it also removes particles that would have otherwise contributed to PM10 emissions.

The efficient combustion control in a modern CTG maximizes the complete combustion of the fuel gas components, keeping condensable C3+ organic compounds to levels typically on the order of 1 ppm.

USEPA's AP-42 provides a PM10 emission factor for landfill gas-fired CTGs of 0.023 lb/MMBtu. This is believed to be a representative value.

### 5.3.2 Post-Combustion Controls

Post combustion control of PM includes cyclones, fabric filters, electrostatic precipitators, and wet scrubbers. These technologies are considered infeasible for the turbines due to very low PM emissions from burning of LFG.

## 5.4 PM<sub>10</sub> BACT SELECTION

The use of clean burning LFG and good combustion control is selected as the BACT for PM10 for the proposed turbines. The PM10 emissions from the proposed CTGs will be 0.023 lb/MMBtu using the BACT.



RECEIVED

AUG 26 2008

BUREAU OF AIR REGULATION

**WASTE MANAGEMENT**

10800 N.E. 128th Avenue  
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August 22, 2008

Alvaro Linero  
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Department of Environmental Protection  
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Tallahassee, FL 32399

RE: Okeechobee Landfill, Inc.  
Application for PSD Permit, No. 1270-2  
Facility No. 0930104

Dear Mr. Linero:

Okeechobee Landfill, Inc (OLI), the applicant, hereby waives the 90-day deadline for the Department to issue its preliminary determination on the referenced application. In order to allow the opportunity for further discussion between staff of the Department's Bureau of Air Regulation, other agencies, and OLI representatives, OLI agrees to waive the deadline the issuance of the Department's preliminary determination until October 31, 2008.

The undersigned is authorized to make this waiver on behalf of the applicant. Should you have any questions, please contact me or John VanGessel at 770-805-3350.

Sincerely,

A handwritten signature in cursive script that reads 'Seth Nunes'.

Seth Nunes  
OLI Engineer

Cc: David Thorley, Waste Management Inc. (WMI)  
Jim Christiansen, OLI  
John VanGessel, WMI

*From everyday collection to environmental protection, Think Green® Think Waste Management.*





RECEIVED

AUG 26 2008

BUREAU OF AIR REGULATION

**WASTE MANAGEMENT**

10800 N.E. 128th Avenue  
Okeechobee, FL 34973  
(863) 357-0111  
(863) 357-0772 Fax

August 22, 2008

Alvaro Linero  
Bureau of Air Regulation  
Department of Environmental Protection  
2600 Blair Stone Road  
Tallahassee, FL 32399

RE: Okeechobee Landfill, Inc.  
Application for PSD Permit, No. 1270-2  
Facility No. 0930104

Dear Mr. Linero:

Okeechobee Landfill, Inc (OLI), the applicant, hereby waives the 90-day deadline for the Department to issue its preliminary determination on the referenced application. In order to allow the opportunity for further discussion between staff of the Department's Bureau of Air Regulation, other agencies, and OLI representatives, OLI agrees to waive the deadline the issuance of the Department's preliminary determination until October 31, 2008.

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Sincerely,

A handwritten signature in black ink that reads 'Seth Nunes'.

Seth Nunes  
OLI Engineer

Cc: David Thorley, Waste Management Inc. (WMI)  
Jim Christiansen, OLI  
John VanGessel, WMI

*From everyday collection to environmental protection, Think Green® Think Waste Management.*

**Walker, Elizabeth (AIR)**

0930104-014-Ac

**From:** Nelson, Deborah  
**Sent:** Monday, August 25, 2008 5:54 PM  
**To:** Walker, Elizabeth (AIR)  
**Subject:** FW: Okeechobee Landfill PSD Extension Letter  
**Attachments:** OLI Deadline Waiver.pdf

Just in case you didn't see this already.....

**Debbie Nelson**  
**Meteorologist**  
**Special Projects Section**  
**850-921-9537**  
[deborah.nelson@dep.state.fl.us](mailto:deborah.nelson@dep.state.fl.us)

---

**From:** Nunes, Seth [mailto:SNunes1@wm.com]  
**Sent:** Sunday, August 24, 2008 12:26 PM  
**To:** Linero, Alvaro  
**Cc:** Nelson, Deborah; Thorley, David; Christiansen, Jim; Blinn, Leah; Pakrasi, Arijit  
**Subject:** Okeechobee Landfill PSD Extension Letter

Al,  
Thanks for meeting with us last week to discuss the Okeechobee Landfill PSD Permit Application. As discussed in the meetings, the attached letter waives the deadline for the department's preliminary determination until October 31, 2008. You should receive a hard copy of letter via FedEx Monday (weather dependent).

Please feel free to contact me or David Thorley if you have any questions.

Seth Nunes  
Site Engineer  
WM Okeechobee Landfill  
Office: 863-357-0824 ext. 231  
Fax: 863-357-0772  
Cell: 863-634-7185



**WASTE MANAGEMENT**

10600 N.E. 128th Avenue  
Okeechobee, FL 34973  
(863) 357-0111  
(863) 357-0772 Fax

August 22, 2008.

Alvaro Linero  
Bureau of Air Regulation  
Department of Environmental Protection  
2600 Blair Stone Road  
Tallahassee, FL 32399

RE: Okeechobee Landfill, Inc.  
Application for PSD Permit, No. 1270-2  
Facility No. 0930104

Dear Mr. Linero:

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The undersigned is authorized to make this waiver on behalf of the applicant. Should you have any questions, please contact me or John VanGessel at 770-805-3350.

Sincerely,

A handwritten signature in black ink that reads 'Seth Nunes'. The signature is written in a cursive, flowing style.

Seth Nunes  
OLI Engineer

Cc: David Thorley, Waste Management Inc. (WMI)  
Jim Christiansen, OLI  
John VanGessel, WMI

*From everyday collection to environmental protection, Think Green. Think Waste Management.*



# Florida Department of Environmental Protection

Bob Martinez Center  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Charlie Crist  
Governor

Jeff Kottkamp  
Lt. Governor

Michael W. Sole  
Secretary

January 30, 2007

E-MAIL - RECEIVED RECEIPT REQUESTED

jvangessel@wm.com

Mr. John Van Gessel  
Vice President & Assistant Secretary  
Waste Management, Inc. of Florida  
2859 Paces Ferry Road  
Suite 1600  
Atlanta, Georgia 30339

Re: DEP File Number 0930104-014-AC  
Okeechobee Landfill Facility  
Okeechobee Landfill, Inc.  
Waste Management, Inc. of Florida

Dear Mr. Van Gessel:

On September 1, 2006, the Department requested additional information with regard to the subject application (copy enclosed). Per the correspondence dated November 27, 2006, an extension was requested. The request to revise the Title V permit concurrently, DEP File Number 0930104-015-AV, was previously withdrawn. To continue the processing of the subject permit application, the Department needs the previously requested additional information.

Recently, I met with the Okeechobee Landfill representatives on-site to discuss the details of the project. The capacity of the current site and the proposed expanded site was discussed. The topic of potential to emit (PTE) as it specifically relates to this project, a landfill, was briefly covered. PTE is a specifically defined term in Florida Administrative Code (F.A.C.), Rule 62-210.200(232), F.A.C. In your additional information response, please include a detailed description of the basis for the PTE of the proposed project. Include pertinent supporting information like:

- (i) the dependent values relied upon for the landfill's capacity, e.g., design quantity of solid waste in tons and cubic yards;
- (ii) an aerial photograph clearly showing the footprint of the current and the expanded landfill site; and,
- (iii) how long will it take for the landfill to reach the requested capacity in years.

The PTE of the proposed project will be relied upon for our air quality regulatory review. As I stated during the on-site visit, we need the PTE properly documented for this project.

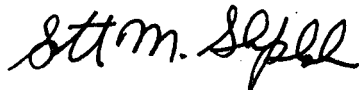
Re: DEP File Number 0930104-014-AC  
Okeechobee Landfill Facility  
Okeechobee Landfill, Inc.

Page 2 of 2

Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. Please note that per Rule 62-4.055(1): "The applicant shall have **90 (ninety)** days after the Department mails a timely request for additional information to submit that information to the Department ... Failure of an applicant to provide the timely requested information by the applicable date shall result in denial of the application."

If you have any questions, please contact me at 850/921-9532 regarding the permit processing review or Ms. Debbie Nelson regarding the air dispersion modeling review at 850/921-9537.

Sincerely,



Scott M. Sheplak, P.E.  
Air Permitting South Section  
Bureau of Air Regulation  
Mail Station #5505  
2600 Blair Stone Road  
Tallahassee, FL 32399  
Scott.Sheplak@dep.state.fl.us

SMS/

Enclosure

copy to:

Mike Stallard, Okeechobee Landfill, Inc.: mstallard@wm.com

David Thorley, P.E., Waste Management, Inc.: DThorley@wm.com

Kristin Alzheimer, P.E., Shaw Environmental & Infrastructure, Inc.:

Kristin.Alzheimer@shawgrp.com

Darrel Graziani, P.E., DEP Southeast District Office: Darrel.Graziani@dep.state.fl.us

Jim Little, U.S. EPA, Region 4: little.james@epa.gov

Dee Morse, National Park Service: Dee\_Morse@nps.gov



# Department of Environmental Protection

Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400  
Telephone: (850) 488-0114 FAX: (850) 922-6979

Colleen M. Castille  
Secretary

September 1, 2006

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. John Van Gessel  
Vice President & Assistant Secretary  
Waste Management, Inc. of Florida  
2869 Paces Ferry Road  
Atlanta, Georgia 30339

Re: DEP File No. 0930104-014-AC and 0930104-015-AV  
Berman Road Landfill Facility  
Okeechobee Landfill, Inc.  
Waste Management, Inc. of Florida

Dear Mr. Van Gessel:

On July 28, 2006 the Department received electronic notification of an air construction permit application for the construction of additional flares, other improvements planned at the Berman Road Landfill and to revise the facility's Title V Operation Permit. We received the fee of \$7,500 on August 4 that is required for an application for an Air Construction Permit pursuant to the Rules for the Prevention of Significant Deterioration of Air Quality (AC/PSD Permit).

The application was submitted with a transmittal letter prepared by Shaw Environmental & Infrastructure Inc. (Shaw). Shaw stated "the short time frame for the application's submittal precluded completion of detailed discussions with vendors and other necessary tasks necessary for a final BACT selection". Shaw also stated "since the BACT has not been chosen as yet, the ambient air impact analysis has not been completed".

A description as to what system of continuous emissions reduction is planned and a best available control technology (BACT) proposal are needed in accordance with Paragraph 62-212.400(4)(c), F.A.C. Also Source Impact Analysis, Air Quality Analysis, and Additional Impact Analyses are also needed as described in Paragraphs 62-212.400(5), (7), (8), and possibly (9), F.A.C. depending on effects upon Class I areas.

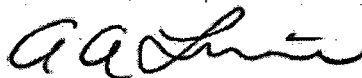
According to the information submitted, the emissions increases for the proposed projects will exceed the respective significant emissions rates for several pollutants. The key pollutant subject to PSD and that Shaw concentrated on is sulfur dioxide (SO<sub>2</sub>). It appears that emissions increases of nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), and particulate matter (PM<sub>10</sub>) also exceed their respective significant emissions rates. Therefore ambient analyses and a BACT proposal are required for the additional pollutants.

A great deal of very useful information was provided in the application. In the mentioned letter, Shaw requested a meeting "to discuss the application" and our engineer, Ms. Teresa Heron, advised them to let us know when they would like to meet with us. We understand Shaw is planning to meet with us this month. We can also discuss the information necessary to complete the application.

Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. Please note that per Rule 62-4.055(1): "The applicant shall have ninety days after the Department mails a timely request for additional information to submit that information to the Department..... Failure of an applicant to provide the timely requested information by the applicable date shall result in denial of the application."

We will forward any comments from EPA Region IV and the National Park Service as soon as they are received. If you have any questions regarding this matter, please contact Ms. Heron at 850/921-9529 or Debbie Nelson (meteorologist) at 850/921-9537.

Sincerely,



A.A. Linero, Program Administrator  
South Permitting Section

AAL/th

cc: Mike Stallard, Waste Management, Inc (via e-mail)  
Joe Fasulo, Okeechobee Landfill, Inc (via e-mail)  
Kristin Alzheimer, P.E., Shaw Environmental & Infrastructure, Inc (via e-mail)  
Bruce K. Maillet, Shaw Environmental & Infrastructure, Inc (via e-mail)  
Jim Little, U.S. EPA, Region 4 (via e-mail)  
Darrel Graziani, Southeast District Office (via e-mail)  
John Bunyak, National Park Service (via e-mail)

**Adams, Patty**

---

**From:** Harvey, Mary  
**Sent:** Tuesday, January 30, 2007 3:51 PM  
**To:** Adams, Patty  
**Subject:** FW: Waste Management, Inc. of Florida - DEP #0930104-014-AC

---

**From:** Stallard, Mike [mailto:MStallard@wm.com]  
**Sent:** Tuesday, January 30, 2007 3:13 PM  
**To:** Harvey, Mary  
**Subject:** RE: Waste Management, Inc. of Florida - DEP #0930104-014-AC

Received 1/30/2007.

Thank you

Mike Stallard  
Waste Management  
Director, Landfill Operations  
Central Florida Market Area  
Office phone 863-357-0111  
Cell phone 863-990-5194

Waste Management's renewable energy projects create enough energy to power over 1 million homes.

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

**From:** Harvey, Mary [mailto:Mary.Harvey@dep.state.fl.us]  
**Sent:** Tuesday, January 30, 2007 2:46 PM  
**To:** Stallard, Mike; Thorley, David; Kristin.Alzheimer@shawgrp.com; Graziani, Darrel; little.james@epa.gov; Dee\_Morse@nps.gov  
**Cc:** Sheplak, Scott; Adams, Patty; Gibson, Victoria  
**Subject:** Waste Management, Inc. of Florida - DEP #0930104-014-AC

Dear Sir/Madam:

Please send a "reply" message verifying receipt of the attached document(s); this may be done by selecting "Reply" on the menu bar of your e-mail software and then selecting "Send". We must receive verification of receipt and your reply will preclude subsequent e-mail transmissions to verify receipt of the document(s).

The document(s) may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible.

The document is in Adobe Portable Document Format (pdf). Adobe Acrobat Reader can be downloaded for free at the following internet site: <http://www.adobe.com/products/acrobat/readstep.html>.

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Thank you,

1/30/2007



**Adams, Patty**

---

**From:** Harvey, Mary  
**Sent:** Tuesday, January 30, 2007 3:52 PM  
**To:** Adams, Patty  
**Subject:** FW: Waste Management, Inc. of Florida - DEP #0930104-014-AC

---

**From:** Thorley, David [mailto:DThorley@wm.com]  
**Sent:** Tuesday, January 30, 2007 3:00 PM  
**To:** Harvey, Mary  
**Subject:** RE: Waste Management, Inc. of Florida - DEP #0930104-014-AC

Received email.

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

**From:** Harvey, Mary [mailto:Mary.Harvey@dep.state.fl.us]  
**Sent:** Tuesday, January 30, 2007 1:46 PM  
**To:** Stallard, Mike; Thorley, David; Kristin.Alzheimer@shawgrp.com; Graziani, Darrel; little.james@epa.gov; Dee\_Morse@nps.gov  
**Cc:** Sheplak, Scott; Adams, Patty; Gibson, Victoria  
**Subject:** Waste Management, Inc. of Florida - DEP #0930104-014-AC

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DEP, Bureau of Air Regulation

**Adams, Patty**

---

**From:** Harvey, Mary  
**Sent:** Tuesday, January 30, 2007 3:51 PM  
**To:** Adams, Patty  
**Subject:** FW: Waste Management, Inc. of Florida - DEP #0930104-014-AC

---

**From:** Graziani, Darrel  
**Sent:** Tuesday, January 30, 2007 3:18 PM  
**To:** Harvey, Mary  
**Subject:** RE: Waste Management, Inc. of Florida - DEP #0930104-014-AC

Got it

---

**From:** Harvey, Mary  
**Sent:** Tuesday, January 30, 2007 2:46 PM  
**To:** 'mstallard@wm.com'; 'DThorley@wm.com'; 'Kristin.Alzheimer@shawgrp.com'; Graziani, Darrel; 'little.james@epa.gov'; 'Dee\_Morse@nps.gov'  
**Cc:** Sheplak, Scott; Adams, Patty; Gibson, Victoria  
**Subject:** Waste Management, Inc. of Florida - DEP #0930104-014-AC

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Thank you,

DEP, Bureau of Air Regulation

**Adams, Patty**

---

**From:** Harvey, Mary  
**Sent:** Tuesday, January 30, 2007 2:50 PM  
**To:** Adams, Patty; Sheplak, Scott  
**Subject:** FW: Waste Management, Inc. of Florida - DEP #0930104-014-AC

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

From: Little.James@epamail.epa.gov [mailto:Little.James@epamail.epa.gov]  
Sent: Tuesday, January 30, 2007 2:49 PM  
To: Harvey, Mary  
Subject: Re: Waste Management, Inc. of Florida - DEP #0930104-014-AC

Received

Jim Little - EPA Region 4  
(404) 562-9118

"Harvey, Mary"  
<Mary.Harvey@dep  
.state.fl.us>

01/30/2007 02:45  
PM

To  
mstallard@wm.com,  
DThorley@wm.com,  
Kristin.Alzheimer@shawgrp.com,  
"Graziani, Darrel"  
<Darrel.Graziani@dep.state.fl.us>  
, James Little/R4/USEPA/US@EPA,  
Dee\_Morse@nps.gov

cc

"Sheplak, Scott"  
<Scott.Sheplak@dep.state.fl.us>,  
"Adams, Patty"  
<Patty.Adams@dep.state.fl.us>,  
"Gibson, Victoria"  
<Victoria.Gibson@dep.state.fl.us>

Subject

Waste Management, Inc. of Florida  
- DEP #0930104-014-AC

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**Adams, Patty**

---

**From:** Harvey, Mary  
**Sent:** Tuesday, January 30, 2007 2:50 PM  
**To:** 'jvangessel@wm.com'  
**Cc:** Sheplak, Scott; Adams, Patty  
**Subject:** FW: Waste Management, Inc. of Florida - DEP #0930104-014-AC  
**Attachments:** Ltr-John Van Gessel-Waste Management, Inc. of Florida - DEP File #0930104-014-AC.pdf

---

**From:** Harvey, Mary  
**Sent:** Tuesday, January 30, 2007 2:46 PM  
**To:** 'mstallard@wm.com'; 'DThorley@wm.com'; 'Kristin.Alzheimer@shawgrp.com'; Graziani, Darrel; 'little.james@epa.gov'; 'Dee\_Morse@nps.gov'  
**Cc:** Sheplak, Scott; Adams, Patty; Gibson, Victoria  
**Subject:** Waste Management, Inc. of Florida - DEP #0930104-014-AC

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Thank you,

DEP, Bureau of Air Regulation

**Adams, Patty**

---

**From:** Harvey, Mary  
**Sent:** Tuesday, January 30, 2007 2:46 PM  
**To:** 'mstallard@wm.com'; 'DThorley@wm.com'; 'Kristin.Alzheimer@shawgrp.com'; Graziani, Darrel; 'little.james@epa.gov'; 'Dee\_Morse@nps.gov'  
**Cc:** Sheplak, Scott; Adams, Patty; Gibson, Victoria  
**Subject:** Waste Management, Inc. of Florida - DEP #0930104-014-AC  
**Attachments:** Ltr-John Van Gessel-Waste Management, Inc. of Florida - DEP File #0930104-014-AC.pdf

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Thank you,

DEP, Bureau of Air Regulation



# Florida Department of Environmental Protection

Bob Martinez Center  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Charlie Crist  
Governor

Jeff Kottkamp  
Lt. Governor

Michael W. Sole  
Secretary

April 2, 2007

## E-MAIL - RETURN RECEIPT REQUESTED

jvangessel@wm.com

Mr. John Van Gessel  
Vice President & Assistant Secretary  
Waste Management, Inc. of Florida  
2859 Paces Ferry Road  
Suite 1600  
Atlanta, Georgia 30339

Re: DEP File Number 0930104-014-AC  
Okeechobee Landfill Facility  
Okeechobee Landfill, Inc.

Dear Mr. Van Gessel:

On February 28, 2007, the Department received via the electronic permit submittal and processing system (EPSAP) a resubmitted application. On March 8, 2007, we received the hard copy of the application. The professional engineer certification was received on March 12, 2007. The Department received these submissions regarding the subject application.

To continue the processing of the subject permit application, the Department needs the following previously requested information or newly requested information..

### A. Air Quality Impact Analyses Items

1. Please submit all electronic Class I, visibility and deposition modeling files along with tables detailing the results to the Department.
2. Please explain how the terrain of the landfill was modeled. For example, was the existing landfill included in the terrain or was it assumed that the landfill was mostly flat? Provide guidance that was used in determining how to model the landfill terrain.
3. Appendix B, Page 2 of 5, shows a summary of the interim operating scenario. The interim operating scenario Significant Impact Analysis should include only the new emission units or emission increases. The existing emission units should be added only if an increment or AAQS analysis is required. Does the Significant Impact Analysis submitted to the Department for this interim scenario reflect only the new units or does it include all units listed on Page 2?

Re: DEP File Number 0930104-014-AC  
Okeechobee Landfill Facility  
Okeechobee Landfill, Inc.  
April 2, 2007  
Page 2 of 5

4. Please verify that the EPA Regulatory Version, Version 5.71 1a. was used for the Class I analyses.
5. The analysis of soil, vegetation and wildlife as part of the Additional Impact Analysis should include all pollutants subject to PSD. Please submit a full analysis to the Department.
6. Section 3.2 in the Ambient Air Quality Analysis states that short-term and long-term emission rates are the same. Are the short-term emission rates indicative of worst-case scenario/proposed short term permit emission limits?
7. Appendix B, Page 4 of 5 shows the alternative operating scenario with BACT. This table shows 7 proposed flares. Section 4.0 of the Air Quality Analysis, page 16, states that there will be 8 new flares. Please clarify. In addition, page 1 of 5 in Appendix B shows 2 existing flares with a backup flare. Section 4.1 does not include the backup flare nor do the flows correlate with each other.
8. Section 3.6 of the Ambient Air Quality Analysis details the receptor layout. Please indicate the receptor distance used for areas of highest impacts in the refined Increment analyses.
9. Please provide bpip modeling files.
10. The proposed project is PSD for NOx and is expected to emit over 100 TPY. NOx is a precursor to ozone. Please provide an ambient air quality analysis for ozone.
11. Please provide the Class I Increment and AAQS inventories used in the modeling analyses.
12. Please provide receptor information regarding the Class I analysis.

#### B. Air Construction/PSD Permit Application Items

##### Potential to Emit

1. In the application the capacity of the landfills is mentioned in the Support Documentation Section II., subsection 3.3.1. and in Appendix E, LFG (Landfill Gas) Generation Rates & Construction Schedule. The landfill capacity is important in defining the potential to emit for the facility. While on-site and as mentioned in the application, two solid waste permits apparently exist for the existing site and the proposed new site. The solid waste permits referenced are Permit Number 0040842-010-SC for the Berman Road Landfill site and Permit Number 0247963-001-SC for the Clay Farms Landfill site.
  - a. In Appendix E, the memorandum indicates the capacity of each landfill was estimated by Okeechobee Landfill, Inc. to be 23,431,195 tons for the Berman Road Landfill and 119,324,195 tons for the Clay Farms Landfill. One ton of waste was assumed to be equivalent to one cubic yard. Together these two sites occupy approximately 4,300 acres. Please provide a copy of the pertinent

page(s) of these solid waste permits and relevant documentation to support the cited "permitted solid waste capacities."

- b. Please provide landfill gas generation graphs for the Berman Road and Clay Farms sites, with landfill gas flow (scfm) plotted versus years.

#### Hydrogen Sulfide (H<sub>2</sub>S) and Sulfur Dioxide (SO<sub>2</sub>) Emissions

2. An H<sub>2</sub>S content from the landfill gas at the Berman Road Landfill of 5,786 ppmv was used in the subject permit application.
  - a. In Appendix A of the application, it was stated that municipal solid waste that is landfilled contains approximately 29% construction & demolition (C&D) waste. Does the Berman Road Landfill accept C&D wastes such as wallboard? If so, what has been the approximate % of C&D waste? What is the anticipated % C&D waste for the Clay Farms site?
  - b. Has the H<sub>2</sub>S content of the present landfill gas exceeded 5,786 ppmv? Is the H<sub>2</sub>S content anticipated to remain around this value for the Berman Road site and the Clay Farms site?
3. Does the landfill currently measure the H<sub>2</sub>S content of the landfill gas? If so, at what frequency is it measured and how & where is it measured?
4. Prior to landfill gas going to the proposed desulphurization system landfill gas is collected in a collection system then routed to this proposed system for removal. Was a landfill gas collection efficiency assumed in the potential emissions calculations for H<sub>2</sub>S and SO<sub>2</sub> emissions? If so, what was the collection efficiency assumed?
5. A control efficiency of 93% was used to calculate SO<sub>2</sub> potential emissions. Based on my visit to the LO-CAT® II system at the Pompano Beach Landfill, that unit operated at an 80% reduction efficiency. The Pompano Landfill gas has an H<sub>2</sub>S content of approximately 5,000 ppmv reducing it to 1,000 ppmv prior to the combustion turbine inlets.
  - a. Does the manufacturer have any specific information for the LO-CAT® II system? The brochure provided in the application appears to be general to "LO-CAT® systems."
  - b. Please describe how H<sub>2</sub>S monitoring is currently conducted with LO-CAT® systems.
  - c. In Appendix H, the brochure provided from the manufacturer of the LO-CAT® systems claims to provide a guarantee. The brochure advertises systems that can be designed for better than 99.9% H<sub>2</sub>S removal. Does the manufacturer guarantee the 93% control efficiency? How does the manufacturer propose to demonstrate compliance with the control efficiency? Please provide a copy of the written guarantee from the manufacturer.



- d. In Appendix H, a brochure from the manufacturer of the Mars® 100 combustion turbines, Solar Turbines, Inc., was provided. What is the combustion turbine specification for H<sub>2</sub>S inlet to the Mars® 100 unit described in the brochure?
  - e. In Appendix H, a brochure was provided for the MINI-CAT® system. In the brochure it was mentioned this system is “adaptable to landfill gas treatment applications.” Has this type of system been used at landfills anywhere?
6. Good Table 2-5, in Appendix D ranking the best available control technologies for SO<sub>2</sub>. In subsection 2.5, the narrative states that costs were “scaled up” from vendor quotes.
    - a. Please provide a copy of the cost quote from the vendor to support the \$5,000,000 capital cost and the \$500,000 annual O&M cost figures cited in Table 2-4 as applicable to the LO-CAT® system.
    - b. In Table 2-4 and Table 2-5, a cost of SO<sub>2</sub> removed in \$/ton was provided as \$267.03 for the LO-CAT® system. Please provide the specific calculation used to calculate this value.
  7. On Page 33 of 122 of the application form, F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION, SO<sub>2</sub> information is provided. Potential emissions of 131 lb/hour and 575 tons/year of SO<sub>2</sub> are shown along with a Total Percent Efficiency Control of 93. An Emission Factor of 400 ppmvd is also shown. The Calculation of Emissions refers to Appendix B. Appendix B contains Sample Calculations. Please provide the specific calculation used for the “131 lb/hour” value.
  8. As an extra measure to reduce odors, would the facility be willing to install extraction wells and tie into the gas collection system sooner than the NSPS requirement, e.g., earlier of within 2 years of capping or within 5 years of waste placement?

Non-Methane Organic Compound (NMOC) and Volatile Organic Compound (VOC) Emissions

9. An estimated destruction efficiency of 98% was used in the potential to emit calculations for NMOC and VOC. Assuming no destruction efficiency, NMOC and VOC uncontrolled emissions are estimated to be 1,150 TPY and 448 TPY, respectfully. Prior to the landfill gas going to either the flares and/or turbines the landfill gas is collected in a collection system then routed to these units for destruction. Was a landfill gas collection efficiency assumed potential emissions calculations for NMOC and VOC emissions? If so, what was the collection efficiency assumed?

Other

10. The Florida Board of Professional Engineers changed the seal requirements in 2006. The seal used on the March 5, 2007 certification does not meet the new requirements. Please resubmit a P.E. certification using a new seal. For your information, a copy of the new requirement effective January 2006 is attached.

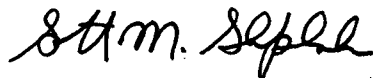
Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to

Re: DEP File Number 0930104-014-AC  
Okeechobee Landfill Facility  
Okeechobee Landfill, Inc.  
April 2, 2007  
Page 5 of 5

responses to Department requests for additional information of an engineering nature. Please note that per Rule 62-4.055(1): "The applicant shall have 90 (ninety) days after the Department mails a timely request for additional information to submit that information to the Department ... Failure of an applicant to provide the timely requested information by the applicable date shall result in denial of the application."

If you have any questions, please contact Ms. Debbie Nelson at 850/921-9537 regarding the air quality impact review or me at 850/921-9532 regarding the permit application review.

Sincerely,



Scott M. Sheplak, P.E.  
Air Permitting South Section  
Bureau of Air Regulation  
Mail Station #5505

Scott.Sheplak@dep.state.fl.us

/sms

Enclosure

copy to:

Mike Stallard, Waste Management, Inc.: mstallard@wm.com

Joe Fasulo, Okeechobee Landfill, Inc.: jfasulo@wm.com

Kristin Alzheimer, P.E., Shaw Environmental & Infrastructure, Inc.:

Kristin.Alzheimer@shawgrp.com

Kelly Fagan, Shaw Environmental & Infrastructure, Inc.: Kelly.Fagan@shawgrp.com

Darrel Graziani, P.E., DEP Southeast District Office: Darrel.Graziani@dep.state.fl.us

Jim Little, U.S. EPA, Region 4: little.james@epa.gov

Dee Morse, National Park Service: Dee\_Morse@nps.gov

-- Extract from 61G15, FLORIDA ADMINISTRATIVE CODE --

Page 29

**CHAPTER 61G15-23 SEALS**

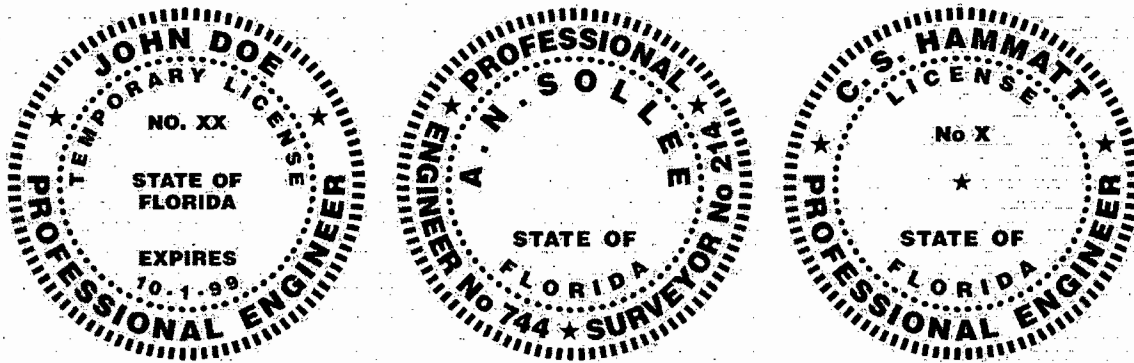
61G15-23.001 Seals Acceptable to the Board.

61G15-23.002 Seal, Signature and Date Shall Be Affixed.

61G15-23.003 Procedures For Signing And Sealing Electronically Transmitted Plans, Specifications, Reports Or Other Documents.

**61G15-23.001 Seals Acceptable to the Board.**

(1) Pursuant to 471.025, F.S., the Board hereby establishes as indicated below the forms of embossing impression seals which are acceptable to the Board. Said seal shall be a minimum of 1 7/8 inches in diameter. All engineers must be utilizing a seal as illustrated in this rule no later than January 1, 2006:



(2) The type of seal in the center may be used only by registrants who are in good standing under both Chapter 471 and Chapter 472, F.S.

Specific Authority 471.025 FS.

Law Implemented 471.025 FS.

History--New 1-8-80, Amended 6-23-80, Formerly 21H-23.01, 21H-23.001, Amended 4-1-97, 2-5-04, 8-8-05.

## Adams, Patty

---

**From:** Harvey, Mary  
**Sent:** Wednesday, April 04, 2007 9:00 AM  
**To:** Adams, Patty  
**Subject:** FW: Letter - Waste Management, Inc. of Florida - Mr. John Van Gessel - Project # 0930104-014-AC

---

**From:** Stallard, Mike [<mailto:MStallard@wm.com>]  
**Sent:** Tuesday, April 03, 2007 1:28 PM  
**To:** Harvey, Mary  
**Subject:** Read: Letter - Waste Management, Inc. of Florida - Mr. John Van Gessel - Project #0930104-014-AC

Your message

To: [MStallard@wm.com](mailto:MStallard@wm.com)  
Subject:

was read on 4/3/2007 1:28 PM.

## Adams, Patty

---

**From:** Harvey, Mary  
**Sent:** Wednesday, April 04, 2007 9:01 AM  
**To:** Adams, Patty  
**Subject:** FW: Letter - Waste Management, Inc. of Florida - Mr. John Van Gessel - Project # 0930104-014-AC

---

**From:** Graziani, Darrel  
**Sent:** Tuesday, April 03, 2007 1:27 PM  
**To:** Harvey, Mary  
**Subject:** Read: Letter - Waste Management, Inc. of Florida - Mr. John Van Gessel - Project #0930104-014-AC

Your message

**To:** 'mstallard@wm.com'; 'jfasulo@wm.com'; 'Kristin.Alzheimer@shawgrp.com'; 'Kelly.Fagan@shawgrp.com'; Graziani, Darrel; 'little.james@epa.gov'; 'dee\_morse@nps.gov'; 'jvangessel@wm.com'  
**Cc:** Sheplak, Scott; Adams, Patty; Gibson, Victoria  
**Subject:** Letter - Waste Management, Inc. of Florida - Mr. John Van Gessel - Project #0930104-014-AC  
**Sent:** 4/3/2007 1:27 PM

was read on 4/3/2007 1:27 PM.

**Adams, Patty**

---

**From:** Harvey, Mary  
**Sent:** Wednesday, April 04, 2007 8:58 AM  
**To:** Holtom, Jonathan; Adams, Patty  
**Subject:** FW: Letter - Waste Management, Inc. of Florida - Mr. John Van Gessel - Project # 0930104-014-AC

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

**From:** Dee\_Morse@nps.gov [mailto:Dee\_Morse@nps.gov]  
**Sent:** Tuesday, April 03, 2007 3:03 PM  
**To:** Harvey, Mary  
**Subject:** Letter - Waste Management, Inc. of Florida - Mr. John Van Gessel - Project # 0930104-014-AC

Return Receipt

Your Letter - Waste Management, Inc. of Florida - Mr. John Van  
document: Gessel - Project #0930104-014-AC

was Dee Morse/DENVER/NPS  
received  
by:

at: 04/03/2007 01:02:30 PM

## Adams, Patty

---

**From:** Harvey, Mary  
**Sent:** Wednesday, April 04, 2007 8:59 AM  
**To:** Adams, Patty  
**Subject:** FW: Letter - Waste Management, Inc. of Florida - Mr. John Van Gessel - Project # 0930104-014-AC

---

**From:** Fasulo, Joe [<mailto:JFasulo@wm.com>]  
**Sent:** Tuesday, April 03, 2007 2:25 PM  
**To:** Harvey, Mary  
**Subject:** Read: Letter - Waste Management, Inc. of Florida - Mr. John Van Gessel - Project #0930104-014-AC

Your message

To: [JFasulo@wm.com](mailto:JFasulo@wm.com)  
Subject:

was read on 4/3/2007 2:25 PM.

**Adams, Patty**

---

**From:** Harvey, Mary  
**Sent:** Wednesday, April 04, 2007 9:00 AM  
**To:** Adams, Patty  
**Subject:** FW: Letter - Waste Management, Inc. of Florida - Mr. John Van Gessel - Project # 0930104-014-AC

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

From: Little.James@epamail.epa.gov [mailto:Little.James@epamail.epa.gov]  
Sent: Tuesday, April 03, 2007 1:43 PM  
To: Harvey, Mary  
Subject: Re: Letter - Waste Management, Inc. of Florida - Mr. John Van Gessel - Project # 0930104-014-AC

We received.

Jim Little - EPA Region 4

"Harvey, Mary"  
<Mary.Harvey@dep.state.fl.us>

04/03/2007 01:26 PM

To  
<mstallard@wm.com>,  
<jfasulo@wm.com>,  
<Kristin.Alzheimer@shawgrp.com>,  
<Kelly.Fagan@shawgrp.com>,  
"Graziani, Darrel"  
<Darrel.Graziani@dep.state.fl.us>  
, James Little/R4/USEPA/US@EPA,  
<dee\_morse@nps.gov>,  
<jvangessel@wm.com>

cc

"Sheplak, Scott"  
<Scott.Sheplak@dep.state.fl.us>,  
"Adams, Patty"  
<Patty.Adams@dep.state.fl.us>,  
"Gibson, Victoria"  
<Victoria.Gibson@dep.state.fl.us>

Subject

Letter - Waste Management, Inc.  
of Florida - Mr. John Van Gessel  
- Project #0930104-014-AC

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Thank you,  
DEP, Bureau of Air Regulation  
[attachment "LTR-John Van Gessel - Project #0930104-014-AC.pdf" deleted by James Little/R4/USEPA/US]

**Adams, Patty**

---

**From:** Harvey, Mary  
**Sent:** Wednesday, April 04, 2007 8:57 AM  
**To:** Sheplak, Scott; Adams, Patty  
**Subject:** FW: Letter - Waste Management, Inc. of Florida - Mr. John Van Gessel - Project # 0930104-014-AC

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

From: Alzheimer, Kristin [mailto:Kristin.Alzheimer@shawgrp.com]  
Sent: Wednesday, April 04, 2007 6:52 AM  
To: Harvey, Mary  
Subject: RE: Letter - Waste Management, Inc. of Florida - Mr. John Van Gessel - Project # 0930104-014-AC

Received 4/4/07.

Mr. Kristin A. Alzheimer, PE

Dear Sir/Madam:

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Thank you,

DEP, Bureau of Air Regulation

-----  
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**Adams, Patty**

---

**From:** Harvey, Mary  
**Sent:** Tuesday, April 03, 2007 1:27 PM  
**To:** 'mstallard@wm.com'; 'jfasulo@wm.com'; 'Kristin.Alzheimer@shawgrp.com'; 'Kelly.Fagan@shawgrp.com'; Graziani, Darrel; 'little.james@epa.gov'; 'dee\_morse@nps.gov'; 'jvangessel@wm.com'  
**Cc:** Sheplak, Scott; Adams, Patty; Gibson, Victoria  
**Subject:** Letter - Waste Management, Inc. of Florida - Mr. John Van Gessel - Project #0930104-014-AC  
**Attachments:** LTR-John Van Gessel - Project #0930104-014-AC.pdf

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Thank you,

DEP, Bureau of Air Regulation



# Florida Department of Environmental Protection

Bob Martinez Center  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Charlie Crist  
Governor

Jeff Kottkamp  
Lt. Governor

Michael W. Sole  
Secretary

May 21, 2007

SENT BY ELECTRONIC MAIL - RETURN RECEIPT REQUESTED

jvangessel@wm.com

Mr. John Van Gessel  
Vice President & Assistant Secretary  
Waste Management, Inc. of Florida  
2859 Paces Ferry Road  
Suite 1600  
Atlanta, Georgia 30339

Re: DEP File Number 0930104-014-AC  
Okeechobee Landfill Facility  
Okeechobee Landfill, Inc.

Dear Mr. Van Gessel:

On May 2, 2007, the Department received additional information regarding the Class I analysis in response to a request from the Department dated April 2, 2007. To continue the processing of the subject permit application, the Department requires the following previously requested information and newly requested information.

1. The Class I analysis submitted to the Department dated May 1, 2007 only addressed the first item or comment with regards to the April 2, 2007 request for additional information. Please submit all additional information requested by the Department listed in the April 2 letter.

Below are new comments regarding the Class I analysis received by the Department on May 1, 2007.

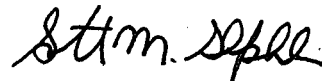
2. The Class I analysis must be completed using the Regulatory Version of the CALPUFF modeling system or a request for approval of the alternate VISTAS's version of the CALPUFF system (following the alternate model guidance provided Section 3.2 of the Guideline on Air Quality Models) should be submitted to EPA Region 4.. The regulatory version of the CALPUFF modeling system, along with the regulatory default settings, located at <http://www.epa.gov/scram001/guidance/mch/cfym109.pdf>, is recommended for use for long range air quality impact assessments by the EPA. [Note that the current regulatory CALPUFF system includes CALMET (Version 5.53a), CALPUFF (Version 5.711a), and CALPOST (Version 5.51).] The EPA and the National Park Service both require the use of the regulatory version at this time.

Re: DEP File Number 0930104-014-AC  
Okeechobee Landfill Facility  
Okeechobee Landfill, Inc.  
May 21, 2007  
Page 2 of 2

3. The "Interim" operating scenario, as explained in the initial application received by the Department February 28, 2007, impacts must be assessed for the Class I area. This includes Class I Increment. The National Park Service concurs and in addition is requesting that the "interim" scenario be assessed with regards to Air Quality Related Values (AQRV's) and that Big Cypress National Preserve be included in the overall Class I analysis.

If you have any questions, please contact Ms. Debbie Nelson at 850/921-9537 regarding the air dispersion modeling review or me at 850/921-9532 regarding the permit application review.

Sincerely,



Scott M. Sheplak, P.E.  
Air Permitting South Section  
Bureau of Air Regulation  
Mail Station #5505  
Scott.Sheplak@dep.state.fl.us

/sms&dn

copy to:

Mike Stallard, Waste Management, Inc.: mstallard@wm.com

Joe Fasulo, Okeechobee Landfill, Inc.: jfasulo@wm.com

Kristin Alzheimer, P.E., Shaw Environmental & Infrastructure, Inc.:

Kristin.Alzheimer@shawgrp.com

Bruce K. Maillet, Shaw Environmental & Infrastructure, Inc.: Bruce.Maillet@shawgrp.com

Darrel Graziani, P.E., DEP Southeast District Office: Darrel.Graziani@dep.state.fl.us

Jim Little, U.S. EPA, Region 4: little.james@epa.gov

Dee Morse, National Park Service: Dee\_Morse@nps.gov

**Adams, Patty**

---

**From:** Harvey, Mary  
**Sent:** Monday, May 21, 2007 3:22 PM  
**To:** 'jvangessel@wm.com'; 'Mike Stallard, Waste Management, Inc.'; 'Joe Fasulo, Okeechobee Landfill, Inc.'; 'Kristin.Alzheimer@shawgrp.com'; 'Bruce K. Maillet, Shaw Environmental & Infrastructure, Inc.'; Graziani, Darrel; 'Jim Little, U.S. EPA, Region 4.'; 'Dee Morse, National Park Service.'  
**Cc:** Sheplak, Scott; Adams, Patty; Gibson, Victoria  
**Subject:** Ltr. - Waste Management, Inc. of Florida  
**Attachments:** LTR-John Van Gessel - Project #0930104-014-AC.pdf - final.pdf

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Thank you,

DEP, Bureau of Air Regulation

5/31/2007

**Adams, Patty**

---

**From:** Harvey, Mary  
**Sent:** Monday, May 21, 2007 3:48 PM  
**To:** Adams, Patty  
**Subject:** FW: Ltr. - Waste Management, Inc. of Florida

---

**From:** Fasulo, Joe [mailto:JFasulo@wm.com]  
**Sent:** Monday, May 21, 2007 3:38 PM  
**To:** Harvey, Mary  
**Subject:** RE: Ltr. - Waste Management, Inc. of Florida

Received.

Joe Fasulo  
District Manager  
Okeechobee Landfill  
10800 NE 128th Ave.  
Okeechobee Florida 34972  
863-357-0111 ext 226  
863-634-2530 cell  
863-763-4832 fax

Waste Management's renewable energy projects create enough energy to power over 1 million homes.

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

**From:** Harvey, Mary [mailto:Mary.Harvey@dep.state.fl.us]  
**Sent:** Monday, May 21, 2007 3:22 PM  
**To:** VanGessel, John; Stallard, Mike; Fasulo, Joe; Kristin.Alzheimer@shawgrp.com; Bruce K. Maillet, Shaw Environmental & Infrastructure, Inc.; Graziani, Darrel; Jim Little, U.S. EPA, Region 4;; Dee Morse, National Park Service:  
**Cc:** Sheplak, Scott; Adams, Patty; Gibson, Victoria  
**Subject:** Ltr. - Waste Management, Inc. of Florida

Dear Sir/Madam:

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Thank you,

5/31/2007





**Adams, Patty**

**From:** Harvey, Mary  
**Sent:** Tuesday, May 22, 2007 8:35 AM  
**To:** Adams, Patty  
**Subject:** FW: Ltr. - Waste Management, Inc. of Florida

---

**From:** VanGessel, John [mailto:JVanGessel@wm.com]  
**Sent:** Monday, May 21, 2007 8:14 PM  
**To:** Harvey, Mary  
**Subject:** RE: Ltr. - Waste Management, Inc. of Florida

I have received the attached letter. Thanks

John Van Gessel  
 Group General Counsel  
 Waste Management  
 Suite 1600  
 2859 W. Paces Ferry Rd.  
 Atlanta, GA 30339  
 (770) 805 3350  
 jvangessel@wm.com

Waste Management's renewable energy projects create enough energy to power over 1 million homes, and its landfills provide over 17,000 acres of protected land for wildlife habitats - 15 are certified by the Wildlife Habitat Council.

**PRIVILEGED AND CONFIDENTIAL**

This e-mail message is intended only for the use of the addressee and may contain information that is privileged, confidential and/or exempt from disclosure. If you are not the intended recipient, please do not disseminate or copy this e-mail in any manner. Instead, please notify us immediately by return e-mail (including the original message in your reply) and by telephone (770-805-3540) and then delete and discard all copies of the e-mail. Thanks.

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

**From:** Harvey, Mary [mailto:Mary.Harvey@dep.state.fl.us]  
**Sent:** Monday, May 21, 2007 3:22 PM  
**To:** VanGessel, John; Stallard, Mike; Fasulo, Joe; Kristin.Alzheimer@shawgrp.com; Bruce K. Maillet, Shaw Environmental & Infrastructure, Inc.; Graziani, Darrel; Jim Little, U.S. EPA, Region 4; Dee Morse, National Park Service  
**Cc:** Sheplak, Scott; Adams, Patty; Gibson, Victoria  
**Subject:** Ltr. - Waste Management, Inc. of Florida

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The Bureau of Air Regulation is issuing electronic documents for permits, notices and other correspondence in lieu of hard

5/31/2007

copies through the United States Postal System, to provide greater service to the applicant and the engineering community. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record.

Thank you,

DEP, Bureau of Air Regulation

## Adams, Patty

---

**From:** Harvey, Mary  
**Sent:** Tuesday, May 22, 2007 8:35 AM  
**To:** Adams, Patty  
**Subject:** FW: Ltr. - Waste Management, Inc. of Florida

---

**From:** Graziani, Darrel  
**Sent:** Monday, May 21, 2007 5:28 PM  
**To:** Harvey, Mary  
**Subject:** Read: Ltr. - Waste Management, Inc. of Florida

Your message

**To:** 'jvangessel@wm.com'; 'Mike Stallard, Waste Management, Inc.'; 'Joe Fasulo, Okeechobee Landfill, Inc.'; 'Kristin.Alzheimer@shawgrp.com'; 'Bruce K. Maillet, Shaw Environmental & Infrastructure, Inc.'; Graziani, Darrel; 'Jim Little, U.S. EPA, Region 4'; 'Dee Morse, National Park Service.'  
**Cc:** Sheplak, Scott; Adams, Patty; Gibson, Victoria  
**Subject:** Ltr. - Waste Management, Inc. of Florida  
**Sent:** 5/21/2007 3:22 PM

was read on 5/21/2007 5:28 PM.

## Adams, Patty

---

**From:** Harvey, Mary  
**Sent:** Tuesday, May 22, 2007 8:36 AM  
**To:** Adams, Patty  
**Subject:** FW: Ltr. - Waste Management, Inc. of Florida

---

**From:** Fasulo, Joe [<mailto:JFasulo@wm.com>]  
**Sent:** Monday, May 21, 2007 3:35 PM  
**To:** Harvey, Mary  
**Subject:** Read: Ltr. - Waste Management, Inc. of Florida

Your message

To: [JFasulo@wm.com](mailto:JFasulo@wm.com)  
Subject:

was read on 5/21/2007 3:35 PM.

## Adams, Patty

---

**From:** Harvey, Mary  
**Sent:** Tuesday, May 22, 2007 12:17 PM  
**To:** Adams, Patty  
**Subject:** FW: Ltr. - Waste Management, Inc. of Florida

---

**From:** Maillet, Bruce [<mailto:Bruce.Maillet@shawgrp.com>]  
**Sent:** Tuesday, May 22, 2007 11:13 AM  
**To:** undisclosed-recipients  
**Subject:** Read: Ltr. - Waste Management, Inc. of Florida

Your message

To: [Bruce.Maillet@shawgrp.com](mailto:Bruce.Maillet@shawgrp.com)  
Subject:

was read on 5/22/2007 11:13 AM.

## Adams, Patty

---

**From:** Harvey, Mary  
**Sent:** Tuesday, May 22, 2007 12:17 PM  
**To:** Adams, Patty  
**Subject:** FW: Ltr. - Waste Management, Inc. of Florida

---

**From:** Alzheimer, Kristin [<mailto:Kristin.Alzheimer@shawgrp.com>]  
**Sent:** Tuesday, May 22, 2007 10:36 AM  
**To:** Harvey, Mary  
**Subject:** Read: Ltr. - Waste Management, Inc. of Florida

Your message

To: [Kristin.Alzheimer@shawgrp.com](mailto:Kristin.Alzheimer@shawgrp.com)  
Subject:

was read on 5/22/2007 10:36 AM.

**Adams, Patty**

---

**From:** Harvey, Mary  
**Sent:** Tuesday, May 22, 2007 12:18 PM  
**To:** Adams, Patty  
**Subject:** FW: Ltr. - Waste Management, Inc. of Florida

**Attachments:** LTR-John Van Gessel - Project #0930104-014-AC.pdf - final.pdf



LTR-John Van Gessel - Project ...

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

From: Forney.Kathleen@epamail.epa.gov [mailto:Forney.Kathleen@epamail.epa.gov]  
Sent: Tuesday, May 22, 2007 9:11 AM  
To: Harvey, Mary  
Subject: Fw: Ltr. - Waste Management, Inc. of Florida

Hey Mary,

We got this email.

Thanks,  
Katy

-----  
Katy R. Forney  
Air Permits Section  
EPA - Region 4  
61 Forsyth St., SW  
Atlanta, GA 30024

Phone: 404-562-9130  
Fax: 404-562-9019

----- Forwarded by Kathleen Forney/R4/USEPA/US on 05/22/2007 09:10 AM  
-----

James  
Little/R4/USEPA/  
US

05/22/2007 09:02  
AM

To  
Kathleen Forney/R4/USEPA/US@EPA  
cc  
Subject  
Fw: Ltr. - Waste Management, Inc.  
of Florida

Katy -

I don't see your name on the distribution list. Please respond.

Jim

"Harvey, Mary"  
<Mary.Harvey@dep  
.state.fl.us>

05/21/2007 03:22  
PM

To  
<jvangessel@wm.com>, "Mike  
Stallard, Waste Management,  
Inc.:" <mstallard@wm.com>, "Joe  
Fasulo, Okeechobee Landfill,  
Inc.:" <jfasulo@wm.com>,  
<Kristin.Alzheimer@shawgrp.com>,  
"Bruce K. Maillet, Shaw  
Environmental & Infrastructure,  
Inc.:"  
<Bruce.Maillet@shawgrp.com>,  
"Graziani, Darrel"  
<Darrel.Graziani@dep.state.fl.us>  
, James Little/R4/USEPA/US@EPA,  
"Dee Morse, National Park  
Service:" <Dee\_Morse@nps.gov>

cc

"Sheplak, Scott"  
<Scott.Sheplak@dep.state.fl.us>,  
"Adams, Patty"  
<Patty.Adams@dep.state.fl.us>,  
"Gibson, Victoria"  
<Victoria.Gibson@dep.state.fl.us>

Subject

Ltr. - Waste Management, Inc. of  
Florida

Dear Sir/Madam:

Please send a "reply" message verifying receipt of the attached document(s); this may be done by selecting "Reply" on the menu bar of your e-mail software and then selecting "Send". We must receive verification of receipt and your reply will preclude subsequent e-mail transmissions to verify receipt of the document(s).

The document(s) may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible.

The document is in Adobe Portable Document Format (pdf). Adobe Acrobat Reader can be downloaded for free at the following internet site:  
<http://www.adobe.com/products/acrobat/readstep.html>.

The Bureau of Air Regulation is issuing electronic documents for permits, notices and other correspondence in lieu of hard copies through the United States Postal System, to provide greater service to the applicant and the engineering community. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record.



Thank you,  
DEP, Bureau of Air Regulation

(See attached file: LTR-John Van Gessel - Project #0930104-014-AC.pdf -  
final.pdf)

**Adams, Patty**

---

**From:** Harvey, Mary  
**Sent:** Tuesday, May 22, 2007 3:48 PM  
**To:** Adams, Patty  
**Subject:** FW: Ltr. - Waste Management, Inc. of Florida

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

From: Dee\_Morse@nps.gov [mailto:Dee\_Morse@nps.gov]  
Sent: Tuesday, May 22, 2007 3:14 PM  
To: Harvey, Mary  
Subject: Ltr. - Waste Management, Inc. of Florida

Return Receipt

Your Ltr. - Waste Management, Inc. of Florida  
document:

was Dee Morse/DENVER/NPS  
received  
by:

at: 05/22/2007 01:13:56 PM



# Florida Department of Environmental Protection

Bob Martinez Center  
2600 Blairstone Road  
Tallahassee, Florida 32399-2400

Charlie Crist  
Governor  
Jeff Kottkamp  
Lt. Governor  
Michael W. Sole  
Secretary

July 18, 2007

*Electronic Mail – Received Receipt Requested*

[jvangessel@wm.com](mailto:jvangessel@wm.com)

Mr. John Van Gessel  
Vice President & Assistant Secretary  
Waste Management, Inc. of Florida  
2859 Paces Ferry Road  
Suite 1600  
Atlanta, Georgia 30339

Re: DEP File Number 0930104-014-AC  
Okeechobee Landfill Expansion and Addition of Control Equipment

Dear Mr. Van Gessel:

On June 19, 2007, the Department received responses to the Department's previous requests for additional information.

After review, it has been determined that the application remains incomplete. In order to continue the processing of the subject permit application, the Department needs the following previously requested information or newly requested information.

#### A. Air Quality Impact Analysis Items

1. Please submit a Class I Prevention of Significant Deterioration (PSD) Significant Impact Analysis, PSD Increment Analysis (if required) and an Air Quality Related Values (AQRV) analysis for the proposed expansion for all operating scenarios, including the "Interim" period. The "Interim" period (prior to installation of controls) is subject to PSD review.

This analysis must be completed using the regulatory version of CALPUFF. The regulatory version of the CALPUFF modeling system, along with the regulatory default settings, is recommended for use for long range air quality impact assessments by the EPA. [Note that the current regulatory CALPUFF system includes CALMET (Version 5.8), CALPUFF (Version 5.8), and CALPOST (Version 5.6397)]. The Class I analysis should also include the Class II areas, Big Cypress National Preserve and Biscayne National Park.

2. Please explain the Interim period further. The Interim period includes the installation of 3 additional flares. When are these flares expected to be installed? Can the Interim period be altered to only have 2 additional flares by installing controls at an earlier date to lower project impacts during this time?
3. The Interim period is only analyzed with regards to PSD Increment and the National Ambient Air Quality Standards. Please submit an analysis regarding additional impacts to soils, vegetation and wildlife with regards to the time period before controls are installed.
4. The Interim period Significant Impact Analyses for the Class I and Class II areas should include all new flares that will be installed prior to controls. If this modeling or analyses concludes that there is a significant impact, all other facility sources, along with other nearby sources (approved Department pollutant-specific inventory) shall be included in the PSD Increment analyses.
5. The Class II analysis submitted to the Department includes a PSD Increment Analysis and National Ambient Air Quality Analysis (NAAQS). These analyses were completed with an inventory of nearby sources which were included in the modeling. Some sources were omitted due to distance and emission rates. While the procedure used for eliminating sources for this project is accepted for the screening area, all sources in the immediate Significant Impact Area should be modeled. Please verify that all of these sources were included in the modeling.
6. Please provide tables and/or spreadsheets for the PSD Increment and NAAQS analyses listing the source id used in the modeling with the corresponding emission unit to clarify which sources were modeled.
7. With regards to the modeling analysis, the locations of the flares are very close together. Please verify the specific location of the new and existing flares for this project and identify them on your plot plan or specify where in the application such data already exists.
8. With regards to the PSD Class II Increment and NAAQS analyses, the application states that receptors were placed "only at locations where the proposed project could potentially have equal to or greater than significance concentration from proposed emission points." Please verify that receptors were placed throughout the Significant Impact Area or SIA for all averaging times. In addition, was a buffer of receptors included?
9. Please note that the Federal Land Manager and the EPA may provide comments regarding this proposed project. Any comments will be forwarded to the applicant.

**B. Air Construction/PSD Permit Application Items**

1. In the response to the Department's previously requested item 1.a., pages from the Department's solid waste permits were submitted with the available solid waste disposal areas circled in red for each site. Review of these pages from the permits indicates the available solid waste disposal areas for the Berman Road Landfill site is 194 acres and the Clay Farms Landfill site is 639 acres. It is claimed that the total "permitted solid waste disposal footprint" is 833 acres for the sites combined.

For your information, each site has its own unique solid waste permitted identification. The Department's solid waste permits allow (permit) phases of a landfill, citing the specific cells of each landfill to be constructed and/or operated at a time.

According to this information and the previously reported estimates, the Berman Road Landfill site occupying 194 acres when filled to its available waste disposal area is expected to hold 23,431,195 tons of waste. The Clay Farms Landfill site is planned to occupy 639 acres and hold up to 119,324,195 tons of waste.

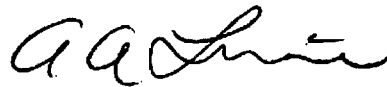
Therefore, the proposed Clay Farms site is approximately 3 times larger in acreage and 6 times larger in solid waste disposal tonnage than the Berman Road Landfill site.

2. In the response to the Department's previously requested item 1.b., a landfill gas generation curve was provided as Attachment 6 in the June 8, 2007, letter from Shaw Environmental, Inc. The curve includes landfill gas generated from both landfill sites combined. In the Department's request dated April 2, 2007, curves were requested from each individual site.
  - a. Please provide a landfill gas generation curve for each site, e.g., the Berman Road Landfill site and the Clay Farms Landfill site.
  - b. Also, please provide graphs for each site showing the mass emissions rates in tons per year showing emission levels "pre-BACT" and emissions "with BACT" for the following pollutants: SO<sub>2</sub>, CO, NO<sub>x</sub> and PM<sub>10</sub>. In what year are (or were) the significant emission rates (SER's) tons per year values exceeded for each pollutant? Show on the graph the point in time at which this occurs.
3. In the Department's request dated April 2, 2007, the following question was asked -  
*"3. Does the landfill currently measure the H<sub>2</sub>S content of the landfill gas? If so, at what frequency is it measured and how & where is it measured?"* The response was - *"The Facility does not currently measure H<sub>2</sub>S content at the landfill."* The use of dräger tubes is an inexpensive technique to sample H<sub>2</sub>S concentrations. The Department has the following questions:
  - a. Is H<sub>2</sub>S measured at the landfill in either the ambient air or from the landfill gas extraction wells? Are levels of H<sub>2</sub>S at the landfill site monitored by personnel detection devices?
  - b. While on-site the Department found the facility using a portable analyzer unit referred to as the "GEM2000" unit to perform the sampling and analysis of landfill gas parameters. Are these analyzers capable of measuring the H<sub>2</sub>S content of the landfill gas?
4. In the PSD permit application dated March 7, 2007, the cost of SO<sub>2</sub> removed in \$/ton was provided as \$267.03 for the LO-CAT® system. In the recent response, the revised cost effectiveness values are between \$383 and \$527. The cost estimates were based on an H<sub>2</sub>S content of 6,000 ppmv.
  - a. In the response, the turbine generators that may be installed at a future date have an inlet concentration of 400 ppmv. Please provide the documentation from Solar Turbines, Inc., the vendor of the Mars® 100 combustion turbines, supporting this inlet concentration specification.

The Department will resume processing your application after receipt of the requested information. Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. Please note that per Rule 62-4.055(1): "The applicant shall have 90 (ninety) days after the Department mails a timely request for additional information to submit that information to the Department ... Failure of an applicant to provide the timely requested information by the applicable date shall result in denial of the application."

If you have any questions, please contact Ms. Debbie Nelson at 850/921-9537 regarding the air quality impact review or Scott Sheplak at 850/921-9532 regarding the permit application review.

Sincerely,



A. A. Linero, P.E.  
Program Administrator  
Air Permitting South Section

AAL/dn/sms

copy to:

Mike Stallard, Waste Management, Inc.: [mstallard@wm.com](mailto:mstallard@wm.com)

Joe Fasulo, Okeechobee Landfill, Inc.: [jfasulo@wm.com](mailto:jfasulo@wm.com)

Kristin Alzheimer, P.E., Shaw Environmental: [kristin.alzheimer@shawgrp.com](mailto:kristin.alzheimer@shawgrp.com)

Kelly A. Fagan, P.E., Shaw Environmental & Infrastructure, Inc.: [kelly.fagan@shawgrp.com](mailto:kelly.fagan@shawgrp.com)

Lee Hoefert, P.E., DEP Southeast District Office: [lee.hoefert@dep.state.fl.us](mailto:lee.hoefert@dep.state.fl.us)

Jim Little, U.S. EPA, Region 4: [little.james@epa.gov](mailto:little.james@epa.gov)

Dee Morse, National Park Service: [dee\\_morse@nps.gov](mailto:dee_morse@nps.gov)

## Adams, Patty

---

**From:** VanGessel, John [JVanGessel@wm.com]  
**Sent:** Saturday, July 21, 2007 2:18 PM  
**To:** Nelson, Deborah  
**Cc:** Adams, Patty; Sheplak, Scott; Linero, Alvaro; Stallard, Mike; Fasulo, Joe; kristin.alzheimer@shawgrp.com; kelly.fagan@shawgrp.com; Hoefert, Lee; little.james@epa.gov; Dee\_Morse@nps.gov  
**Subject:** RE: Letter - Waste Management, Inc. of Florida - Mr. John Van Gessel - Project # 0930104-014-AC

I hereby verify receipt of your letter dated July 18th, sorry for the delay in responding. We will review the same and respond. Thank you.

John Van Gessel  
Group General Counsel  
Waste Management  
Suite 1600  
2859 W. Paces Ferry Rd.  
Atlanta, GA 30339  
(770) 805 3350  
jvangessel@wm.com

Waste Management's renewable energy projects create enough energy to power over 1 million homes, and its landfills provide over 17,000 acres of protected land for wildlife habitats - 15 are certified by the Wildlife Habitat Council.

> PRIVILEGED AND CONFIDENTIAL

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>

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

**From:** Nelson, Deborah [mailto:Deborah.Nelson@dep.state.fl.us]  
**Sent:** Wednesday, July 18, 2007 7:39 PM  
**To:** VanGessel, John  
**Cc:** Adams, Patty; Sheplak, Scott; Linero, Alvaro; Nelson, Deborah; Stallard, Mike; Fasulo, Joe; kristin.alzheimer@shawgrp.com; kelly.fagan@shawgrp.com; Hoefert, Lee; little.james@epa.gov; Dee\_Morse@nps.gov  
**Subject:** Letter - Waste Management, Inc. of Florida - Mr. John Van Gessel - Project #0930104-014-AC

Dear Sir/Madam:

Please send a "reply" message verifying receipt of the attached document(s); this may be done by selecting "Reply" on the menu bar of your e-mail software and then selecting "Send". We must receive verification of receipt and your reply will preclude subsequent e-mail transmissions to verify receipt of the document(s).

The document(s) may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible.

The document is in Adobe Portable Document Format (pdf). Adobe Acrobat Reader can be downloaded for free at the following internet site:  
<http://www.adobe.com/products/acrobat/readstep.html>.

The Bureau of Air Regulation is issuing electronic documents for permits, notices and other correspondence in lieu of hard copies through the United States Postal System, to provide greater service to the applicant and the engineering community. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record.

Thank you,

DEP, Bureau of Air Regulation





# Florida Department of Environmental Protection

Bob Martinez Center  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Charlie Crist  
Governor

Jeff Kottkamp  
Lt. Governor

Michael W. Sole  
Secretary

November 14, 2007

*Electronic Mail – Received Receipt Requested*

[jvangessel@wm.com](mailto:jvangessel@wm.com)

Mr. John Van Gessel  
Vice President & Assistant Secretary  
Waste Management, Inc. of Florida  
2859 Paces Ferry Road  
Suite 1600  
Atlanta, Georgia 30339

Re: DEP File Number 0930104-014-AC  
Okeechobee Landfill Facility  
Okeechobee Landfill, Inc.

Dear Mr. Van Gessel:

On October 16, 2007, the Department received responses to the Department's previous requests for additional information.

After review, it has been determined that the application remains incomplete. In order to continue the processing of the subject permit application, the Department needs the following previously requested information.

#### A. Air Quality Impact Analyses Items

1. With regards to the Department's previous letter dated July 18, 2007, please submit the requested item A.1.

Further, the letter the Department received on October 16, states that the National Park Service (NPS) has not provided comments regarding the initial application. Class I modeling was not included in that submittal and the Department notified the Park Service that the application was incomplete with regards to many issues. The Department notified the NPS that the Department would inform them upon completion of the modeling so they may perform their review. Regardless, the NPS has provided comments regarding the need for the "interim" modeling and sensitive Class II modeling, which has been forwarded to Shaw Environmental, Inc. If comments from the Park Service regarding procedure is required, the NPS frequently recommends that applicants with procedural issues prepare a modeling protocol for their review.

2. With regards to the July 18, 2007 letter, please submit the requested item A.3.
3. With regards to the response to the letter dated July 18, 2007, items A.4. and A.5., the Department helped create inventories. However, the Department did not conduct modeling to determine the significant impact area (SIA) for this project. Please include all sources in your SIA for increment modeling. Please provide all modeling discussed in this response.

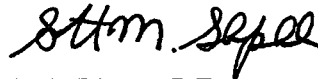
Re: DEP File Number 0930104-014-AC  
Okeechobee Landfill Facility  
Okeechobee Landfill, Inc.  
November 14, 2007  
Page 2 of 2

4. With regards to the response to the letter dated July 18, 2007, item A.8., the initial modeling should determine a significant impact area, if significant. This entire significant impact area, plus a buffer, should be modeled for Increment and National Ambient Air Quality Standards. Please contact the Department if further clarification is needed.
5. With regards to the letter dated July 18, 2007, item A.9. remains applicable.

The Department will resume processing your application after receipt of the requested information. Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. Please note that per Rule 62-4.055(1): "The applicant shall have 90 (ninety) days after the Department mails a timely request for additional information to submit that information to the Department ... Failure of an applicant to provide the timely requested information by the applicable date shall result in denial of the application."

If you have any questions, please contact Ms. Debbie Nelson at 850/921-9537 regarding the air quality impact review or me at 850/921-9523 regarding the permit application review.

Sincerely,



*for* A. A. Linero, P.E.  
Program Administrator  
Air Permitting South Section  
Bureau of Air Regulation  
Mail Station #5505

AAL/sms/dn

copy to:

Mr. Mike Stallard, Waste Management, Inc.: [mstallard@wm.com](mailto:mstallard@wm.com)

Mr. Joe Fasulo, Okeechobee Landfill, Inc.: [jfasulo@wm.com](mailto:jfasulo@wm.com)

Mr. Kristin Alzheimer, P.E., Shaw Environmental & Infrastructure, Inc.:

[Kristin.Alzheimer@shawgrp.com](mailto:Kristin.Alzheimer@shawgrp.com)

Ms. Kelly A. Fagan, P.E., Shaw Environmental & Infrastructure, Inc.: [Kelly.Fagan@shawgrp.com](mailto:Kelly.Fagan@shawgrp.com)

Mr. Lee Hoefert, P.E., DEP Southeast District Office: [Lee.Hoefert@dep.state.fl.us](mailto:Lee.Hoefert@dep.state.fl.us)

Mr. Jim Little, U.S. EPA, Region 4: [little.james@epa.gov](mailto:little.james@epa.gov)

Mr. Dee Morse, National Park Service: [Dee\\_Morse@nps.gov](mailto:Dee_Morse@nps.gov)

**Harvey, Mary**

**From:** Harvey, Mary  
**Sent:** Wednesday, November 14, 2007 11:55 AM  
**To:** 'r. Mike Stallard, Waste Management, Inc.:'; 'Mr. Joe Fasulo, Okeechobee Landfill, Inc.:'; 'Kristin.Alzheimer@shawgrp.com'; 'Ms. Kelly A. Fagan, P.E., Shaw Environmental & Infrastructure, Inc.:'; Hoefert, Lee; 'Mr. Jim Little, U.S. EPA, Region 4:'; 'Mr. Dee Morse, National Park Service:'; 'jvangessel@wm.com'  
**Cc:** Sheplak, Scott; Adams, Patty; Gibson, Victoria  
**Subject:** Letter-Mr. John Van Gessel - DEP File Number 0930104-014-AC  
**Attachments:** letter-John Van Gessel-Okeechobee Landfill Facility.pdf

Tracking:	Recipient	Delivery	Read
✓	'r. Mike Stallard, Waste Management, Inc.:'		
✓	'Mr. Joe Fasulo, Okeechobee Landfill, Inc.:'		
✓	'Kristin.Alzheimer@shawgrp.com'		
✓	'Ms. Kelly A. Fagan, P.E., Shaw Environmental & Infrastructure, Inc.:'		
✓	Hoefert, Lee		Read: 11/14/2007 12:02 PM
✓	'Mr. Jim Little, U.S. EPA, Region 4:'		
✓	'Mr. Dee Morse, National Park Service:'		
✓	'jvangessel@wm.com'		
✓	Sheplak, Scott		Read: 11/14/2007 12:17 PM
✓	Adams, Patty	Delivered: 11/14/2007 11:55 AM	Read: 11/14/2007 12:09 PM
	Gibson, Victoria	Delivered: 11/14/2007 11:55 AM	

Dear Sir/Madam:

Please send a "reply" message verifying receipt of the attached document(s); this may be done by selecting "Reply" on the menu bar of your e-mail software and then selecting "Send". We must receive verification of receipt and your reply will preclude subsequent e-mail transmissions to verify receipt of the document(s).

The document(s) may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible.

The document is in Adobe Portable Document Format (pdf). Adobe Acrobat Reader can be downloaded for free at the following internet site: <http://www.adobe.com/products/acrobat/readstep.html>.

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Thank you,

DEP, Bureau of Air Regulation

11/14/2007

## Harvey, Mary

---

**From:** Sheplak, Scott  
**To:** Harvey, Mary  
**Sent:** Wednesday, November 14, 2007 12:18 PM  
**Subject:** Read: FW: Letter-Mr. John Van Gessel - DEP File Number 0930104-014-AC

Your message

**To:** Sheplak, Scott  
**Cc:** Gibson, Victoria; Adams, Patty; 'Katy Forney, EPA Region 4'  
**Subject:** FW: Letter-Mr. John Van Gessel - DEP File Number 0930104-014-AC  
**Sent:** 11/14/2007 11:56 AM

was read on 11/14/2007 12:18 PM.

## Harvey, Mary

---

**From:** Stallard, Mike [MStallard@wm.com]  
**To:** Harvey, Mary  
**Sent:** Wednesday, November 14, 2007 11:56 AM  
**Subject:** Read: Letter-Mr. John Van Gessel - DEP File Number 0930104-014-AC

Your message

To: MStallard@wm.com  
Subject:

was read on 11/14/2007 11:56 AM.

## Harvey, Mary

---

**From:** Fagan, Kelly [Kelly.Fagan@shawgrp.com]  
**To:** undisclosed-recipients  
**Sent:** Wednesday, November 14, 2007 12:51 PM  
**Subject:** Read: Letter-Mr. John Van Gessel - DEP File Number 0930104-014-AC

Your message

**To:** Kelly.Fagan@shawgrp.com  
**Subject:**

was read on 11/14/2007 12:51 PM.

**Harvey, Mary**

---

**From:** Fasulo, Joe [JFasulo@wm.com]  
**Sent:** Wednesday, November 14, 2007 2:42 PM  
**To:** Harvey, Mary  
**Subject:** RE: Letter-Mr. John Van Gessel - DEP File Number 0930104-014-AC

Received.

Joe Fasulo  
District Manager  
Okeechobee Landfill  
10800 NE 128th Ave.  
Okeechobee Florida 34972  
863-357-0111 ext 226  
863-634-2530 cell  
863-763-4832 fax

Waste Management's renewable energy projects create enough energy to power over 1 million homes.

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

**From:** Harvey, Mary [mailto:Mary.Harvey@dep.state.fl.us]  
**Sent:** Wednesday, November 14, 2007 11:55 AM  
**To:** Stallard, Mike; Fasulo, Joe; Kristin.Alzheimer@shawgrp.com; Ms. Kelly A. Fagan, P.E., Shaw Environmental & Infrastructure, Inc.; Hoefert, Lee; Mr. Jim Little, U.S. EPA, Region 4;; Mr. Dee Morse, National Park Service;; VanGessel, John  
**Cc:** Sheplak, Scott; Adams, Patty; Gibson, Victoria  
**Subject:** Letter-Mr. John Van Gessel - DEP File Number 0930104-014-AC

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Thank you,

11/14/2007

## Harvey, Mary

---

**From:** Fasulo, Joe [JFasulo@wm.com]  
**To:** Harvey, Mary  
**Sent:** Wednesday, November 14, 2007 12:58 PM  
**Subject:** Read: Letter-Mr. John Van Gessel - DEP File Number 0930104-014-AC

Your message

To: JFasulo@wm.com  
Subject:

was read on 11/14/2007 12:58 PM.



## Harvey, Mary

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**From:** Adams, Patty  
**To:** Harvey, Mary  
**Sent:** Wednesday, November 14, 2007 12:09 PM  
**Subject:** Read: FW: Letter-Mr. John Van Gessel - DEP File Number 0930104-014-AC

Your message

**To:** Sheplak, Scott  
**Cc:** Gibson, Victoria; Adams, Patty; 'Katy Forney, EPA Region 4'  
**Subject:** FW: Letter-Mr. John Van Gessel - DEP File Number 0930104-014-AC  
**Sent:** 11/14/2007 11:56 AM

was read on 11/14/2007 12:09 PM.

## Harvey, Mary

---

**From:** Alzheimer, Kristin [Kristin.Alzheimer@shawgrp.com]  
**To:** Harvey, Mary  
**Sent:** Wednesday, November 14, 2007 1:06 PM  
**Subject:** Read: Letter-Mr. John Van Gessel - DEP File Number 0930104-014-AC

Your message

To: Kristin.Alzheimer@shawgrp.com  
Subject:

was read on 11/14/2007 1:06 PM.

## Harvey, Mary

---

**From:** Hoefert, Lee  
**To:** Harvey, Mary  
**Sent:** Wednesday, November 14, 2007 12:02 PM  
**Subject:** Read: Letter-Mr. John Van Gessel - DEP File Number 0930104-014-AC

Your message

**To:** 'r. Mike Stallard, Waste Management, Inc.'; 'Mr. Joe Fasulo, Okeechobee Landfill, Inc.'; 'Kristin.Alzheimer@shawgrp.com'; 'Ms. Kelly A. Fagan, P.E., Shaw Environmental & Infrastructure, Inc.'; Hoefert, Lee; 'Mr. Jim Little, U.S. EPA, Region 4'; 'Mr. Dee Morse, National Park Service'; 'jvangessel@wm.com'  
**Cc:** Sheplak, Scott; Adams, Patty; Gibson, Victoria  
**Subject:** Letter-Mr. John Van Gessel - DEP File Number 0930104-014-AC  
**Sent:** 11/14/2007 11:55 AM

was read on 11/14/2007 12:02 PM.

## Harvey, Mary

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**From:** Forney.Kathleen@epamail.epa.gov  
**Sent:** Wednesday, November 14, 2007 4:38 PM  
**To:** Harvey, Mary  
**Subject:** Re: FW: Letter-Mr. John Van Gessel - DEP File Number 0930104-014-AC

Got it. Thanks

-----

Katy R. Forney  
Air Permits Section  
EPA - Region 4  
61 Forsyth St., SW  
Atlanta, GA 30024

Phone: 404-562-9130  
Fax: 404-562-9019

"Harvey, Mary"  
<Mary.Harvey@dep  
.state.fl.us>

11/14/2007 11:55  
AM

"Sheplak, Scott" To  
<Scott.Sheplak@dep.state.fl.us>  
cc

"Gibson, Victoria"  
<Victoria.Gibson@dep.state.fl.us>  
, "Adams, Patty"  
<Patty.Adams@dep.state.fl.us>,  
Kathleen Forney/R4/USEPA/US@EPA  
Subject  
FW: Letter-Mr. John Van Gessel -  
DEP File Number 0930104-014-AC

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**From:** Harvey, Mary  
**Sent:** Wednesday, November 14, 2007 11:55 AM  
**To:** 'r. Mike Stallard, Waste Management, Inc.':; 'Mr. Joe Fasulo, Okeechobee Landfill, Inc.':; 'Kristin.Alzheimer@shawgrp.com'; 'Ms. Kelly A. Fagan, P.E., Shaw Environmental & Infrastructure, Inc.':; Hoefert, Lee; 'Mr. Jim Little, U.S. EPA, Region 4:':; 'Mr. Dee Morse, National Park Service:':; 'jvangessel@wm.com'  
**Cc:** Sheplak, Scott; Adams, Patty; Gibson, Victoria  
**Subject:** Letter-Mr. John Van Gessel - DEP File Number 0930104-014-AC

## Harvey, Mary

---

**From:** Dee\_Morse@nps.gov  
**Sent:** Friday, November 16, 2007 12:42 PM  
**To:** Harvey, Mary  
**Subject:** Letter-Mr. John Van Gessel - DEP File Number 0930104-014-AC

### Return Receipt

Your document: Letter-Mr. John Van Gessel - DEP File Number 0930104-014-AC

was received by: Dee Morse/DENVER/NPS

at: 11/16/2007 10:41:55 AM

## Harvey, Mary

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**From:** VanGessel, John [JVanGessel@wm.com]  
**To:** Harvey, Mary  
**Sent:** Wednesday, November 14, 2007 5:38 PM  
**Subject:** Read: Letter-Mr. John Van Gessel - DEP File Number 0930104-014-AC

Your message

To: JVanGessel@wm.com  
Subject:

was read on 11/14/2007 5:38 PM.

**Harvey, Mary**

**From:** VanGessel, John [JVanGessel@wm.com]  
**Sent:** Wednesday, November 14, 2007 5:40 PM  
**To:** Harvey, Mary; Stallard, Mike; Fasulo, Joe; Kristin.Alzheimer@shawgrp.com; Ms. Kelly A. Fagan, P.E., Shaw Environmental & Infrastructure, Inc.; Hoefert, Lee; Mr. Jim Little, U.S. EPA, Region 4;; Mr. Dee Morse, National Park Service:  
**Cc:** Sheplak, Scott; Adams, Patty; Gibson, Victoria  
**Subject:** RE: Letter-Mr. John Van Gessel - DEP File Number 0930104-014-AC

I have received the attached letter. Thanks

John Van Gessel  
 Group General Counsel  
 Waste Management  
 Suite 1600  
 2859 W. Paces Ferry Rd.  
 Atlanta, GA 30339  
 (770) 805 3350  
 jvangessel@wm.com

Waste Management's renewable energy projects create enough energy to power over 1 million homes, and its landfills provide over 17,000 acres of protected land for wildlife habitats - 15 are certified by the Wildlife Habitat Council.

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

**From:** Harvey, Mary [mailto:Mary.Harvey@dep.state.fl.us]  
**Sent:** Wednesday, November 14, 2007 11:55 AM  
**To:** Stallard, Mike; Fasulo, Joe; Kristin.Alzheimer@shawgrp.com; Ms. Kelly A. Fagan, P.E., Shaw Environmental & Infrastructure, Inc.; Hoefert, Lee; Mr. Jim Little, U.S. EPA, Region 4;; Mr. Dee Morse, National Park Service;; VanGessel, John  
**Cc:** Sheplak, Scott; Adams, Patty; Gibson, Victoria  
**Subject:** Letter-Mr. John Van Gessel - DEP File Number 0930104-014-AC

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