TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION

APPLICANT

Escambia County Board of County Commissioners
Perdido Landfill
13009 Beulah Road
Cantonment, Florida 325533-8801

Perdido Landfill
Facility ID No. 0330246

PROJECT

Project No. 0330246-007-AC
Application for Title V Source Air Construction Permit
GCCS Expansion Modification

COUNTY

Escambia, Florida

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Air Resource Section
Northwest District Office
160 W Government Street, Suite 308
Pensacola, Florida 32502-5740

September 26, 2012

1. GENERAL PROJECT INFORMATION

Air Pollution Regulations

Projects at stationary sources with the potential to emit air pollution are subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.). The statutes authorize the Department of Environmental Protection (Department) to establish regulations regarding air quality as part of the Florida Administrative Code (F.A.C.), which includes the following applicable chapters: 62-4 (Permits); 62-204 (Air Pollution Control – General Provisions); 62-210 (Stationary Sources – General Requirements); 62-212 (Stationary Sources – Preconstruction Review); 62-213 (Operation Permits for Major Sources of Air Pollution); 62-296 (Stationary Sources - Emission Standards); and 62-297 (Stationary Sources – Emissions Monitoring). Specifically, air construction permits are required pursuant to Rules 62-4, 62-210 and 62-212, F.A.C.

In addition, the U. S. Environmental Protection Agency (EPA) establishes air quality regulations in Title 40 of the Code of Federal Regulations (CFR). Part 60 specifies New Source Performance Standards (NSPS) for numerous industrial categories. Part 61 specifies National Emission Standards for Hazardous Air Pollutants (NESHAP) based on specific pollutants. Part 63 specifies NESHAP based on the Maximum Achievable Control Technology (MACT) for numerous industrial categories. The Department adopts these federal regulations on a quarterly basis in Rule 62-204.800, F.A.C.

Glossary of Common Terms

Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of this permit.

Facility Description and Location

Perdido Landfill is an existing Municipal Solid Waste Landfill, which is categorized under Standard Industrial Classification Code No. 4953, Sanitary Services, Refuse Systems. The facility is located in Escambia County at 13009 Beulah Road in Cantonment, Florida. The UTM coordinates of the existing facility are Zone 16, 462.27 km East and 3382.82 km North; and, Latitude: 30° 34’ 41” North and Longitude: 87° 23’ 43” West. This site is in an area that is in attainment (or designated as unclassifiable) for all air pollutants subject to state and federal Ambient Air Quality Standards (AAQS).

Facility Regulatory Categories

- The facility is not a major source of hazardous air pollutants (HAP).
- The facility has no units subject to the acid rain provisions of the Clean Air Act.
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400, F.A.C., for the Prevention of Significant Deterioration (PSD) of Air Quality.

Project Description

The proposed project is to modify permit 0330246-005-AC, issued August 2, 2010, which expanded the gas collection and control system (GCCS) in existing Landfill Sections 2A, 2B, 3A, 3B and 3C. This modification expands the GCCS further to include active Landfill Section 4 and future Landfill Section 5.

Processing Schedule

August 20, 2012 Received the application for a minor source air pollution construction permit; application complete.

2. PSD APPLICABILITY

General PSD Applicability

For areas currently in attainment with the state and federal AAQS or areas otherwise designated as unclassifiable, the Department regulates major stationary sources of air pollution in accordance with Florida's PSD preconstruction review program as defined in Rule 62-212.400, F.A.C. Under preconstruction review, the Department first must determine if a project is subject to the PSD requirements ("PSD applicability review") and, if so, must conduct a PSD preconstruction review. A PSD applicability review is required for projects at new and existing major stationary sources. In addition, proposed projects at existing minor sources are subject to a PSD applicability review to determine whether potential emissions *from the proposed project itself* will exceed the PSD major stationary source thresholds. A facility is considered a major stationary source with respect to PSD if it emits or has the potential to emit:

- 250 tons per year or more of any regulated air pollutant; or
- 100 tons per year or more of any regulated air pollutant and the facility belongs to one of the following 28 PSD-major facility categories: fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input, coal cleaning plants (with thermal dryers), Kraft pulp mills, portland cement plants, primary zinc smelters, iron and steel mill plants, primary aluminum ore reduction plants, primary copper smelters, municipal incinerators capable of charging more than 250 tons of refuse per day, hydrofluoric, sulfuric, and nitric acid plants, petroleum refineries, lime plants, phosphate rock processing plants, coke oven batteries, sulfur recovery plants, carbon black plants (furnace process), primary lead smelters, fuel conversion plants, sintering plants, secondary metal production plants, chemical process plants, fossil fuel boilers (or combinations thereof) totaling more than 250 million British thermal units per hour heat input, petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels, taconite ore processing plants, glass fiber processing plants and charcoal production plants.

Once it is determined that a project is subject to PSD preconstruction review, the project emissions are compared to the "significant emission rates" defined in Rule 62-210.200, F.A.C., for the following pollutants: carbon monoxide (CO); nitrogen oxides (NO_X); sulfur dioxide (SO_2); particulate matter (PM); particulate matter with a mean particle diameter of 10 microns or less (PM_{10}); volatile organic compounds (VOC); lead (Pb); fluorides (Fl); sulfuric acid mist (SAM); hydrogen sulfide (H_2S); total reduced sulfur (TRS), including H_2S; reduced sulfur compounds, including H_2S; municipal waste combustor organics measured as total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans; municipal waste combustor metals measured as particulate matter; municipal waste combustor acid gases measured as SO_2 and hydrogen chloride (HCl); municipal solid waste landfills emissions measured as non-methane organic compounds (NMOC); and mercury (Hg). In addition, significant emissions rate also means any emissions rate or any net emissions increase associated with a major stationary source or major modification which would construct within 10 kilometers of a Class I area and have an impact on such area equal to or greater than 1 $\mu g/m^3$, 24-hour average.

If the potential emission exceeds the defined significant emissions rate of a PSD pollutant, the project is considered "significant" for the pollutant and the applicant must employ the Best Available Control Technology (BACT) to minimize the emissions and evaluate the air quality impacts. Although a facility or project may be *major* with respect to PSD for only one regulated pollutant, it may be required to install BACT controls for several "significant" regulated pollutants.

<u>PSD Applicability for Project</u>

As provided in the application, the following table summarizes potential emissions and PSD applicability for the project.

Table A. Potential Emissions (Tons/Year) and PSD Applicability

Pollutant (TPY)	Pre-Project Potential Emissions	Contempo-raneous Emissions	Post Project Potential Emissions	Total Emissions Change	Significant Emissions Rate	Subject to PSD
CO	336.00	0	336.00	0	100	NO
NO_X	90.00	0	90.00	0	40	NO
PM/PM_{10}	19.00/1.00	0	19.00/1.00	0	25/15	NO
SO_2	11.00	0	11.00	0	40	NO
VOC	26.00	0	26.00	0	40	NO
H106(HCl)	2.00	0	2.00	0	10	NO
HAP	5.00	0	5.00	0	25	NO
NMOC	25.00	0	25.00	0	50	NO

This facility is a major stationary source for PSD because it emits more than 250 tpy of a regulated pollutant (336 TPY of CO). No potential emissions increases are proposed in this project so the PSD major stationary source thresholds for this type of facility are not equaled or exceeded, and the PSD significant emissions rates of regulated pollutants are not equaled or exceeded. Based on these facts it is determined that this project is not subject to PSD preconstruction review.

3. APPLICATION REVIEW

Application Fee

Title V Facility - no permit processing fees.

Discussion of Emissions

Current Title V permit 0330246-006-AV, Specific Condition A.27, states: "The Escambia County Board of County Commissioners Perdido Landfill (Facility I.D. 0330246), and Gulf Power Company's Perdido Landfill Gas-to-Energy Facility (Facility I.D. 0330286), are considered one facility for purposes of determining applicability of the Prevention of Significant Deterioration requirements. In determining whether any modification proposed for either or both facilities would result in a significant net emissions increase, potential-to-emit emissions of PSD pollutants shall be calculated based on the combined emissions from all emissions units at both facilities." These emissions are based on maximum gas generation at build-out.

MAXIMUM POTENTIAL EMISSIONS

PARAMETERS	All LF Gas Flared (TPY)	3-LF Gas Engines w/Flaring (TPY)	MAXIMUM EMISSIONS (TPY)
CO	220	336	336
NOx	40	90	90
HCl	2	1	2
HAPs	5	4	5
NMOC	25	12	25
PM	10	19	19
PM10		1	1
SO2	8	11	11
VOC	6	26	26

State Requirements

Rules 62-204.800(8)(b)75. and 62-204.800(11)(b)59., F.A.C.

Federal NSPS Provisions

40 CFR 60 Subpart WWW - Standards of Performance for Municipal Solid Waste Landfills, as adopted by Rule 62-204.800(8)(b)75.

Federal NESHAP Provisions

40 CFR 63 Subpart AAAA - National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills, as adopted by Rule 62-204.800(11)(b)59.

Other Draft Permit Requirements

None

4. PRELIMINARY DETERMINATION

The Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations as conditioned by the draft permit. This determination is based on a technical review of the complete application, reasonable assurances provided by the applicant, and the conditions specified in the draft permit. Rick Prusa is the project engineer responsible for reviewing the application and drafting the permit. Additional details of this analysis may be obtained by contacting the project engineer at 850.595.0634 or rick.prusa@dep.state.fl.us.