TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION

APPLICANT

Polk County Waste Resource Management Division
10 Environmental Loop South
Winter Haven

Polk County North Central Landfill

Facility ID No. 1050298

PROJECT

Project No. 1050298-006-AC
Application for Minor Air Construction Permit
Project Name: Landfill Gas Flares

COUNTY

Polk, Florida

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Air Resource Management
Southwest District Office
Temple Terrace, Florida 33637-7600

January 24, 2011

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

Prepared by Nancy E. Knight

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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.

I. <u>Project Description:</u>

A. Applicant:

Brooks Stayer, Waste Resource Management Director
Polk county Waste Resource Management Division
10 Environmental Loop South
Winter Haven, FL

B. Professional Engineer:

Lindsey E. Kennelly, P.E.
SCS Engineers

4041 Park Oaks Blvd, Suite 100
Tampa, FL 33601

C. Project Location:

7425 Highway 540, Winter Haven, FL

D. Project Summary:

To establish a flow rate cap of landfill gas (LFG) to the existing flare (designated as Phase I & II LFG flare) and authorize the construction of a LFG candlestick flare (designated as Phase III LFG flare) at the Class I, Phase III area, as further described in the permit.

E. Application Information:

Application received on: August 20, 2010
Additional information requested on: August 31, 2010
Additional information received on: October 1, 2010
90-day time clock waiver received on: December 7, 2010
Additional information on Phase I & II LFG flare flow rate limit received on: December 16, 2010
Additional information with gas collection system design drawing received on : January 20, 2011

II. Rule Applicability

This project is subject to the preconstruction review requirements of Chapter 403, Florida Statutes and Chapters 62-204 through 62-297, Florida Administrative Code (F.A.C.), as indicated below.

Subject to:	Y/N	Comments
Rule 62-210.300, F.A.C. - Project Not Subject to Prevention of Significant Deterioration or Nonattainment Requirements, F.A.C.	Y	not exempt from general permitting requirements
Rule 62-212.400, F.A.C. - Prevention of Significant Deterioration	N	facility is not a PSD major source
Rule 62-296.320(4), F.A.C. - General Particulate Emission Limiting Standards	Y	Landfill activities are a source of PM emissions
Rules 62-296.320(1) and (2), F.A.C. - General Pollutant Emission Limiting Standards (VOCs and Odor)	Y	landfill gas is a source of odors

Subject to:	Y/N	Comments
Rule 62-296.400, F.A.C. - Stationary Source Emission Standards	N	there is no applicable source category
Rule 62-296.500, F.A.C. - Reasonably Available Control Technology (VOC)	N	Polk County is an attainment area for ozone
Rule 62-296.700, F.A.C. - Reasonably Available Control Technology (PM)	N	this is a new source, therefore not subject to PM RACT rule
Rule 62-204.800, F.A.C. - Standards of Performance for New Stationary Sources (NSPS)	Y	this facility is subject to NSPS 40 CFR 60 Subpart WWW
Rule 62-204.800, F.A.C. National Emission Standard for Hazardous Air Pollutants (NESHAPS – 40 CFR 61)	N	there is no applicable source category
Rule 62-204.800, F.A.C. National Emission Standard for Hazardous Air Pollutants for Source Categories a.k.a. MACT (NESHAPS – 40 CFR 63)	Y	the facility is subject to 40 CFR 63, Subpart AAAA
Chapter 62-213, F.A.C. - Operation Permits for Major Sources of Air Pollution	Y	facility is a major source for the pollutants NOX, SO_2 and CO
Rule 62-297.310, F.A.C. - General Compliance Test Requirements, F.A.C.	Y	VE testing is required for the flares

III. Summary of Emissions

Pollutant	EU No. and brief description	Potential Emissions tons per year	Allowable Emissions
PM	001 MSW landfill with 2 open candlestick flares[1]	8.9	
	004 & 005 diesel powered yard waste grinders	5.4	
	006 passive solar flares	0.3	
	insignificant	0.3	

Pollutant	EU No. and brief description	Potential Emissions tons per year	Allowable Emissions
	sources		
	Total	14.9	
PM10	001 MSW landfill with 2 open candlestick flares[1]	8.9	
	004 & 005 diesel powered yard waste grinders	5.4	
	006 passive solar flares	0.3	
	insignificant sources	0.3	
	Total	14.9	
VOC	001 MSW landfill with 2 open candlestick flares[1]	2.6	
	004 & 005 diesel powered yard waste grinders	6.1	
	006 passive solar flares	0.02	
	insignificant sources	0.5	
	Total	9.2	
NOx	001 MSW landfill with	36.2	

Pollutant	EU No. and brief description	Potential Emissions tons per year	Allowable Emissions
	2 open candlestick flares[1]		
	004 & 005 diesel powered yard waste grinders	76.7	
	006 passive solar flares	0.9	
	insignificant sources	4.1	
	Total	117.9	
SO2	001 MSW landfill with 2 open candlestick flares[1]	127.5	
	004 & 005 diesel powered yard waste grinders	5.1	
	006 passive solar flares	3.4	
	insignificant sources	0.3	
	Total	136.3	
CO	001 MSW landfill with 2 open candlestick flares[1]	196.8	
	004 & 005 diesel	16.5	

Pollutant	EU No. and brief description	Potential Emissions tons per year	Allowable Emissions
	powered yard waste grinders		
	006 passive solar flares	5.1	
	insignificant sources	0.9	
	Total	219.3	
Total HAP	001 MSW landfill with 2 open candlestick flares[1]	8.5[2]	
	004 & 005 diesel powered yard waste grinders	0.1	
	006 passive solar flares	negligible	
	Total	8.6	
VE	001 MSW landfill with 2 open candlestick flares[3]		no visible emissions except for periods not to exceed a total of 5 minutes during any 2 consecutive hours

[1] Emissions for the Phase I & II flare were calculated at a flow rate of 1,800 scfm and at a flow rate of 2,200 scfm for the Phase III flare.
[2] from permit applications received 10/16/1997 and 8/18/2010
[3] for candlestick flares

IV. Conclusions

The emission limits proposed by the applicant will meet all of the requirements of Chapters 62-204 through 297, F.A.C.

The General and Specific Conditions listed in the proposed permit (attached) will assure compliance with all the applicable requirements of Chapters 62-204 through 297, F.A.C.

V. 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. Additional details of this analysis may be obtained by contacting the project engineer at the Florida Department of Environmental Protection Air Resource Management, Southwest District 13051 North Telecom Parkway, Temple Terrace, Florida 33637-7600.

Pursuant to Section 403.087, Florida Statutes and Section 62-4.070, Florida Administrative Code, the Department hereby gives notice of its intent to issue a permit to construct the aforementioned air pollution source in accordance with the draft permit and its conditions as stipulated (see attached).