TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION

APPLICANT

Dakin Natural Soils, Inc.
28510 SR 70 East
Myakka City, FL

Dakin Natural Soils, Inc. - Myakka City

Facility ID No. 0810245

PROJECT

Project No. 0810245-001-AC
Application for Minor Air Construction Permit
Project Name: Air Curtain Incinerator

COUNTY

Manatee County, Florida

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Air and Solid Waste Permitting
Southwest District Office
Temple Terrace, Florida 33637-0926

October 23, 2014

Prepared by Nancy E. Knight

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. Facility Description:

This project is for the initial construction of an air curtain incinerator.

II. Project Description:

A. Applicant:

Jerry Dakin, Owner
Dakin Natural Soils, Inc.
28510 SR 70 East
Myakka City, FL 34251

B. Professional Engineer:

Lynn Robinson
Southern Environmental Sciences, Inc.
1204 North Wheeler Street
Plant City, FL 33563

C. Project Location:

28510 SR 70 East
Myakka City, FL 34251

D. Project Summary:

This project is the initial air construction permit for a proposed air curtain incinerator to control air emissions from the disposal of wood waste ignited within an earthen trench. The fan within the air curtain incinerator is powered by a 110 HP engine that is fired with diesel fuel at 10,400 gallons/year as further described in the permit.

E. Application Information:

Application Received on: October 17, 2014
Application Complete on: October 17, 2014

III. Applicable State and Federal Regulations

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. – Permits Required	Y	subject to 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	air curtain incinerator operations are a source of unconfined particulate matter emissions
Rules 62-296.320(1) and (2), F.A.C. - General Pollutant Emission Limiting Standards (VOCs and Odor)	Y	burning operations are not a significant source of VOC, but may be a source of odors
Rule 62-296.401-418, F.A.C. - Stationary Source Emission Standards	Y	facility is subject to Rule 62-296.401(7),F.A.C. – Air Curtain Incinerators
Rule 62-296.500, F.A.C. - Reasonably Available Control Technology (VOC)	N	Manatee County is not an air quality maintenance 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	facility is subject to 40 CFR 40, Subpart CCCC
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)	N	there is no applicable source category
Chapter 62-213, F.A.C. - Operation Permits for Major Sources of Air Pollution	N	facility is a natural minor source
Rule 62-297.310, F.A.C. - General Compliance Test Requirements, F.A.C.	Y	VE testing is required for EU No. 001

IV. Summary of Emissions

Pollutant	**EU No. and brief description**	**Potential Emissions** (tons/year)	**Allowable Emissions** (tons/year)
PM	001 – Air Curtain Incinerator	20.3	
	Exempt 110 HP Diesel Engine	0.3	
	Total	**20.6**	
PM10	001 – Air Curtain Incinerator	20.3	
	Exempt 110 HP Diesel Engine	0.3	
	Total	**20.6**	
VOC	001 – Air Curtain Incinerator		
	Exempt 110 HP Diesel Engine	0.3	
	Total	**0.3**	
NOx	001 – Air Curtain Incinerator	41.6	
	Exempt 110 HP Diesel Engine	3.5	
	Diesel starter fuel		
	Total	**45.1**	
SO2	001 – Air Curtain Incinerator	1.0	
	Exempt 110 HP Diesel Engine	0.2	
	Total	**1.2**	
CO	001 – Air Curtain Incinerator		
	Exempt 110 HP Diesel Engine	0.8	
	Total	**0.8**	
VE Limitation			
VE	001 – Air Curtain Incinerator		10% (35% during startup)

Notes:

1. Potential emissions for EU No. 001 were calculated using the maximum charging rate of 10 tons per hour (20,800 tons/year and AP 42 Table 2.1-12 emissions factors for PM, NOx, and SO_2 (there are no data for CO and VOC). An 85% control efficiency was also used for the PM calculations.
2. Potential emissions for the exempt 110 HP diesel engine were calculated using 2,080 hours per year (or approximately 10,400 gallons of diesel fuel @ 5 gallons/hour) and emission factors from AP-42 Table 3.3-1.
3. Potential emissions for the diesel starter fuel using 0.5 gallons of starter fuel each day (130 gallons per year based on 260 days per year) and AP-42 Table 1.3-1 are negligible.

V. 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.

VI. 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).