FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest District Office
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926

RICK SCOTT
GOVERNOR

CARLOS LOPEZ-CANTERA
LT. GOVERNOR

HERSCHEL T. VINYARD JR.
SECRETARY

DRAFT PERMIT

PERMITTEE

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

Authorized Representative:
Mr. Jerry Dakin, Owner

Air Permit No. 0810245-001-AC
Permit Expires: 12/31/2015
Dakin Natural Soils - Myakka City
Minor Air Construction Permit
Project: Air Curtain Incinerator

This is the final air construction permit to construct an air curtain incinerator. The proposed work will be conducted at Dakin Natural Soils – Myakka City (Standard Industrial Classification No. 4953). The facility will be located in Manatee County at 28510 SR 70 East in Myakka City, Florida. The UTM coordinates are Zone 17, 376.3 km East, and 3029.5 km North. As noted in the Final Determination provided with this final permit, no changes or only minor changes and clarifications were made to the draft permit.

This final permit is organized by the following sections:

Section 1. General Information

Section 2. Administrative Requirements and Facility-wide Specific Conditions

Section 3. Emissions Unit Specific Conditions

Section 4. Appendices

Due to the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 4 of this permit.

This air pollution permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

Upon issuance of this final permit, any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Hillsborough County, Florida

DRAFT

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Kelley M. Boatwright Effective Date
Permitting & Waste Cleanup Program Administrator
Southwest District

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination, the Final Permit and the Appendices) was sent by electronic mail (or a link to these documents made available electronically on a publicly accessible server) with received receipt requested before the close of business on the date indicated below to the persons listed below.

Jerry Dakin, Dakin Natural Soils Inc. (jerry.ddf@gmail.com)

Cindy Smith, Dakin Natural Soils, Inc. (cindys.ddf@gmail.com)

Scott Cagle, Dakin Natural Soils, Inc. (scott.ddf@gmail.com)

Lynn Robinson, P.E., Southern Environmental Sciences, Inc. (lrobinson@sesfla.com)

Danielle Henry, SWD Compliance Assurance Program Team Leader Manager (danielle.d.henry@dep.state.fl.us)

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

DRAFT

_____ _____

(Clerk) (Date)

FACILITY AND PROJECT DESCRIPTION

Project Description and Affected/Proposed Emission Units

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 air curtain incinerator is subject to the requirements of 40 CFR 60, Subpart CCCC- Standards of Performance for Commercial and Industrial Solid Waste Incineration Units. This project will create the following emissions unit (EU).

EU ID No.	Emissions Unit Description
001	Air Curtain Incinerator

NOTE: *Please reference the Permit No., Facility ID, and Emission Unit ID in all correspondence, test report submittals, applications, etc.*

Exempt Emission Sources/Activities

A 110 HP (max) diesel engine using 10,400 gallons/year pursuant to Rule 62-210.300(3)(a)35., F.A.C. (Categorical and Conditional Exemptions - Stationary Reciprocating Internal Combustion Engines)

This engine is subject to all the limitations and requirements of Title 40, Code of Federal Regulations, Part 63, Subpart ZZZZ- National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. This federal regulation is adopted by reference in Rule 62-204.800(11)(b), F.A.C.

FACILITY REGULATORY CLASSIFICATION

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

PERMIT HISTORY/AFFECTED PERMITS

No previous air permits have been issued for this facility. An air curtain incinerator was previously located at this site owned by Lake St. Clair Mining, LLC (0810222). The Department received a letter on 5/3/12, stating the company ceased burning operations in 10/2010 and was off the property on 7/21/11.

ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority - The permitting authority for this project is the Florida Department of Environmental Protection (Department), Southwest District Office's Air and Solid Waste Permitting Program. The mailing address and phone number is:

Florida Department of Environmental Protection
Southwest District Office
Air and Solid Waste Permitting Program
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926
Telephone: 813-470-5700

All documents related to applications for permits shall be submitted to the above address.

2. Compliance Authority - The compliance authority for this project is the Florida Department of Environmental Protection (Department), Southwest District Office's Compliance Assurance Program. The mailing address and phone number is:

Florida Department of Environmental Protection
Southwest District Office
Compliance Assurance Program
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926
Telephone: 813-470-5700

All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the above address.

3. Appendices - The following Appendices are attached as part of this permit:

a. Appendix A. Citation Formats and Glossary of Common Terms;

b. Appendix B. General Conditions;

c. Appendix C. Common Conditions;

d. Appendix D. Common Testing Requirements; and

e. Appendix E. Solid Waste Requirements and Limitations.

4. Applicable Regulations, Forms and Application Procedures - Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.

5. New or Additional Conditions - For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time.
[Rule 62-4.080, F.A.C.]

6. Modifications - Unless otherwise exempt by rule, the permittee shall not initiate any construction, reconstruction, or modification at the facility and shall not install/modify any pollution control device at the facility without obtaining prior authorization from the Department. Modification is defined as: Any physical change or changes in the method of operations or addition to a facility that would result in an increase in the actual emissions of any air pollutant subject to air regulations, including any not previously emitted, from any emission unit or facility.
[Rules 62-210.200 - Definition of "Modification" and 62-210.300(1)(a), F.A.C.]

7. Annual Operating Report - On or before **April 1** of each year, the permittee shall submit a completed DEP Form 62-210.900(5), "Annual Operating Report for Air Pollutant Emitting Facility" (AOR) for the preceding calendar year. The report may be submitted electronically in accordance with the instructions received with the AOR package sent by the Department, or a hardcopy may be sent to the Compliance Authority.
[Rule 62-210.370(3), F.A.C.]

8. Application for Non-Title V Air Operation Permit - This permit authorizes construction of the permitted emissions unit and initial operation to determine compliance with Department rules. A Non-Title V air operation permit is required for continued operation of the permitted emissions unit. The permittee shall apply for a Non-Title V air operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation or commencing operation as modified. Commencing operation means setting into operation of any emissions unit for any purpose. To apply for a Non-Title V air operation permit, the applicant shall submit the following:

a. the appropriate permit application form *(see current version of Rule 62-210.900, F.A.C. (Forms and Instructions), and/or FDEP Division of Air Resource Management website at: http://www.dep.state.fl.us/air/)*;

b. the appropriate operation permit application fee from Rule 62-4.050(4)(a), F.A.C.;

c. a copy of the initial compliance test report required by Specific Condition No, A.8., if not previously submitted; and

d. copies of the most recent month of records/logs specified in Specific Condition No. A.16.

The application shall be submitted to the Permitting Authority.

[Rules 62-4.030 and 62-4.050, F.A.C.]

FACILITY-WIDE SPECIFIC CONDITIONS

9. Reasonable Precautions - All reasonable precautions shall be taken to prevent and control generation of unconfined emissions of particulate matter. These provisions are applicable to any source, including, but not limited to vehicular movement, transportation of materials, construction, alteration, demolition or wrecking, or industrial related activities such as loading, unloading, storing and handling. Reasonable precautions include the following:

a. curtailing operations during extremely windy conditions;

b. the ash removed from the pit shall be watered as necessary;

c. reasonable care will be taken in loading and unloading the pit to avoid particulate matter from becoming airborne; and

d. watering roads as necessary.

[Rule 62-296.320(4)(c), F.A.C.; Permit Application received October 17, 2014]

10. Solid Waste Requirements and Limitations - The permittee shall comply with the Solid Waste requirements specified in Appendix E. (Solid Waste Requirements and Limitations) of this permit.

A. EU No. 001 Air Curtain Incinerator

This section of the permit addresses the following emissions unit (EU).

EU ID No.	Emissions Unit Description
001	Air Curtain Incinerator - This emissions unit is a McPherson Systems, Inc. Model M30F Air Curtain Destructor (incinerator) used to burn wood waste at a maximum incineration rate of 10 tons/hour. Its manifold measures 30 feet in length, with a burn trench that measures approximately 30 feet in length, 12 feet wide and 15 feet deep. The trench has three vertical sidewalls constructed of vertical concrete-encased steel pipes placed side-by-side with a concrete cap, the forth vertical side/end wall consists of a removable steel curtain to allow ease of ash removal or wood loading. A 37" axial vane fan creates an air curtain by forcing air through a plenum and nozzle. This fan is powered by a 110 HP diesel engine. The high velocity (minimum of 25,000 cubic feet per minute) air discharged from the nozzle forms a curtain as it flows across the burning wood within the trench. The high air volume increases the rate of combustion within the pit. The air curtain traps and recirculates smoke and particulates, reducing emissions.

PERFORMANCE RESTRICTIONS

A.1. Federal Regulatory Requirements - This emission unit is subject to 40 CFR 60, Subpart CCCC – Standards of Performance for Commercial and Industrial Solid Waste Incineration Units, which is adopted by reference in Rule 62-204.800, F.A.C.
[Rule 62-204.800(8)(b), F.A.C.; NSPS 40 CFR 60, Subpart CCCC]

A.2. Other Requirements – Any air curtain incinerator subject to 40 CFR Part 60, Subpart CCCC, adopted and incorporated by reference at Rule 62-204.800, F.A.C., shall be constructed and operated so as to comply with the standards, limitations, and requirements of the applicable subpart and with the requirements of Rule 62-296.401(7), F.A.C., to the extent that those requirements are stricter than or supplemental to, the requirements of the applicable subpart.

(Permitting Note: The conditions of this permit include the requirements referenced in the underlined portion of Specific Conditions No. A.2. above.)

[Rule 62-296.401(7)(a)1, F.A.C.]

A.3. Restricted Operation - The hours of operation are limited to 2080 hours per year.
[Rule 62-210.200 ("Potential to Emit"), F.A.C.; as requested in Permit Application received 10/17/2014]

A.4. Permitted Capacity/Charging Rate – The maximum charging rate to the incinerator shall not exceed the following:

Daily Average Basis (tons/hour)	Annual Basis (tons/ any consecutive 12-month period)
10	20,800

(Permitting Note: The daily average charging rate of 10 TPH may change in the initial operation permit based on the actual charging rate during the initial visible emissions testing.)

The charging rate going into the pit shall be determined by the following procedure:

a. The loader used to charge the pit shall weigh five (5) buckets (rakes) at a representative maximum capacity and representative material to be charged into the burn pit.

b. This average, together with the number of charges, shall then be used to determine the hourly process rate.

c. In addition, the loader bucket (rake) that will be used to charge the pit shall be designated as the only one used in charging the pit.

d. If a different or alternate sized loader bucket is used, a new average shall be determined and noted in the facility's records/logs.

[Rules 62-4.070(3) and 62-210.200 ("Potential to Emit"), F.A.C.]

A.5. Operational Requirements for Air Curtain Incinerator (ACI) - The following requirements shall be met:

a. The pit walls of the earthen trench (width and length) shall be vertical and maintained as such, so that combustion of the waste within the pit is maintained at an adequate temperature and with sufficient air recirculation to provide enough residence time and mixing for proper combustion and control of emission. The following dimensions for the pit must be strictly adhered to: no more than twelve feet (12') wide, between eight feet (8') and fifteen (15') feet deep, and no longer than the length of the manifold. The pit shall not be dug within a previously active portion of a landfill;

b. Except as allowed by Rule 62-296.401(7)(b)4., F.A.C., the only materials that shall be burned in the air curtain incinerator are vegetative material and untreated wood, excluding sawdust. The air curtain incinerator shall not be used to burn any biological waste, hazardous waste, asbestos-containing materials, mercury-containing devices, pharmaceuticals, tires, rubber material, residual oil, used oil asphalt, roofing material, tar, treated wood, plastics, garbage, trash or other material prohibited to be open burned as set forth in Rule 62-256.300(2), F.A.C. Only kerosene, diesel fuel, drip-torch fuel (as used to ignite prescribed fires), untreated wood, virgin oil, natural gas, or liquefied petroleum gas shall be used to start the fire in the air curtain incinerator. The use of used oil, chemicals, gasoline, or tires to start the fire is prohibited;

c. Notwithstanding the provisions of Rule 62-296.401(7)(b)3., F.A.C., the air curtain incinerator may be used for the destruction of animal carcasses in accordance with the provisions of Rule 62-256.700(6), F.A.C. When using an air curtain incinerator to burn animal carcasses, untreated wood may also be burned to maintain good combustion;

d. In no case shall the air curtain incinerator be started before sunrise. All charging shall end no later than one (1) hour after sunset. After charging ceases, air flow shall be maintained until all material within the air curtain incinerator has been reduced to coals, and flames are no longer visible. A log shall be maintained onsite that documents daily beginning and ending times of charging (see recordkeeping requirements below);

e. The air curtain incinerator shall be attended at all times while materials are being burned or flames are visible within the incinerator;

f. The air curtain incinerator shall be located at least fifty (50) feet from any wildlands, brush, combustible structure, or paved public roadway;

g. The material shall not be loaded into the air curtain incinerator such that it protrudes above the air curtain; and

h. Ash shall not be allowed to build up in the pit of the air curtain incinerator to higher than one third (1/3) the pit depth or to the point where the ash begins to impede combustion, whichever occurs first. The pit shall be marked with a permanent indicator to show the 1/3 depth.

[Rules 62-4.070(3) and 62-296.401(7)(b), F.A.C.]

A.6. Fan Operation - In order to ensure the visible emission limitations are not exceeded and objectionable odors are not generated, the air curtain incinerator's fan shall continue to operate after the last charge of each day until all combustion has ceased. For purposes of this condition, "combustion" means the presence of any flames or smoke that causes visible emissions greater than five (5) % opacity.
[Rules 62-210.200 ("Visible Emission") and 62-4.070(3), F.A.C.]

EMISSIONS STANDARDS

A.7. Visible Emissions (VE) Limitations - Outside of startup periods, visible emissions shall not exceed ten percent (10%) opacity, six (6) minute average. During startup periods, which shall not exceed the first (30) minutes of operation, an opacity of up to 35%, averaged over a six (6) minute period, shall be allowed. The general excess emission rule, Rule 62-210.700, F.A.C., shall not apply.
[Rule 62-296.401(7)(b)1., F.A.C.]

COMPLIANCE TESTING REQUIREMENTS

A.8. Initial Compliance Test - In order to determine compliance with Specific Condition A.7. above, the permittee shall test the air curtain incinerator for visible emissions within 60 days after reaching the maximum permitted charging rate of 10 tons/hour, but no later than 180 days after its initial startup. Submit a copy of the initial test report in accordance with Specific Condition A.17. to the Permitting Authority within 45 days of such testing.
[Rules 62-297.310, F.A.C. and 62-4.070(3), F.A.C.; 40 CFR 60.8]

A.9. Compliance Tests After Initial Testing - During each federal fiscal year (October 1st to September 30th), the air curtain incinerator shall be tested to demonstrate compliance with the emissions standards for visible emissions (see Specific Condition No. A.7.).
[Rule 62-297.310, F.A.C.; 40 CFR 60.2255]

A.10. Compliance Test Requirements - Compliance tests shall be conducted in accordance with the applicable requirements specified in Appendix D (Common Testing Requirements) of this permit.
[Rule 62-297.310, F.A.C.]

A.11. Compliance Test Method - Required compliance tests shall be performed in accordance with the following reference method.

EPA Method	Description of Method and Comments
9	Visual Determination of the Opacity of Emissions from Stationary Sources- The EPA Method No. 9 test interval on the air curtain incinerator shall be at least 60 minutes and meet all the applicable requirements of Chapter 62-297, F.A.C. The

EPA Method	Description of Method and Comments
	visible emission test shall begin upon initial combustion and include the first 60 minutes of the burn (30 minute start-up and 30 minutes normal operation).

The above method is described in Appendix A of 40 CFR 60 and is adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department.
[Rule 62-204.800, F.A.C.; Appendix A of 40 CFR 60]

A.12. Charging Rate Requirements during Compliance Testing - Compliance testing of emissions must be conducted within 90-100% of the permitted capacity, if feasible. The permitted capacity is considered to be the maximum allowable charging rate* of 10 tons/hour. If it is impracticable to test at permitted capacity, an emission unit may be tested at less than the maximum permitted capacity; in this case, subsequent emission unit operation is limited to 110 percent of the test rate until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. The test results shall be submitted to the Compliance Authority within 45 days of testing. Acceptance of the test by the Department will automatically constitute an amended permit at the higher charging tested rate, plus 10%, but in no case shall the maximum allowable charging rate of 10 tons/hour be exceeded. The emission limitations shall not change.

** (Permitting Note: For the purposes of testing, the Charging rate is defined as 1) the amount of material placed in the incinerator during the period starting with the initial loading and ending 60 minutes after initial combustion, for the first 60 minute period after initial combustion and 2) the amount of material placed in the incinerator for any 60-minute period thereafter.)*

[Rules 62-4.070(3) and 62-297.310(2), F.A.C.]

NOTIFICATION REQUIREMENTS

A.13. Compliance Test Notification - The permittee shall comply with all of the following:

a. For only the initial emission compliance test, the permittee shall provide the Compliance Authority at least 30 days prior notice. The notice shall contain the date on which the formal compliance test is to begin, of the date, time and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted.

[40 CFR 60.8(d)]

b. After the initial emission compliance test, the permittee shall notify the Compliance Authority at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted.

[Rule 62-297.310(7)(a)9., F.A.C.]

A.14. Notification of Construction Commencement – The permittee shall notify the Compliance Authority in writing of the actual date of commencing construction of the air curtain incinerator, postmarked within thirty (30) days after that date.

[40 CFR 60.7(a)(1); Rule 62-210.200(90) ("Commence Construction"), F.A.C.]

A.15 Notification of Initial Startup -The permittee shall notify the Compliance Authority in writing of the actual date of initial startup of the air curtain incinerator, postmarked within fifteen (15) days after that date.
[40 CFR 60.7(a)(3)]

RECORDKEEPING AND REPORTING REQUIREMENTS

A.16. Operating Log: The permittee shall keep a daily operating log and at a minimum contain the following:

Daily

a. date;

b. type of starter fuel used;

c. total number charges;

d. default charging rate and identification of the rake used;

e. total material charged (tons);

f. operating (charging) hours, which includes the start of initial combustion to the time of the last charge to the incinerator (start and stop times shall be indicated);

g. calculate the hourly charging rate (tons/hr.);

h. type of maintenance performed;

i. comments;

j. operator's signature; and

Monthly

k. the most recent consecutive 12-month period total for the amount of material charged (tons).

The log shall be maintained at the facility for at least three (3) years and shall be made available to the Department upon request. Daily logs shall be completed within five (5) business days and monthly logs shall be completed by the end of the following month.

[Rules 62-4.070(3), and 62-4.160(14), F.A.C.]

A.17. Test Reports - The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix D (Common Testing Requirements) of this permit. All submitted visible emissions test reports shall include:

a. A copy of the daily log for each test day.

b. The actual charging rate during the test period.

c. A description of the materials burned and starter fuel used during the test period.

A copy of all test reports and records of the results of all annual visible emissions tests shall be kept by the owner or operator in either paper copy or electronic format for at least five (5) years. These records shall be made available to the Department or for an inspector's onsite review upon request.

[Rules 62-297.310(8) and 62-296.401(7)(c)3., F.A.C.; 40 CFR 60.2260]

A.18. Other Requirements - The permittee shall comply with all of the following:

a. The permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; or any malfunction of the air pollution control equipment. The records shall be recorded in a permanent form suitable for inspection and shall be retained for at least 2 years.
[Rule 62-204.800(8), F.A.C. and 40 CFR 60.7(b) & (f)]

b. The requirements of this permit shall not relieve the owner or operator from any requirement for obtaining authorization to use an air curtain incinerator, when necessary, from the Division of Forestry, or any local fire control authority.
[Rule 62-4.070(3), F.A.C.]

OPERATION & MAINTENANCE GUIDE AND OPERATOR TRAINING

A.19. Operation and Maintenance (O & M) Guide for Air Curtain Incinerator (ACI) - An operation and maintenance guide shall be available to the operators of an air curtain incinerator at all times, and the owner shall provide training to all operators before they work at the incinerator. This guide shall be made available to the Department or for an inspector's onsite review upon request.
[Rules 62-4.070(3) and 62-296.401(7)(b)10., F.A.C.]

A.20. Operator Training - Each trained operator shall receive a certificate demonstrating that the operator has successfully passed the training required by the operation and maintenance guide. During the tenure of the operator, a copy of this certificate shall be kept on file at the facility and be made available to the Department upon request.
[Rules 62-4.070(3) and 62-296.401(7)(b)10., F.A.C.]