H & H Liquid Sludge Disposal, Inc.
H & H Clewiston Facility

Facility ID No. 0510033
Hendry County

Initial Title V Air Operation Permit

Permit No. 0510033-008-AV

Permitting Authority:

State of Florida
Department of Environmental Protection
Air Resource Management, South District

2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33901-2549

Telephone: (239) 344-5600
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FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

SOUTH DISTRICT
P.O. BOX 2549
FORT MYERS, FL 33902-2549

RICK SCOTT
GOVERNOR

JENNIFER CARROLL
LT. GOVERNOR

HERSCHEL T. VINYARD JR.
SECRETARY

FINAL PERMIT

PERMITTEE:
H & H Liquid Sludge Disposal, Inc.
6990 U.S. Highway 27
Branford, Florida 32008

Permit No. 0510033-008-AV
H & H Clewiston Facility
Facility ID No. 0510033
Initial Title V Air Operation Permit

The purpose of this permit is for the initial Title V air operation permit for the above referenced facility. The H & H Clewiston Facility is located in Hendry County at 3013 Evercane Road, Clewiston, Florida. UTM Coordinates are: Zone 17, 440.56 East and 3364.79 North. Latitude is: 26/42/25.46 North; and, Longitude is: 80/54/15.92 West.

The Title V air operation permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, 62-213. The above named permittee is hereby authorized to operate the facility in accordance with the terms and conditions of this permit.

Effective Date: March 8, 2013.

Renewal Application Due Date: July 25, 2017.
Expiration Date: March 7, 2018.

_____

Jon M. Iglehart
Director of
District Management

JMI/GM/CE/mf

Subsection A. Facility Description.

The facility is a liquid refuse (municipal) sludge disposal system consisting of 1 Sludge Dryer, 2 propane/diesel burners (heaters), 1 conditioner, 2 (road certified tractor) engine driven mixers, 1 metering screw, 1 collection hopper, 2 cyclones, 1 inclined screw conveyor, 4 transfer screw conveyors and one 18,000-gallon diesel storage tank. All components are located outdoors.

Note: The mixers are driven by a power takeoff from the road-certified, wheeled tractors. The tractors operate in a fixed (stationary) position while driving the mixers. The mixers are mobile, however, they are operated as fixed (stationary) units when connected to load into a collection hopper that feeds the dryer. The tractor engine power sources are considered as "insignificant emission" sources. The mixers are subject to the facility-wide visual emissions standard (20% VE), and also are included in the sum of the fugitive emissions for the facility. The tractor engines are NOT subject to the opacity rules, but can be included in the sum of the facility-wide fugitive emissions when required.

The facility is designed to receive up to 920 tons/day of biologically stabilized Class B municipal wastewater sludge operating continuously 24 hours/day. (The sludge is typically processed by the municipal wastewater utilities in anaerobic digesters, chemically conditioned with cationic polymers, dewatered in centrifuges, loaded into containers and trucked to the H & H facility.)

The process includes receiving municipal liquid refuse waste sludge into a mixer, then the mixed sludge flows to a metering screw, to a collection hopper, and gravity dumps into an M2 Dryer. The flow from the dryer goes to a conditioner unit, then to mechanical screw conveyors, and finally to truck loading or portable tote bins. The dryer (20 MMBTU/hour) is rated at 10 tons/hour and utilizes two heaters which are primarily fueled by diesel with the option of using propane.

Annual production is a maximum of 177,840 tons. Annual fuel usage is approximately 1.165 million gallons.

Fines (light particulate matter) is vented from the sludge dryer to two high efficiency cyclones that drop the "fines" into mechanical screw conveyors that load portable tote bins for separate off-site processing or disposal by others.

Dried final product from the sludge dryer and conditioner is stored in static piles on the ground. A front-end loader loads open container trucks to distribute the class AA Biosolids to volume users. (The fugitive emissions from tote and truck loading are 10 tons of particulate matter (PM) per year.)

This project is defined as a NESHAP classification and a Title V facility due to hazardous mercury (0.9328 tons/year) contained in the source emissions.

Subsection B. Summary of Emissions Units.

This facility has the following emissions unit:

Facility ID No. 0510033

EU No.	Brief Description
Regulated Emissions Units	
001	**One (1) Jet-Pro Fluidized Bed Dryer and Conditioner with two (2) Burner Systems and two (2) cyclones**

Subsection C. Applicable Regulations.

Based on the initial Title V air operation permit application received December 7, 2012, this facility is NOT a major source of hazardous air pollutants (HAP). However, it is designated for Title V operation because of (NESHAP) Mercury rules. A summary of applicable regulations is shown in the following table.

Regulation	EU No(s).
40 CFR 60, Subpart A, NSPS General Provisions	EU-001
40 CFR 61, Subpart E (NESHAP) National Emission Standard for Mercury	EU- 001
40 CFR 63, Subpart A (NESHAP) General Provisions	EU-001
40 CFR 60, Subpart Kb, New Source Performance Standards (NSPS),	EU-001

FACILITY REGULATORY CLASSIFICATION

- 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 (CAA).
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is not a major stationary source in accordance with Rule 62-212.400(PSD), F.A.C.

The following conditions apply facility-wide to all emission units and activities:

FW1. Appendices. The permittee shall comply with all documents identified in Section IV, Appendices, listed in the Table of Contents. Each document is an enforceable part of this permit unless otherwise indicated. [Rule 62-213.440, F.A.C.]

Emissions and Controls

FW2. Not federally Enforceable. Objectionable Odor Prohibited. No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An "objectionable odor" means any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [Rule 62-296.320(2) and 62-210.200(Definitions), F.A.C.]

FW3. General Volatile Organic Compounds (VOC) Emissions or Organic Solvents (OS) Emissions. The permittee shall allow no person to store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed-necessary and ordered by the Department. [Rule 62-296.320(1), F.A.C. and 0510033-001-AC]

FW4. General Visible Emissions. No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20 percent opacity. EPA Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C. This regulation does not impose a specific testing requirement. [Rule 62-296.320(4)(b)1, F.A.C.]

FW5. Unconfined Particulate Matter. Pursuant to Rules 62-296.320(4)(c)1., 3. & 4., F.A.C., reasonable precautions to prevent emissions of unconfined particulate matter at this facility include the following requirements (see Condition 57. of APPENDIX TV-6, TITLE V CONDITIONS):

a. Paving and maintenance of roads, parking areas and yards.
b. Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing.
c. Application of asphalt, water, chemicals, or other dust suppressants to unpaved roads, yards, open stock piles, and similar activities.
d. Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent re-entrainment, and from buildings or work areas to prevent particulate from becoming airborne.
e. Landscaping or planting of vegetation.
f. Use of hoods, fans, filters, and similar equipment to contain, capture, and/or vent particulate matter.

[Rule 62-296.320(4)(c), F.A.C.]

Annual Reports and Fees

See Appendix RR, Facility-wide Reporting Requirements for additional details.

FW6. Annual Operating Report. The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by April 1st of each year. [Rule 62-210.370(3), F.A.C.]

FW7. Annual Emissions Fee Form and Fee. The annual Title V emissions fees are due (postmarked) by March 1st of each year. The completed form and calculated fee shall be submitted to: Major Air Pollution Source Annual Emissions Fee, P.O. Box 3070, Tallahassee, Florida 32315-3070. The forms are available for download by accessing the Title V Annual Emissions Fee On-line Information Center at the following Internet web site: http://www.dep.state.fl.us/air/emission/tvfee.htm. [Rule 62-213.205, F.A.C.]

FW8. Annual Statement of Compliance. The permittee shall submit an annual statement of compliance to the compliance authority at the address shown on the cover of this permit within 60 days after the end of each calendar year during which the Title V permit was effective. [Rules 62-213.440(3)(a)2. & 3. and (3)(b), F.A.C.]

Subsection A. Emissions Unit 001

The specific conditions in this section apply to the following emissions unit(s):

EU No.	Brief Description
001	One (1) Jet-Pro Fluidized Bed Dryer and Conditioner with two (2) Burner Systems and two (2) cyclones.

Essential Potential to Emit (PTE) Parameters

A.1. Allowable Heat Input. The maximum allowable heat input rate is as follows:

20 MMBTU/hr (Diesel or Propane)

[Rules 62-4.160(2), 62-204.800, 62-210.200(PTE), 62-296.405, F.A.C.; and, Permit No. 0510033-001-AC]

A.2. Methods of Operation.

a) Permitted Capacity: 150 tons/day (20,000 lb/hr; 15-hr operating shift) [Rule 62-210.200(PTE), F.A.C.] (Dryer throughput rate: 133 tons/day.)

b) Authorized Fuel: #2 Diesel Fuel or Propane
[Construction Permit No. 0510033-001-AC and Rule 62-210.200(PTE), F.A.C.]

c) Maximum Dry Standard Flow Rate: 51,090 dscfm

d) Actual Volumetric Flow Rate: 67,187 acfm (total, two (2) cyclones)

e) Diesel Fuel Usage Rate: 133 gallon/hour or 1.165 million gallons/year (unrestricted).
[Permit No. 0510033-001-AC]

A.3. Restricted Operation:
The maximum hours of operation are 4,500 hours per year.
[Permit No. 0510033-001-AC] [Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

A.4. Insignificant Emissions equipment includes:
Mixer units, collection hopper with rotary airlock valve, and mechanical screw conveyors are "insignificant emissions" and are exempt, however are subject to facility-wide visual opacity (20% VE) and fugitive emissions). The "road certified" tractor engines (mixer drivers), are "insignificant emissions". These engines are NOT subject to VE testing requirements, but can be included in the sum of the facility-wide fugitive emissions when required.

[Rule 62-213.410, F.A.C.; Applicant's request in Title V permit application received December 7, 2012; and, Permit No(s). 0510033-001-AC.]

A.5. Emissions Unit Operating Rate Limitation After Testing.
See the related testing provisions in Appendix TR, Facility-wide Testing Requirements. [Rule 62-297.310(2), F.A.C.]

A.6 Control Technology
Particulate control is provided by two cyclones at 85 percent efficiency capture of exhaust.

Subsection A. Emissions Unit 001

A.7 Emission Limitations and Standards

Unless otherwise specified, the averaging times for Specific Conditions No. **A.8, A.10, A.12,** and **A.13** are based on the specified averaging time of the applicable test method.

A.8. Visible Emissions. Visible emissions shall not exceed 20 percent opacity.

A.9. NO_X Emissions. (No restrictions or testing is required).

A.10. PM Emissions. Particulate matter emissions is Limited to 50 ton/year for Emission Unit EU-001(Per applicant request in application) (Testing is required)

A.11. SO2 Emissions. (No restrictions or testing is required).

A.12. CO Emissions. Shall not exceed 219 ton/year. This limit is requested by the applicant to avoid triggering PSD Review. (Testing is required).

A.13. Mercury (H114). Facility-Wide or Multi-Unit emissions Cap Comment: Per 40 CFR 61.52(b), Emissions to the atmosphere from sludge incineration plants, sludge drying plants, or a combination of these that process wastewater treatment sludge shall not exceed 3.2 kg (7.1 lb.) of mercury per 24 – hour period. (actual expected emissions are 0.9328 ton/year). (Testing is required).

Excess Emissions

A.14. Excess Emissions Allowed. Excess emissions resulting from malfunction shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24-hour period unless specifically authorized by the Department for longer duration. [Rule 62-210.700(1), F.A.C. and Permit No. 0150033-001-AC].

A.15. Excess Emissions Allowed. Excess emissions resulting from startup or shutdown shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized. [Rule 62-210.700(2), F.A.C. and Permit No. 0510033-001-AC].

A.16. Excess Emissions Prohibited. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C. and Permit No. 0510033-001-AC].

Monitoring Requirements

A.17 Mercury emissions are calculated to be minimal at 0.00125 lb/hr.
However if emissions exceed 1.6 kg (3.5 lb) per 24-hour period, demonstrated either by stack sampling according to §61.53 or sludge sampling according to §61.54, then monitoring of mercury emissions shall be required at intervals of at least once per year by use of Method 105 of appendix B or the procedures specified in §61.53 (d) (2) and (4). The results of monitoring shall be reported and retained according to §61.53(d) (5) and (6) or §61.54 (f) and (g).
[Construction Permit No. 0510033-001-AC][Rule 40 CFR 62.55(a)]

TESTING REQUIREMENTS

Subsection A. Emissions Unit 001

A.18 Initial Compliance Tests: Initial compliance test within 60 days after achieving permitted capacity, but not later than 180 days after initial operation of the unit. Testing is required for the following emissions:

a) Visible Emissions: EPA Method 9

b) CO Emissions: EPA Method 10

c) Mercury (H114): EPA Method 29 (Allowed by EPA as an alternate to Method 101A)

d) Particulate Matter: EPA Method 5
[Rules 62-4.070(3) and 62-297.310(7)(a)1, F.A.C.]

A.19 Annual Compliance Tests: During each federal fiscal year, the owner or operator shall have a formal compliance test conducted for Visual Emissions (VE), Particulate Matter (PM) and Mercury (Hg) during each federal fiscal year (October 1 – September 30). [Rule 62-297.310(7)(a)4., F.A.C.] These tests are to be done at the cyclone discharge to atmosphere.
[Rule 62- 297.310(7)(a)4, F.A.C.]

A.20 Every five (5) years or at time of operating permit renewal (whichever comes first), test for VE, Mercury, PM, and CO.
[Construction Permit No. 0510033-001-AC]

A.21 The permittee shall notify the Compliance Authority in writing at least 15 days prior to any required tests. Tests shall be conducted in accordance with the applicable requirements specified in Appendix D (Common Testing Requirements) of this permit. [Rule 62-297.310(7)(a)9, F.A.C.]

A.22 Test Methods: Required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
5	Particulate Matter Emissions
9	Visible Emissions
10	Test for CO
*29, 101A or 105	Mercury Emissions in accordance with the requirements of 40 CFR 61, Subpart E. (See text from 40 CFR 61, Subpart E, below)

The above methods are described in Appendix A of 40 CFR 60 and Appendix B of 40 CFR 61, and are 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. [Rules 62-204.800 and 62-297.100, F.A.C.; and Appendix A of 40 CFR 60]

a. The test methods for particulate matter emissions shall be EPA Method 5, incorporated and adopted by reference in Chapter 62-297, F.A.C. The minimum sample volume shall be 30 dry standard cubic feet. Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

b. The test method(s) for mercury emissions shall be either EPA Method *29, 101A or Method 105, in accordance with the requirements of 40 CFR 61, Subpart E, National Emission Standards for Mercury.
RULE: 40 CFR 61 Subpart E (Test for Mercury)

(d) *Sludge incineration and drying plants.* (1) Unless a waiver of emission testing is obtained under § 61.13, each owner or operator of a source subject to the standard in § 61.52(b) shall test emissions from that source. Such tests shall be conducted in accordance with the procedures set forth either in paragraph (d) of this section or in § 61.54.

(2) Method 101A in appendix B to this part shall be used to test emissions as follows:

(i) The test shall be performed within 90 days of the effective date of these regulations in the case of an existing source or a new source which has an initial startup date preceding the effective date.

(ii) The test shall be performed within 90 days of startup in the case of a new source which did not have an initial startup date preceding the effective date.

(3) The Administrator shall be notified at least 30 days prior to an emission test, so that he may at his option observe the test.

(4) Samples shall be taken over such a period or periods as are necessary to determine accurately the maximum emissions which will occur in a 24-hour period. No changes shall be made in the operation which would potentially increase emissions above the level determined by the most recent stack test, until the new emission level has been estimated by calculation and the results reported to the Administrator.

(5) All samples shall be analyzed and mercury emissions shall be determined within 30 days after the stack test. Each determination shall be reported to the Administrator by a registered letter dispatched within 15 calendar days following the date such determination is completed.

(6) Records of emission test results and other data needed to determine total emissions shall be retained at the source and shall be made available, for inspection by the Administrator, for a minimum of 2 years.

* Note:

EPA has approved Method 29 as an alternative to Method 101A (ref. letter EPA, Office of Air Quality Planning and Standards dated Dec. 7, 2007), subject to the following limitations:

1) The procedures for preparation of mercury standards and sample analysis in sections 13.4.1.1 through 13.4.1.3 of ASTM D6784-02 shall be followed instead of the procedures in sections 7.5.33 and 11.1.3 of Method 29.

2) The Quality Assurance/Quality Control procedures in section 13.4.2 of ASTM D6784-02 shall be performed instead of the procedures in section 9.2.3 of Method 29.

3) In addition, at his option, a tester may use the sample recovery and preparation procedures in ASTM D6784-02 instead of Method 29 procedures, as follows: Sections 8.2.8 and 8.2.9 of Method 29 may Be replaced with sections 13.2.9.1 through 13.2.9.3 of ASTM D6784-02; sections 8.2.9.2 and 8.2.9.3 of Method 29 may be replaced with sections 13.2.10.1 through 13.2.10.4 of ASTM D6784-02; section 8.3.4 of Method 29 may be replaced with section 13.3.4 of Method 29 may be replaced with section 13.3.4 or 13.3.6 of ASTM D6784-02 (as appropriate); and section 8.3.5 of Method 29 may be replaced with section 13.3.5 or 13.3.6 of ASTM D6784-02 (as appropriate).

A.23 Operating Rate During Testing. Testing of emissions shall be conducted with the emissions unit operating at permitted capacity. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the maximum permitted capacity; in this case, subsequent emissions 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. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. [Rule 62-297.310(2), F.A.C.]

A.24 Calculation of Emission Rate. The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]

The above methods are described in 40 CFR 60, Appendix A, and 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. [62-297.401, F.A.C.]

A.25 Sludge Sampling. The sludge shall be sampled according to Method 105—Determination of Mercury in Wastewater Treatment Plant Sewage Sludges. A total of three composite samples shall be obtained within an operating period of 24 hours. When the 24-hour operating period is not continuous, the total sampling period shall not exceed 72 hours after the first grab sample is obtained. Samples shall not be exposed to any condition that may result in mercury contamination or loss. The maximum 24-hour period sludge incineration or drying rate shall be determined by use of a flow rate measurement device that can measure the mass rate of sludge charged to the incinerator or dryer with an accuracy of ±5 percent over its operating range. Other methods of measuring sludge mass charging rates may be used if they have received prior approval by the Administrator.
[Construction Permit No. 0510033-001-AC] [Appendix E - NESHAP, National Emission Standard for Mercury, 40 CFR Part 61, Subpart E].

Recordkeeping and Reporting Requirements

A.26 Reporting Schedule.

See Facility-Wide Reporting Requirements – Appendix RR.

SECTION IV. APPENDICES.

The Following Appendices Are Enforceable Parts of This Permit:

Appendix A, Glossary.
Appendix B. General Conditions
Appendix C. Common Conditions
Appendix D. Common Testing Requirements
Appendix E. NESHAP, National Emission Standard for Mercury, 40 CFR Part 61, Subpart E
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