FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

NORTHEAST DISTRICT
8800 BAYMEADOWS WAY WEST, SUITE 100
JACKSONVILLE, FLORIDA 32256

RICK SCOTT
GOVERNOR

CARLOS LOPEZ-CANTERA
LT. GOVERNOR

HERSCHEL T. VINYARD JR.
SECRETARY

Sent by Electronic Mail – Received Receipt Requested

PERMITTEE

University of Florida
Animal Resources Department
Post Office Box 100006
Gainesville, Florida 32610

Authorized Representative:
Michael Cormier, Director of Engineering

Air Permit No. 0010072-006-AO
Permit Expires: February 12, 2018

Progress Park Facility
Air Permit Revision

This is the final air operating permit, which revises air operating permit No.0010072-005-AO to incorporate the terms and conditions of construction permit No. 0010072-005-AC which authorized: 1). Installation of a Program Logic Controller (PLC) to the existing Simonds 604L Biological Waste Incinerator, and 2). Establish a restriction of 495lbs/hr. maximum incinerator operating rate. The principal components of animal tissue are animal carcasses, organs, and solid organic material from the Animal resources Department Biotechnology Institute Progress Park Facility (adult horses and cows).

The Progress Park Facility is a Biological Waste Incinerator (Standard Industrial Classification No. (8733). The facility is located in Alachua County at Research Drive and S.E. 12th Street, in Alachua, Florida. The UTM coordinates are Zone 17, 355.3 km East, and 3295.5 km North.

This final permit is organized by the following sections.

Section 1. General Information

Section 2. Administrative Requirements

Section 3. Emissions Unit Specific Conditions

Section 4. Appendices

Appendix A. Citation Formats and Glossary of Common Terms;
Appendix B. General Conditions;
Appendix C. Common Conditions;
Appendix D. Common Testing Requirements;

Because of 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 operating 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.

Executed in Jacksonville, Florida

August 18, 2014

Richard S. Rachal III, P.G. Date
District Air Program Administrator
Waste and Air Resources Management Program

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Written Notice and Final Permit) 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 August 18, 2014 to the persons listed below.

Michael Cormier, Director of Engineering, University of Florida, mcormier@ufl.edu
James T. Show, P.E., Grove Scientific & Engineering Company, Inc. j_sshow@bellsouth.net
Luis Llorens, AI Environmental Consulting Services, Inc. ai@cfl.rr.com

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.

(Clerk) August 18, 2014
(Date)

FACILITY AND PROJECT DESCRIPTION

Existing Facility

The incinerator is a natural gas incinerator used for disposing of animal remains and wastes. Only pathological wastes and, if applicable, the bedding and the remains associated with the animals placed in leak-proof containers, shall be incinerated.

This incinerator is equipped with a secondary chamber that has an emission exposure of one second or more at 1800+ ° F.

The facility is a minor source of air pollution because the potential emissions of regulated air pollutants are less than 100 tons per year, and individual and total hazardous air pollutants are less than 10 and 25 tons per year, respectively in accordance with Chapter 62-210, FAC. **The facility has restricted hours of operation so that potential HCl emissions are below the major source threshold.**

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 not** 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.

SECTION 2. ADMINISTRATIVE REQUIREMENTS (FINAL)

1. Permitting Authority: The permitting authority for this project is the Northeast District Office, Waste and Air Resource Management Program, Florida Department of Environmental Protection (Department). The Northeast District Office's mailing address and phone number are 8800 Baymeadows Way West, Suite 100, Jacksonville, Florida 32256, 904-256-1700. All documents related to applications for permits to operate an emissions unit shall be submitted to the Northeast District Office.

2. Compliance Authority: The compliance authority for this project is the Northeast District Office, Compliance Assurance Florida Department of Environmental Protection (Department). The Northeast District Office's mailing address and phone number are 8800 Baymeadows Way West, Suite 100, Jacksonville, Florida 32256, 904-256-1700. All documents related to compliance of an emissions unit shall be submitted to the Northeast District Office.

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; and

d. Appendix D. Common Testing Requirements.

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: The permittee shall notify the Compliance Authority upon commencement of construction. No new emissions unit shall be constructed and no existing emissions unit shall be modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification.

[Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

7. A completed **Application for Non Title V Air Permit Renewal** (DEP Form No. 62-210.900(4), F.A.C.), shall be submitted to the Department at least 60 days prior to the expiration date of this operation permit. To properly apply for an operation permit, the permittee shall submit the appropriate application form, processing fee, and compliance test reports as required by this permit.

[Rules 62-4.090 and 62-4.055, F.A.C.]

8. **Construction Permit Required:** Unless exempt from permitting pursuant to Rule 62-210.300(3)(a) or (b), F.A.C., or Rule 62-4.040, F.A.C., an air construction permit shall be obtained by the owner or operator of any proposed new, reconstructed, or modified facility or emissions unit, or any new pollution control equipment prior to the beginning of construction, reconstruction pursuant to CFR 60.15 or 63.2, or modification of the facility or emissions unit or addition of the air pollution control equipment; or to establish a PAL; in accordance with all applicable provisions of Chapter 62-210, F.A.C., Chapter 62-212, F.A.C., and Chapter 62-4, F.A.C.

   [Rule 62-210.300(1)(a), F.A.C.]

EU001 Biological Waste Incinerator

This section of the permit addresses the following emissions unit.

E.U. ID No.	Brief Description of Emissions Unit
001	Dual Chambered Natural Gas-Fired Biological Waste Incinerator with a Program Logic Controller (PLC)

This emissions unit is subject to Rule 62-296.401(4) F.A.C. for Biological Waste Incinerators.

The 600 lbs/hr designed capacity dual chambered natural gas-fired Biological Waste Incinerator with a Program Logic Controller (PLC). The Siemens S7-1200 CPU will accept the weight scale's analog output which will monitor the maximum permitted 495 lbs/hr charge weight. Each load will be weighed and logged into the PLC controller. If the total of the weight exceeds 495 lbs/hr the machines PLC will not allow load to charge enabling CPU controlled mechanical lock out of the loading process.
The biological waste incinerator model no. 604L is manufactured by Simonds Manufacturing Corporation. The incinerator utilizes four primary Eclipse 936SIB-G chamber burners (1 MMBtu/hr each), and one ThermAir TA200 second stage burner (2.071 MMBtu/hr). Emissions are controlled by the afterburner, which maintains a minimum secondary chamber combustion zone temperature of 1800 degrees Fahrenheit prior to and during combustion of material in the primary chamber. The secondary chamber is designed to insure one-second residence time at a gas temperature of 1800 degrees Fahrenheit (F), and is equipped with a continuous temperature monitor.
The incinerator is authorized to burn 100% pathological, animal waste and, if applicable, the bedding and the remains associated with the animals placed in leak-proof containers. Chlorinated materials shall not be incinerated. The incinerator consists of primary and secondary (afterburner) chambers, each fired on natural gas.

ESSENTIAL POTENTIAL TO EMIT (PTE) PARAMETERS

1. **Hours of Operation:** The incinerator hours of operation shall not exceed 2496 hours per calendar year.

   [Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; Construction Permit No. AC01-168936, Construction Permit No. 0010072-005-AC]

PERFORMANCE RESTRICTIONS

2. **Operating Capacity:** The maximum throughput rate shall not exceed 495 lbs/hr. of pathological animal waste. (See **Specific Condition No. 12**). Chlorinated materials shall not be incinerated.
   The design incinerator operating rate (design permitted capacity) of this emissions unit is 600 pounds per hour[1].

   [1] The design incinerator operating rate is in accordance with the Certification of Completion of Construction dated June 26, 1991.

   [Rule 62-4.070(3), F.A.C, 62-4.160(2) and 62-210.200(PTE); Permit No. AC01-168936, Permit No. 0010072-005-AC, Certification of Completion of Construction dated 06/26/91]

EMISSION LIMITING STANDARDS

{Permitting Note: Unless otherwise specified, the averaging times for these conditions are based on the specified averaging time of the applicable test method.}

3. **Particulate Matter:** Particulate matter emissions shall not exceed 0.100 grains per dry standard cubic foot of flue gas, corrected to 7% O_2.

[Rule 62-296.401(4)(b)2.a., F.A.C.]

4. **Visible Emissions:** Visible emissions shall not exceed five percent (5%) opacity, six (6) minute average, except that visible emissions not exceeding fifteen percent (15%) opacity shall be allowed for up to six (6) minutes in any one (1) hour period.

[Rule 62-296.401(4)(b)1, F.A.C.]

5. **Hydrochloric Acid:** Hydrochloric acid (HCl) emissions shall not exceed 4.0 pounds per hour.

[Rule 62-296.401(4)(b)2.b., F.A.C.]

6. **Carbon monoxide (CO):** Carbon Monoxide emissions shall not exceed 100 parts per million by volume, dry basis, corrected to 7% O2 on an hourly average basis.

[Rule 62-296.401(4)(b)5., F.A.C.]

TEST METHOD(S) AND PERFORMANCE TEST(S)

7. **Particulate Matter:** The reference test method for particulate emissions shall be EPA Method 5 or 26A. The minimum sample volume shall be thirty (30) dry standard cubic feet. This compliance test shall be conducted prior to submitting the application for an initial or renewal air operation permit.

[Rules 62-296.401(4)(d)4., and 62-296.401(4)(e)1.b., F.A.C.]

8. **Hydrochloric Acid:** The reference test method for hydrochloric acid shall be EPA Method 26 or 26A. This compliance test shall be conducted prior to submitting the application for a renewal air operation permit.

[Rules 62-296.401(4)(d)5., and 62-296.401(4)(e)1.b., F.A.C.]

9. **Carbon Monoxide:** The reference test method for carbon monoxide shall be EPA Method 10. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit.

[Rule 62-296.401(4)(d)2., F.A.C.; Rule 62-297.210(7)(a)3.]

10. **Visible Emissions:** The reference test method for visible emissions shall be EPA Method 9. The test shall be conducted by an observer certified in accordance with the requirements of Rule 62-297.320, F.A.C. – Standards for Persons Engaged in Visible Emissions Observations. This compliance test shall be conducted prior to submitting the application for an operation permit and annually thereafter.

[Rules 62-296.401(4)(d)1., 62-296.401(4)(e)1.a.]

11. **EPA Method 9- Required Sampling Time:** The required minimum period of observation for each opacity compliance test shall be sixty (60) minutes. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur.

[Rule 62-297.310(4)(a)2., F.A.C.]

12. **Operating Rate During Testing:** Unless otherwise stated in the applicable emission limiting standard rule, testing of emissions shall be conducted with the emissions unit operating at permitted capacity. I f 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.

[Rule 62-297.310(2)]

13. **Compliance Test Procedures:** Compliance test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

[Rule 62-296.410(3)(c), F.A.C.]

EMISSIONS MONITORING

14. **Continuous Emissions Monitor (CEM) – Secondary Combustion Chamber Temperature:** The owner or operator shall install, operate, and maintain, in accordance with the manufacturer's instructions, continuous monitoring equipment to record the secondary (or last) combustion chamber exit temperature.

[Rules 62-296.401(4)(f) and (f)1.a., F.A.C.]

METHOD OF INCINERATOR OPERATION

15. **Auxiliary Fuel Type:** The incinerator is authorized to burn natural gas as an auxiliary fuel at a total maximum heat input rate of 6.071 MMBtu/hr (4.0 MMBtu/hr from the four primary 1.0 MMBtu/hr chamber burners, and 2.071 MMBtu/hr from the second stage burner).

[Additional Information Response received 02/01/08.]

16. **Incinerator Chamber Operation Temperature:** The incinerator shall operate with a combustion zone design temperature of no less than 1800 °F for at least a 1.0 second gas residence time in the secondary (or last) combustion chamber. The primary chamber and stack volumes shall not be used in calculating this residence time.

    [Rule 62-296.401(4)(c)1., F.A.C.]

17. **Air Lock System-Mechanically Fed:** Mechanically fed units shall incorporate an air lock system to prevent opening the incinerator to the room environment. The volume of the loading system shall be designed to prevent overcharging, thereby assuring complete combustion of the waste. Overcharging of the permitted operating capacity of the loading system as specified in **Specific Condition 2** is prohibited.

    [Rule 62-296.401(4)(c)2., F.A.C. Permit No. 0010072-005-AC]

18. **Incineration:** Incineration or ignition of waste shall not begin until the 1800 °F secondary (or last) combustion chamber temperature requirement is attained. All air pollution control and continuous emission monitoring equipment shall be operational and functioning properly prior to the incineration or ignition of waste and until all the wastes is incinerated. The 1800 °F secondary (or last) combustion chamber temperature requirement shall be maintained until the wastes are completely combusted.

    [Rule 62-296.401(4)(c)3., F.A.C.]

19. **Radioactive waste:** Radioactive waste shall not be burned in the incinerator. The owner or operator is advised to contact the Department of Health regarding requirements that may apply to any proposed burning of radioactive waste.

    [Rule 62-296.401(4)(c)4., F.A.C.]

20. **Hazardous waste:** Hazardous waste shall not be burned in the incinerator. The owner or operator is advised to contact the Department's Division of Waste Management regarding requirements that may apply to any proposed burning of hazardous waste.

    [Rule 62-296.401(4)(c)5., F.A.C.]

INCINERATOR OPERATOR TRAINING

21. **Initial & Annual Training:** Each operator of the unit shall successfully complete a training program meeting the requirements of 40 CFR 60.53c(c) and the annual refresher training course requirements of 40 CFR 60.53c(f), adopted and incorporated by reference at Rule 62-204.800, F.A.C.

    [Rule 62-296.401(4)(c)6., F.A.C.]

22. **Re-training:** If the incinerator is modified to the extent that a Department construction permit is required, the operators shall be retrained to operate the modified incinerator.

    [Rule 62-296.401(4)(c)6.a., F.A.C.]

23. **Operator Training Certificates:** An operator's training certificate must be kept on file at the facility for the duration of the operator's employment and for an additional two (2) years after termination of employment. The owner shall not allow the incinerator to be operated unless it is operated by an operator who has satisfactorily completed the required training program, as stated in **Specific Conditions No. 21. & 22.**

[Rule 62-296.401(4)(c)6.b., F.A.C.]

RECORDKEEPING AND REPORTING REQUIREMENTS

24. **Secondary Combustion Chamber Temperature – Recordkeeping:** The owner or operator shall maintain a complete file of all measurements, including CEM system, monitoring device, and performance testing measurements; all CEM system performance evaluations; all CEM system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required, recorded in a permanent legible form suitable for inspection. The continuous temperature chart documentation shall include at a minimum the following:

A. date markings;
B. time markings;
C. temperature scale markings;
D. operator name; and
E. operator indication of when combustion of waste in the primary began and when combustion ceased.

The file shall be retained at the facility for at least two years following the date of such measurements, maintenance, reports and records. The file shall be made available to the Department upon request.

[Rule 62-296.401(4)(f)2., F.A.C.]

25. **Daily Log:** A daily operations and maintenance log shall be kept by the operators showing at least the following information:

A. date;
B. name of operator;
C. type of material incinerated;
D. weight (as weighed on scale) of materials placed in the primary chamber;
E. time combustion of waste in primary chamber began and number of hours taken for incineration;
F. minimum temperature of the secondary chamber during periods when incinerator is in operation; and
G. any maintenance performed; indicate when, what, why, and by whom it was performed.

The file shall be retained at the facility for at least two years following the date of such measurements, maintenance, reports and records. The file shall be made available to the Department upon request.

[Rule 62-070(1), F.A.C.]