Florida Department of Environmental Protection

Northeast District
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Jacksonville, Florida 32256

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Lt. Governor

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PERMITTEE

University of Florida
P.O. Box 100006
Gainesville, Florida 32610

Authorized Representative:
Mr. Matt Johnson, Planning Coordinator

Air Permit No. 0010121-006-AO
Air Operation Permit

1371 Building Biological (Animal) Waste Incinerator
Alachua County, Florida

PROJECT

This is the final Federally Enforceable State Operation Permit, which authorizes the operation of University of Florida 1371 Building, which is a Biological (Animal) Waste Incinerator (Standard Industrial Classification No. 8733). This project is for the renewal of Permit No. 0010121-005- AO for the continued operation of the Biological (Animal) Waste Incinerator (EU 001) 1371 Building.

The facility is located in Alachua County at 2292 SW 23rd Street (Westside) in Gainesville, Florida. The UTM coordinates are Zone 17, 368.7km East, and 3279km North.

This final permit is organized into the following sections: Section 1 (General Information); Section 2 (Administrative Requirements); Section 3 (Emissions Unit Specific Conditions); and Section 4 (Appendices). 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.

Permitting Authority: Applications for air operation permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4 and 62-210 of the Florida Administrative Code (F.A.C.). The Permitting Authority responsible for making a permit determination for this project is the Florida Department of Environmental Protection Northeast District Office. The Permitting Authority's physical and mailing address is: 8800 Baymeadows Way West, Suite 100, Florida 32256. The Permitting Authority's telephone number is 904/256-1700.

Petitions. A person whose substantial interests are affected by the proposed decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Department's Office of General Counsel, MS #35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000. Petitions filed by the applicant or any of the parties listed below must be filed within 14 days of receipt of this notice. Petitions filed by any other person must be filed within 14 days of receipt of this proposed action. A petitioner must mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner; the name, address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when each petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and, (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the permitting authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the permitting authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation: Mediation is not available in this proceeding.

Effective Date: This permitting decision is final and effective on the date filed with the clerk of the Permitting Authority unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition pursuant to Rule 62-110.106, F.A.C., and the petition conforms to the content requirements of Rules 28-106.201 and 28-106.301, F.A.C. Upon timely filing of a petition or a request for extension of time, this action will not be effective until further order of the Permitting Authority.

Judicial Review: Any party to this permitting decision (order) has the right to seek judicial review of it under Section 120.68, F.S., 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.

0010121-006-AO Effective Date: July 19, 2016
Renewal Application Due Date: May 19, 2021
Expiration Date: July 18, 2021

Executed in Jacksonville, Florida

Richard S. Rachal III, P.G.
Program Administrator
Permitting Program

FILING AND ACKNOWLEDGEMENT & CERTIFICATE OF SERVICE

Filed on this date pursuant to § 120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged. The undersigned hereby certifies that the Final Air Permit package (including the Final Determination and Final Permit), and all copies were sent before the close of business on July 19, 2016, to the listed persons.

Mr. Matt Johnson Planning Coordinator, University of Florida, matt986john@mail.ufl.edu
Mr. Luis Llorens, AI Environmental Consulting Services, Inc., ai@cfl.rr.com

Clerk

July 19, 2016
Date

FACILITY DESCRIPTION

The University of Florida operates a Biological (Animal) Waste Incinerator Model C - 1000S (EU 001) Building 1371. The Biological (Animal) Waste Incinerator is a multi-chamber 1.5 MMbtu/hr. incineration unit that burns only 100% pathological waste.

Combustion of waste in the multi-chamber unit occurs in two stages. In the first stage, waste (which includes components of dead animals, tissues, organs and solid organic material used in research at the facility and, if applicable, the bags/containers and bedding used to collect and transport the animal waste); is fed into the primary combustion chamber, which is operated with less than the stoichiometric amount of air required for combustion. The low air-to-fuel ratio in the primary chamber dries and facilitates volatilization of the waste.

In the second stage, excess air is added to the volatile gases formed in the primary chamber to complete combustion. The Secondary chamber temperature has an emission exposure of 1.0 second at 1600 to 1850 ° F. The design also include: fully automatic PLC based controls, independent fuel/air systems, preheated combustion air, secondary chamber temperature monitor and recorder. The unit also has a primary burner temperature interlock, which prevents primary burner from firing prior to the secondary chamber reaching it's set point temperature of 1800 ° F. In addition, the cremator is also equipped with UV continuous scanning flame detectors on burners, and an opacity sensor which can temporarily suspend operation of the primary chamber.

The air pollutant emissions from the facility are: Particulate matter (PM), Carbon Monoxide (CO) and Hydrochloric Acid (HCl).

The existing facility consists of the following emissions unit (EU).

EU No.	Emission Unit Description
001	Biological (Animal) Waste Incinerator

APPLICABLE REGULATIONS

The existing facility is subject to the requirements of Rule 62-296.401(4) F.A.C. for Biological Waste Incinerators.

A summary of applicable regulations is shown in the following table.

Regulation	EU No(s).
State Rule Citations	
Rule 62-210.300, F.A.C., Permits Required	001
Rule 62-296.401(4), F.A.C, Biological Waste Incinerators.	
Rule 62-297.310, F.A.C, General Emissions Tests Requirements	

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 62-213, F.A.C.
- The facility is not a major stationary source in accordance with Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: The permitting authority for this project is the Northeast District Office of the Department of Environmental Protection (Department) Permitting Program. The District Office mailing address is 8800 Baymeadows Way West, Suite 100, Jacksonville, Florida 32256.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Northeast District Office of the Department of Environmental Protection (Department) Compliance Assurance Program at: 8800 Baymeadows Way West, Suite 100, Jacksonville, Florida 32256.

3. Appendices: The following Appendices are attached as a part of this permit: Appendix A (Citation Formats and Glossary of Common Terms); Appendix B (General Conditions); Appendix C (Common Conditions); and 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, 62-296 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: 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. Renewal. Prior to 60 days before the expiration date of this permit, the permittee shall apply for a renewal of the permit. A renewal application shall be timely and sufficient. If the application is submitted prior to 60 days before expiration of the permit, it will be considered timely and sufficient. If the renewal application is submitted at a later date, it will not be considered timely and sufficient unless it is submitted and made complete prior to the expiration of the operation permit. When the application for renewal is timely and sufficient, the existing permit shall remain in effect until the renewal application has been finally acted upon by the Department. [Rule 62-4.090, F.A.C.]

8. Annual Operating Report (AOR): The information required by the Annual Operating Report for Air Pollutant Emitting Facility (DEP Form No. 62-210.900(5)) shall be submitted by April 1 of each year, for the previous calendar year, to the Department of Environmental Protection's (DEP) District Office shall submit a completed DEP Form 62-210.900(5) unless the annual operating report is submitted using the DEP's electronic annual operating report software. Emissions shall be computed in accordance with the provisions of subsection 62-210.370(2), F.A.C. [Rule 62-210.370(3), F.A.C.]

   {Permitting Note: Resources to help you complete your AOR are available on the electronic AOR (EAOR) website at: http://www.dep.state.fl.us/air/emission/eaor. If you have questions or need assistance after reviewing the information posted on the EAOR website, please contact the Department by phone at (850) 717-9000 or email at eaor@dep.state.fl.us.}

EU 001 – Biological (Animal) Waste Incinerator

This section of the permit addresses the following emissions unit.

EU No.	Emission Unit Description
001	Biological (Animal) Waste Incinerator

*{Crawford Manufacturing Model C 1000S is a multi-chamber 1.5 MMBtu/hr. animal cremation biological waste incinerator rated at 400 lbs./hr. that burns **only** 100% pathological waste. Emissions are controlled through the design of the unit including its ability to operate the secondary chamber between temperatures of 1600 to 1850 ° F at a residence time emission exposure of 1.0 second. The unit is equipped with fully automatic PLC based controls, independent fuel/air systems, preheated combustion air, secondary chamber temperature monitor and recorder. The unit also has a primary burner temperature interlock, which prevents the primary burner from firing prior to the secondary chamber reaching it's set point temperature of 1800 °F. In addition, the incinerator is also equipped with UV continuous scanning flame detectors on burners, and an opacity sensor which can temporarily suspend operation of the primary chamber}.*

PERFORMANCE RESTRICTIONS

1. Permitted Capacity: The maximum incineration rate shall not exceed 400 lbs./hr. without prior Department approval.

   [Rule 62-210.200(PTE), F.A.C. and Permit No. 0010121-004-AC]

2. Restricted Operation: The hours of operation of are limited to 2000 hours per year and shall be recorded.

   [Rule 62-210.200(PTE), F.A.C. and Permit No. 0010121-004-AC]

EMISSIONS STANDARDS

3. 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. a, F.A.C. and Permit No. 0010121-004-AC]

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

   [Rule 26-296.401(4)(b)2. a., F.A.C. and Permit No. 0010121-004-AC]

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

   [Rule 26-296.401(4)(b)2. b., F.A.C. and Permit No. 0010121-004-AC]

6. Carbon Monoxide Emissions (CO): Carbon Monoxide emissions (CO) shall not exceed 100 parts per million by volume, dry basis, corrected to 7% O_2 on an hourly average basis.

   [Rule 26-296.401(4)(b)5., F.A.C. and Permit No. 0010121-004-AC]

7. Incinerator Design Temperature & Residence Time: The unit shall operate with a combustion zone temperature of no less than 1800 degrees Fahrenheit 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 utilized in calculating this residence time.

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

8. Incinerator Air Lock and Loading Systems: 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.

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

9. Waste Incineration: Incineration or ignition of waste shall not begin until the 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 are incinerated. The 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.]

10. Radioactive Waste: 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.]

11. Hazardous Waste: 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

12. Initial & Annual Operator 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.]

13. Operator 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.]

14. Operator Training Certificate: 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.

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

TESTING REQUIREMENTS

15. Annual Compliance Tests: During each calendar year (January 1st to December 31st), the emissions unit shall be tested to demonstrate compliance with the emissions standards for visible emissions.

    [Rule 62-297.310(8)(a)1, 62-296.401(4)(e)1. a., F.A.C. and Permit No. 0010121-004-AC]

16. Compliance Test Prior to Renewal: Compliance tests shall also be performed for Particulate Matter (PM) Hydrochloric Acid (HCl) and Carbon Monoxide (CO) prior to submitting a renewed operation permit to demonstrate compliance with the emission limits in **Specific Conditions 4 – 6.**

    [Rule 62-296.401(4)(e)1. b., F.A.C. and Permit No. 0010121-004-AC]

17. Test Requirements: 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(9), F.A.C.]

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

Method	Description of Method and Comments
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
5 or 26A	Method for Determining Particulate Matter Emissions **(NOTE 1)**
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources (The method shall be based on a continuous sampling train.)
26 or 26A	Determination of Hydrochloric Acid Emissions from Stationary Sources

    (NOTE 1) The minimum sample volume shall be thirty (30) dry standard cubic feet.

    The above methods are described in Appendix A of 40 CFR 60 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, 62-296.401(4)(e)1. b., F.A.C and Appendix A of 40 CFR 60]

19. EPA Method 9- Required Sampling Time: The required minimum period of observation for each 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(5) (b) 2 F.A.C.]

MONITORING REQUIREMENTS

20. Continuous Emissions Monitoring **(CEM)** Requirements: Each owner or operator of a biological waste incinerator unit shall install, operate, and maintain, in accordance with the manufacturer's instructions, continuous emission monitoring equipment. The monitors shall record the secondary (or last) combustion chamber exit temperature operating parameter.

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

NOTIFICATION, RECORDKEEPING AND REPORTING REQUIREMENTS

21. Secondary Combustion Chamber Temperature – Recordkeeping: The owner or operator shall maintain a complete file of all measurements, including continuous emissions monitoring system (CEM), 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 available 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 for at least two (2) years following the date of such measurements, maintenance, reports and records and shall be made available upon Department's request.

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

22. 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.]

23. 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.

    [Rule 62-297.310(10), F.A.C.]

24. 40 CFR 60, Subpart Ce: This combustor **is not** subject to 40 CFR 60, Subpart Ce during periods when only pathological waste, low-level radioactive waste, and/or chemotherapeutic waste (all defined in § 60.51c) is burned, provided the owner or operator of the combustor:

    (1) Notifies the Administrator of an exemption claim; and

(2) Keeps records on a calendar quarter basis of the periods of time when only pathological waste, low-level radioactive waste, and/or chemotherapeutic waste is burned.

[40 CFR 60.32e(b) and Permit No. 0010121-004-AC]