



**RECEIVED**

**AUG 31 1999**

**BUREAU OF AIR REGULATION**

August 30, 1999

Mr. Tom Cascio, P.E.  
Florida Dept. of Environmental Protection  
Twin Towers Office Building  
2600 Blair Stone Road, MS 5505  
Tallahassee, FL 32399-2400

RE: Gainesville Regional Utilities (GRU)  
Deerhaven Generating Station  
Draft Title V Permit No. 0010006-001-AV

Dear Mr. Cascio:

Pursuant to our conversation last week regarding the draft Title V permit for the Deerhaven facility, I understand that the Department will be favorably addressing GRU's comments as requested in my letter dated August 9, 1999 except as indicated herein.

**SECTION II. FACILITY-WIDE CONDITIONS.**

The Department stated that inclusion of GRU's requested Condition 13 under facility-wide conditions, would cause certain "unregulated emission units" to become "regulated units". GRU requested the addition of the condition to address excess emission provisions for other units at the facility that are subject only to the general visible emissions standard set forth in Rule 62-296.320(4)(b) such as combustion turbines No. 1 and 2. These units are by definition "unregulated emission units" because they emit no emissions limited pollutant and are not subject to a unit-specific work practice standard. It is not clear to GRU how the inclusion of the excess emission provisions would make these units "regulated emission units" subject to other requirements (e.g., testing). In fact, the Dept. has taken the position (DARM-PER-GEN-38) that such units are not required to perform visible emissions compliance tests to demonstrate compliance with the facility-wide limitation annually or before renewal. The Dept. has included these provisions in other permits and GRU requests that it be included as requested.

**SECTION III. EMISSION UNIT(S) AND CONDITIONS**

- GRU requested the deletion of Condition A.33 or clarification that only the opacity and sulfur dioxide CEMS will be used for purposes of periodic monitoring. It is my understanding that the condition will not be deleted but the clarification will be provided.

- Regarding the incinerator (E.U. ID No. 004), it is my understanding that the Department is seeking 1) clarification of the definition of Type 1 waste as contained in the construction permit and 2) assurances that only on-site generated waste will be burned in the unit, unless otherwise provided by previous permits/correspondence.
- Enclosed is a letter from the State of Florida dated November 17, 1971 addressing the construction permit for the Deerhaven incinerator. Attached to the letter is a copy of Chapter 170C-10 from the Sanitary Code of Florida providing a definition of Type I waste (see page 106). Accordingly, the Title V permit language (on page 16) as proposed in my August 9, 1999 comment letter should be reworded as follows:
 

"This emissions unit... Type I waste is rubbish, consisting of combustible waste such as paper, cartons, rags, wood scraps, sawdust, foliage, and floor sweepings from domestic, commercial and industrial activities".
- Condition B.3 should be modified as follows to clarify that only Type I waste generated on-site will be burned in the unit:
 

"B.3. Methods of Operation - Fuels. Only natural gas and/or on-site generated solid Type 1 waste shall be fired in the incinerator."
- Regarding Condition C.12. GRU believes this condition provides an exemption from annual compliance testing when the permittee elects to demonstrate compliance with a specific limitation(s) using a CEMS. It is not clear how the Department has interpreted this to relate to contemporaneous RATA/compliance testing. Notwithstanding, the Dept. will be providing language dealing with such testing for consideration (perhaps as a separate permit condition?).

## **SUBSECTION E. NSPS COMMON CONDITIONS**

GRU requested that the permitting note indicating that the excess emissions Rule at 62-210.700, F.A.C., cannot vary any requirement of an NSPS, NESHAP, or Acid Rain program provision be clarified as to its meaning. According to Mr. Mitchell, this language has been previously negotiated with EPA and it cannot be revised or clarified by the Department.

### **APPENDIX I-1. List of Insignificant Emissions Units and/or Activities.**

GRU requests the inclusion of the following items in this appendix.

- 22. Application of fungicide, herbicide, or pesticide.
- 23. Petroleum lubrication systems.
- 24. Asbestos renovation and demolition activities.

I understand that the Department will be making the requested changes upon resolution of the remaining items. I would appreciate the opportunity to review a final draft of the permit before it is issued as a proposed permit. GRU has filed a Request for Extension of Time (attached) to and including September 24, 1999 to file a petition for an administrative hearing. If the permit changes are acceptable, GRU will be willing to withdraw the petition so that the proposed permit can be issued expeditiously. Thank you in advance for this consideration.


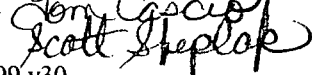
Please call me at (352) 334-3400 Ext. 1284 if you have any questions.

Sincerely,



Yolanta E. Jonynas  
Sr. Environmental Engineer

xc: R. Casserleigh  
D. DuBose  
S. Sheplak, FDEP - Tall.  
CAA Title V

9/1/99 cc:   


DHTVcascio83099.y30



STATE OF FLORIDA  
DEPARTMENT OF POLLUTION CONTROL  
SUITE 300, TALLAHASSEE BANK BUILDING  
315 SOUTH CALHOUN STREET, TALLAHASSEE, FLORIDA 32301

VINCENT D. PATTON  
EXECUTIVE DIRECTOR

November 17, 1971  
Alachua County SW  
City of Gainesville  
Municipal Generating Station  
Incinerator No. 1

DAVID H. LEVIN  
CHAIRMAN

Mr. John R. Kelly  
Director of Utilities  
City of Gainesville  
Gainesville, Florida

Dear Mr. Kelly:

This will acknowledge receipt of a construction permit applications and other applicable documents for a George L. Simonds Company Model B-215 incinerator to serve the City of Gainesville Municipal Generating Station, Unit NO. 1, U. S. Hwy 441, North of Gainesville, in Alachua County, Florida.

These documents have been reviewed and the attached construction permit No. SC 599 dated November 4, 1971 has been issued subject to the attached standard provisos 1 through 6 and the following:

- \* 7. This incinerator shall be used only for the Combustion of Type I waste. *(see attached Rules of State Board of Health, the Sanitary Code of Florida, Chapter 170C-10, Garbage & Rubbish Incineration 170C-10.09)*
8. The Florida Department of Pollution Control shall be notified of any changes or revisions made during construction. *(1)(b)1*
9. Any time this unit is found to be performing inadequately because of overloading, neglect, or other reasons, the owner shall discontinue its use until measures are provided to correct the cause of such performance.
10. The incinerator shall have a metal name plate affixed in a conspicuous place on the incinerator shell showing manufacturer, model number, type waste, rated capacity, and construction permit number.
11. This unit shall be tested for total particulate emissions by a commercial testing firm and the results submitted in duplicate to the DPC Northeast Florida Regional Office, 4441 Emerson Street, Jacksonville, Florida 32207. Such test results are required prior to our issuance of an operation permit.

JOHN R. MIDDLEMAS  
BOARD MEMBER

GEORGE RUPPEL  
BOARD MEMBER

JAMES F. REDFORD, JR.  
BOARD MEMBER

A. D. VINCENT  
BOARD MEMBER

This is 100% recycled paper.

Mr. John R. Kelly  
November 17, 1971  
Page Two

Your cooperation in this matter will be appreciated.

Sincerely,



W. E. Linne, Acting Chief  
Bureau of Permitting

WEL/wlw

cc: Mr. John Ketteringham  
County Health Department  
Board of County Commissioners  
Mr. James W. Humphrey, P.E.

STATE OF FLORIDA  
DEPARTMENT OF AIR AND WATER  
POLLUTION CONTROL

CONSTRUCTION PERMIT

FOR City of Gainesville  
Gainesville, Florida

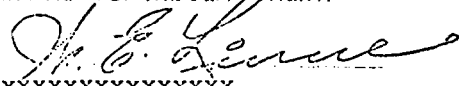
PERMIT NO. SC 599 DATE November 4, 1971

PURSUANT TO THE PROVISION OF SECTION 403.661 (16) OF CHAPTER 403, FLORIDA STATUTES AND CHAPTER 17A FLORIDA ADMINISTRATIVE CODE, THIS PERMIT IS ISSUED TO:  
John R. Kelly, Director of Utilities

FOR THE CONSTRUCTION OF THE FOLLOWING:  
George L. Simonds Company Model B-215 (215 Cu. Ft. Type I  
Waste) Incinerator to serve the Municipal Generating Station,  
Unit No. 1. U. S. Hwy. 441, North of Gainesville  
82°23'18.4"-29°45'30.75"

IN ACCORDANCE WITH THE APPLICATION DATED July 22, 1971  
AND IN CONFORMITY WITH THE STATEMENTS AND SUPPORTING DATA ENTERED THEREIN,  
ALL OF WHICH ARE FILED WITH THE DEPARTMENT AND ARE CONSIDERED A PART OF THIS  
PERMIT.

THIS PERMIT SHALL BE EFFECTIVE FROM THE DATE OF ITS ISSUANCE UNTIL 8/1/72  
AND SHALL BE SUBJECT TO ALL APPLICABLE LAWS OF THE STATE AND THE RULES AND REG-  
ULATIONS OF THE DEPARTMENT.

  
XXXXXXXXXXXXXXXXXXXX  
W. E. Linne, Acting Chief  
BUREAU OF PERMITTING

  
VINCENT D. PATTON  
EXECUTIVE DIRECTOR

DEPARTMENT OF POLLUTION CONTROL

STANDARD PROVISOS

1. Construction of this installation shall be completed by March 1, 1972.
2. This installation shall be operated by a competent and qualified person. Operations shall be conducted according to the best accepted practices and the recommendations of the Department of Pollution Control.
3. This construction permit is issued with the understanding that the owner may need to comply with county, municipal, or other local regulations prior to construction.
4. The applicant shall continue the retention of the engineer of record for the inspection of the construction of this project. Upon completion, the engineer shall inspect for conformity to construction permit applications and associated documents. A report of such inspection shall be submitted by the engineer to the Department of Pollution Control for consideration toward the issuance of an operation permit. Notification of the pending completion of this project shall be transmitted in writing to the Department by the engineer approximately two weeks before the completion of construction.
5. This construction permit expires on August 1, 1972 following an initial period of operation for appropriate testing to determine compliance with the Rules of the Florida Pollution Control Board.
6. Detailed plans and specifications for this report shall be available upon request by the Department of Pollution Control.

**RULES  
OF  
STATE BOARD OF HEALTH  
THE SANITARY CODE OF FLORIDA  
CHAPTER 170C-10  
GARBAGE AND RUBBISH**

170C-10.01	Garbage and rubbish — general	170C-10.06	Disposal of garbage and rubbish
170C-10.02	Definitions	170C-10.07	Sanitary landfills
170C-10.03	Garbage storage and collection	170C-10.08	Incineration
170C-10.04	Collection and disposal responsibilities	170C-10.09	Composting
170C-10.05	Garbage feeding of hogs	170C-10.10	Other stabilization methods
		170C-10.11	Disposal of pathological wastes

170C-10.01 Garbage and rubbish—general—Responsibilities and operational procedures relative to the sanitary storage, collection and disposal of garbage and rubbish.

General Authority 381.031 (1) (e) 3 FS Law Implemented 381.031 (1) (e) 3 FS, 381.311 FS, 386. FS

170C-10.02 Definitions.—

(1) "Garbage"—Waste products of all animal or vegetable matter resulting from growing, processing, marketing and preparation of food items including containers in which packaged.

(2) "Rubbish"—Waste material not of a putrescible nature; included are stumps and logs, car bodies, refrigerators, stoves, tires, building and road materials, tree trimmings, paper boxes and similar material.

(3) "Offal"—Waste animal matter from butcher, slaughter and packing houses.

(4) "Dead animals" — Dead animals not intended to be used for food purposes.

(5) "Manure"—Body waste of animals and fowl and cleanings from all barns, stables, corals or pens used for stabling, caging or penning of animals or fowl.

(6) "Sanitary landfill"—A planned method of compacting and completely covering garbage in a prepared area so as to prevent sanitary nuisances and insect and rodent breeding and harborage.

(7) "Composting"—A controlled method utilizing biochemical decomposition of garbage in a completely nuisance free manner resulting in a safe, stable final product.

(8) "Incineration"—Pertinent terms shall be defined as follows:

(a) "Auxiliary Fuel Firing Equipment"—Equipment to supply additional heat, by the combustion of an auxiliary fuel, for the purpose of attaining temperatures sufficiently high to dry and ignite the waste material, to maintain ignition thereof, and to promote complete combustion of combustible materials.

(b) "Baffle"—Any refractory construction

intended to change the direction of flow of the product of combustion.

(c) "Barometric Damper"—A hinged or pivoted balanced blade so as to admit air to the breeching, flue connection or stack, thereby automatically maintaining a constant draft in the incinerator.

(d) "Breeching or Flue Connection"—A passage for conducting the products of combustion to the stack or chimney.

(e) "Bridge Wall"—A partition wall between chambers over which pass the products of combustion.

(f) "Burning Area"—The horizontal projected area of grate, hearth, or combination thereof on which active burning takes place.

(g) "Burning Rate"—The amount of waste incinerated, usually expressed in pounds per hour per square foot of burning area.

(h) "Butterfly Damper"—A plate or blade installed in a duct, breeching, flue connection or stack, arranged to move horizontally across the duct, breeching, flue connection or stack.

(i) "Bypass"—An arrangement of breechings of flue connections and dampers to permit the alternate use of two or more pieces of equipment by directing or diverting the flow of the products of combustion.

(j) "Capacity"—The amount of waste incinerated, usually expressed in pounds per hour with the characteristics or type of waste stipulated.

(k) "Checkerwork"—A pattern of multiple openings in refractory through which the products of combustion pass to promote turbulent mixing of the gases.

(l) "Curtain Wall"—A partition wall between chambers under which pass the products of combustion.

(m) "Down Pass"—Chamber or gas passage placed between two chambers to carry the products of combustion in a downward direction.



- (n) "Dropl" -Any vertical refractory wall supported arch construction.
- (o) "Drying Hearth"—A surface within the primary chamber upon which wet waste material is deposited for drying, prior to burning.
- (p) "Excess Air"—The air remaining after a fuel has been completely burned, or that air supplied in addition to the theoretical quantity.
- (q) "Forced Draft"—The pressure difference created by the action of a fan, blower, or ejector, which supplies the primary combustion air above atmospheric pressure.
- (r) "Fly Ash"—Suspended particulate matter in products of combustion.
- (s) "Fly Ash Collector"—Auxiliary equipment designed to remove fly ash in dry form from the products of combustion.
- (t) "Grate"—Surface with suitable openings to support the fuel bed and permit passage of air through the burning fuel. It is usually located in the primary combustion chamber and is designed to permit removal of unburned residue, and may be horizontal or inclined, stationary or movable.
- (u) "Guillotine Damper"—An Adjustable blade installed vertically in a breaching or flue connection arranged to move vertically across the breaching or flue connection usually counter-balanced for easy operation.
- (v) "Heating Value"—The heat released by combustion of a unit quantity of waste or fuel, measured in British Thermal Units (B.T.U.).
- (w) "Heat of Combustion"—The heat released by combustion of a unit quantity of waste or fuel, measured in British Thermal Units (B.T.U.).
- (x) "Heat Release Rate"—The amount of heat liberated during the process of complete combustion and expressed in B.T.U. per hour per cubic foot of the internal furnace volume in which such combustion takes place.
- (y) "Hot Drying Hearth"—A surface upon which wet material is placed to dry by the action of hot combustion gases that pass successively over the wet material and under the hearth.
- (z) "Incineration"—The process of igniting and burning combustible waste under properly designed and controlled conditions to carbon dioxide and water vapor.
- (aa) "Incinerator"—A properly designed combustion apparatus in which combustible wastes are ignited and burned to carbon dioxide and water vapor, and from which the solid residues contain little or no combustible material.
- (ab) "Induced Draft"—The pressure difference created by the action of a fan, blower, or ejector, which is located between the incinerator and the stack, or at the stack exit.
- (ac) "Mixing Chamber"—Chamber usually

placed between the primary combustion chamber and the secondary combustion chamber where thorough mixing of the products of combustion is accomplished by turbulence created by increased velocities of the gases, checkerwork and/or turns in direction of the gas flow.

(ad) "Natural Draft"—The pressure difference created by stack or chimney due to its height and the temperature difference between the flue gases and the atmosphere.

(ae) "Primary Air"—Any air controlled with respect to quantity and direction, forced or induced, supplied through or adjacent to the fuel bed, for the purpose of promoting combustion of the combustible materials in the fuel bed.

(af) "Primary Combustion Chamber"—Chamber within an incinerator where primary ignition and burning of the waste occurs.

(ag) "Scrubber or Gas Washer"—Auxiliary equipment designed to remove pollutants in wet form from the products of combustion.

(ah) "Secondary Air"—Any air, controlled with respect to quantity and direction, supplied beyond the fuel bed, as through ports in the wall, or bridge wall of the primary combustion chamber (overfire air), or the secondary combustion chamber, for the purpose of completing combustion of combustible materials in the gases from the fuel bed, or to reduce operating temperature within the incinerator.

(ai) "Secondary Combustion Chamber"—Chamber where unburned combustible materials from the primary chamber are completely burned.

(aj) "Settling or Expansion Chamber"—Any chamber designed to reduce the velocity of the products of combustion to promote the settling of fly ash from the gas stream.

(ak) "Spark Arrester"—A device to prevent sparks, embers, or other ignited material above a given size from being expelled to the atmosphere.

(al) "Stack, Chimney or Flue"—A vertical passage for conducting products of combustion to the atmosphere.

(am) "Standard Conditions"—Standard conditions shall mean a temperature of 68°F and a pressure of 14.7 pounds per square inch gage, dry basis.

(an) "Theoretical Air"—The exact amount of air required to supply oxygen for complete combustion of a given quantity of a specific fuel.

(ao) "Underfire Air"—Any air controlled with respect to quantity and direction, forced or induced, supplied beneath the grate, that passes through the fuel bed.

(ap) "Underfire Air"—Any air controlled with respect to quantity and direction, forced or induced, supplied beneath the grate, that passes through the fuel bed.

(aq) "Underfire Air"—Any air controlled with respect to quantity and direction, forced or induced, supplied beneath the grate, that passes through the fuel bed.

General Authority 381.031 (1) (g) 3 FS Law Implemented 381.031 (1) (g) 3 FS  
History—Amended 10-20-04

170C-10.03 Garbage age and Collections.—Garbage shall be retained in watertight receptacles of impervious material which are provided with tight fitting covers suitable to protect the contents from flies, insects, rats and other animals. Garbage collection shall be made at such intervals and collection equipment shall be of such design as meets the approval of the board.

General Authority 381.031 (1) (g) 3 FS Law Implemented 381.031 (1) (g) 3 FS

170C-10.04 Collection and disposal responsibilities.—

(1) Municipalities shall be responsible for providing an adequate, efficient and sanitary system of collecting, transporting and disposing of garbage and rubbish from all buildings and establishments creating garbage or rubbish throughout the municipality in a manner approved by the board.

(2) Persons, firms, corporations and other governmental bodies or agencies providing garbage collection, and/or disposal services to any person, place or establishment shall manage such service in a completely nuisance free manner as provided herein.

General Authority 381.031 (1) (g) 3 FS Law Implemented 381.031 (1) (g) 3 FS, 381.271 FS, 381.311 FS, 386 FS

170C-10.05 Garbage feeding of hogs.—Feeding garbage, offal or dead animals to hogs without first adequately cooking said materials in a manner prescribed by the State Department of Agriculture in accordance with provisions of 585.50 F.S. is prohibited. A feeding permit shall be obtained from the State Department of Agriculture in accordance with provisions of 585.51 F.S. and approval granted by the local health department before such feeding program commences. After cooking the garbage shall be fed to hogs on impervious feeding platforms. Platforms and surrounding areas shall be maintained in such a manner as to prevent fly breeding, rat harborage or sanitary nuisance of any kind.

General Authority 381.031 (1) (g) 3 FS Law Implemented 381.031 (1) (g) 3 FS, 386.10 FS, 585.50 FS, 585.51 FS

170C-10.06 Disposal of garbage and rubbish.—

(1) Garbage, offal, dead animals and manure, or rubbish mixed with garbage, offal, dead animals and manure; or any combination thereof, shall be disposed of by incineration, burial, sanitary landfill or other method approved by the board. Such materials shall not be disposed of by being placed in any natural or artificial body of water or on the water shed of any surface public water supply; nor within one-half mile of any habitation or place of business where it may become a sanitary nuisance or menace to health through the breeding of flies and/or harboring of rodents; nor shall such material be dumped on or upon public highway, road or alley of this state or within one-half

mile of such public highway or road or alley or other place except when said material has been rendered completely stable by a process approved by the board. The responsibility for disposal of dead animals, etc., shall be carried out at the owner's expense.

(2) Sanitary landfills, incinerators, composting operations and any other garbage and rubbish disposal or stabilizing method or device shall be maintained and operated in a sanitary nuisance free manner.

(3) No food or food products of any kind incorporated into garbage or otherwise deposited at a garbage disposal area or operation of any type shall be received and utilized for human consumption.

General Authority 381.031 (1) (g) 3 FS Law Implemented 381.031 (1) (g) 3 FS, 386 FS

170C-10.07 Sanitary landfills.—

(1) Responsibilities.—

(a) Counties and mosquito control districts participating in the state arthropod control program and which operate or propose to operate one, or more, sanitary landfills, shall comply with provisions of Chapter 388 F.S. and all applicable provisions of this chapter.

(b) Counties, municipalities, individuals, corporations or organizations not subject to the requirements of Chapter 388 F.S. which operate or propose to operate, one, or more, sanitary landfills, shall comply with all applicable provisions of this chapter. They shall submit to the local health department of the county in which the landfill operation is proposed, an operational work plan including a map showing proposed work locations.

(c) Following receipt of the proposed operational work plan from the local health department, the board will review said plan and make such field investigations deemed necessary prior to approval, or disapproval, of the proposal. Approval by the board shall be received before operations are initiated.

(d) Landfill site locations may be changed at any time provided no radical change is made from the original plan and local health department approval is obtained prior to re-locating.

(2) Operations.—Topography of Florida is such that sites which vary from high dry ground to low lying ponded areas must be utilized for landfill operations. When working in watered areas the trench or pit should be kept de-watered during operating periods.

(a) A separate disposal area shall be provided for rubbish. This material may be burned only when atmospheric conditions are satisfactory and no nuisance will result from such burning in accordance with local health department recommendations.

(b) Separate trenches shall be provided for the disposal of offal and dead animals and for the disposal of sewage sludge from septic tanks

and other soil material in such trenches shall be covered six (6) inches of earth at the end of each day. The final covering of such trenches shall consist of at least a twenty-four (24) inch depth of sand, sandy loam or similar cover materials. A lesser depth of other soil types may be permitted following approval of the board.

(c) The site of operations shall be easily accessible by trucks and cars. An all-weather road shall be maintained at all times to the location where garbage is dumped.

(d) Garbage shall be disposed of by compacting and all exposed surfaces of the compacted materials shall be covered with earth to form a closed cell at the end of each day's operation.

(e) The face of the working fill shall be kept as narrow as is consistent with proper operation of trucks and equipment in order that the area of waste material exposed during the operating day will be minimized.

(f) Burning of garbage prior to covering shall not be permitted except in unusual circumstances as approved by the board.

(g) Garbage shall be placed in layers not exceeding a compacted depth of six (6) feet. There shall be at least a twenty-four (24) inch depth of sand, sandy loam or similar cover material used to close out each cell. A lesser depth of other soil types such as clays, gumbos and crushed rock may be permitted following approval of the board. Operations compacting depths less than six (6) feet may reduce the daily earth cover proportionately; provided, that not less than six (6) inches of cover material is used in closing out each day's operation. A final cover depth of twenty-four (24) inches of compacted earth shall be used in closing out all cells unless otherwise approved by the board.

(h) Where the top of the compacted fill is above normal ground elevation, side slopes shall have a minimum cover of twenty-four (24) inches, unless otherwise approved and a slope of not less than two (2) feet horizontally to one (1) foot vertically. The top of the fill shall be graded so as to drain all waters from the surface. Slopes should be seeded with grass promptly after completion.

(i) Water spraying of exposed waste material and adjacent surfaces shall be used when necessary to allay dust.

(j) Blowing of papers shall be prevented, insofar as possible, by the use of movable fencing or other appropriate means. The landfill and immediate surrounding area shall be kept in a clean condition.

(k) Where scavengers are permitted, they shall be adequately supervised and not allowed to interfere with operations.

(l) Collections of surface water resulting

from landfill operations shall be drained, eliminated by filling or treated with effective chemicals as a temporary measure in order to prevent mosquito production and disagreeable odors.

(m) The agency or person responsible for construction and operation of the landfill shall maintain an inspection program for the control of rodents. After filling operations are completed, the maintenance program shall be continued until the fill has become stabilized to assure prompt repair of cracks, depressions and erosion of the surface and side slopes.

(n) Operation and maintenance shall be under the direction of a qualified person.

(o) An operation report form shall be submitted monthly concerning daily operations.

General Authority 181.031 (1) (a) 3 FS Law Implemented 181.031 (1) (a) 3 FS, 386, FS History—Amended 10-20-84

#### 170C-10.08 Incineration.—

##### (1) Classifications.—

(a) Incinerators—Incinerators to burn Types I, II and III waste shall be classified by their rated capacity as follows:

1. Municipal incinerators—Those having a rated capacity of one-thousand (1000) pounds per hour or greater.

2. Commercial incinerators—Those having a rated capacity of one-hundred (100) to one-thousand (1000) pounds per hour.

3. Domestic incinerators—Those having a rated capacity of less than one-hundred (100) pounds per hour.

4. Other—this category shall include incinerators designed to burn Types IV, V, or VI wastes.

(b) Waste—Waste shall be classified as follows:

1. Type I Waste—Rubbish, consisting of combustible waste such as paper, cartons, rags, wood scraps, sawdust, foliage, and floor sweepings from domestic, commercial and industrial activities.

2. Type II Waste—Refuse, consisting of an approximately even mixture of rubbish and garbage by weight.

3. Type III Waste—Garbage, consisting of animal and vegetable wastes from restaurants, cafeterias, hotels, hospitals, markets, and like installations.

4. Type IV Waste—Human and animal remains, consisting of carcasses, organs, solid organic wastes from hospitals, laboratories, abattoirs, animal pounds and similar sources.

5. Type V Waste—By-product waste, gaseous, liquid or semi-liquid, such as tar, paints, solvents sludge, fumes, etc., from industrial operations.

6. Type VI Waste—Solid by-product waste, such as rubber, plastics, wood waste, etc., from industrial operations.

(c) The various types of waste shall be considered to have the following composition and characteristics:

Type Waste	Non-Combustibles	Moisture	Combustibles	Heating Values
I	10%	25%	65%	6,500 BTU/#
II	7%	50%	43%	4,300 BTU/#
III	5%	70%	25%	2,500 BTU/#
IV	5%	85%	10%	1,000 BTU/#
V	Considered according to waste analysis.			
VI	Considered according to waste analysis.			

(2) Approval—It shall be unlawful for any person, persons, firm, corporation, company, institution, municipality or community to install or alter any incinerator or incinerator appurtenances without first having received approval from the board.

(a) Plans and accompanying documents for incinerators shall be submitted to the board for review and possible approval.

(b) An incinerator may only be used to burn the type of waste for which it was approved.

(3) Applications—Upon request, the board shall provide application forms and data sheets necessary for board approval of incinerators. All applications shall be prepared by an engineer registered in Florida and submitted in quadruplicate and shall contain the following information:

(a) Statement that engineering drawings for the incinerator have been approved by the governing body of the applicant (city commissioners, corporation, board, etc.)

(b) Prints of drawings of the work project which contain sufficient detail to clearly appraise the board of the work to be undertaken.

(c) Incinerator data sheets.

(d) Plot plan showing the location, type and height of all buildings within a five hundred (500) foot radius of the incinerator installation.

(e) A set of operating instructions for the incinerator.

(f) A letter from the owner of the installation indicating that he has read the incinerator operating instructions and understands that he may be restricted from future use of the incinerator, if it is not operated in accordance with these instructions.

(g) Additional data may be requested by the board after initial application for purposes of clarification.

(4) Design criteria—The incinerator for each proposed installation shall be reviewed and considered for approval on its own merits and compliance with the criteria outlined below, where applicable, and with good sanitary engineering practices.

(a) Municipal—Municipal incinerators shall be reviewed on the basis of information presented and in accordance with good sanitary engineering practices.

(b) Commercial—Commercial incinerators shall be designed in accordance with the criteria listed below:

1. Incinerator size based upon heat release

- The minimum total heat release shall equal 6000 BTU per pound. This shall be based upon the BTU value of any supplemental fuel (BTU per pound), plus the heating value of the refuse (BTU per pound).

- The total effective furnace volume heat release shall approximate 20,000 British Thermal Units per cubic foot per hour (BTU/ft<sup>3</sup>/hr).

- The total heat release in the incinerator shall be able to maintain an average temperature of 1700 degrees Fahrenheit in the primary chamber.

- Heat release—The total heat release in the primary combustion chamber shall approximate 40,000 British Thermal Units per cubic foot per hour (BTU/ft<sup>3</sup>/hr.)

- Burning area—The minimum burning area shall be based upon the I.I.A. maximum burning rate table from Incinerator Institute of America Incinerator Standards, April, 1963 (Burning rate = Waste type factor x log of capacity per hour). This area shall be the grate area for incinerators designed to burn Type I waste, and shall be equal to the sum of the hearth and grate areas for incinerators designed to burn Type II and III wastes.

#### 2. Air Requirements—

- Air ports shall be designed to admit a total of 100% excess air to the primary chamber.

- 20% ± 20% of the total combustion air shall be used as underfire air.

- All combustion air shall be added in the primary chamber.

#### 3. Velocity considerations—Velocities at points of interest shall be as listed below:

	Velocity (ft/sec)	Temperature (°F at which Velocity is reported)
a. Flame Port	35 ± 20%	1700
b. Mixing Chamber (Down Pass)	35 ± 20%	1600
c. Secondary Chamber 7 (max.)		1600
d. Stack	35 ± 20%	1200
e. Air ports (indraft)	20 ± 20%	Ambient

#### 4. Stacks—

- All stacks shall be constructed to withstand an internal temperature of 1800°F.

- b. All stacks shall be equipped with an adequate spark arrester.
- c. All stacks shall be at least ten (10) feet above the highest point of any building within one-hundred (100) feet of the stack center line.
- d. A test port, 3½" inside diameter, shall be installed in every incinerator stack, (approximately eight (8) stack diameters above the barometric damper).
5. Other Considerations:—
- a. All incinerator units shall be refractory lined in accordance with I.I.A. Standards (April 1963).
- b. Only end or side charging is recommended.
- c. All units shall have a properly located barometric damper installed. Guillotine or stack dampers are recommended.
- d. The use of step grates is not recommended.
- e. All incinerator charging rooms shall have adequate refuse storage space.
- f. All incinerators shall be assured a sufficient supply of fresh air for proper fuel combustion. Design of ventilating system for personnel and proper incinerator operation shall comply with the safety and fire code of the respective authorities having jurisdiction.
- g. All units shall be of multiple chamber design.
6. Chute Feed Mechanisms—Chute fed incinerators shall comply with the following criteria:
- a. The charging hopper shall be located directly beneath the charging chute and directly above the incinerator.
- b. A refractory lined charging hopper shall connect the charging chute with the primary chamber of the incinerator. The hopper shall have a refractory lining not less than four and one-half (4.5) inches thick and a steel casing of not less than twelve (12) gauge.
- c. The charging hopper shall be connected to both the charging chute and the incinerator primary chamber to refractory lined gates. The metal casing shall be at least twelve (12) gauge. The gates shall have a refractory lining not less than four and one-half (4.5) inches thick. The charging hopper shall have an access door.
- d. The volume of the charging hopper shall not exceed the volume of the incinerator primary chamber.
- e. The control panel for the incinerator and hopper shall incorporate a timer which can be adjusted for automatic charging cycles at time intervals as determined for the specific installation.
- f. Hand operated switches shall be provided

106B

which permit the operator to move either gate for servicing.

g. Adequate limit switches shall be incorporated in the control panel to avoid any possibility of both charging gates being open at the same time during either automatic or manual operation.

h. To insure proper preheating of the incinerator, a temperature controller shall be incorporated in the control panel so that the temperature in the secondary combustion chamber will be at least 300°F before charging cycle can start. This may be accomplished by an auxiliary burner. A controller shall also be provided for cutting off the burner when the primary chamber temperature exceeds 1600°F.

i. An alarm shall be provided which will sound when malfunctions in automatic controls occur.

j. The charging chute shall be provided with adequate means for sanitizing, fire protection, and drainage.

(c) Domestic—Domestic incinerators shall be reviewed on the basis of information presented. A surety bond to insure adequate and satisfactory performance shall be required on all makes and models until such time as said units have been proven capable of operation without creating nuisance conditions.

(d) Other—

1. Incinerators for Type IV Waste—

a. Hearth—The waste shall be burned on a hot hearth heated from below by the hot gases resulting from the combustion of the waste and heated from above by the direct action of the primary burner.

b. Primary chamber volume—The primary chamber volume shall approximate 0.25 cu. ft./# /hr. of waste at rated capacity.

c. Burners—Two burners shall be provided; one in the primary chamber and one in the secondary chamber. The primary burner shall supply 5000 BTU/# and the secondary burner shall supply 3000 BTU/# of waste.

2. Incinerators for Types V or VI Waste. Such incinerators shall be reviewed on the basis of information presented to the board.

(5) Safety—The incinerator shall have the side charging door suspended so it will provide explosion relief in the event of an emergency.

(6) Prohibitions—Flue-fed incinerators are prohibited.

(7) Disposal—Residue from burning shall be disposed of in a nuisance free manner and proposals for said disposal shall be submitted for review and approval at the time of submitting original plans and applications for the incinerator.

(8) Stack Emissions—Stack particulate emissions shall not exceed a grain loading of 0.2 grains per standard dry cubic foot of exhaust gas corrected to 50% excess air volume.

(9) Experimental installations—Plans for incinerators designed for special applications will be reviewed by the board in accordance with good engineering practices. In certain instances, such installations may be approved on an experimental basis.

General Authority 381.031 (1) (g) 3 FS Law Implemented 381.031 (1) (g) 3 FS, 381.031 (1) (g) 7 FS History.—Amended 10-20-64

#### 170C-10.09 Composting.—

(1) Standards—In view of the lack of precise definition of design criteria, proposed composting plants shall be reviewed in light of information presented to the board and other information available.

(2) Approval—It shall be unlawful for any person, persons, firm, corporation, company, institution, municipality or community to install or alter composting plants without first having received approval from the board. Plans and accompanying documents for composting plants shall be submitted to the board, through the local health department of the county involved, for review and consideration of approval.

(3) Application—Upon request, the board shall provide application forms and data sheets necessary for board approval. All applications shall be submitted in quadruplicate and shall contain the following information:

(a) A statement that plans for the project have been approved by the governing body of the applicant.

(b) Prints of drawings of the work project which contain sufficient detail to clearly appraise the board of the work to be undertaken.

(c) Data sheets.

(d) Such additional data may be requested by the board after initial application for purpose of clarification, anticipated use or to support any changes in the scope of the project, actual or anticipated.

(4) Products—Offered for sale shall contain no pathogenic organisms, shall not reheat upon standing, shall cause no odors and shall contain no sharp particles which would cause injury to personnel handling the compost. By-products removed shall be handled in a sanitary manner.

General Authority 381.031 (1) (g) 3 FS Law Implemented 381.031 (1) (g) 3 FS

170C-10.10 Other stabilization methods.—Before any other method of stabilizing garbage, rubbish, offal or other such materials is constructed or placed in operation, complete plans, specifications and design data shall be submitted to the board, through the local health department of the county involved, for review and consideration of approval.

General Authority 381.031 (1) (g) 3 FS Law Implemented 381.031 (1) (g) 3 FS

170C-10.11 Disposal of pathological wastes.—(1) Pathological Wastes—All human and animal remains as described in 170C-10.08 (1) (b)4., and including such items as cloth, bandages, cartons and other materials which have been in contact with such materials.

(2) The handling and disposal of all pathological waste shall be in accordance with procedures approved by the Board. Disposal shall be by incineration or other method approved by the Board, and is expressly considered to be Type IV waste as heretofore classified in 170C-10.08.

General Authority 381.031(1) (g) 3 FS: Law Implemented 381.031(1)(g)1,2,3,7,8; 386.01, 395.09, 400.10(1)(a),(c) History.—New 11-25-66

106C