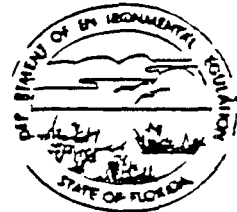


State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION



DEK  
OCT 31 1986

SOUTH FLORIDA DISTRICT

APPLICATION FOR PERMIT TO CONSTRUCT  
OPERATE  
A SOLID WASTE RESOURCE RECOVERY AND MANAGEMENT FACILITY

GENERAL REQUIREMENTS

Resource Recovery and Management Facilities must be permitted pursuant to Section 403.707 Florida Statutes. Separate applications for each permit. Four copies each should be submitted to the District office of the Department of Environmental Regulation. Complete appropriate sections of the application for the type of facility proposed.

Each application shall be accompanied by an application (check) fee of \$400 payable to State of Florida Department of Environmental Regulation.

Applicant has the responsibility to provide copies of the application to appropriate city, county and/or regional pollution control agencies established pursuant to Section 403.82 Florida Statute. Applicant shall also clear the application through appropriate local planning agencies. Comments from any of these agencies shall be forwarded with the application to the Department.

Information contained in the application shall conform to requirements of Chapter 177 Florida Administrative Code. All entries should be typed or printed in ink. If additional space is needed separate properly identified sheets or paper may be attached. All blanks shall be filled or marked as not applicable.

Applicant Name (operating authority) Board of County Commissioners, Sumter County, Florida

Address Sumter County Courthouse  
Busnell Florida 33513

Authorized Agent Garry Bleeden Director of Public Works

Main Office Address (if different from above) P O Drawer A  
Busnell Sumter 33513  
City County Zip

Telephone Number (904) 793-4221

Facility Location State Road 470  
(Name of road, Road and Crossroad)

S 205 T 22E /Latitude 28 ° 44 ' 30 " Longitude 82 ° 05 ' 20 "

Township and Range Sumter County Communities of Wilwood Coleman Oxford Poval  
Busnell, Sumter, Bushnell, and Webber

Population of area 70,000

Area within State Boundary 28

Area within County Boundary 30.3

Volume of Solid Waste to be received 150 Tons/day

Facility to Receive Solid Waste Operating since June 1975

Signature (if different than applicant)

Address of Lender

Facility Type

Sanitary Landfill

- Class I more than 50 cy or 20 tons waste/day
- Class II less than 50 cy or 20 tons waste/day
- Class III
  - trash/yard trash
  - yard trash composting
- Landspreading
  - Grade III
  - Grade IV
- Other Facility not shown \_\_\_\_\_

Volume Reduction

- Composting
- Transfer Station
- Shredder
- Incinerator
- Resource Recovery
  - Energy
  - Materials

REQUIRED ATTACHMENTS FOR  
RESOURCE RECOVERY AND MANAGEMENT FACILITY PERMITS

Construction Permits

- A Class I and Class II Landfills Submit items 1 (if appropriate) 2, 3 4 5 6 7 8 9 10 and 11
- B Class III Landfills 1 (if appropriate) 3 4 5 7 8 (a b c, h j k) 9 and 11
- C Volume Reduction 4 5 6 (a e) 7 (a d e g h j) 8 (a b c, g h j k) 9 and 12.

Operation Permits

- NOTE For facilities that have been satisfactorily constructed in accordance with their construction permit the information in A B and C above does not have to be resubmitted for an operation permit if the information has not changed during the construction period.
- D Class I and II Landfills all of the items in A above plus item 13
  - E Class III Landfills all items in B above plus item 13
  - F Volume Reduction all items in C above plus item 13

ATTACHMENT ITEMS

- 1 Bonds (17 7 03(1) Florida Administrative Code) and/or other assurances. N/A
  - a Copy of bond or
  - b Copy of waiver of bond requirement.

NOTE This requirement only applies to privately owned and operated disposal sites. It does not apply to sites operated by counties municipalities other governmental agencies or persons operating a county or municipally owned facility under contract.

- c Agreement between landowner and applicant if not the same identify and explain the terms of lease or contract duration and who will be responsible for site closure and continued monitoring until released by the department.

- 2. Soil Survey (17 7 05(2)(a) Florida Administrative Code) See Groundwater Monitoring Plan Approved March 22 1985 Permit # S060-30674

NOTE This information is not required if the information is included in the hydrogeological report in item #3

- a Degree of limitation of soil Seepage if not covered
- b Soil series Apopka fine sand Astatula fine Sand and Candler Sand
- c Soil drainage class All soils have an A hydrologic classification
- d Permeability Apopka (6-20 in /hr) Astatula (greater than 20 in /hr) and Candler (greater than 20 in /hr)

- e Slope Apopka (0-57) Astatula (0-87 8-127) and Candler (0-57)
- f Soil texture Quartz Sand Medium Grain size and 5-20% Clay Content
- g Depth to bedrock Varies

3 Hydrogeological Survey (17 7 05(2)(b) Florida Administrative Code) See Groundwater Monitoring Plan Approved March 22 1985 Permit No S060-30674

NOTE For Class II and Class III landfills these requirements may be satisfied by providing the best available information from Water Management Districts the U.S. Geological Survey the Florida Bureau of Geology or other acceptable sources For Class I site this information shall be obtained from on-site soil borings

- a Thickness and character of overburden (soil)
- b Character of bedrock
- c Depth of water table and potentiometric surfaces
- d Depth to shallow ground water aquifer and artesian aquifer
- e Local and regional ground water flow systems indicating direction of ground water flow
- f Frequency and extent of flooding of the area (17 7 04(3)(a) Florida Administrative Code)

Landfill exists in a flood-free area above the 100 year flood plain

4 Evidence that the Facility is in conformance with local zoning (17 7 05(2)(c)4 Florida Administrative Code) County owned operation Information previously submitted in earlier approved application

5 Map or Aerial Photograph taken within one year of permit application (17 7 05(3)(a) Florida Administrative Code) showing land use and zoning within 1/2 mile of the proposed facility using the Florida Land Use Cover and Forms Classification System (available from the Department) Map shall be of sufficient scale to show all homes industrial buildings wells water courses dry runs rock out-croppings roads and other significant details

5 Recent aerial has been included Zoning has not changed since earlier approved applications  
Plot Plan (17 7 05(3)(b) Florida Administrative Code)

NOTE See Groundwater Monitoring Plan Approved Mar 22 1985 Permit # S060-30674  
The plot plan should be drawn on a scale not greater than 200 feet to the inch showing the following

- a Dimensions and legal description of the site Legal description found in earlier approved operation Permit Applications
- b Location and depth corrected to MSL of soil borings
- c Proposed trenching plan
- d Cover stock piles
- e Fencing or other measures to restrict access
- f Cross sections showing both original and proposed fill elevations
- g Location depth corrected to MSL and construction details of monitoring wells

7 Design Drawings and Maps (17 7 05(3)(c) Florida Administrative Code) See Groundwater Monitoring Plan Approved March 22, 1985 Permit # S060-30674

NOTE The design drawings and maps which may be combined with the plot plan (item #6) should be drawn on a scale not greater than 200 feet to the inch showing the following

- a Topographic map with five foot contour intervals
- b Proposed fill area
- c Borrow area
- d Access roads
- e Grades required for proper drainage
- f Typical cross sections of disposal site including lifts borrow areas and drainage controls
- g Special drainage devices

- h Fencing Perimeter fence access controlled at entrance gate
  - i Equipment facilities Single facility building at entrance with well
  - j Other permanent information based on intended use of facility
8. Report (17 7 05(3)(d) Florida Administrative Code) See Groundwater Monitoring Plan Approved Mar 22 1985 Permit #S060-30674
- a. Estimated population and area served by the proposed site with basis for the estimate
  - b. Anticipated type annual quantity and source of solid waste with rationale for estimate expressed in tons or cubic yards of compacted material Specify the type and amounts of solid wastes to be received from industrial and commercial sources
  - c. Anticipated life of site
  - d. Geological formations and ground water elevations corrected to MSL to a depth of at least ten feet below proposed excavations and lowest elevation of the site Such data shall be obtained by soil borings or other appropriate means This information is not required for Class III sites. This information may be submitted in the hydrogeological survey (Item #3)
  - e. Soil map interpretive guide sheets and a report giving the suitability of the site for such an operation This information may be submitted in the soil survey (Item #2)
  - f. Source and characteristics of cover material
  - g. Contingency plan including waste handling and disposal methods in case of an emergency such as equipment failure natural disaster or fire See Supplemental Information
  - h. Persons responsible for actual operation and maintenance of the site and intended operating procedures See Supplemental Information
  - i. A plan for gas control if gas generation from the site is expected See Supplemental Information
  - j. Operational plans to direct and control the use of the site See Supplemental Information
  - k. Plans for controlling the type of waste received at the site plans shall specify inspection procedures to be followed if prohibited types of waste are discovered See Supplemental Information
9. Water Quality Standards (17 7 05(3)(e) 17 7 05(4)(f) and 17 7 05(4)(g) Florida Administrative Code) See Supplemental Information  
Indicate by discussion or drawings or both how the site is designed to meet water quality standards of 17-3 and 17-4 Florida Administrative Code at the site boundary
10. Background Water Quality (17 7 05(4)(a)3 Florida Administrative Code) - Ground water and any on-site water shall be tested for the following parameters A comprehensive monitoring of wells for water quality can be found in the Groundwater Monitoring Plan Approved Mar 22 1985 Permit #S060-30674
- a. Conductivity
  - b. Nitrates
  - c. Iron
  - d. Chemical Oxygen Demand
  - e. Others as determined necessary
11. Solid Waste Disposal Facility Data Form Attached to Application Form
12. Solid Waste Volume Reduction and Resource Recovery Facility Data Form N/A
13. Certification of Construction Completion Found in earlier approved operating permit applications

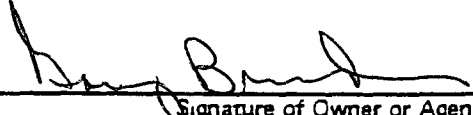
STATEMENTS BY APPLICANT AND ENGINEER OR PUBLIC OFFICER

A. Applicant

The undersigned owner or authorized representative of Sumter County

is aware that statements made in this form and attached exhibits are an application for a Landfill Operation

\_\_\_\_\_ Permit from the Florida Department of Environmental Regulation and certifies that the information in this application is true correct and complete to the best of his knowledge and belief Further the undersigned agrees to comply with the provisions of Chapter 403 Florida Statutes and all rules and regulations of the Department It is understood that the Permit is not transferable and the Department will be notified prior to the sale or legal transfer of the permitted establishment

  
\_\_\_\_\_  
Signature of Owner or Agent

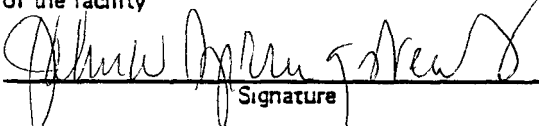
Garry Breeden Director of Public Works  
\_\_\_\_\_  
Name and Title

Date 10-23-85

Attach letter of authorization if agent is not a governmental official owner or corporate officer

B Professional Engineer Registered in Florida or Public Officer as Required in Chapter 403.707 and 403 707(5) Florida Statutes

This is to certify that the engineering features of this resource recovery and management facility have been designed/examined by me and found to conform to engineering principals applicable to such facilities In my professional judgement this facility when properly maintained and operated will comply with all applicable statutes of the State of Florida and rules of the Department It is agreed that the undersigned will provide the applicant with a set of instructions for proper maintenance and operation of the facility

  
\_\_\_\_\_  
Signature

John W. Springstead, P E  
\_\_\_\_\_  
Name and Title (Please Type)

8579  
\_\_\_\_\_  
Florida Registration No

(please affix seal)

Springstead & Associates-P O Box 448  
\_\_\_\_\_  
Mailing Address

Leesburg, Florida 32749-0448  
\_\_\_\_\_  
City State Zip Code

(904) 787-1414  
\_\_\_\_\_  
Telephone No

Date 10/21/85

Construction Cost Estimate N/A

Permit Number 5060-30674 Issue Date July 16, 1980

Review Date \_\_\_\_\_ Expiration Date July 1985

## SOLID WASTE DISPOSAL FACILITY DATA FORM

Permit No 5060-30674 Issue Date July 16, 1980 Expires July 1985

Facility No (DER Identification) 10024260016092

DER ACTION  Add  Delete  Change  Deactivate Site  Other

1 County Sumter 2 Site Name Sumter County Sanitary Landfill

3 Date Form Completed 10/12/85 4 Facility Address State Road 470

4a Facility Phone No \_\_\_\_\_ 4b Facility Site Supervisor \_\_\_\_\_

5a 28° 44' 30N 82° 05' 20W 5b 20 S 22 E 15  
 Latitude Longitude Township Range Section

6 Operating Authority Name \_\_\_\_\_ 8 Operating Authority Address Sumter County Courthouse

7 Phone Number (904) 793-4221 Rushnell, Florida 33513

9 Owner of Site Property (if different from operator) \_\_\_\_\_ 11 Address of Owner \_\_\_\_\_

10 Phone Number of Owner \_\_\_\_\_

12 Facility Type  
 Class I Sanitary Landfill  Class III  Sludge disposal facility  
 Class II Sanitary Landfill  Trash/Yard Trash  Other Facility Not Shown  
 Trash & Trash Composting (Lagoon Pit etc.)

3 Month/Year Begun June 1975 14 Disposal Area 28 Acres 15 Population Served 20 000

16 Expected Useful Lifetime 3 Years 17 Weighing Scales  Yes  No 18 Security to Prevent Unauthorized Use  Yes  No

19 Depth of Water Table MSL 44 Ft. 20 Quantity of Waste/Day \_\_\_\_\_ Tons or 150 Yd<sup>3</sup> 21 Charge \$1 5-4 yd/ton

22 Surrounding Land Use Zoning  
 Residential  None  Agricultural  Commercial  Industrial  Other

23 Types of Waste Received  
 Residential  Agricultural  Hazardous  Industrial Sludge  
 Commercial  Septic Tank  Yard Trash/Trash  Hospital  
 Consumer Residue  Industrial  Sewage Sludge  Other  
 Pathological/Infectious  Water/Air Treatment Sludge

24 Number of Monitoring Wells 6 25 Number of Surface Monitoring Points None

26 Gas Control System  Yes  No 27 Salvaging Permitted  Yes  No 28 Attendant Full-Time  Yes  No

29 Leachate Control Method  
 Liner Type  Natural  Emplaced Clay  Plastic  None  Other Clay Cover

Collection Method  Well Point  Perimeter Ditch  None  Underdrain Drains  Other

Treatment Method  Oxidation  Recirculated  Chemical  Advanced  None  Other

30 Leachate Discharge  Yes  No Class of Receiving Water Groundwater G-3

31 Site Located in  Floodplain  Wetlands  Other Sandy Upland

32 Surface Runoff Collected  Yes  No Type of Runoff Treatment None Class of Receiving Waters None

33 Property Recorded as a Solid Waste Disposal Site in County Land Records  Yes  No

4 Days of Operation 6 days/Week Days of Cover Covered Daily Hours of Operation 8

Name and Title of Person Completing Form John W. Springstead P.E.

Note All blanks must be filled or marked as not applicable

**SOLID WASTE VOLUME REDUCTION AND  
RESOURCE RECOVERY FACILITY DATA FORM**

Permit No \_\_\_\_\_ Issue Date \_\_\_\_\_ Expires \_\_\_\_\_

Facility No (DER Identification) \_\_\_\_\_

DER ACTION    Add    Delete    Change    Deactivate Site    Other

1 County		2. Site Name		
3 Date Form Completed		4 Facility Address		
4a Facility Phone No		4b Facility Site Supervisor		
5a o                      o	5b			
Latitude	Longitude	Township	Range	Section
6 Operating Authority Name		8 Operating Authority Address		
7 Phone Number				
9 Owner of Site Property (if different from Operator)		11 Address of Owner		
10 Phone Number of Owner				
12 Facility Type (check one or more)				
<input type="checkbox"/> Incinerator Only		<input type="checkbox"/> Biomass Gas Production		<input type="checkbox"/> Pyrolysis
<input type="checkbox"/> Sludge Concentration		<input type="checkbox"/> Baler (compactor)		<input type="checkbox"/> Composting Plant
<input type="checkbox"/> Transfer Station		<input type="checkbox"/> Waterwall Incinerator		<input type="checkbox"/> Shredder (pulverizer)
13 Month/Year Begun		14 Disposal Area Acres		15 Population Served
16 Expected Useful Lifetime Years		17 Weighing Scales <input type="checkbox"/> Yes <input type="checkbox"/> No		18 Waste Processed Per Operational Day tons/gal/yd
19 Char e/ _____		20 Days Operated S M T W T F S		21 Hours/Day Operated
22 Maximum Processing Rate tons/day				
23 Material Recovered Tons/Week				
_____ Paper		_____ Glass		Other
_____ Ferrous Metals		_____ Non Ferrous Metals		
_____ Aluminum		_____ Plastics		
24 Energy Recovery in units shown				
_____ High Pressure Steam lb/hr		_____ Chilled Water-gal/hr		_____ Gas ft <sup>3</sup> /hr
_____ Low Pressure Steam lb/hr		_____ Oil-gal/hr		_____ Gas BTU/hr
_____ Electricity kw/hr		_____ Oil BTU/hr		Other
25 Process Water Recycled		<input type="checkbox"/> Yes <input type="checkbox"/> No		Treatment Method Used
Discharge to		Class Receiving Water		
<input type="checkbox"/> Surface Waters <input type="checkbox"/> Underground				
26 Final Residue is _____ % of waste intake		Residue is disposed of at (Site Name)		
27 Supplementary Fuel Used				
Type		Quantity Used/Hour		
28 Estimated Operating Costs Material - Energy Revenue \$		Total Cost/Ton \$		Net Cost/Ton \$
29 Number of Staff		30 State Pollution Control Bond Financing Amount \$		31 Estimated Amount of Tax Exemptions that will be Requested \$
32 Name and Title of Person Completing Form				

Note All blanks must be filled or marked as not applicable

SUMTER COUNTY LANDFILL  
APPLICATION FOR PERMIT TO OPERATE A SOLID  
WASTE RESOURCE RECOVERY AND MANAGEMENT FACILITY  
SUPPLEMENTAL INFORMATION  
C-103

8 REPORT

8g CONTINGENCY PLAN

The sanitary landfill is owned and operated by Sumter County. The county can utilize equipment and personnel resources in the event of an emergency such as a fire or equipment failure.

Fire Safety measures for fire prevention are employed at the landfill. Highly combustible material can not be disposed at the site. Smoldering refuse ashes or cinders will be completely saturated with water at the entrance.

The trench method of refuse disposal is favorable to fire control. Earth is excavated in a linear direction and displaced above and along the edges of the trench. Earth material can be hastily pushed over into the trench and extinguish any inflamed debris. Fire spreading beyond the trench area can proceed only a short distance due to the lack of combustible material.

If a fire becomes uncontrollable, fire fighting equipment can be furnished by the Lake Panasoffkee Fire Department, County water trucks, and the Florida Forestry Service.

Equipment Failure Sumter County will immediately replace any malfunctioning landfill equipment to insure uninterrupted waste disposal service. Waste material will be temporarily stockpiled in an appropriate area until service is resumed.

8h RESPONSIBLE PERSONS

Landfill Operation Mr. Garry Breeden, Director of Public Works, 209 North Florida Street, Bushnell, Florida, Sumter County.

Landfill Site Supervisor Mr. William R. Baker, Site Attendant, Sumter County Landfill, Sumter County, Florida.

8i GAS CONTROL PLAN

Methane Gas Landfill solid waste is a diversified mixture of inorganic and organic material and living organisms. The formation of methane gas from buried waste involves the degradation of organic matter by microorganisms. The microbial activity is influenced by moisture and warm temperatures.



Under aerobic conditions organic matter is initially hydrolyzed by bacteria into soluble organic compounds. The compounds are then oxidized into carbon dioxide and water. The second process continues until the available oxygen is depleted. Under anaerobic conditions the soluble organics are converted to organic acids, carbon dioxide, and water. The organic acids are further reduced to methane and carbon dioxide.

Solid waste deposited at the Sumter County Landfill decomposes under aerobic conditions since the underground waste cells are at least ten (10) feet above the maximum water table elevation. Precipitation infiltration through the earth cover is minimized due to the high clay content of the soil.

Evidence of methane gas includes yellowed or decayed vegetation and small unexplained fires. These signs have not yet been observed at the landfill site or adjacent property.

Presently methane gas production at the landfill is minimal and does not pose a safety hazard to landfill personnel and adjacent property owners. If methane gas is discovered at the landfill the following steps will be initiated:

1. Gas investigation A comprehensive gas investigation of the site with methane detection equipment to determine the location and concentration of gas.
2. Preventative measures The installation of vent pipes to alleviate gas accumulation. The vents will be installed just below the crown of each gas producing waste cell. Permanent gas detection devices will be installed to monitor the gas over a long time interval.

## 8j OPERATIONAL PLAN

Disposal Method The sanitary landfill is carried out by the trench method that requires refuse to be compacted and covered daily. In the trench method soil for covering a compacted windrow of refuse is obtained by digging a trench 15 to 35 feet wide, 100 to 400 feet long, and at least 3 feet deep. The refuse is then placed in the trenches in layers 1 to 2 feet thick and 8 to 10 feet wide and compacted. Only enough length of windrow is built-up in this manner daily so that the full height is reached and sides and top are covered with soil at the end of the workday. Refuse is covered with a daily earth cover of 6 to 12 inches thick. The cover is increased to 2 feet when filling has been completed.

Dust and debris control Dust at the landfill is minimized by the high clay content of the soil cover and the existing paved road. Dusty conditions can be promoted by prolonged dry weather, wind, and vehicular traffic. If these conditions persist, county personnel shall control dust by wetting problem areas with water trucks.

Litter and debris are minimized by keeping the trench working face as small as possible during excavation, covering, and compaction. Natural vegetation and a perimeter fence confine debris on the landfill site. The landfill is regularly policed for litter.

8k WASTE CONTROL PLAN

Inspection All private and public vehicles transporting refuse shall be stopped and inspected at the landfill entrance by a full-time gate attendant. Inspection shall determine the nature and volume of the refuse in the vehicles. Large metal items such as washing machines or automobiles shall not be accepted. The vehicles containing these items will be directed to a state approved metal yard. Wastewater sludge, petrochemical and radioactive wastes are not permitted at the landfill. If these wastes are intercepted at the entrance, the attendant will initiate the following steps:

1. Persons transporting oil and oil by-products shall be directed to an oil recycling center or a Department of Transportation (DOT) garage or designated gasoline station where the liquid can be accepted.
2. Persons transporting wastewater wastes and sludges shall be identified and questioned concerning the origin and nature of these wastes. The attendant shall then notify the County pollution agency and any other agencies having jurisdiction. These agencies shall decide the next course of action.
3. Persons carrying hazardous chemicals such as herbicides, pesticides and acids shall be detained. The attendant shall immediately notify the sheriff's department and County Pollution Control agency. The Pollution Control agency shall decide the next course of action.

9 WATER QUALITY STANDARDS

Long-term monitoring of the landfill well and adjacent property well reveals that the groundwater safely exceeds the State of Florida Department of Environmental Regulation (FDER) water quality standards. The evidence demonstrates that the design and operation of the landfill facility minimizes leachate generation and leakage through the confining layer of the Floridan Aquifer.

If monitoring wells detect the movement of leachate away from the landfill and/or through the confinement layer, the following steps will be initiated:

1. Determination of the size and extent of the leachate plume by subsurface investigation.
2. Analysis of the leachate to determine treatment strategies.
3. If necessary, treatment will consist of a wastewater recycle system that effectively neutralizes the leachate. Other methods are not cost-effective since the landfill is near full-capacity.

The wastewater recycle system will remove the leachate by well points. After treatment by fixed-bed reactors, the effluent will be injected into the ground to mix with the existing leachate. The diluted leachate will be continually circulated through the system to meet groundwater quality standards. A fixed-bed reactor uses plastic or wood media to anaerobically digest the waste stream. Methane gas is a by-product of this process.