



FACILITY FILE: MANATEE COUNTY
LENA ROAD LF

MANATEE COUNTY GOVERNMENT

SC41-067529

Public Works Department
Solid Waste Division
Caller Service 25010
Bradenton, Fl. 33506
March 19, 1986

Mr. Nick Bruno
DER - Southwest District
7601 Highway 301 North
Tampa, Fl. 33610

44795

44100000

Dear Mr. Bruno:

This letter is for the purpose of informing the Florida Department of Environmental Regulation that Briley Wild & Associates, Inc. are the consultants for Manatee County for permitting and design of the Lena Road Landfill and are authorized to prepare the permit application for operation of that facility.

If there are any questions regarding this matter or further information is required, please contact Mr. John Banks of the Solid Waste Division at your earliest convenience.

Very truly yours,

Richard A. Wilford
Director Public Works Department

/lsh

5/6/86

FOR INFO OF

GEORGE MATLOCK

MR. REESE - I MISSED YOU
THIS AFTERNOON, BUT TOOK THE
OPPORTUNITY TO REVIEW THESE
MATERIALS. THANK YOU.

GEORGE MATLOCK
Reese



briley, wild & associates, inc.
CONSULTING ENGINEERS AND PLANNERS

March 31, 1986

MC 82044-6DE

Mr. Richard D. Garrity, Ph.D.
District Manager
Department of Environmental Regulation
7601 Highway 301 North
Tampa, Florida

D. E. R.

APR 01 1986

Re: Application for Permit to Operate Landfill
Lena Road Stage I
Manatee County, Florida

SOUTH WEST DISTRICT
TAMPA

Gentlemen:

On behalf of Manatee County, we are pleased to submit the following material in connection with the subject application:

1. Application for Permit (6)
2. Supporting Data (6)
3. Drawings
4. Permit Application Fee Check - \$100.00
5. Engineers Letter of Appointment

A copy of the lease agreement with SMR Properties is on file with the approved construction permit. At present, Manatee County is in the final stages for purchase of the land now occupied by Stage I and the land to be used for Stage II construction. Other adjoining lands to the south and east of the Stage I and II sites is also being acquired by the County.

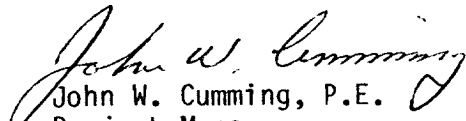
The information submitted herein is intended to supplement that contained in the approved Permit to Construct (SC41-067529). Where certain items have been revised or additional information is required by Chapter 17-7 Revised that information is contained in this application.

Mr. Richard D. Garrity, Ph.D.
District Manager
Department of Environmental Regulation

Should there be any question or should you need additional information, please advise.

Very truly yours,

BRILEY, WILD & ASSOCIATES, INC.
CONSULTING ENGINEERS & PLANNERS


John W. Cumming, P.E.
Project Manager

JWC/nlc

Enclosure

cc: Mr. Richard Wilford, Director of Public Works
Mr. John Banks, Solid Waste Manager
Dr. John Garlanger, Ardaman and Associates
BWA/Bradenton

LENA ROAD LANDFILL - STAGE I

Manatee County, Florida

Application for Permit to Operate

D. E. R.

APR 01 1986

SOUTH WEST
TALPA

April 1, 1986

Briley, Wild & Associates, Inc.
Consulting Engineers & Planners
Bradenton-Clearwater-Ormond Beach
Orlando, Florida

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STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BRATTLESTONE ROAD
TALLAHASSEE, FLORIDA 32301-8241



BOB GRAHAM
GOVERNOR
VICTORIA J. TSCHUNKI
SECRETARY

APPLICATION FOR PERMIT TO
CONSTRUCT ☐
OPERATE ☒

A SOLID WASTE RESOURCE RECOVERY AND MANAGEMENT FACILITY
GENERAL REQUIREMENTS

Solid Waste Resource Recovery and Management Facilities shall be permitted pursuant to Section 403.707, Florida Statutes, and in accordance with Florida Administrative Code Rule 17-7. A minimum of six copies of the application shall be submitted to the Department District Office having jurisdiction over the facility. Complete appropriate sections for the type of facility for which application is made. Entries should be typed or printed in ink. All blanks should be filled in or marked not applicable. The application shall include all information, drawings, and reports necessary to evaluate the facility. Information required to support the application is listed on the attached pages of this form.

Facility Type: Existing ☒ Proposed ☐

Sanitary Landfill:	Volume Reduction:	Sludge Landspreading:
<input checked="" type="checkbox"/> Class I,	<input type="checkbox"/> Composting	<input type="checkbox"/> Grade I
<input type="checkbox"/> Class II,	<input type="checkbox"/> Shredder	<input type="checkbox"/> Grade II
<input type="checkbox"/> Class III: Trash/yard Trash	<input type="checkbox"/> Incinerator/Trench Burner	<input type="checkbox"/> Grade III
<input type="checkbox"/> Class III: Yard Trash Composting	<input type="checkbox"/> Resource Recovery:	<input type="checkbox"/> Septage/Food Service
	<input type="checkbox"/> Energy <input type="checkbox"/> Materials	

FACILITY NAME: Lena Road Landfill Stage I / SC41-067529
DER ID Number

FACILITY LOCATION (main entrance): State Road 64 at Lena Road
S 6 section, T 35S township, R 19E range / Latitude 27 ° 28 ' " Longitude 82 ° 26 ' "

Applicant Name (operating authority): Manatee County Public Utilities Dept.

Street Address & P. O. Box: 4415 66th Street W., Bradenton Manatee 33507
City County Zip

Contact Person: John Banks (813) 792-8811
Name Phone Number

Authorized Agent/Consultant: Briley, Wild & Assoc. (813) 753-2605
Name Phone Number

Contact Person: John W. Cumming (813) 753-2605
Name Street P. O. Box Phone Number
Bradenton Manatee Florida 33506
City County State Zip

Landowner (if different than applicant): SMR Development Corp.

Address of Landowner: 6000 Lorraine Road. Bradenton Florida 34202
Street, P. O. Box City State Zip

Cities, towns and Areas to be Served: All of Manatee County

Current and Projected Population to Served: 160,000

Acres within Waste Site Boundary: 142 Acres within Property Boundary: 213

Protecting Florida and Your Quality of Life

Volume of Solid Waste to be received: 900 Ton/Day cu. yds/day tons/day gallons/day
Date Site Ready to Received Solid Waste: existing site Estimated Life of Facility 16 years
Estimated Cost of Construction, Total: \$ 1,382,000 Estimated cost of Closing: \$ 1,328,000
Anticipated Construction Starting and Completion Dates
From: 9/85 To: 3/86

**REQUIRED ATTACHMENTS FOR CONSTRUCTION/OPERATION PERMIT
FOR A RESOURCE RECOVERY AND MANAGEMENT FACILITY**

GENERAL

Permit application and supporting information shall include the following (17-7.030(2), F.A.C.):

	<u>Completeness Check</u>
1. A letter of transmittal to the Department; (17-7.030(3)(a) F.A.C.)	—
2. A table of contents listing the main sections of the application: (17-7.030(3)(b), F.A.C.)	—
3. The permit fee specified in Florida Administrative Code Rule 17-4.05 in check or money order payable to the Department: (17-7.030(3)(c), F.A.C.)	—
4. Six copies, at minimum, of the completed application form, all supporting data, and reports; (17-7.030(2), F.A.C.)	—
5. Engineer seal; (17-7.030(2)(d), F.A.C.)	—
6. Engineer's letter of appointment if applicable; (17-7.030(3)(e), F.A.C.)	—
7. Copy of any lease agreement, transfer of property agreement with right of entry for long-term care, or any other agreement between operator and property owner by which the closing and long-term care of the facility may be affected; (17-7.030(3)(h)	—
8. Proof of publication of notice of application for the proposed activity in a newspaper of general circulation; (17-7.03(4), F.A.C.)	—

SPECIFICATION ATTACHMENT ITEMS

The following information items must be included in the application or an explanation given if they are not applicable.

Construction Permits:

- A. Landfills - Submit items 1, 2, 3, 4, 5, 6, 7, 8, 10.
- B. Volume Reduction - Submit items 1, 2, 3, 4, 5, 6, 7, 9, 10.
- C. Sludge Landspreading - Submit items 2, 3, 4, 5, 6, 8, 10.

Operation Permits:

- A. Landfills - All the items above.
- B. Volume Reduction - All the items above.
- C. Sludge Landspreading - All the items above.

NOTE: For facilities that have been satisfactorily constructed in accordance with their construction permit the information required for A, B, and C type facilities does not have to be resubmitted for an operation permit if the information has not changed during the construction period.

- 1. A foundation analysis (17-7.050(2)(b), F.A.C.) —
- 2. Evidence that the facility is in conformance with local zoning (17-7.050(2)(c)4, F.A.C.) —
- 3. Facility Design (17-7.050(3), F.A.C.):

NOTE: All maps, plan sheets, drawings, isometrics, cross-sections, or aerial photographs shall be legible; be signed and sealed by the registered professional engineer responsible for their preparation; be of appropriate scale to show clearly all required details; be numbered, referenced to narrative, titled, have a legend of symbols used, contain horizontal and vertical scales (where applicable), and specify drafting or origination dates; and use uniform scales as much as possible, contain a north arrow, and use NGVD for all elevations.

Completeness Check

- a. A map or aerial photograph of the area, no more than 1 year old, showing land use and zoning within 1 mile of the facility. (17-7.050(3)(a), F.A.C.) _____
- b. Plot Plan (17-7.050(3)(b), F.A.C.) _____
- NOTE: The plot plan on a scale not greater than 200 feet to the inch showing the following:
- (1) Dimensions and Legal Description of the site _____
 - (2) Location and depth (NGVD) of soil borings _____
 - (3) Plan for trenching or disposal areas _____
 - (4) Fencing or other measures to restrict access _____
 - (5) Cross sections showing both original and proposed fill elevations _____
 - (6) Location, depth, and construction details of monitoring wells _____
- c. Topographic Maps (17-7.050(3)(c), F.A.C.) _____
- NOTE: The topographic maps, which may be combined with the plot plan (item 4b), on a scale not greater than 200 feet to the inch showing the following:
- (1) Five foot contour intervals _____
 - (2) Proposed fill areas _____
 - (3) Borrow areas _____
 - (4) Access roads _____
 - (5) Grades required for proper drainage _____
 - (6) Typical cross sections of disposal site including lifts, borrow areas and drainage controls _____
 - (7) Special drainage devices _____
 - (8) Fencing _____
 - (9) Equipment facilities _____
 - (10) Other pertinent information based on intended use of facility _____
- d. Report (17-7.050(3)(d), F.A.C.) _____
- (1) Estimated population and area served by the proposed site with basis for the estimate _____
 - (2) Anticipated type, annual quantity, and source of solid waste _____
 - (3) Anticipated life of site _____
 - (4) Source and characteristics of cover material _____
- e. Ground Water Monitoring Plan (17-7.050(3)(e), F.A.C.) _____
- (1) Plan and hydrogeological survey, including foundation analysis, in accordance with 17-4.245(6), 17-7.030, and 17-7.050 F.A.C.; or _____
 - (2) A copy of a Department letter of approval of a previously submitted plan, if applicable. _____

Completeness Check

4. Landfill Performance and Design Standards (17-7.050(4), F.A.C.)

- a. Liner performance (17-7.050(4)(a)(b), F.A.C.)
 - (1) Material type (soil, synthetic, other) _____
 - (2) Adequate base support _____
 - (3) Planned installation adequate to cover all surrounding earth _____
 - (4) Equivalency to design standards _____
- b. Liner quality control plan (17-7.050(4)(c), F.A.C.)
 - (1) Specifications _____
 - (2) Construction/installation methods _____
 - (3) Sampling and testing _____
 - (4) Manufacturer's specifications and recommendations _____
- c. Leachate control and removal system performance (17-7.050(4)(e), F.A.C.)
 - (1) Construction materials _____
 - (2) Strength and thickness _____
 - (3) Measures to prevent clogging _____
 - (4) Central collection point for treatment and disposal _____
 - (5) Leachate depth not to exceed one foot _____
 - (6) Equivalency to design standards _____
- d. Surface water management system performance (17-7.050(4)(g), F.A.C.)
 - (1) Prevention of surface water flow onto waste-filled areas _____
 - (2) Stormwater run-off controls; retention, detention ponds _____
 - (3) Equivalency to design standards _____
 - (4) Water management district approval _____
- e. Gas control system performance (17-7.050(4)(i), F.A.C.)
 - (1) Prevention of methane migration _____
 - (2) Prevention of damage to vegetation _____
 - (3) Prevention of objectionable odors off site _____
 - (4) Equivalency to design standards _____

5. Operations Plan (17-7.050(5)(b),(c)(d) & (e), F.A.C.)

- a. Designation of responsible person(s) _____
- b. Contingency operations _____
- c. Controlling the type of waste received at the site: _____

	<u>Completeness Check</u>
d. Weighing or measuring incoming waste	_____
e. Vehicle traffic control and unloading	_____
f. Method and sequence of filling waste	_____
g. Waste compaction and application of cover	_____
h. Operations of gas, leachate, and storm water controls	_____
i. Ground water monitoring	_____
j. All weather access roads	_____
k. Effective barrier	_____
l. Signs indicating name of operating authority, traffic flow, hours of operation, and charges for disposal (if any)	_____
m. Dust control methods	_____
n. Litter control devices	_____
o. Fire protection and fire fighting facilities	_____
p. Attendant	_____
q. Communication facilities	_____
r. Adequate in-service and reserve equipment	_____
s. Safety devices on equipment to shield and protect operators	_____
6. <u>Water Quality Standards (17-7.050(5)(g) & (h), F.A.C.)</u>	_____
Describe how surface runoff and leachate will be handled to meet water quality standards of Florida Administrative Code Rules 17-3 and 17-4.	
7. <u>Closure (17-7.070(2), F.A.C.)</u>	_____
a. <u>Closure plan (17-7.073, F.A.C.)</u>	_____
(1) Design	_____
(2) Final use	_____
(3) Closure operations	_____
(4) Post-closure (17-7.075, F.A.C.)	_____
(5) Financial responsibility(17-7.071, F.A.C.)	_____
b. <u>Closure plan schedule (17-7.071, F.A.C)</u>	_____
8. <u>Solid Waste Disposal Facility Data Form</u>	_____
9. <u>Solid Waste-Volume Reduction and Resource Recovery Facility Data Form</u>	_____
10. <u>Certification by Applicant and Engineer or Public Officer</u>	_____

SOLID WASTE DISPOSAL FACILITY DATA FORM

Date Form Completed: _____

Permit No.: _____ Issue Date: _____ Expires: _____

DER ACTION: ☐ Add ☐ Delete ☐ Change ☐ Deactivate Site

1. DER IDENTIFICATION NUMBER SC41-067529		2. SITE NAME Lena Road Landfill Stage I	
3. COUNTY Manatee		4. FACILITY ADDRESS (Road, cross road, street) St. Rt. 64 at Lena Road	
4a. Facility Phone Number:		4b. Facility Site Supervisor	
5a. <u>27° 28'</u> " <u>82° 26'</u> " Latitude Longitude		5b. <u>35S</u> <u>19E</u> <u>6</u> Township Range Section	
6. Operating Authority Name Manatee County Dept. of Public Works		8. Operating Authority Address 4415 66th St. W., Bradenton, FL 34202	
7. Phone Number 813-792-8811			
9. Owner of Site Property (if different from operator) SMR Development Corp.		11. Address of Owner 6000 Lorraine Road, Bradenton, FL 34202	
10. Phone Number of Owner 813-755-6574			
12. Facility Type <input checked="" type="checkbox"/> Class I, Sanitary Landfill <input type="checkbox"/> Class II, Sanitary Landfill <input type="checkbox"/> Class III, Trash/Yard Trash <input type="checkbox"/> Class III Yard trash comp.		Sludge Landspreading: Type <input type="checkbox"/> Grade I <input type="checkbox"/> Grade II <input type="checkbox"/> Grade III <input type="checkbox"/> Septage <input type="checkbox"/> Other Facility	
13. Month Year Begun 1972	14. Disposal Area 142 Acres	15. Population Served 160,000	
16. Expected Useful Lifetime Years	17. Weighing Scales <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	18. Security to Prevent Unauthorized Used <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
19. Depth of Water Table 33 Ft. (NGVD)	20. Quantity of Waste/Day 231 tons or Yd ³	21. Charge \$ 12.00 yd/ton	
22. Surrounding Land Use Zoning <input type="checkbox"/> Residential <input type="checkbox"/> None <input checked="" type="checkbox"/> Agricultural <input type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Other			
23. Types of Waste Received <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Agricultural <input checked="" type="checkbox"/> Yard Trash/Trash <input type="checkbox"/> Other: _____ <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Septic Tank <input checked="" type="checkbox"/> Sewage Sludge <input type="checkbox"/> Incinerator Residue <input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Industrial Sludge <input type="checkbox"/> Pathological/infectious <input type="checkbox"/> Water/Air Treat Sludge <input checked="" type="checkbox"/> Hospital			
24. Number of Monitoring Wells 13		25. Number of Surface Monitoring Points 3	
26. Gas Control / Recovery <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No / <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	27. Salvaging Permitted <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	28. Attendant <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

29. Leachate Control Method - Liner Type: <input checked="" type="checkbox"/> Natural <input checked="" type="checkbox"/> Emplaced Clay <input type="checkbox"/> Synthetic <input type="checkbox"/> None <input type="checkbox"/> Other		
Collection Method: <input type="checkbox"/> Well Point <input type="checkbox"/> Perimeter Ditch <input type="checkbox"/> None <input checked="" type="checkbox"/> Under Site Drains <input type="checkbox"/> Other		
Treatment Method: <input type="checkbox"/> Oxidation <input checked="" type="checkbox"/> Recirculated <input type="checkbox"/> Chemical <input type="checkbox"/> Advanced <input type="checkbox"/> None <input type="checkbox"/> Other		
30. Leachate Discharge <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Class of Receiving Water N/A
31. Site Located in <input type="checkbox"/> Floodplain <input type="checkbox"/> Wetlands <input checked="" type="checkbox"/> Other: Flatwoods		
32. Surface Runoff Collected <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Type of Runoff Treatment None	Class of Receiving Waters III
33. Property Recorded as a Solid waste Disposal Site in County Land Records <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
34. Days of Operation 6	Days of Cover 6	Hours of Operation 8:00 a.m. to 5:00 p.m.
35. Name, Title and Phone Number of Person Completing Form John Cumming, Consultant (904) 672-5660		

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. ° ' " ° ' "		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"/> Other:			
<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	
16. Expected Useful Lifetime Years		17. Weighing Scales <input type="checkbox"/> Yes <input type="checkbox"/> No	
19. Charge/_____		20. Days Operated S M T W T F S	
		15. Population Served	
		18. Waste Processed Per Operational Day tons/gal/yd	
		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 ³ /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	
Discharged to: <input type="checkbox"/> Surface Waters <input type="checkbox"/> Underground		Class Receiving Water	
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			

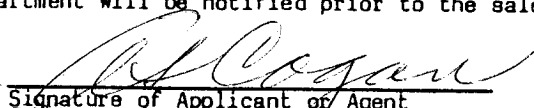
Note: All blanks must be filled or marked as not applicable.

CERTIFICATION BY APPLICANT AND ENGINEER OR PUBLIC OFFICER

A. Applicant

The undersigned applicant or authorized representative of Manatee County, Florida is aware that statements made in this form and attached information are an application for a permit to operate a solid waste management facility

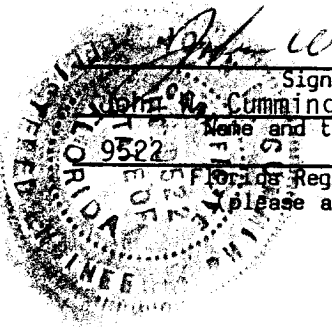
Permit from the Florida Department of Environmental Regulation and certifies that the information in this application is true, correct and complete to the best of his knowledge and belief. Further, the undersigned agrees to comply with the provisions of Chapter 403, Florida Statutes, and all rules and 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 facility.


Signature of Applicant or Agent
Richard A. Wilford, Public Works Director
Name and Title
Date: March 31, 1986

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 Section 403.707 and 403.7075, 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 of proper maintenance and operation of the facility.


Signature
John R. Cumming
Name and title (please type)
Professional Engineer
Florida Registration Number
9522
(please affix seal)

Post Office Box 607
Mailing Address
Ormond Beach, FL 32074
City, State, Zip Code
813-753-2605
Telephone Number
Date: March 31, 1986

Construction Cost Estimate: _____

Permit Number: _____ Issue Date: _____

Review Date: _____ Expiration Date: _____

LENA ROAD - STAGE I
OPERATING PERMIT

1. FOUNDATION ANALYSIS

Extensive borings and test wells have provided sufficient information at the Lena Road, Stage I site to provide conclusive evidence as to the suitability of the underlying soil to support existing and proposed facilities. No evidence of sinkholes was found on or near the Lena Road site. Supporting data is found in the reports prepared by Ardaman & Associates and on file with the DER in Tampa.

2. EVIDENCE OF CONFORMATION WITH LOCAL ZONING

The area on which the facility is located is zoned A, agricultural, and public uses are permissible. (See page 23, Item VIII, Zoning Conformance, March 1983 Report by BWA.) An aerial photograph showing land use and zoning within one mile of the site is included as a part of this application.

3. FACILITY DESIGN

The basic Stage I design was presented in the March 1983 Report and Permit Application and is on file with DER. The revised design, incorporating a perimeter slurry wall, and other less basic revisions, was approved by DER for construction and is also on file at DER's Tampa office. No significant changes were made during construction. Minor revisions made are listed below and are incorporated in "Record Drawings" that will be forwarded to the Department.

- A. Slurry wall depth was extended approximately 4-feet to insure proper keying into underlying clay unit.
- B. Subsurface leachate collection line was modified. Some manholes were deleted and clean-outs substituted. Location of each are shown on record drawings. Manhole material was changed with bituminous coated, galvanized corrugated steel manholes being used rather than precast concrete.
- C. Minor adjustments were made in location of leachate collection and pumping facilities. Dimensions will be shown on record drawings.

4. LANDFILL PERFORMANCE AND DESIGN STANDARDS

A. Liner Performance

The existing landfill has a natural clay liner. To prevent lateral movement of leachate, a slurry wall was constructed surrounding the site. The specifications for the slurry wall are included in the approved construction plans and specifications.

B. Liner Quality Control Plan

See "A", above.

C. Leachate Control and Removal System Performance

The leachate collection system includes 8" high density polyethylene perforated collection pipe pump stations, and PVC force main. Manholes and cleanouts are used to keep the collection pipe clean. The system collects leachate from all sides of the landfill and pumps it to a holding pond.

D. Surface Water Management System Performance

The site is designed to drain all surface water away from the working face through ditches to a stormwater detention pond. The detention pond is sized to attenuate storm flows.

E. Gas Control System Performance

The landfill is located above grade and is surrounded by slurry wall and drainage ditches. Gas migration is therefore confined to the landfill site. The leachate collection system will also aid in venting methane.

5. OPERATIONS PLAN

A. Designation of Responsible Persons

The landfill operates under the following chain of authority

Richard Wilford - Director of Public Works

John Banks - Solid Waste Manager

Ronald Cox - Landfill Superintendent

B. Contingency Operations

See p. 18 of the March 1983 Report

C. Controlling the type of waste received at the site

See p. 19 of the March 1983 Report

D. Weighing or Measuring Incoming Waste

A new scale facility has been constructed and is now in operation. All refuse collection vehicles and private trucks are weighed upon entry. At the present time, private cars are not weighed but are charged a lump sum price.

E. Vehicle Traffic Control and Unloading

Signs and spotters are used to direct vehicles to the working face.

F. Method and Sequence of Filling Waste

See p. 20 of the March 1983 Report

G. Waste Compaction and Application of Cover

See p. 20 of the March 1983 Report

H. Operations of Gas, Leachate and Stormwater Controls

For gas control, see p. 20 of the March 1983 Report

Leachate contained by the slurry wall is collected in the leachate collection pipes and pumped to a leachate holding pond. The water is then disposed of through spray irrigation on top of the landfill.

Stormwater is collected in stormwater collection ditches and discharged through overflow weirs and subsurface drainage to offsite wetlands and drainageways to approximate the pre-existing drainage patterns. Flow attenuation is provided in the stormwater ditches and in the stormwater holding pond.

I. Groundwater Monitoring

See p. 6-2 of the Ardaman Report

J. All Weather Access Roads

The main entrance road to the landfill is asphalt paved. Other on-site roads are maintained with proper grading, ditching and application of crushed shell as required.

K. Effective Barrier

The stormwater ditch and perimeter fencing effectively limits vehicle or pedestrian entry to the active site to the crossing by the weigh scales.

L. Signs

All required signs are prominently displayed at the entrance

M. Dust Control

Water from either of the two on-site ponds is sprayed on the roads for dust control on an as-needed basis. A proprietary dust control agent is also used.

N. Litter Control

Portable fencing is used to catch windblown litter. Operational practices (keeping the working face small, regular cover) also help to control litter.

O. Fire Protection

Application of daily cover is the most effective defense against deep long-term landfill fires. Sufficient earth-moving equipment is available on-site to deal with localized fires. The leachate holding pond would also serve as a water supply for dealing with fires.

P. Attendant

Trained personnel are on duty at the weigh scale and at the working face during all hours of operation.

Q. Communication Facilities

There are telephones in the Solid Waste Office at the landfill and in the scale house. Truck mounted radios provide communication with the operating staff at the working face and with other key operating personnel.

R. Adequate Equipment

See p. 16 of the March 1983 Report

S. Safety devices on equipment to shield and protect operators.

Equipment used on site is equipped with caging and safety devices as required.

6. WATER QUALITY STANDARDS

The stormwater system and leachate system are designed to prevent direct contact or mixing of leachate water with surface stormwater runoff. Following is a description of each system, its function and mode of operation.

A. Leachate System

Leachate is contained within the site by means of a clay confining unit approximately 20-feet below original grade and by a perimeter slurry wall keyed into the clay unit. A subsurface collection system, consisting of perforated pipe

located just inside the slurry, delivers leachate to two pump stations which in turn discharge to a leachate holding pond. Leachate level will be maintained at least one-foot below the surrounding groundwater level.

An irrigation system will spread collected leachate over selected areas of the landfill surface by means of a fixed and moveable pipe system and rain guns. Each of thirteen irrigation zones covers about 9 acres. The rate of application is 1200 GPM, maximum, or about 0.3 inches per hour. Daily pumping time to dispose of the estimated 50,000 to 60,000 GPD production will be less than one hour at this rate. Regular rotation of the irrigation zones will allow uniform application. The application rate will average 0.7 inches per month or 8.5 inches per year over the site.

The landfill top surface, where irrigation will take place, will be well graded so as to prevent any ponding. It will also be properly planted to establish and maintain vegetation. No irrigation will occur near the stormwater collection system. This will result in a separation of over 200 feet between the irrigation zones and the stormwater ditches.

Low irrigation rates and proper grading, coupled with a good growth of vegetation, will allow soil penetration by the leachate with resulting adsorption and absorption of contaminants within the leachate. Irrigation will not be done during rainfall events nor when a rainfall event appears likely.

B. Stormwater System

The stormwater management system consists of a perimeter collection/storage ditch and a detention pond with a total holding capacity of 8.5 million gallons. The stormwater detention system will prevent initial runoff from leaving the site and will store runoff from a rainfall exceeding 5 inches. Detention capacity far exceeds requirements of Rule 17.25 FAC.

Any surface discharge from the site will be monitored to insure compliance with water quality standards per Chapter 17-3 and 17-4, FAC. Each overflow incidence shall be monitored and underdrain effluent shall be monitored quarterly. Parameters to be sampled shall be:

Rainfall in inches	Total Alkalinity
pH	Chlorides
Specific Conductance	TSS
TOC	DO
TDS	BOD
TKN	Total Coliform

- C. As a final backup, the County has agreed to treat leachate at the adjacent Southeast Regional Wastewater Treatment Plant should conditions warrant.

7. CLOSURE

A. Closure Plan

The landfill will be closed as described on pp. 21-22 of the March 1983 Report. A drawing showing the finished plan and profile of the site is attached.

The side slopes will be no steeper than one to three from the toe of slope to elevation 50.0. From that elevation, the side slope will be maintained at four to one. After every 12 feet of vertical rise, a 12-foot wide terrace will be maintained.

The final use of the site will be determined by the Department of Parks and Recreation at the time of closure. Original plans submitted to the DER showed it being used as a golf course.

After closure, the County will continue to monitor ground-water and surface water as required by the DER at the time of closure. The leachate pumps and the spray irrigation system will continue to be used.

B. Closure Plan Schedule

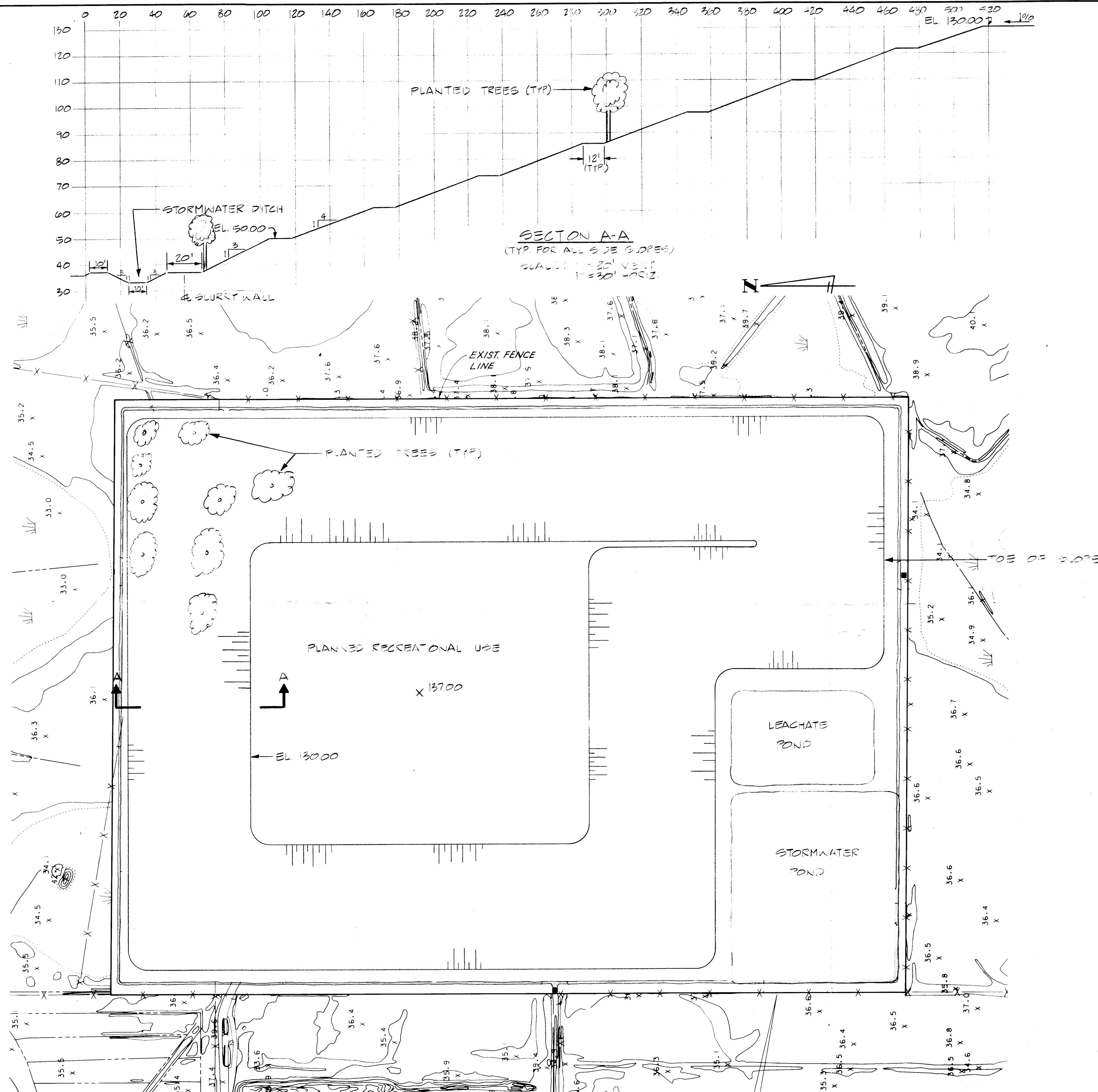
A schedule of closure will be submitted one year prior to the estimated date of closure.

DATE OF PHOTO
3-23-86



STAGE 1 PERIMETER

1 MILE PERIMETER



STATUS	ACTION DATE
A	3-31-86
P	PRELIMINARY
E	FOR ESTIMATING ONLY
B	FOR BIDDING ONLY
O	RELEASED FOR CONSTRUCTION
R	REVISED DESTROY PREVIOUS PRINTS
H	PORTION(S) BEING HELD
A	APPROVAL
C	CHECK PRINT
RD	RECORD DRAWING

DESIGNED	LAP	SUBMITTED: BRILEY, WILD & ASSOCIATES
DRAWN	BVP	APPROVED: [Signature]
CHECKED	JWC	COPYRIGHT © 1986 ALL RIGHTS RESERVED Briley, Wild and Associates, Inc.

Briley, Wild & Associates, Inc.
CONSULTING ENGINEERS AND PLANNERS
Ormond Beach - Clearwater - Bradenton - Orlando, Florida

LENA ROAD LANDFILL IMPROVEMENTS
PROPOSED FINAL TOPOGRAPHY-STAGE I
MANATEE COUNTY, FLORIDA

DATE: MARCH 1986	PROJ. NO. 82044-6
SCALE: 1" = 200'	FILE NO.
SHEET NO. 2 OF 2	11895