

**APPLICATION FOR  
SOLID WASTE MANAGEMENT FACILITY PERMIT  
FOR  
CONSTRUCTION-OTHER**



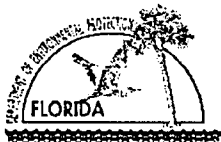
**Lena Road Landfill  
Manatee County, Florida**

**January 2000**

***Prepared by:***

**McKim & Creed Engineers, P.A.  
601 Cleveland Street, Suite 205  
Clearwater, Florida 34615**





Florida Department of Environmental Protection  
Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, FL 32399-2400

DEP Form # 62-701.900(1)  
Form Title Solid Waste Management Facility Permit  
Effective Date May 19, 1994

DEP Application No. \_\_\_\_\_  
(Filled by DEP)

FLORIDA DEPARTMENT OF  
ENVIRONMENTAL PROTECTION

JAN 12 2000

SOUTHWEST DISTRICT  
TAMPA

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

SOLID WASTE MANAGEMENT FACILITY PERMIT

APPLICATION INSTRUCTIONS AND FORMS

Northwest District  
160 Governmental Center  
Pensacola, FL 32501-5794  
850-595-8360

Northeast District  
7825 Baymeadows Way, Ste. B200  
Jacksonville, FL 32256-7590  
904-448-4300

Central District  
3319 Maguire Blvd., Ste. 232  
Orlando, FL 32803-3767  
407-894-7555

Southwest District  
3804 Coconut Palm Dr.  
Tampa, FL 33619  
813-744-6100

South District  
2295 Victoria Ave., Ste. 364  
Fort Myers, FL 33901-3881  
941-332-6975

Southeast District  
400 North Congress Ave.  
West Palm Beach, FL 33401  
561-681-6600

D.E.P.  
JAN 12 2000  
Southwest District Tampa

**INSTRUCTIONS TO APPLY FOR A SOLID WASTE MANAGEMENT PERMIT**

**I. General**

Solid Waste Management Facilities shall be permitted pursuant to Section 403.409, Florida Statutes, (FS) and in accordance with Florida Administrative Code (FAC) Chapter 62-701. A minimum of six copies of the application shall be submitted to the Department District Office having jurisdiction over the facility. The appropriate fee in accordance with Chapter 62-4, FAC, and Rule 62-701.320(5)(c), FAC, shall be submitted with the application by check made payable to the Department of Environmental Regulation (DEP).

Complete appropriate sections for the type of facility for which application is made. Entries shall be typed or printed in ink. All blanks shall be filled in or marked "not applicable" or "no substantial change". Information provided in support of the application shall be marked "submitted" and the location of this information in the application package indicated. The application shall include all information, drawings, and reports necessary to evaluate the facility. Information required to complete the application is listed on the attached pages of this form.

**II. Application Parts Required for Construction and Operation Permits**

- A. Landfills and Ash Monofills - Submit parts A,B, D through R, and T
- B. Asbestos Monofills - Submit parts A,B,D,E,F,I,K, M through Q, and T
- C. Industrial Solid Waste Facilities - Submit parts A,B, D through Q, and T
- D. Volume Reduction Facilities - Submit parts A,C,D,S, and T
- E. Materials Recovery Facilities - Submit parts A,C,D,S, and T

**NOTE:** Portions of some parts may not be applicable.

**NOTE:** For facilities that have been satisfactorily constructed in accordance with their construction permit, the information required for A,B,C,D, and E type facilities does not have to be resubmitted for an operation permit if the information has not substantially changed during the construction period. The appropriate portion of the form should be marked "no substantial change".

**III. Application Parts Required for Closure Permits**

- A. Landfills and Ash Monofills - Submit parts A,B, N through R, and T
- B. Asbestos Monofills - Submit parts A,B, M through Q, and T
- C. Industrial Solid Waste Facilities - Submit parts A,B, N through Q, and T
- D. Volume Reduction Facilities - Submit parts A,C,S, and T
- E. Materials Recovery Facilities - Submit parts A,C,S, and T

**NOTE:** Portions of some parts may not be applicable.

**IV. Permit Renewals**

The above information shall be submitted at time of permit renewal in support of the new permit. However, facility information that was submitted to the Department to support the expiring permit, and which is still valid, does not need to be re-submitted for permit renewal. Portions of the application not re-submitted shall be marked "no substantial change" on the application form.

**V. Application Codes**

|          |   |   |
|----------|---|---|
| S        | - | Submitted                                       |
| LOCATION | - | Physical location of information in application |
| N/A      | - | Not Applicable                                  |
| N/C      | - | No Substantial Change                           |

**VI. LISTING OF APPLICATION PARTS**

|         |  |
|---------|--|
| PART A- | GENERAL INFORMATION  |
| PART B- | DISPOSAL FACILITY GENERAL INFORMATION                              |
| PART C- | MATERIALS RECOVERY / VOLUME REDUCTION FACILITY GENERAL INFORMATION |
| PART D- | SOLID WASTE MANAGEMENT FACILITY PERMIT GENERAL REQUIREMENTS        |
| PART E- | LANDFILL PERMIT GENERAL REQUIREMENTS                               |
| PART F- | GENERAL CRITERIA FOR LANDFILLS                                     |
| PART G- | LANDFILL CONSTRUCTION REQUIREMENTS                                 |
| PART H- | HYDROGEOLOGICAL INVESTIGATION REQUIREMENTS                         |
| PART I- | GEOTECHNICAL INVESTIGATION REQUIREMENTS                            |
| PART J- | VERTICAL EXPANSION OF LANDFILLS                                    |
| PART K- | LANDFILL OPERATION REQUIREMENTS                                    |
| PART L- | WATER QUALITY AND LEACHATE MONITORING REQUIREMENTS                 |
| PART M- | SPECIAL WASTE HANDLING REQUIREMENTS                                |
| PART N- | LANDFILL CLOSURE REQUIREMENTS                                      |
| PART O- | CLOSURE PROCEDURES   |
| PART P- | LONG TERM CARE REQUIREMENTS  |
| PART Q- | FINANCIAL RESPONSIBILITY REQUIREMENTS                              |
| PART R- | CLOSURE OF EXISTING LANDFILL REQUIREMENTS                          |
| PART S- | MATERIALS RECOVERY FACILITY REQUIREMENTS                           |
| PART T- | CERTIFICATION BY APPLICANT AND ENGINEER OR PUBLIC OFFICER          |

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
APPLICATION FOR PERMIT TO CONSTRUCT, OPERATE, MODIFY OR CLOSE  
A SOLID WASTE MANAGEMENT FACILITY

Please Type or Print

**A. GENERAL INFORMATION**

1. Type of facility:

Disposal ☒

|                    |                                     |                        |                          |
|--------------------|-------------------------------------|------------------------|--------------------------|
| Class I Landfill   | <input checked="" type="checkbox"/> | Ash Monofill           | <input type="checkbox"/> |
| Class II Landfill  | <input type="checkbox"/>            | Asbestos Monofill      | <input type="checkbox"/> |
| Class III Landfill | <input type="checkbox"/>            | Industrial Solid Waste | <input type="checkbox"/> |
| Other              | <input type="checkbox"/>            |                        |                          |

Volume Reduction ☐

|                    |                          |                          |                          |
|--------------------|--------------------------|--------------------------|--------------------------|
| Incinerator        | <input type="checkbox"/> | Pulverizer / Shredder    | <input type="checkbox"/> |
| Composting         | <input type="checkbox"/> | Compactor / Baling Plant | <input type="checkbox"/> |
| Materials Recovery | <input type="checkbox"/> | Energy Recovery          | <input type="checkbox"/> |
| Other              | <input type="checkbox"/> |                          |                          |

2. Type of application:

|              |                                     |                        |                          |
|--------------|-------------------------------------|------------------------|--------------------------|
| Construction | <input checked="" type="checkbox"/> | Construction/Operation | <input type="checkbox"/> |
| Operation    | <input type="checkbox"/>            | Closure                | <input type="checkbox"/> |

3. Classification of application:

|         |                          |                          |                                     |
|---------|--------------------------|--------------------------|-------------------------------------|
| New     | <input type="checkbox"/> | Substantial Modification | <input type="checkbox"/>            |
| Renewal | <input type="checkbox"/> | Minor Modification       | <input checked="" type="checkbox"/> |

4. Facility name: Lena Road Landfill

5. DEP ID number: GMS 4041C02025 County: Manatee

6. Facility location (main entrance): 3333 Lena Road, Bradenton, FL 34202

7. Location coordinates:

Section: 1 Township: 34S Range: 18E/Sect. 6, 35S, 19E/Sect 1, 35S, 18E/Sect. 12  
35S, 18E

UTMs: Zone \_\_\_\_\_ km E \_\_\_\_\_ km N

Latitude: 27 ° 28 ' 00 " Longitude: 82 ° 27 ' 00 "

8. Applicant name (operating authority): Manatee County  
Mailing address: 4410 66th Street West, Bradenton, FL 34210  
Street or P.O. Box City State Zip  
Contact person: Len Bramble Telephone: ( 941 ) 792-8811  
Title: Director of Public Works
9. Authorized agent/Consultant: McKim & Creed, PA  
Mailing address: 601 Cleveland Street, Ste. 205, Clearwater, FL 33755  
Street or P.O. Box City State Zip  
Contact person: A. Street Lee Telephone: ( 727 ) 442-7196  
Title: Senior Project Manager
10. Landowner(if different than applicant): Manatee County Board of County Commissioners  
Mailing address: 112 Manatee Avenue West, Bradenton, FL 34205  
Street or P.O. Box City State Zip  
Contact person: Len Bramble Telephone: ( 941 ) 792-8811
11. Cities, towns and areas to be served: Manatee County, Long Boat Key South, small amount received from surrounding counties
12. Population to be served:  
Current: 245,889 Five-Year Projection: 267,603
13. Volume of solid waste to be received: 1,300 yds<sup>3</sup>-/day tons/day gallons/day
14. Date site will be ready to be inspected for completion: N/A
15. Estimated life of facility: 30 years
16. Estimated costs:  
Total Construction: \$ N/A Closing Costs: \$ N/A
17. Anticipated construction starting and completion dates:  
From: 01/01/00 To: 01/01/02

**B. DISPOSAL FACILITY GENERAL INFORMATION**

1. Provide brief description of disposal facility design and operations planned by this application:

Landfilling of Municipal Solid Waste. Collection and storage of household hazardous waste, tires and white goods which are removed by the contractor. Collection and processing of yard waste.

2. Facility site supervisor: Gus DiFonzo

Title: Solid Waste Manager Telephone: ( 941 ) 795-3473

3. Disposal area: Total 312 acres; Used 198 acres; Available 114 acres

4. Weighing scales used: Yes ☒ No ☐

5. Security to prevent unauthorized use: Yes ☒ No ☐

6. Charge for waste received: \_\_\_\_\_ \$/yds<sup>3</sup> 23 \$/ton

7. Surrounding land use, zoning:

|              |                                     |            |   |
|--------------|-------------------------------------|------------|---|
| Residential  | <input checked="" type="checkbox"/> | Industrial | <input type="checkbox"/>  |
| Agricultural | <input checked="" type="checkbox"/> | None       | <input type="checkbox"/>  |
| Commercial   | <input type="checkbox"/>            | Other      | <input checked="" type="checkbox"/> <u>Transportation &amp; Utilities</u> |

8. Types of waste received:

|                        |                                     |                    |                                     |
|------------------------|-------------------------------------|--------------------|-------------------------------------|
| Residential            | <input checked="" type="checkbox"/> | C & D debris       | <input checked="" type="checkbox"/> |
| Commercial             | <input checked="" type="checkbox"/> | Shredded/cut tires | <input checked="" type="checkbox"/> |
| Incinerator / WTE ash  | <input checked="" type="checkbox"/> | Yard trash         | <input checked="" type="checkbox"/> |
| Treated biohazardous   | <input checked="" type="checkbox"/> | Septic tank        | <input checked="" type="checkbox"/> |
| Water treatment sludge | <input checked="" type="checkbox"/> | Industrial         | <input checked="" type="checkbox"/> |
| Air treatment sludge   | <input checked="" type="checkbox"/> | Industrial sludge  | <input checked="" type="checkbox"/> |
| Agricultural           | <input checked="" type="checkbox"/> | Domestic sludge    | <input checked="" type="checkbox"/> |
| Asbestos               | <input checked="" type="checkbox"/> |                    |                                     |
| Other                  | <input type="checkbox"/>            |                    |                                     |

9. Salvaging permitted: Yes ☐ No ☒

10. Attendant: Yes ☒ No ☐ Trained operator: Yes ☒ No ☐

11. Spotters: Yes ☒ No ☐ Number of spotters used: 2

12. Site located in: Floodplain ☐ Wetlands ☐ Other ☒ Up Lands

13. Property recorded as a Disposal Site in County Land Records: Yes ☒ No ☐
14. Days of operation: Monday - Saturday
15. Hours of operation: 8:00 a.m. to 5:00 p.m.
16. Days Working Face covered: 6
17. Elevation of water table: 29 Ft. NGVD
18. Number of monitoring wells: 27
19. Number of surface monitoring points: 5 with one to be eliminated
20. Gas controls used: Yes ☒ No ☐ Type controls: Active ☐ Passive ☒  
Gas flaring: Yes ☒ No ☐ Gas recovery: Yes ☐ No ☒
21. Landfill Unit - liner type:
- |                    |                                     |                         |                          |
|--------------------|-------------------------------------|-------------------------|--------------------------|
| Natural soils      | <input checked="" type="checkbox"/> | Double geomembrane      | <input type="checkbox"/> |
| Single clay liner  | <input type="checkbox"/>            | Geomembrane & composite | <input type="checkbox"/> |
| Single geomembrane | <input type="checkbox"/>            | Double composite        | <input type="checkbox"/> |
| Single composite   | <input type="checkbox"/>            | None                    | <input type="checkbox"/> |
| Slurry wall        | <input checked="" type="checkbox"/> |                         |                          |
| Other              | <input type="checkbox"/>            |                         |                          |
22. Leachate collection method:
- |                  |                                     |                    |                          |
|------------------|-------------------------------------|--------------------|--------------------------|
| Collection pipes | <input checked="" type="checkbox"/> | Sand layer         | <input type="checkbox"/> |
| Geonets          | <input type="checkbox"/>            | Gravel layer       | <input type="checkbox"/> |
| Well points      | <input type="checkbox"/>            | Interceptor trench | <input type="checkbox"/> |
| Perimeter ditch  | <input type="checkbox"/>            | None               | <input type="checkbox"/> |
| Other            | <input type="checkbox"/>            |                    |                          |
23. Leachate storage method:
- |       |                          |                      |                                     |
|-------|--------------------------|----------------------|-------------------------------------|
| Tanks | <input type="checkbox"/> | Surface impoundments | <input checked="" type="checkbox"/> |
| Other | <input type="checkbox"/> |                      |                                     |
24. Leachate treatment method:
- |           |                          |                    |                          |
|-----------|--------------------------|--------------------|--------------------------|
| Oxidation | <input type="checkbox"/> | Chemical treatment | <input type="checkbox"/> |
| Secondary | <input type="checkbox"/> | Settling           | <input type="checkbox"/> |
| Advanced  | <input type="checkbox"/> | None               | <input type="checkbox"/> |
| Other     | <input type="checkbox"/> |                    |                          |



Leachate disposal method:

gn

|                     |     |                             |     |
|---------------------|-----|-----------------------------|-----|
| Recirculated        | [ ] | Pumped to WWTP              | [X] |
| Transported to WWTP | [ ] | Discharged to surface water | [ ] |
| Injection well      | [ ] | Evaporation (ie: Perc Pond) | [ ] |
| Other               | [ ] |                             |     |

For leachate discharged to surface waters:

Name and Class of receiving water: N/A

Storm Water: Collected: Yes [X] No [ ] Type of treatment: Sand Filters

Name and Class of receiving water: Cypress Strand, Gates Creek via onsite wetlands  
Class III

Management and Storage of Surface Waters ( MSSW ) Permit number or status: Management

of surface waters on Stages I, II, and III is permitted by Operation Permit  
S041-21117. Stages II and III are for the permitted by MSSW Permit No. 403143.01.

16. Energy recovery, in units shown:

|                                  |                             |
|----------------------------------|-----------------------------|
| _____ High pressure steam, lb/hr | _____ Chilled water, gal/hr |
| _____ Low pressure steam, lb/hr  | _____ Oil, gal/hr           |
| _____ Electricity, kw/hr         | _____ Oil, BTU/hr           |
| _____ Gas, ft <sup>3</sup> /hr   | _____ Gas, BTU/hr           |
| _____ Other:                     | _____                       |

17. Process water management:

Recycled: Yes ☐ No ☐

Treatment method used: \_\_\_\_\_

Discharged to: Surface waters ☐ Underground ☐ Other ☐

Name and Class of receiving water: \_\_\_\_\_

18. Storm Water:

Collected: Yes ☐ No ☐ Type of treatment: \_\_\_\_\_

Name and Class of receiving water: \_\_\_\_\_

19. ERP Permit number or status: \_\_\_\_\_

20. Final residue produced:

\_\_\_\_\_ % of normal processing rate

\_\_\_\_\_ % of maximum processing rate

Disposed of at (Site name): \_\_\_\_\_

21. Supplemental fuel used:

Type: \_\_\_\_\_ Quantity used/hour: \_\_\_\_\_

22. Costs:

Estimated operating costs (material-energy revenue): \$ \_\_\_\_\_

Total cost/ton: \$ \_\_\_\_\_ Net cost/ton: \$ \_\_\_\_\_

23. State pollution control bond financing amount: \$ \_\_\_\_\_

24. Estimated amount of tax exemptions that will be requested: \$ \_\_\_\_\_

D. SOLID WASTE MANAGEMENT FACILITY PERMIT GENERAL REQUIREMENTS (62-701.320, FAC)

| <u>S</u> | <u>LOCATION</u>               | <u>N/A</u> | <u>N/C</u> |   |
|----------|-------------------------------|------------|------------|---|
| <u>X</u> | _____                         | ___        | ___        | 1. Six copies, at minimum, of the completed application form, all supporting data and reports; (62-701.320(5)(a), FAC)  |
| <u>X</u> | <u>(Previously Submitted)</u> |            |            | 2. Engineering and/or professional certification (signature, date and seal) provided on the applications and all engineering plans, reports and supporting information for the application; (62-701.320(6), FAC)  |
| <u>X</u> | _____                         | ___        | ___        | 3. A letter of transmittal to the Department; (62-701.320(7)(a), FAC)   |
| <u>X</u> | _____                         | ___        | ___        | 4. A completed application form dated and signed by the applicant; (62-701.320(7)(b), FAC)  |
| <u>X</u> | <u>(Previously Submitted)</u> |            |            | 5. Permit fee specified in Rule 62-4.050, FAC and Rule 62-701.320(5)(c), FAC in check or money order, payable to the Department; (62-701.320(7)(c), FAC)  |
| ___      | _____                         | <u>X</u>   | ___        | 6. An engineering report addressing the requirements of this rule and with the following format: a cover sheet, text printed on 8 1/2 inch by 11 inch consecutively numbered pages, a table of contents or index, the body of the report and all appendices including an operation plan, contingency plan, illustrative charts and graphs, records or logs of tests and investigations, engineering calculations; (62-701.320(7)(d), FAC) |
| ___      | _____                         | <u>X</u>   | ___        | 7. Operation Plan; (62-701.320(7)(e)1, FAC)   |
| ___      | _____                         | <u>X</u>   | ___        | 8. Contingency Plan; (62-701.320(7)(e)2, FAC)   |
|          |                               |            |            | 9. Plans or drawings for the solid waste management facilities in appropriate format (including sheet size restrictions, cover sheet, legends, north arrow, horizontal and vertical scales, elevations referenced to NGVD) showing; (62-702.320(7)(f), FAC)   |
| ___      | _____                         | <u>X</u>   | ___        | a. A regional map or plan with the project location;  |
| ___      | _____                         | <u>X</u>   | ___        | b. A vicinity map or aerial photograph no more than 1 year old;   |
| ___      | _____                         | <u>X</u>   | ___        | c. A site plan showing all property boundaries certified by a registered Florida land surveyor;   |

| <u>S</u> | <u>LOCATION</u>                   | <u>N/A</u> | <u>N/C</u> |  |
|----------|-----------------------------------|------------|------------|--|
| —        | —                                 | —          | —          | d. Other necessary details to support the engineering report.  |
| —        | —                                 | —          | <u>X</u>   | 10. Proof of property ownership or a copy of appropriate agreements between the facility operator and property owner authorizing use of property; (62-701.320(7)(g), FAC)  |
| —        | —                                 | —          | <u>X</u>   | 11. For facilities owned or operated by a county, provide a description of how, if any, the facilities covered in this application will contribute to the county's achievement of recycling goals contained in Section 403.706, FS; (62-701.320(7)(h), FAC)                                      |
| —        | —                                 | —          | <u>X</u>   | 12. Provide a history and description of any enforcement actions taken by the Department against the applicant for violations of applicable statutes, rules, orders or permit conditions relating to the operation of any solid waste management facility in this state; (62-701.320(7)(i), FAC) |
| <u>X</u> | <u>To be provided if Required</u> | —          | —          | 13. Proof of publication in a newspaper of general circulation of notice of application for a permit to construct or substantially modify a solid waste management facility; (62-702.320(8), FAC)  |
| —        | —                                 | <u>X</u>   | <u>—</u>   | 14. Provide a description of how the requirements for airport safety will be achieved including proof of required notices if applicable; (62-701.320(12), FAC)   |

NOTE:

\* Items noted as N/A have been covered in previous Operation Permit Application on file with FDEP.

E. LANDFILL PERMIT GENERAL REQUIREMENTS (62-701.330, FAC)

| <u>S</u>     | <u>LOCATION</u>           | <u>N/A</u>   | <u>N/C</u> |  |
|--------------|---------------------------|--------------|------------|--|
| <u>  </u>    | <u>                  </u> | <u>  X  </u> | <u>  </u>  | 1. Vicinity map or aerial photograph no more than 1 year old and of appropriate scale showing land use and local zoning within one mile of the landfill and of sufficient scale to show all homes or other structures, water bodies, and roads other significant features of the vicinity. All significant features shall be labeled; (62-701.330(4)(a),FAC) |
| <u>  </u>    | <u>                  </u> | <u>  X  </u> | <u>  </u>  | 2. Vicinity map or aerial photograph no more than 1 year old showing all airports that are located within five miles of the proposed landfill; (62-701.330(4)(b),FAC)  |
| <u>  </u>    | <u>                  </u> | <u>  X  </u> | <u>  </u>  | 3. Plot plan with a scale not greater than 200 feet to the inch showing; (62-701.330(4)(c),FAC)  |
| <u>  </u>    | <u>                  </u> | <u>  X  </u> | <u>  </u>  | a. Dimensions;   |
| <u>  </u>    | <u>                  </u> | <u>  X  </u> | <u>  </u>  | b. Locations of proposed and existing water quality monitoring wells;  |
| <u>  </u>    | <u>                  </u> | <u>  X  </u> | <u>  </u>  | c. Locations of soil borings;  |
| <u>  </u>    | <u>                  </u> | <u>  X  </u> | <u>  </u>  | d. Proposed plan of trenching or disposal areas;   |
| <u>  </u>    | <u>                  </u> | <u>  X  </u> | <u>  </u>  | e. Cross sections showing original elevations and proposed final contours which shall be included either on the plot plan or on separate sheets;   |
| <u>  </u>    | <u>                  </u> | <u>  X  </u> | <u>  </u>  | f. Any previously filled waste disposal areas;   |
| <u>  </u>    | <u>                  </u> | <u>  X  </u> | <u>  </u>  | g. Fencing or other measures to restrict access.   |
|              |                           |              |            | 4. Topographic maps with a scale not greater than 200 feet to the inch with 5-foot contour intervals showing; (62-701.330(4)(d),FAC):  |
| <u>  </u>    | <u>                  </u> | <u>  X  </u> | <u>  </u>  | a. Proposed fill areas;  |
| <u>  </u>    | <u>                  </u> | <u>  X  </u> | <u>  </u>  | b. Borrow areas;   |
| <u>  X  </u> | <u>                  </u> | <u>  </u>    | <u>  </u>  | c. Access roads;   |
| <u>  X  </u> | <u>                  </u> | <u>  </u>    | <u>  </u>  | d. Grades required for proper drainage;  |
| <u>  </u>    | <u>                  </u> | <u>  X  </u> | <u>  </u>  | e. Cross sections of lifts;  |

NOTE:

\*Items noted as N/A have been covered in previous Operation Permit Application on file with FDEP.

| <u>S</u> | <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> |   |
|----------|-----------------|------------|------------|---|
| <u>X</u> | _____           | <u>X</u>   | _____      | f. Special drainage devices if necessary;   |
| _____    | _____           | <u>X</u>   | _____      | g. Fencing;   |
| _____    | _____           | <u>X</u>   | _____      | h. Equipment facilities.  |
| _____    | _____           | _____      | _____      | 5. A report on the landfill describing the following;<br>(62-701.330(4)(e), FAC)  |
| _____    | _____           | <u>X</u>   | _____      | a. The current and projected population and area to<br>be served by the proposed site;  |
| _____    | _____           | <u>X</u>   | _____      | b. The anticipated type, annual quantity, and<br>source of solid waste, expressed in tons;  |
| _____    | _____           | <u>X</u>   | _____      | c. The anticipated facility life;   |
| _____    | _____           | <u>X</u>   | _____      | d. The source and type of cover material used for<br>the landfill.  |
| _____    | _____           | <u>X</u>   | _____      | 6. Provide evidence that an approved laboratory shall<br>conduct water quality monitoring for the facility in<br>accordance with Rule 62-160, FAC; (62-701.330(4)(h), FAC)  |
| _____    | _____           | <u>X</u>   | _____      | 7. Provide a statement of how the applicant will<br>demonstrate financial responsibility for the closing<br>and long-term care of the landfill; (62-<br>701.330(4)(i), FAC) |

**F. GENERAL CRITERIA FOR LANDFILLS (62-701.340, FAC)**

|       |       |          |       |  |
|-------|-------|----------|-------|--|
| _____ | _____ | <u>X</u> | _____ | 1. Describe (and show on a Federal Insurance<br>Administration flood map, if available) how the<br>landfill or solid waste disposal unit shall not be<br>located in the 100-year floodplain where it will<br>restrict the flow of the 100-year flood, reduce the<br>temporary water storage capacity of the floodplain<br>unless compensating storage is provided, or result is a<br>washout of solid waste; (62-701.340(4)(b), FAC) |
| _____ | _____ | <u>X</u> | _____ | 2. Describe how the minimum horizontal separation between<br>waste deposits in the landfill and the landfill<br>property boundary shall be 100 feet, measured from the<br>toe of the proposed final cover slope; (62-<br>701.340(4)(c), FAC)   |
| _____ | _____ | <u>X</u> | _____ | 3. Describe what methods shall be taken to screen the<br>landfill from public view where such screening can<br>practically be provided; (62-701.340(4)(d), FAC)  |

**NOTE:**

\*Items noted as N/A have been covered in previous Operation Permit Application of  
file with FDEP.

G. LANDFILL CONSTRUCTION REQUIREMENTS (62-701.400,FAC)

| <u>S</u> | <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> |   |
|----------|-----------------|------------|------------|---|
| _____    | _____           | <u>X</u>   | _____      | 1. Describe how the landfill shall be designed so that solid waste disposal units will be constructed and closed at planned intervals throughout the design period of the landfill; (62-701.400(2),FAC) |
|          |                 |            |            | 2. Landfill liner requirements; (62-701.400(3),FAC)   |
|          |                 |            |            | a. General construction requirements; (62-701.400(3)(a),FAC):   |
| _____    | _____           | <u>X</u>   | _____      | (1) Provide test information and documentation to ensure the liner will be constructed of materials that have appropriate physical, chemical, and mechanical properties to prevent failure;             |
| _____    | _____           | <u>X</u>   | _____      | (2) Document foundation is adequate to prevent liner failure;   |
| _____    | _____           | <u>X</u>   | _____      | (3) Constructed so bottom liner will not be adversely impacted by fluctuations of the ground water;   |
| _____    | _____           | <u>X</u>   | _____      | (4) Designed to resist hydrostatic uplift if bottom liner located below seasonal high ground water table;   |
| _____    | _____           | <u>X</u>   | _____      | (5) Installed to cover all surrounding earth which could come into contact with the waste or leachate.  |
|          |                 |            |            | b. Composite liners; (62-701.400(3)(b),FAC)   |
| _____    | _____           | <u>X</u>   | _____      | (1) Upper geomembrane thickness and properties;   |
| _____    | _____           | <u>X</u>   | _____      | (2) Design leachate head for primary LCRS including leachate recirculation if appropriate;  |
| _____    | _____           | <u>X</u>   | _____      | (3) Design thickness in accordance with Table A and number of lifts planned for lower soil component.   |

| <u>S</u> | <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> |
|----------|-----------------|------------|------------|
| _____    | _____           | <u>X</u>   | _____      |
| _____    | _____           | <u>X</u>   | _____      |
| _____    | _____           | <u>X</u>   | _____      |
| _____    | _____           | <u>X</u>   | _____      |
| _____    | _____           | <u>X</u>   | _____      |
| _____    | _____           | <u>X</u>   | _____      |
| _____    | _____           | <u>X</u>   | _____      |
| _____    | _____           | <u>X</u>   | _____      |
| _____    | _____           | <u>X</u>   | _____      |
| _____    | _____           | <u>X</u>   | _____      |

c. Double liners; (62-701.400(3)(c),FAC)

- (1) Upper and lower geomembrane thicknesses and properties;
- (2) Design leachate head for primary LCRS to limit the head to one foot above the liner;
- (3) Lower geomembrane sub-base design;
- (4) Leak detection and secondary leachate collection system minimum design criteria ( $k \geq 1$  cm/sec, head on lower liner  $< 1$  inch, head not to exceed thickness of drainage layer);

d. Standards for geomembranes;  
(62-701.400(3)(d),FAC)

- (1) Field seam test methods to ensure all field seams are at least 90 percent of the yield strength for the lining material;
- (2) Design of 24-inch-thick protective layer above upper geomembrane liner;
- (3) Describe operational plans to protect the liner and leachate collection system when placing the first layer of waste above 24-inch-thick protective layer.

e. Geosynthetic specification requirements;  
(62-701.400(3)(e),FAC)

- (1) Definition and qualifications of the designer, manufacturer, installer, QA consultant and laboratory, and QA program;
- (2) Material specifications for geomembranes, geotextiles, geogrids, and geonets;



| <u>S</u> | <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> |
|----------|-----------------|------------|------------|
| —        | —               | <u>X</u>   | —          |

(3) Manufacturing and fabrication specifications including geomembrane raw material and roll QA, fabrication personnel qualifications, seaming equipment and procedures, overlaps, trial seams, destructive and nondestructive seam testing, seam testing location, frequency, procedure, sample size and geomembrane repairs;

|   |   |          |   |
|---|---|----------|---|
| — | — | <u>X</u> | — |
|---|---|----------|---|

(4) Geomembrane installation specifications including earthwork, conformance testing, geomembrane placement, installation personnel qualifications, field seaming and testing, overlapping and repairs, materials in contact with geomembrane and procedures for lining system acceptance;

|   |   |          |   |
|---|---|----------|---|
| — | — | <u>X</u> | — |
|---|---|----------|---|

(5) Geotextile and geogrid specifications including handling and placement, conformance testing, seams and overlaps, repair, and placement of soil materials;

|   |   |          |   |
|---|---|----------|---|
| — | — | <u>X</u> | — |
|---|---|----------|---|

(6) Geonet specifications including handling and placement, conformance testing, stacking and joining, repair, and placement of soil materials;

f. Standards for soil components  
(62-710.400(3)(f), FAC):

|   |   |          |   |
|---|---|----------|---|
| — | — | <u>X</u> | — |
|---|---|----------|---|

(1) Description of construction procedures including overexcavation and backfilling to preclude structural inconsistencies and procedures for placing and compacting soil component in layers;

|   |   |          |   |
|---|---|----------|---|
| — | — | <u>X</u> | — |
|---|---|----------|---|

(2) Demonstration of compatibility of the soil component with actual or simulated leachate in accordance with EPA Test Method 9100 or an equivalent test method;

|   |   |          |   |
|---|---|----------|---|
| — | — | <u>X</u> | — |
|---|---|----------|---|

(3) Procedures for testing in-situ soils to demonstrate they meet the specifications for soil liners;

| <u>S</u> | <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> |
|----------|-----------------|------------|------------|
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |

(4) Specifications for soil component of liner including at a minimum:

- (a) Allowable particle size distribution, Atterberg limits, shrinkage limit;
- (b) Placement moisture and dry density criteria;
- (c) Maximum laboratory-determined saturated hydraulic conductivity using simulated leachate;
- (d) Minimum thickness of soil liner;
- (e) Lift thickness;
- (f) Surface preparation (scarification);
- (g) Type and percentage of clay mineral within the soil component;

(5) Procedures for constructing and using a field test section to document the desired saturated hydraulic conductivity and thickness can be achieved in the field.

3. Leachate collection and removal system (LCRS);  
(62-701.400(4), FAC)

a. The primary and secondary LCRS requirements;  
(62-701.400(4)(a), FAC)

- X Appendix A/Technical Specifications(1) Constructed of materials chemically resistant to the waste and leachate;
- X Appendix A/Technical Specifications(2) Have sufficient mechanical properties to prevent collapse under pressure;
- X Appendix A/Technical Specifications(3) Have granular material or synthetic geotextile to prevent clogging;
- X Appendix A/Technical Specifications(4) Have method for testing and cleaning clogged pipes or contingent designs for rerouting leachate around failed areas;

| <u>S</u> | <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> |
|----------|-----------------|------------|------------|
|----------|-----------------|------------|------------|

|   |   |          |   |
|---|---|----------|---|
| — | — | <u>X</u> | — |
|---|---|----------|---|

|   |   |          |   |
|---|---|----------|---|
| — | — | <u>X</u> | — |
|---|---|----------|---|

|   |   |          |   |
|---|---|----------|---|
| — | — | <u>X</u> | — |
|---|---|----------|---|

|   |   |          |   |
|---|---|----------|---|
| — | — | <u>X</u> | — |
|---|---|----------|---|

|   |   |          |   |
|---|---|----------|---|
| — | — | <u>X</u> | — |
|---|---|----------|---|

|   |   |          |   |
|---|---|----------|---|
| — | — | <u>X</u> | — |
|---|---|----------|---|

|   |   |          |   |
|---|---|----------|---|
| — | — | <u>X</u> | — |
|---|---|----------|---|

|   |   |          |   |
|---|---|----------|---|
| — | — | <u>X</u> | — |
|---|---|----------|---|

|   |   |          |   |
|---|---|----------|---|
| — | — | <u>X</u> | — |
|---|---|----------|---|

|   |   |          |   |
|---|---|----------|---|
| — | — | <u>X</u> | — |
|---|---|----------|---|

b. Primary LCRS requirements; (62-701.400(4)(b), FAC)

(1) Bottom 12 inches having hydraulic conductivity  $\geq 1 \times 10^{-3}$  cm/sec;

(2) Total thickness of 24 inches of material chemically resistant to the waste and leachate;

(3) Bottom slope design to accomodate for predicted settlement;

(4) Demonstration that synthetic drainage material, if used, is equivalent or better than granular material in chemical compatibility, flow under load and protection of geomembrane liner.

4. Leachate recirculation; (62-701.400(5), FAC)

a. Describe general procedures for recirculating leachate;

b. Describe procedures for controlling leachate runoff and minimizing mixing of leachate runoff with storm water;

c. Describe procedures for preventing perched water conditions and gas buildup;

d. Describe alternate methods for leachate management when it cannot be recirculated due to weather or runoff conditions, surface seeps, wind-blown spray, or elevated levels of leachate head on the liner;

e. Describe methods of gas management to control odors and migration of methane;

f. If leachate irrigation is proposed, describe treatment methods and standards for leachate treatment prior to irrigation over final cover and provide documentation that irrigation does not contribute significantly to leachate generation.

| <u>S</u> | <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> |
|----------|-----------------|------------|------------|
|----------|-----------------|------------|------------|

5. Leachate storage tanks and leachate surface impoundments; (62-701.400(6),FAC)

a. Surface impoundment requirements; (62-701.400(6)(b),FAC)

|   |   |          |   |
|---|---|----------|---|
| — | — | <u>X</u> | — |
|---|---|----------|---|

(1) Documentation that the design of the bottom liner will not be adversely impacted by fluctuations of the ground water;

|   |   |          |   |
|---|---|----------|---|
| — | — | <u>X</u> | — |
|---|---|----------|---|

(2) Designed in segments to allow for inspection and repair as needed without interruption of service;

(3) General design requirements;

|   |   |          |   |
|---|---|----------|---|
| — | — | <u>X</u> | — |
|---|---|----------|---|

(a) Double liner system consisting of an upper and lower 60-mil minimum thickness geomembrane;

|   |   |          |   |
|---|---|----------|---|
| — | — | <u>X</u> | — |
|---|---|----------|---|

(b) Leak detection and collection system with hydraulic conductivity  $> 1$  cm/sec;

|   |   |          |   |
|---|---|----------|---|
| — | — | <u>X</u> | — |
|---|---|----------|---|

(c) Lower geomembrane placed on subbase  $> 6$  inches thick with  $k \leq 1 \times 10^{-5}$  cm/sec;

|   |   |          |   |
|---|---|----------|---|
| — | — | <u>X</u> | — |
|---|---|----------|---|

(d) Design calculation to predict potential leakage through the upper liner;

|   |   |          |   |
|---|---|----------|---|
| — | — | <u>X</u> | — |
|---|---|----------|---|

(e) Daily inspection requirements and notification and corrective action requirements if leakage rates exceed that predicted by design calculations;

|   |   |          |   |
|---|---|----------|---|
| — | — | <u>X</u> | — |
|---|---|----------|---|

(4) Description of procedures to prevent uplift, if applicable;

|   |   |          |   |
|---|---|----------|---|
| — | — | <u>X</u> | — |
|---|---|----------|---|

(5) Design calculations to demonstrate minimum two feet of freeboard will be maintained;

|   |   |          |   |
|---|---|----------|---|
| — | — | <u>X</u> | — |
|---|---|----------|---|

(6) Procedures for controlling vectors and off-site odors.



| <u>S</u> | <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> |
|----------|-----------------|------------|------------|
| —        | —               | —          | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |

(a) Interstitial space monitoring at least weekly;

(b) Corrosion protection provided for primary tank interior and external surface of outer shell;

(c) Interior tank coatings compatible with stored leachate;

(d) Cathodic protection inspected weekly and repaired as needed;

(3) Describe an overfill prevention system such as level sensors, gauges, alarms and shutoff controls to prevent overfilling and provide for weekly inspections;

(4) Inspection reports available for department review.

d. Schedule provided for routine maintenance of LCRS; (62-701.400(6)(e), FAC)

6. Liner systems construction quality assurance ( CQA ):  
(62-701.400(7), FAC)

a. Provide CQA Plan including:

(1) Specifications and construction requirements for liner system;

(2) Detailed description of quality control testing procedures and frequencies;

(3) Identification of supervising professional engineer;

(4) Identify responsibility and authority of all appropriate organizations and key personnel involved in the construction project;

(5) State qualifications of CQA professional engineer and support personnel;

(6) Description of CQA reporting forms and documents;

| <u>S</u> | <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> |
|----------|-----------------|------------|------------|
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |

- b. An independent laboratory experienced in the testing of geosynthetics to perform required testing;

7. Soil Liner CQA (62-701.400(8)FAC)

- a. Documentation that an adequate borrow source has been located with test results or description of the field exploration and laboratory testing program to define a suitable borrow source;
- b. Description of field test section construction and test methods to be implemented prior to liner installation;
- c. Description of field test methods including rejection criteria and corrective measures to insure proper liner installation.

8. Surface water management systems; (62-701.400(9),FAC)

- a. Design of surface water management system to isolate surface water from waste filled areas and to control stormwater run-off;
- b. Details of stormwater control design including retention ponds, detention ponds, and drainage ways;

9. Gas control systems; (62-701.400(10),FAC)

- a. Design details for gas control system including collection pipes and vents, and passive venting or vacuum extraction details;
- b. Documentation that the gas control system will not impact the liner or leachate control system;
- c. Proposed methods of odor control including flaring designs in accordance with Chapter 62-296, FAC;
- d. Description of a routine gas monitoring program to ensure gas control system is operating properly including:

- (1) Location of monitoring points;

| <u>S</u> | <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> |  |
|----------|-----------------|------------|------------|--|
| —        | —               | <u>X</u>   | —          | (2) Requirements for quarterly sampling of all monitoring points;  |
| —        | —               | <u>X</u>   | —          | (3) Description of corrective measures to be completed within 60 days of detection of elevated levels of explosive gases;  |
| —        | —               | <u>X</u>   | —          | e. Description of condensate collection and disposal methods.  |
|          |                 |            |            | 10. Landfill gas recovery facilities; (62-701.400(11),FAC)   |
| —        | —               | <u>X</u>   | —          | a. Information required in Rules 62-701.320(7) and 62-701.330(4), FAC supplied;  |
| —        | —               | <u>X</u>   | —          | b. Information required in Rule 62-701.600(4), FAC supplied where relevant and practical;  |
| —        | —               | <u>X</u>   | —          | c. Estimate of current and expected gas generation rates and description of condensate disposal methods provided;  |
| —        | —               | <u>X</u>   | —          | d. Description of procedures for condensate sampling, analyzing and data reporting provided;   |
| —        | —               | <u>X</u>   | —          | e. Closure plan provided describing methods to control gas after recovery facility ceases operation;   |
| —        | —               | <u>X</u>   | —          | f. Performance bond provided to cover closure costs if not already included in other landfill closure costs.   |
| —        | —               | <u>X</u>   | —          | 11. For landfills designed in ground water, provide documentation that the landfill will provide a degree of protection equivalent to landfills designed with bottom liners not in contact with ground water; (62-701.400(12),FAC) |



H. HYDROGEOLOGICAL INVESTIGATION REQUIREMENTS (62-701.410(1), FAC)

| <u>S</u> | <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> |   |
|----------|-----------------|------------|------------|---|
|          |                 |            |            | 1. Submit a hydrogeological investigation and site report including at least the following information:   |
| —        | —               | <u>X</u>   | —          | a. Regional and site specific geology and hydrogeology;   |
| —        | —               | <u>X</u>   | —          | b. Direction and rate of ground water and surface water flow including seasonal variations;   |
| —        | —               | <u>X</u>   | —          | c. Background quality of ground water and surface water;  |
| —        | —               | <u>X</u>   | —          | d. Any on-site hydraulic connections between aquifers;  |
| —        | —               | <u>X</u>   | —          | e. Site stratigraphy and aquifer characteristics for confining layers, semi-confining layers, and all aquifers below the landfill site that may be affected by the landfill;  |
| —        | —               | <u>X</u>   | —          | f. Site topography and soil characteristics;  |
| —        | —               | <u>X</u>   | —          | g. Inventory of all public and private water wells within a one-mile radius of the landfill including well top of casing and bottom elevations, name of owner, age and usage of each well, stratigraphic unit screened, well construction technique and static water level; |
| —        | —               | <u>X</u>   | —          | h. Description of topography, soil types and surface water drainage systems;  |
| —        | —               | <u>X</u>   | —          | i. An inventory of all public and private water wells within one mile of the landfill.  |
| —        | —               | <u>X</u>   | —          | j. Existing contaminated areas on landfill site.  |
| —        | —               | <u>X</u>   | —          | 2. Report signed, sealed and dated by PE or PG.   |

I. GEOTECHNICAL INVESTIGATION REQUIREMENTS (62-701.410(2), FAC)

S      LOCATION      N/A   N/C

- |  |  |
|--|--|
| <p><u>X</u>   <u>PSI Report Enclosed</u></p> <p><u>X</u>   <u>PSI Report Enclosed</u></p> <p><u>X</u>   <u>PSI Report Enclosed</u></p> <p>____   _____   <u>X</u>   ____</p> <p>____   _____   <u>X</u>   ____</p> <p>____   _____   <u>X</u>   ____</p> <p><u>X</u>   <u>PSI Report Enclosed</u></p> <p>____   _____   <u>X</u>   ____</p> <p><u>X</u>   <u>PSI Report Enclosed</u></p> | <p>1.      Submit a geotechnical site investigation report defining the engineering properties of the site including at least the following:</p> <p>a.      Description of subsurface conditions including soil stratigraphy and ground water table conditions;</p> <p>b.      Investigate for the presence of muck, previously filled areas, soft ground, lineaments and sink holes;</p> <p>c.      Estimates of average and maximum high water table across the site;</p> <p>d.      Foundation analysis including:</p> <p>         (1)      Foundation bearing capacity analysis;</p> <p>         (2)      Total and differential subgrade settlement analysis;</p> <p>         (3)      Slope stability analysis;</p> <p>e.      Description of methods used in the investigation and includes soil boring logs, laboratory results, analytical calculations, cross sections, interpretations and conclusions;</p> <p>f.      An evaluation of fault areas, seismic impact zones, and unstable areas as described in 40 CFR 258.13, 40 CFR 258.14 and 40 CFR 258.15.</p> <p>2.      Report signed, sealed and dated by PE or PG.</p> |
|--|--|

**J. VERTICAL EXPANSION OF LANDFILLS (62-701.430, FAC)**

| <u>S</u> | <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> |   |
|----------|-----------------|------------|------------|---|
| —        | —               | <u>X</u>   | —          | 1. Describe how the vertical expansion shall not cause or contribute to leachate leakage from the existing landfill or adversely affect the closure design of the existing landfill;                |
| —        | —               | <u>X</u>   | —          | 2. Describe how the vertical expansion over unlined landfills will meet the requirements of Rule 62-701.400, FAC with the exceptions of Rule 62-701.430(1)(c), FAC;                                 |
| —        | —               | <u>X</u>   | —          | 3. Provide foundation and settlement analysis for the vertical expansion;   |
| —        | —               | <u>X</u>   | —          | 4. Provide total settlement calculations demonstrating that the final elevations of the lining system, that gravity drainage, and that no other component of the design will be adversely affected; |
| —        | —               | <u>X</u>   | —          | 5. Minimum stability safety factor of 1.5 for the lining system component interface stability and deep stability;   |
| —        | —               | <u>X</u>   | —          | 6. Provide documentation to show the surface water management system will not be adversely affected by the vertical expansion;  |
| —        | —               | <u>X</u>   | —          | 7. Provide gas control designs to prevent accumulation of gas under the new liner for the vertical expansion.   |

**K. LANDFILL OPERATION REQUIREMENTS (62-701.500, FAC)**

|   |   |   |          |  |
|---|---|---|----------|--|
| — | — | — | <u>X</u> | 1. Provide documentation that landfill will have at least one trained operator during operation and at least one trained spotter at each working face;<br>(62-701.500(1), FAC) |
|   |   |   |          | 2. Provide a landfill operation plan including procedures for: (62-701.500(2), FAC)  |
| — | — | — | <u>X</u> | a. Designating responsible operating and maintenance personnel;  |
| — | — | — | <u>X</u> | b. Contingency operations for emergencies;   |
| — | — | — | <u>X</u> | c. Controlling types of waste received at the landfill;  |

| <u>S</u> | <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> |  |
|----------|-----------------|------------|------------|--|
| —        | —               | —          | <u>X</u>   | d. Weighing incoming waste;  |
| —        | —               | —          | <u>X</u>   | e. Vehicle traffic control and unloading;  |
| —        | —               | —          | <u>X</u>   | f. Method and sequence of filling waste;   |
| —        | —               | —          | <u>X</u>   | g. Waste compaction and application of cover;  |
| —        | —               | —          | <u>X</u>   | h. Operations of gas, leachate, and stormwater controls;   |
| —        | —               | —          | <u>X</u>   | i. Water quality monitoring.   |
| —        | —               | —          | <u>X</u>   | 3. Provide a description of the landfill operation record to be used at the landfill; details as to location of where various operational records will be kept (i.e. FDEP permit, engineering drawings, water quality records, etc.) (62-701.500(3),FAC) |
| —        | —               | —          | <u>X</u>   | 4. Describe the waste records that will be compiled monthly and provided to the Department quarterly; (62-701.500(4),FAC)  |
| —        | —               | —          | <u>X</u>   | 5. Describe methods of access control; (62-701.500(5),FAC)   |
| —        | —               | —          | <u>X</u>   | 6. Describe load checking program to be implemented at the landfill to discourage disposal of unauthorized wastes at the landfill; (62-701.500(6),FAC)   |
| —        | —               | —          |            | 7. Describe procedures for spreading and compacting waste at the landfill that include: (62-701.500(7),FAC)  |
| —        | —               | —          | <u>X</u>   | a. Waste layer thickness and compaction frequencies;   |
| —        | —               | —          | <u>X</u>   | b. Special considerations for first layer of waste placed above liner and leachate collection system;  |
| —        | —               | —          | <u>X</u>   | c. Slopes of cell working face and side grades above land surface, planned lift depths during operation;   |
| —        | —               | —          | <u>X</u>   | d. Maximum width of working face;  |

| <u>S</u> | <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> |
|----------|-----------------|------------|------------|
|----------|-----------------|------------|------------|

|       |       |       |          |
|-------|-------|-------|----------|
| _____ | _____ | _____ | <u>X</u> |
| _____ | _____ | _____ | <u>X</u> |
| _____ | _____ | _____ | <u>X</u> |
| _____ | _____ | _____ | <u>X</u> |
| _____ | _____ | _____ | <u>X</u> |
| _____ | _____ | _____ | <u>X</u> |
| _____ | _____ | _____ | <u>X</u> |
| _____ | _____ | _____ | <u>X</u> |
| _____ | _____ | _____ | <u>X</u> |
| _____ | _____ | _____ | <u>X</u> |

e. Description of type of initial cover to be used at the facility that controls:

- (1) Disease vector breeding/animal attraction
- (2) Fires
- (3) Odors
- (4) Blowing litter
- (5) Moisture infiltration

f. Procedures for applying initial cover including minimum cover frequencies;

g. Procedures for applying intermediate cover;

h. Time frames for applying final cover;

i. Description of litter policing methods;

j. Erosion control procedures.

8. Describe operational procedures for leachate management including; (62-701.500(8),FAC)

|       |                    |       |          |
|-------|--------------------|-------|----------|
| _____ | <u>Appendix B*</u> | _____ | <u>X</u> |
| _____ | _____              | _____ | <u>X</u> |
| _____ | _____              | _____ | <u>X</u> |
| _____ | _____              | _____ | <u>X</u> |
| _____ | _____              | _____ | <u>X</u> |
| _____ | _____              | _____ | <u>X</u> |
| _____ | _____              | _____ | <u>X</u> |

a. Leachate level monitoring, sampling, analysis and data results submitted to the Department;

b. Operation and maintenance of leachate collection and removal system, and treatment as required;

c. Procedures for managing leachate if it becomes regulated as a hazardous waste;

d. Agreements for off-site discharge and treatment of leachate;

e. Contingency plan for managing leachate during emergencies or equipment problems;

f. Procedures for recording quantities of leachate generated in gal/day;

g. Procedures for comparing precipitation experienced at the landfill with leachate generation rates.

NOTE:

\*Taken from Part K of Operating Permit Application

| <u>S</u> | <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> |   |
|----------|-----------------|------------|------------|---|
| —        | —               | —          | <u>X</u>   | 9. Describe routine gas monitoring program for the landfill as required by Rule 62-701.400(10), FAC; (62-701.500(9), FAC)   |
| —        | —               | —          | <u>X</u>   | 10. Describe procedures for operating and maintaining the landfill stormwater management system to comply with the standards of Chapters 62-3, 62-302 and 62-25, FAC; (62-701.500(10), FAC) |
| —        | —               | —          |            | 11. Equipment and operation feature requirements; (62-701.500(11), FAC)   |
| —        | —               | —          | <u>X</u>   | a. Sufficient equipment for excavating, spreading, compacting and covering waste;   |
| —        | —               | —          | <u>X</u>   | b. Reserve equipment or arrangements to obtain additional equipment within 24 hours of breakdown;   |
| —        | —               | —          | <u>X</u>   | c. Communications equipment;  |
| —        | —               | —          | <u>X</u>   | d. Personnel shelter and sanitary facilities, first aid equipment;  |
| —        | —               | —          | <u>X</u>   | e. Dust control methods;  |
| —        | —               | —          | <u>X</u>   | f. Fire protection capabilities and procedures for notifying local fire department authorities in emergencies;  |
| —        | —               | —          | <u>X</u>   | g. Litter control devices;  |
| —        | —               | —          | <u>X</u>   | h. Signs indicating operating authority, traffic flow, hours of operation, disposal restrictions.   |
| —        | —               | —          | <u>X</u>   | 12. Provide a description of all-weather access road, inside perimeter road and other roads necessary for access which shall be provided at the landfill; (62-701.500(12), FAC)             |

| <u>S</u> | <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> |
|----------|-----------------|------------|------------|
|----------|-----------------|------------|------------|

13. Additional record keeping and reporting requirements;  
(62-701.500(13),FAC)

|   |   |   |          |
|---|---|---|----------|
| — | — | — | <u>X</u> |
| — | — | — | <u>X</u> |
| — | — | — | <u>X</u> |
| — | — | — | <u>X</u> |

- a. Records used for developing permit applications and supplemental information maintained for the design period of the landfill;
- b. Monitoring information, calibration and maintenance records, copies of reports required by permit maintained for at least 10 years;
- c. Background water quality records shall be maintained for the design period of the landfill;
- d. Maintain annual estimates of the remaining life of constructed landfills and of other permitted areas not yet constructed and submit this estimate annually to the Department.

L. WATER QUALITY AND LEACHATE MONITORING REQUIREMENTS (62-701.510, FAC)

| <u>S</u> | <u>LOCATION</u>              | <u>N/A</u> | <u>N/C</u> |  |
|----------|------------------------------|------------|------------|--|
| —        | —                            | —          | <u>X</u>   | 1. Water quality and leachate monitoring plan shall be submitted describing the proposed ground water, surface water and leachate monitoring systems and shall meet at least the following requirements; |
| —        | —                            | —          | <u>X</u>   | a. Based on the information obtained in the hydrogeological investigation and signed, dated and sealed by the PG or PE who prepared it; (62-701.510(2)(a), FAC)  |
| —        | —                            | —          | <u>X</u>   | b. All sampling and analysis performed by organizations having Department approved Comprehensive Quality Assurance Plans; (62-701.510(2)(b), FAC)  |
|          |                              |            |            | c. Ground water monitoring requirements; (62-701.510(3), FAC)  |
| —        | —                            | —          | <u>X</u>   | (1) Detection wells located downgradient from and within 50 feet of disposal units;  |
| —        | —                            | —          | <u>X</u>   | (2) Downgradient compliance wells as required;   |
| —        | —                            | —          | <u>X</u>   | (3) Background wells screened in all aquifers below the landfill that may be affected by the landfill;   |
| <u>X</u> | <u>Plan C-13</u>             | —          | —          | (4) Location information for each monitoring well;   |
| —        | —                            | <u>X</u>   | —          | (5) Well spacing no greater than 500 feet apart for downgradient wells and no greater than 1500 feet apart for upgradient wells unless site specific conditions justify alternate well spacings;         |
| <u>X</u> | <u>Plan C-12</u>             | —          | —          | (6) Well screen locations properly selected;   |
| <u>X</u> | <u>DEP/SWFWMD Procedures</u> | —          | —          | (7) Procedures for properly abandoning monitoring wells;   |
| —        | —                            | <u>X</u>   | —          | (8) Detailed description of detection sensors if proposed.   |

NOTE: Relocation of monitoring well shown on plans previously submitted. Well construction detail is included on plans.



| <u>S</u> | <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> |
|----------|-----------------|------------|------------|
| _____    | _____           | _____      | <u>X</u>   |
| _____    | _____           | _____      | <u>X</u>   |
| _____    | _____           | _____      | <u>X</u>   |
| _____    | _____           | _____      | <u>X</u>   |
| _____    | _____           | _____      | <u>X</u>   |
| _____    | _____           | _____      | <u>X</u>   |
| _____    | _____           | _____      | <u>X</u>   |
| _____    | _____           | _____      | <u>X</u>   |
| _____    | _____           | _____      | <u>X</u>   |
| _____    | _____           | _____      | <u>X</u>   |

- d. Surface water monitoring requirements;  
(62-701.510(4), FAC)
- (1) Location of and justification for all proposed surface water monitoring points;
- (2) Each monitoring location to be marked and its position determined by a registered Florida land surveyor;
- e. Leachate sampling locations proposed; (62-701.510(5), FAC)
- f. Routine sampling frequency and requirements;  
(62-701.510(6), FAC)
- (1) Background ground water and surface water sampling and analysis requirements;
- (2) Leachate semi-annual and annual sampling and analysis requirements;
- (3) Detection well semi-annual sampling and analysis requirements;
- (4) Compliance well sampling and analysis requirements;
- (5) Surface water sampling and analysis requirements.
- g. Describe procedures for implementing assessment monitoring and corrective action as required;  
(62-701.510(7), FAC)
- h. Water quality monitoring report requirements;  
(62-701.510(9), FAC)
- (1) Semi-annual report requirements;
- (2) Bi-annual report requirements signed, dated and sealed by PG or PE.

M. SPECIAL WASTE HANDLING REQUIREMENTS (62-701.520, FAC)

| <u>S</u> | <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> |  |
|----------|-----------------|------------|------------|--|
| —        | —               | —          | <u>X</u>   | 1. Describe procedures for managing motor vehicles;<br>(62-701.520(1), FAC)    |
| —        | —               | —          | <u>X</u>   | 2. Describe procedures for landfilling shredded waste;<br>(62-701.520(3), FAC) |
| —        | —               | —          | <u>X</u>   | 3. Describe procedures for asbestos waste disposal;<br>(62-701.520(4), FAC)    |
| —        | —               | —          | <u>X</u>   | 4. Describe procedures for contaminated soil disposal;<br>(62-701.520(5), FAC) |

N. LANDFILL FINAL CLOSURE REQUIREMENTS (62-701.600, FAC)

|   |   |          |   |  |
|---|---|----------|---|--|
|   |   |          |   | 1. Closure schedule requirements; (62-701.600(2), FAC)   |
| — | — | <u>X</u> | — | a. Documentation that a written notice including a schedule for closure will be provided to the Department at least one year prior to final receipt of wastes; |
| — | — | <u>X</u> | — | b. Notice to user requirements within 120 days of final receipt of wastes;   |
| — | — | <u>X</u> | — | c. Notice to public requirements within 10 days of final receipt of wastes.  |
|   |   |          |   | 2. Closure permit general requirements; (62-701.600(3), FAC)   |
| — | — | <u>X</u> | — | a. Application submitted to Department at least 90 days prior to final receipt of wastes;  |
|   |   |          |   | b. Closure plan shall include the following:   |
| — | — | <u>X</u> | — | (1) Closure report;  |
| — | — | <u>X</u> | — | (2) Closure design plan;   |
| — | — | <u>X</u> | — | (3) Closure operation plan;  |
| — | — | <u>X</u> | — | (4) Closure procedures;  |
| — | — | <u>X</u> | — | (5) Plan for long term care;   |

| <u>S</u> | <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> |
|----------|-----------------|------------|------------|
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |

(6) A demonstration that proof of financial responsibility for long term care will be provided.

3. Closure report requirements; (62-701.600(4),FAC)

a. General information requirements;

- (1) Identification of landfill;
- (2) Location, description and vicinity map;
- (3) Total acres of disposal areas and landfill property;
- (4) Legal property description;
- (5) History of landfill;
- (6) Identification of types of waste disposed of at the landfill.

b. Geotechnical investigation report and water quality monitoring plan required by Rule 62-701.330(4),FAC;

c. Land use information report indicating: identification of adjacent landowners; zoning; present land uses; and roads, highways right-of-way, or easements.

d. Report on actual or potential gas migration at landfills containing biodegradable wastes including detailed description of test and investigation methods used;

e. Report assessing the effectiveness of the landfill design and operation including results of geotechnical investigations, surface water and storm water management, gas migration and concentrations, condition of existing cover, and nature of waste disposed of at the landfill;

4. Closure design requirements to be included in the closure design plan: (62-701.600(5),FAC)

a. Plan sheet showing phases of site closing;

| <u>S</u> | <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> |
|----------|-----------------|------------|------------|
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |

- b. Drawings showing existing topography and proposed final grades;
- c. Provisions to close units when they reach approved design dimensions;
- d. Final elevations before settlement;
- e. Side slope design including benches, terraces, down slope drainage ways, energy dissipators and discussion of expected precipitation effects;
- f. Final cover installation plans including:
  - (1) CQA plan for installing and testing final cover;
  - (2) Schedule for installing final cover after final receipt of waste;
  - (3) Description of drought-resistant species to be used in the vegetative cover;
  - (4) Top gradient design to maximize runoff and minimize erosion;
  - (5) Provisions for cover material to be used for final cover maintenance.
- g. Final cover design requirements:
  - (1) Protective soil layer design;
  - (2) Barrier soil layer design;
  - (3) Erosion control vegetation;
  - (4) Geomembrane barrier layer design.
- h. Proposed method of stormwater control;
- i. Proposed method of access control;
- j. Description of proposed final use of the closed landfill, if any;

| <u>S</u> | <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> |
|----------|-----------------|------------|------------|
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |

5. Closure operation plan shall include:  
(62-701.600(6),FAC)

- a. Detailed description of actions which will be taken to close the landfill;
- b. Time schedule for completion of closing and long term care;
- c. Describe proposed method for demonstrating financial responsibility;
- d. Indicate any additional equipment and personnel needed to complete closure.
- e. Development and implementation of the water quality monitoring plan required in Rule 62-701.510, FAC.
- f. Development and implementation of routine gas monitoring program required in Rule 62-701.400(10)(c), FAC.

6. Justification for and detailed description of procedures to be followed for temporary closure of the landfill, if desired; (62-701.600(7),FAC)

O. CLOSURE PROCEDURES (62-701.610,FAC)

| <u>S</u> | <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> |  |
|----------|-----------------|------------|------------|--|
| ___      | ___             | <u>X</u>   | ___        | 1. Survey monuments; (62-701.610(2),FAC)                                 |
| ___      | ___             | <u>X</u>   | ___        | 2. Final survey report; (62-701.610(3),FAC)                              |
| ___      | ___             | <u>X</u>   | ___        | 3. Certification of closure construction completion; (62-701.610(4),FAC) |
| ___      | ___             | <u>X</u>   | ___        | 4. Declaration to the public; (62-701.610(5),FAC)                        |
| ___      | ___             | <u>X</u>   | ___        | 5. Official date of closing; (62-701.610(6),FAC)                         |
| ___      | ___             | <u>X</u>   | ___        | 6. Use of closed landfill areas; (62-701.610(7),FAC)                     |

P. LONG TERM CARE REQUIREMENTS (62-701.620,FAC)

|          |                       |     |  |
|----------|-----------------------|-----|--|
| <u>X</u> | <u>See Appendix C</u> | ___ | 1. Right of property access requirements; (62-701.620(4),FAC)                                    |
| <u>X</u> | <u>See Appemdix C</u> | ___ | 2. Successors of interest requirements; (62-701.620(5),FAC)                                      |
| <u>X</u> | <u>See Appendix C</u> | ___ | 3. Requirements for replacement of monitoring devices; (62-701.620(7),FAC)                       |
| <u>X</u> | <u>See Appendix C</u> | ___ | 4. Completion of long term care signed and sealed by professional engineer (62-701.620(8), FAC). |

Q. FINANCIAL RESPONSIBILITY REQUIREMENTS (62-701.630,FAC)

|     |     |     |          |  |
|-----|-----|-----|----------|--|
| ___ | ___ | ___ | <u>X</u> | 1. Provide cost estimates for closing, long term care, and corrective action costs estimated by a PE for a third party performing the work, on a per unit basis, with the source of estimates indicated; (62-701.630(3)&(7), FAC). |
| ___ | ___ | ___ | <u>X</u> | 2. Describe procedures for providing annual cost adjustments to the Department based on inflation and changes in the closing, long-term care, and corrective action plans; (62-701.630(4)&(8), FAC).                               |
| ___ | ___ | ___ | <u>X</u> | 3. Describe funding mechanisms for providing proof of financial assurance and include appropriate financial assurance forms; (62-701.630(5),(6),&(9), FAC).  |

**R. CLOSURE OF EXISTING LANDFILLS (62-701.640, FAC)**

| <u>S</u> | <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> |   |
|----------|-----------------|------------|------------|---|
| —        | —               | <u>X</u>   | —          | 1. Demonstration that facility does not pose a bird hazard to aircraft as specified in Rule 62-701.320(12)(b), FAC.   |
| —        | —               | <u>X</u>   | —          | 2. Demonstration that facility does not restrict the flow of the 100-year flood, reduce water storage capacity or result in wash-out of solid waste as specified in Rule 62-701.340(4)(b), FAC. |
| —        | —               | <u>X</u>   | —          | 3. Demonstration that facility is not located in a fault area, seismic zone or unstable area as specified in Rule 62-701.410(2)(c), FAC.  |
| —        | —               | <u>X</u>   | —          | 4. Request for extension of closure criteria as specified in Rule 62-701.640(2)(a) & (2)(b), FAC.   |
| —        | —               | <u>X</u>   | —          | a. Demonstration of no alternative disposal capacity.   |
| —        | —               | <u>X</u>   | —          | b. Demonstration of no threat to human health or the environment.   |

**S. MATERIALS RECOVERY FACILITY REQUIREMENTS (62-701.700, FAC)**

|   |   |          |   |   |
|---|---|----------|---|---|
| — | — | <u>X</u> | — | 1. Demonstration of financial assurance to cover closing costs, if required; (62-701.700(4), FAC) |
| — | — | <u>X</u> | — | 2. Materials recovery facility requirements; (62-701.700, FAC)                                    |
| — | — | <u>X</u> | — | a. Submit information required in Rule 62-701.320, FAC  |
| — | — | <u>X</u> | — | b. Submit an engineering report including the following:  |
| — | — | <u>X</u> | — | (1) Description of the solid waste proposed to be collected, stored, processed or disposed;       |
| — | — | <u>X</u> | — | (2) Projection with assumptions for waste types and quantities expected in future years;          |

| <u>S</u> | <u>LOCATION</u> | <u>N/A</u> | <u>N/C</u> |
|----------|-----------------|------------|------------|
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |
| —        | —               | <u>X</u>   | —          |

(3) Description of operation and functions of all processing equipment with design criteria and expected performance;

(4) Description of flow of solid waste, expected regular facility operations, procedures for start up and shut down, potential safety hazards and control methods including fire protection;

(5) Description of loading, unloading, and processing areas;

(6) Identification and capacity of temporary on-site storage areas for materials handled and provisions for solid waste and leachate containment;

(7) Identification of potential ground water and surface water contamination;

(8) Plan for disposal of unmarketable recyclables and residue and contingencies for waste handling during breakdowns.

c. Submit the following operational information:

(1) Operation and maintenance manual;

(2) Waste control plan to manage unauthorized wastes;

(3) Contingency plan for emergencies;

(4) Closure plan including the following:

(a) Notification to Department 180 days prior to closure;

(b) Procedures for removal of all waste within 30 days of receipt of final waste;

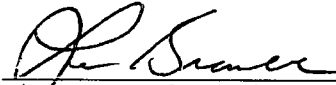
(c) Completion of closure activities within 180 days of receipt of final waste and notification to the Department that closure is complete.



T. CERTIFICATION BY APPLICANT AND ENGINEER OR PUBLIC OFFICER

A. Applicant

The undersigned applicant or authorized representative of Manatee County is aware that statements made in this form and attached information are an application for a Construction-Other 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

Len Bramble, P.E. Director of Public Works  
Name and Title

Date: 1-7-2000

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 403.707(5), Florida Statutes.

This is to certify that the engineering features of this solid waste 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

A. Street Lee, P.E.  
Name and Title (please type)

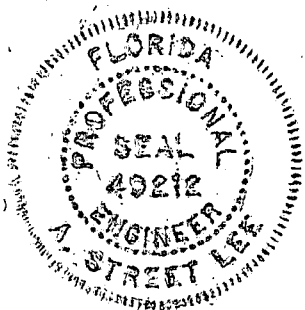
49212  
Florida Registration Number  
(please affix seal)

McKim & Creed, PA  
601 Cleveland St., Suite 205  
Mailing Address

Clearwater, FL 33755  
City, State, Zip Code

(727) 442-7196  
Telephone Number

• Date: 1/6/00



## APPENDIX A

### Section G – Item 3 Leachate Collection and Removal System

#### Narrative Overview

This project involves the replacement of an existing section of the leachate collection system along the western side of the Stage III area. The existing leachate system is currently functional however the County desires to improve the functionality of the system to better control the level of ground water inside the contained landfill area. This work will be in conjunction with the construction of an access roadway along the perimeter of the Stage III area for access to the County's Southeast Regional Wastewater Treatment plant. Relocating this access will allow the County to eliminate the current access road in the long term that currently separates the Stage III area from the other sections of the landfill to provide better traffic flow.

Several improvements are to be completed with this minor system modification. These are:

1. Increase depth of the pipe collection system to aid in lowering the water level and thereby increasing the inward gradient along the western edge of the landfill.
2. Eliminate the existing surface water infiltration collection system by installing new surface water catch basins. This will improve the surface drainage in the western portion of the Stage III area and will reduce the volume of leachate that has to be collected by the leachate collection pipeline.
3. The replacement of the leachate collection pipeline will allow the County to improve the hydraulic conditions of the system by gaining an improved horizontal and vertical alignment
4. The existing leachate pump station in the northwest corner of the Stage III area will be lowered to improve the capability of the system to effectively lower the ground water level inside the slurry wall.
5. The pumping capacity of the upgraded pump station will be increased from 600 gpm to 800 gpm which will improve the effectiveness of the system in this area.

Materials of construction are selected to be resistant to chemical attack from leachate. The piping for the system is proposed to be HDPE pipe that will be more rigid and stronger than the existing corrugated HDPE material and easier to clean and maintain than the existing system. The manholes are all to be constructed of HDPE. Details and specifications of these materials is included in the plans submitted.

APPENDIX B

PART K. LANDFILL OPERATION REQUIREMENTS

## PART K. LANDFILL OPERATION REQUIREMENTS

### 1. TRAINED OPERATORS

At least one trained operator and spotter will be site at all times of waste disposal operations. A current copy of training documentation is included in Appendix E.

### 2. OPERATION PLAN

See Appendix A.

### 3. OPERATING RECORD

The Operating Record consist of all records, reports, analytical results, demonstrations, and notifications required by Chapter 62-701, F.A.C., all permits and permit modifications, and training records. The Operating Record will be maintained within the filing system at the landfill.

### 4. WASTE RECORDS

Monthly records are developed for the waste categories received at the landfill. Current categories include:

Residential Mixed, Commercial Mixed (Long Boat Key-South), Clean-up, Illegal, Sludge, Out-of-County, C&D, Yard Waste, Mulch, Mulch (North County), Fuel, Debris, Tires, Tires (Out-of-County), Illegal Tires, White Goods, White Goods (Out-of-County)

Monthly waste records are submitted to the Department on a quarterly basis.

### 5. ACCESS CONTROLS

Access to the landfill is maintained by a six-foot high chain link fence along the entrance of the landfill and a barbed-wire fence around the remainder of the site. The access gates are locked at the end of each business day.

### 6. LOAD CHECKS

The County has a random load inspection program in-place and inspects at least three loads per week. Spot checking also occurs at the active face. If the spotters detect a load of unauthorized waste while the hauler is still present, the waste is reloaded into the vehicle and is removed from the site. If the hauler cannot be identified, it is the County's responsibility to remove the waste from the landfill for proper disposal.

## 7. WASTE COMPACTION

### a. Waste Layer Thickness

Waste is typically dumped at the toe of the working face and is spread over the face in a maximum of two-foot lifts prior to compaction. This procedure continues throughout the day for a typical lift thickness of no more than 20 feet.

### b. First Waste Layer

This section is not applicable for this permit application.

### c. Slopes and Lift Depths

Interior slopes may be as great as 3:1 (H:V) other than the active face. The proposed final slope is also 3:1. To minimize the cover soil requirement, the lift depths are should be limited to 20 feet or less.

### d. Working Face

The active face width should be no greater than necessary to accommodate the peak number of disposal vehicles at one time. The wider the active face, the more cover soil is used. The County use an active face of 150 feet. The working area of the active face slope is approximately 5:1. Active face side slopes are limited to 3:1. The objective for the dimensions of the active face is to maximize the volume to surface area ratio.

### e. Initial Cover Controls

This permit application considers soil cover as the only initial cover material. Soil will be applied at a minimum thickness of six inches to control vectors, fires, odors, blown litter, and water infiltration.

### f. Initial Cover Application Procedures

During the working day, initial cover will be stockpiled near the active face for use at the end of each day. Dozers used for spreading waste will spread the cover soil over the exposed refuse.

### g. Intermediate Cover

An additional 12 inches of cover (intermediate cover) will be placed on areas that are not expected to receive additional wastes within 180 days. These areas will be grassed to reduce erosion. Prior to placement of additional wastes in these areas, the intermediate cover may be removed and stockpiled adjacent to the active face for use as initial cover.

h. Final Cover Timing

The next closure project is planned to occur in the year 2000 as shown in the DEP-approved Fill Sequence Plan. The timing of this partial closure sequence was due to the availability of areas at final grade. Based on the waste generation projections used in the Fill Sequence development, the slopes along the south and west sides of Stage I will not be at final grade until 1999 and the top deck available for closure in 2000. Therefore, to reduce construction costs associated with contractor mobilization, economies of scale, and engineering costs of design and construction related services, one closure project was proposed to include all of the available areas in Stage I upon moving to Stage III. This area will receive final cover as scheduled in the DEP-approved Fill Sequence Plan.

i. Litter Policing

Litter fences are installed near the active face to capture wind-blown litter. The site is policed when needed to remove additional litter from the site.

j. Erosion Control

Erosion has been controlled with grassing and terraces. Manatee County has implemented an aggressive sodding plan to protect side slopes from erosion. Temporary piping will be used to remove runoff from the terraces rather than allowing the terrace to merely reduce the sheet flow velocity. This temporary piping will drain collected runoff for discharge into the perimeter stormwater pond. Temporary discharge structures will be used to control erosion at the stormwater pond edge. These drainage features are shown in the approved Fill Sequence Plan.

8. LEACHATE MANAGEMENT

a. Leachate Level Monitoring

Leachate levels and adjacent groundwater levels outside of the slurry wall are monitored monthly with use of piezometers and wells, respectively. The leachate collection system pumping is engaged to provide an inward gradient.

An inward gradient is maintained throughout most of the site. Stage III (PZ 15) has been the only area containing waste to have consecutive monthly outward gradients from May 1995 to November 1996. Over this time period, this piezometer has had an average outward gradient of 1.1 feet. Manatee County is implementing measures to create an inward gradient in this area. Table K-1 summarizes the gradient across the slurry wall.

Table K-1  
Groundwater Gradient Data

| WELL #      | STAGE | GRADIENT |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|-------------|-------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|             |       | 5/95     | 6/95  | 7/95  | 8/95  | 9/95  | 10/95 | 11/95 | 12/95 | 2/96  | 3/96  | 4/96  | 5/96  | 6/96  | 7/96  | 7/96  | 8/96  | 9/96  | 10/96 | 11/96 |
| MW 5        | I     | 0        | 0     | 0     | 0     | 0     | 0     | 0     |       | 0     | 0     | 2.45  | 1.82  | 2.92  | 3.37  | 3.37  | 1.35  | 1.97  | 2.34  | 2.3   |
| MW 2/PZ 2   | I     | 3.7      | 4.86  | 3.22  | 5.05  | 2.01  | 5.14  | 2.51  | 0.83  | 3.46  | 3.43  | 2.61  | 1.98  | 2.76  | 3.32  | 3.32  | 3.03  | 1.94  | 2.47  | 2.07  |
| MW 1/PZ 3   | I     | 5.55     | 2.34  | 2.16  | 2.45  | 1.98  | 0.69  | 1.62  | 2.08  | 1.31  | 2.44  | 1.96  | 5.14  | 3.68  | 5.02  | 5.02  | 4.24  | 5.13  | 4.48  | 3.72  |
| CW 4/PZ 4   | I     | 3.8      |       |       | -4.77 |       |       |       |       |       |       | 5.1   | 4.44  | 3.2   | 5.21  | 5.21  | 4.92  | 4.23  | 3.88  | 5.14  |
| CW 5A/PZ 5  | I     |          | 5.35  | 0.14  | 8.62  | 8.81  | 9.05  | 9.06  | 8.52  | 8     | 7.9   | 7.61  | 6.67  | 7.12  | 7.9   | 7.9   | 7.07  | 6.16  | 6.53  | 5.6   |
| PZ6         | I     |          | -31   | -31.3 | -28.8 | -31.6 | -31.7 | -31.1 | -32   | -29.3 | -30.3 | -32.3 | -32.5 | -30.5 | -31.5 | -31.5 | -31.5 | -30.6 | -30.8 | -30.5 |
| MW 6/PZ 7   | I     | 2.8      | 4.13  | 3.52  | 1.45  | 3.45  | 4.4   | 2.28  | 0.87  | 4     | 3.89  | 3.17  | 2.67  | 3.58  | 3.63  | 3.63  | 3.64  | 3.95  | 3.37  | 1.69  |
| LR2-5/PZ 8  | II    | -0.48    | -0.18 | -0.98 | -1.99 | -1.96 | 1.44  | -3.3  | -0.84 | -2.16 | -0.22 | 1.98  | 2.86  | 3.07  | 3.27  | 3.27  | 4.64  | 3.31  | 2.11  | 1.03  |
| LR2-3/PZ 9  | II    | -4.27    | -3.92 | -4.64 | -5.45 | -6.16 | -2.62 | -6.05 | -4.78 | -5.34 | -4.66 | -1.22 | -0.59 | -0.79 | -1.39 | -1.39 | 1.6   | -0.31 | -1.81 | -3.27 |
| LR2-2/PZ 10 | II    | -0.27    | -0.61 | -1.77 | -2.67 | -2.61 | 0.79  | -3.41 | -2.14 | -2.26 | -0.4  | 3.1   | 7.15  | 2.8   | 2.01  | 2.01  | 6.68  | 3.61  | 2.21  | -0.52 |
| LR2-1/PZ 11 | II    | 1.5      | 1.69  | 0.84  | -0.97 | -0.28 | 4.48  |       | 2.43  | 0.08  | 2.16  | 5.16  | 6.13  | 5.87  | 4.85  | 4.85  | 7.98  | 5.15  | 4.01  | 2.23  |
| GC 2/PZ 12  | III   | 0.57     | 3.05  | 1.62  | 0.6   | 1.18  | 1.54  | 2.51  | 2.47  | 3.41  | 3.98  | 3.75  | 1.24  | 4.47  | 4.16  | 4.16  | 2     | 5.48  | 2.67  | 1.48  |
| GC 3/PZ 13  | III   | 1.49     | 2.32  | 2.18  | 0.48  | 3.14  | 3.43  | 2.52  | 2.36  | 2.39  | 2.99  | 2.67  | 1.32  | 4.29  | 4.03  | 4.03  | 1.72  | 3.04  | 1.42  | 1.4   |
| GC 4/PZ 14  | III   | 0.22     | 2.51  | 8.2   | -3.16 | 0.19  | 0.69  | 0.9   | 0.57  | 0.87  | 1.93  | 1.05  | 0.06  | 2.04  | 1.74  | 1.74  | 0.91  | 0.39  | 1.03  | 0.19  |
| GC 1A/PZ 15 | III   |          | -1.36 | -0.42 | -3.26 | -1.51 | -1.44 | -1.18 | -1.01 | -1.66 | 0.07  | -0.24 | -0.26 | 0.44  | -1.02 | -1.02 | -3.11 | -1.01 | -1.15 | -0.99 |
| PZ 15A      | III   | 0        | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     |
| GC 5/PZ 16  | III   | 0.51     | 2.48  | 0.48  | -2.33 | 0.26  | 0.25  | 0.34  | 0.39  | 0.27  | 0.38  | 0.76  | 5.84  | 1.34  | 1.74  | 1.74  | -0.7  | 1.04  | 0.5   | -0.59 |
| GC 6/PZ 17  | III   | 2.28     | 2.45  | 3.24  | 0.14  | 1.83  |       |       |       | 0.94  | 2.74  | 2.86  | 3.8   | 3.62  | 2.45  | 2.45  | -0.73 | 2.14  | 1.64  | 1.98  |

b. Operation and Maintenance of Leachate Collection System

Visual observations of flow rates from various areas of the landfill are recorded to indicate possible problems with the leachate collection system. In the event a suspected block has occurred, the leachate lines will be inspected with a TV camera, and if appropriate, cleaned by hydrojetting. As required by permit the leachate collection lines were inspected via TV on November 1997. This inspection revealed a broken leachate collection pipe in Stage III near Piezometer 15. This pipe is being repaired.

c. Leachate as Hazardous Waste

Leachate from the landfill has historically been very weak and management as a hazardous waste is not necessary. Therefore, it is not included in this application.

d. Off-Site Discharge Agreements

All leachate is treated at a County-owned wastewater treatment plant adjacent to the landfill.

e. Leachate Management Contingency Plan

The Lena Road Landfill is located adjacent to a County owned waste water treatment plant. Leachate is collected at the landfill and pumped via pipeline to the treatment plant.

In the event of short duration system failure, the landfill can be used to store leachate. The County intends to maintain a one-foot inward gradient across the slurry wall. Based on average flow rates, each inch of storage in the landfill will provide over two weeks of storage volume. Thus, only six inches of the available volume would be used in a three month period. In the event sufficient storage is not available in the landfill, one of the options described in the following paragraph can be used.

In the event of prolonged lift station failure or pipeline failure, portable pumps and/or temporary piping can be used to pump the collected leachate to the treatment plant.

In the event of an extended power outage at the landfill, the County will rent a portable generator to provide power to the lift station.

Any treatment plant operational or power problems will be addressed by the treatment plant as a part of its permitting procedures. A generator is available to provide emergency power at the treatment plant.

Leachate can also be trucked to the County's Southwest Treatment Plant.

f. Leachate Generation Recording

Daily leachate generation records are obtained from a flow totalizer on the three pump stations discharging to the leachate pond and to the wastewater treatment plant. The pump stations include two for the Stage I area and one for Stage III.



g. Precipitation/Leachate Comparison

Monthly precipitation records were compared to leachate generation records. The leachate/rainfall records from May 1995 to November 1996 are shown in Table K-2. The accompanying figure shows the a graphical representation for the data. Also included with this table is the quantity of leachate that is apparently recirculated back into landfill from the leachate pond. This "recirculation" is passive in nature and is driven by the head difference between the leachate pond and the leachate level in the landfill.

9. GAS MONITORING

The landfill has a routine gas migration monitoring plan in-place. Gas migration is monitored using the gas monitoring wells around the site. While sampling is conducted monthly, the minimum sample frequency for this permit shall be quarterly. With the presence of the slurry wall and surrounding pond, gas migration is extremely unlikely. Monitoring results are presented in Table K-3. For ease reading this table, LEL concentration values of zero were not included. No data available is indicated with a "dash".

Two migration monitoring locations are proposed to be eliminated. These locations (GMP 7 and GMW 18) are both within the Stage III fill area. Gas migration within the landfill adjacent to abandoned structures is not applicable.

10. STORMWATER MANAGEMENT

The surface water management system is divided into three separate and distinct drainage basins (Stage I, II and III). Stage I utilizes perimeter ditches to route stormwater runoff to the stormwater pond located at the southwest corner of Stage I. Stage I discharges to Cypress Stand via an underdrain filter system located beneath the west perimeter ditch, and an overflow weir also located in the southwest corner of Stage I. The majority of runoff collected in the stormwater pond is treated in the adjacent wastewater treatment facility prior to discharge.

Stages II and III were permitted by Southwest Florida Water Management District in August 1990, (MSSW Permit No. 403143.01). The stormwater management systems for Stages II and III consist of 25 foot wide perimeter ditches, ten inch underdrain filtration pipes, and grate inlets. Attenuation is accomplished within the perimeter ditches through raised grate inlets. The perimeter ditches for Stages II and III were constructed several feet above the existing grade to allow separation between the underdrain filter system and the seasonal high water table.

According to the SWFWMD Staff Report dated July 18, 1990:

"The post-development peak discharge rate will equal the pre-development rate of 350 cfs for the 25 year - 24 hour rainfall event of 8.0 inches. The Department of Regulation issued a dredge and fill permit which included stormwater management for this project. The system approved by DER is an effluent filtration system designed to treat the first 0.5 inches of runoff with the total treatment volume recovered within the required 36 hours. This design meets the criteria as established

**Table K-2**  
**Rainfall / Leachate Comparison**

| Month          | Rain (in)    | Leachate (Million Gallons) |             |              |             |               |
|----------------|--------------|----------------------------|-------------|--------------|-------------|---------------|
|                |              | Stage I                    | Stage III   | Total        | Treated     | Recirculation |
| May-95         | 1.34         | 2.68                       | 3.68        | 6.35         | 3.63        | 2.72          |
| Jun-95         | 8.43         | 15.00                      | 1.25        | 16.25        | 8.28        | 7.97          |
| Jul-95         | 11.21        | 13.21                      | 2.02        | 15.23        | 7.75        | 7.47          |
| Aug-95         | 14.25        | 10.89                      | 6.53        | 17.42        | 10.63       | 6.79          |
| Sep-95         | 8.55         | 8.76                       | 5.84        | 14.60        | 13.81       | 0.79          |
| Oct-95         | 8.97         | 12.23                      | 8.38        | 20.61        | 13.56       | 7.05          |
| Nov-95         | 1.2          | 8.73                       | 6.75        | 15.48        | 11.51       | 3.97          |
| Dec-95         | 1.3          | 4.42                       | 1.89        | 6.30         | 9.38        | -3.08         |
| Jan-96         | 0.86         | 1.93                       | 1.49        | 3.42         | 1.19        | 2.23          |
| Feb-96         | 1.2          | 2.05                       | 1.42        | 3.47         | 3.43        | 0.04          |
| Mar-96         | 5.55         | 3.30                       | 2.36        | 5.66         | 7.32        | -1.66         |
| Apr-96         | 1.46         | 8.82                       | 2.91        | 11.73        | 5.60        | 6.13          |
| May-96         | 7.76         | 10.13                      | 2.32        | 12.45        | 2.52        | 9.93          |
| Jun-96         | 7.43         | 10.07                      | 4.45        | 14.52        | 3.43        | 11.09         |
| Jul-96         | 4.81         | 12.85                      | 4.89        | 17.74        | 9.34        | 8.41          |
| Aug-96         | 5.78         | 9.28                       | 2.19        | 11.47        | 1.75        | 9.72          |
| Sep-96         | 3.56         | 8.00                       | 3.94        | 11.95        | 2.12        | 9.83          |
| Oct-96         | 4.31         | 8.82                       | 4.25        | 13.07        | 2.97        | 10.10         |
| Nov-96         | 0.5          | 4.41                       | 1.75        | 6.16         | 1.55        | 4.61          |
| <b>Average</b> | <b>5.183</b> | <b>8.19</b>                | <b>3.59</b> | <b>11.78</b> | <b>6.30</b> | <b>5.48</b>   |

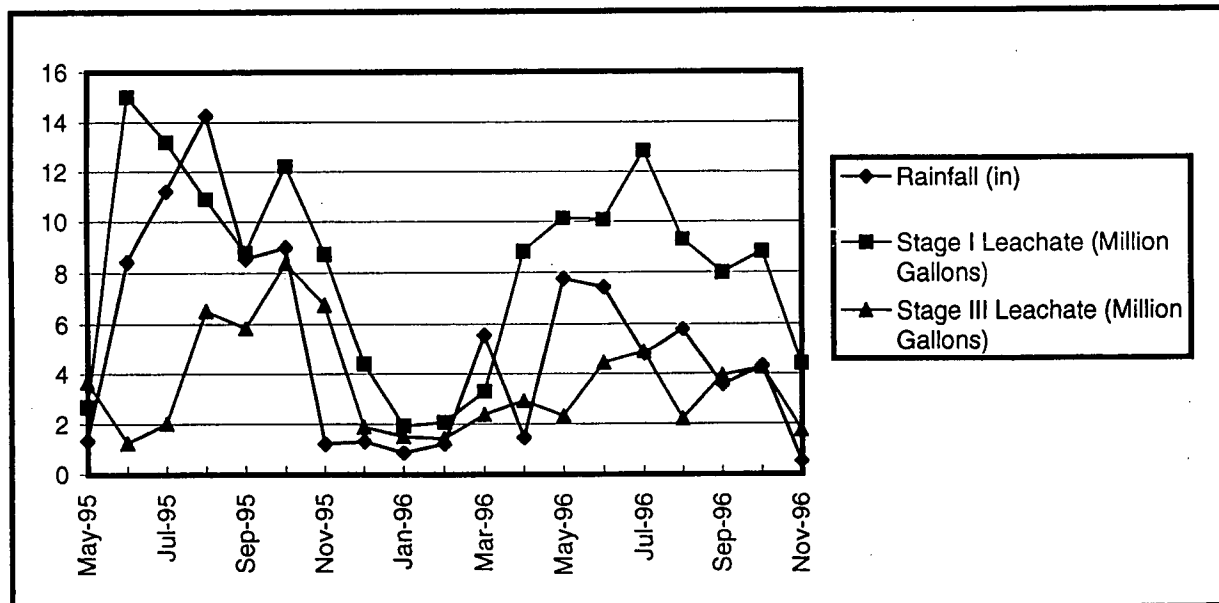


Table K-3  
Landfill Gas Migration Monitoring Data

|        | LFG Migration Well |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    | LFG Monitoring Point |   |   |   |   |   |   |   |
|--------|--------------------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----------------------|---|---|---|---|---|---|---|
| Month  | 1                  | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 1                    | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| May-95 | 2                  |   |   | 8 |   |   |   |   |   |    | 1  |    |    |    | 8  |    |    |    | -                    | - | - | - | - | - | - | - |
| Jun-95 |                    | 2 | 1 | 5 | 2 | 2 |   | 2 |   |    |    | 1  |    |    |    |    |    | 2  |                      |   |   |   | - |   |   |   |
| Jul-95 | 2                  |   |   |   |   |   |   |   |   |    |    |    | 3  |    |    |    |    | 70 |                      |   |   |   |   |   |   |   |
| Aug-95 |                    |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                      |   |   |   |   |   |   |   |
| Sep-95 |                    |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                      |   |   |   | - |   | - |   |
| Oct-95 |                    |   |   |   |   |   |   |   |   |    |    |    |    | 48 |    |    |    |    |                      |   |   |   | - |   | - |   |
| Nov-95 |                    |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                      |   |   |   | - |   | - |   |
| Dec-95 |                    |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                      |   |   |   | - |   | - |   |
| Jan-96 |                    |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                      | 2 | 4 |   | 3 |   | 2 |   |
| Feb-96 |                    | 2 |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    | 1                    |   | 1 |   |   |   |   |   |
| Mar-96 |                    |   |   |   |   |   |   |   |   |    |    | 1  | 1  | 1  | 1  |    | 2  | 1  | 1                    | 1 | 1 | 1 |   | 2 | 3 | 1 |
| Apr-96 |                    |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                      |   |   |   |   |   |   |   |
| May-96 |                    |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                      |   |   | - |   |   |   |   |
| Jun-96 |                    |   |   |   |   |   |   |   |   |    |    |    | 7  | 29 |    |    |    | 23 |                      |   |   |   | 3 |   |   |   |
| Jul-96 |                    |   |   |   |   |   |   |   |   |    |    |    |    | 12 |    |    |    | 9  |                      |   |   |   |   |   |   |   |
| Aug-96 |                    |   |   |   |   |   |   |   |   |    |    |    | 8  | 17 |    |    |    |    |                      |   |   |   |   |   |   |   |
| Sep-96 |                    |   |   |   |   |   |   |   |   |    | 11 |    |    |    |    |    |    |    |                      |   |   |   |   |   |   |   |
| Oct-96 |                    |   |   |   |   |   |   |   |   |    | 2  |    |    |    | -  |    |    |    |                      |   |   |   |   |   |   |   |

in Chapter 40D-4, F.A.C." and,

"Grate inlets at elevations set to detain the necessary storage volumes will discharge into an existing ditch or sheet flow to existing wetlands."

At final buildout, the stormwater systems for Stages II and III will collect the runoff from 118 and 58 acres, respectively. The drainage from the scale, administrative and maintenance facilities flows to the Stage III drainage system. Currently, the only stormwater collected, conveyed, and discharged through these underdrain systems is that rainfall that falls directly into the ditches themselves.

## 11. EQUIPMENT/OPERATION FEATURES

### a. Sufficient Equipment

The County has sufficient equipment to provide flexible landfill operations. Table K-5 provides a list of the current landfill heavy equipment for daily operations.

### b. Reserve Equipment

The above table indicates the County possesses sufficient equipment to operate the landfill. In the event the dozer is out of service, the compactors can be used to spread refuse over the active face. The County can rent needed equipment in the event needed equipment is not available from County sources within 24 hours.

### c. Communication Equipment

All equipment operators and traffic controllers are equipped with hand held radios. This radio transmission service links the field personnel to the office and management.

### d. Shelter/Sanitation/First Aid Features

Shelter and sanitation facilities are provided at the scale house and landfill office. First aid kits are provided in the cab of all heavy equipment vehicles.

### e. Dust Control

Dust control is provided with use of a water wagon on the internal access roads. Dust is also controlled with the use of vegetation on the slopes of the filled areas.

### f. Fire Protection

Fire protection in the working face is provided with the use of stockpiles of soil adjacent to the active face. Water wagons for dust suppression are also available for fire protection. In the event of a hot load, the hauler is directed to place the load in a containable area for extinguishing the fire. The load will be monitored for several days to insure the fire is completely out. Upon complete satisfaction the fire is extinguished, the load will be moved to the active face for proper disposal. In the event

the County personnel can not extinguish a fire, the Manatee County Fire Department will be notified for assistance. The heavy equipment are also provided with fire extinguishers.

g. Litter Control Devices

Litter control fences are used near the active face to control litter. Also, the chain link fence along entrance offers secondary control of blowing litter.

Table K-4  
LANDFILL EQUIPMENT

| YEAR | MAKE        | MODEL  | DESCRIPTION  |
|------|-------------|--------|--------------|
| 1990 |             |        | WATER TANKER |
| 1989 | CATERPILLAR | 623E   | PAN          |
| 1996 | CATERPILLAR | 623F   | PAN          |
| 1996 | CATERPILLAR | 623F   | PAN          |
|      | FORD        |        | TRACTOR      |
| 1992 | MICHIGAN    |        | LOADER       |
| 1995 | JOHN DEERE  |        | TRACTOR      |
|      | JOHN DEERE  |        | BACKHOE      |
| 1996 | CATERPILLAR |        | COMPACTOR    |
| 1992 | CATERPILLAR |        | COMPACTOR    |
| 1996 | CATERPILLAR |        | COMPACTOR    |
| 1994 | CATERPILLAR | D7H    | DOZER        |
| 1994 | CATERPILLAR | D7H    | DOZER        |
| 1996 | CATERPILLAR | D7HLGP | DOZER        |
| 1996 | CATERPILLAR | D7HLGP | DOZER        |
|      |             | D400D  | DUMP TRUCK   |

h. Signs

Signs are used around the site to direct traffic to the active face, white goods area, tire area, used motor oil collection center, lead-acid battery drop-off, clean debris, yard waste, mulch site, sludge disposal areas, warnings of heavy equipment, speed limits, disposal rates and hours of operation, and prohibitions.

12. ALL-WEATHER ACCESS ROADS

The main haul road in the landfill is paved. Wet-weather areas are provided near the paved haul road to reduce traversing poor road conditions for disposal vehicles. Wet-weather roads are constructed of compacted limerock and shell. The perimeter road along the slurry wall is also passable in all weather events.

13. RECORDS & REPORTING

Required landfill records are reported to the Department on a quarterly basis. All records are maintained at the landfill for a minimum period of 10 years or for the design period as specified below. The design period is projected to end in the year 2058 (unless long term care is decreased).

a. Permit Application Development

All reports used to develop permit applications and operation records will be maintained for the design period. Records such as geotechnical investigations, foundation analyses, demonstration reports, and previous permits and regulations are examples of records to be maintained.

b. Monitoring Records

All water quality, gas, and leachate monitoring records are required to be maintained for at least ten years.

c. Background Water Quality

Background water quality (ground and surface waters) reports are required to be maintained for the design period.

d. Remaining Site-Life Estimates

Estimated site-life projections are required and will be submitted annually to the Department.

## APPENDIX C

### Section P - Long Term Care

#### 1. Rights of Property Access

Manatee County will maintain ownership and access rights to the access road for purposes of operating and maintaining the Southeast Regional Wastewater Treatment Plant.

#### 2. Successors of Interest

The County will maintain ownership of tis portion of the facility for access to the plant.

#### 3. Replacement of Monitoring Devices

Any monitoring devices that are damaged will be replaced by the County. The Department will be notified within 60 days of the discovery of an inoperable or non-functioning monitoring device.

#### 4. Completion of Long Term Care Certification

See Operating Permit Application – Part P.