December 31, 1997

HDR

Mr. Kim Ford, P.E.
Solid Waste Engineer
Florida Department of Environmental Protection
Southwest District
3804 Coconut Palm Drive
Tampa, FL 33619-8318

RECEIVED
DEC 31 1997
FDEP

RE: Lena Road Landfill
Renewal of Landfill Operations Permit
HDR Project Number: 07982-024-096

Dear Mr. Ford:

HDR Engineering, Inc. has prepared and is submitting, on behalf of Manatee County, four copies of the permit application package for renewal of the operation permit for Lena Road Landfill. Please also find enclosed Manatee County's check in the amount of $10,000 for the application fee.

Please call me if you have any questions or if we can provide further information.

Sincerely,

HDR ENGINEERING, INC.

Fred W. Sebesta

Fred W. Sebesta, P.E.
Senior Project Manager

Enclosures

cc: Len Bramble
Dan Gray
Gus DiFonzo
Ben Alex
Bob Butera
Greg Goodwin
Neal Poteet
Dave Pelham

W:\MANATEE\OPERMIT\S106F022.WPD

HDR Engineering, Inc.
Suite 300
5100 W. Kennedy Boulevard
Tampa, Florida
33609-1840
Telephone
813 287-1960

Landfill Operation Permit Renewal Application

Lena Road Landfill

December 31, 1997

Prepared for:

Manatee County, Florida

Submitted to:

Florida Department of Environmental Protection

Prepared by:

HDR Engineering, Inc.

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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)

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

SOLID WASTE MANAGEMENT FACILITY PERMIT

APPLICATION INSTRUCTIONS AND FORMS

INSTRUCTIONS TO APPLY FOR A SOLID WASTE MANAGEMENT PERMIT

I. General

Solid Waste Management Facilities shall be permitted pursuant to Section 403.707, 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
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PART M	-	SPECIAL WASTE HANDLING REQUIREMENTS
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PART O	-	CLOSURE PROCEDURES
PART P	-	LONG TERM CARE REQUIREMENTS
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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 [X]

Class I Landfill	[X]	Ash Monofill	[ ]
Class II Landfill	[ ]	Asbestos Monofill	[ ]
Class III Landfill	[ ]	Industrial Solid Waste	[ ]
Other	[ ]		

Volume Reduction [ ]

Incinerator	[ ]	Pulverizer / Shredder	[ ]
Composting	[ ]	Compactor/Baling Plant	[ ]
Materials Recovery	[ ]	Energy Recovery	[ ]
Other	[ ]		

2. Type of application:

Construction	[ ]	Construction/Operation	[ ]
Operation	[X]	Closure	[ ]

3. Classification of application:

New	[ ]	Substantial Modification	[ ]
Renewal	[X]	Minor Modification	[ ]

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: ____ Township: ____ Range: ____ Section 1, Township 34S, Range 18E, and Sections 6, 31, Township 34S, Range 19E

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 (Street or P.O. Box) Bradenton (City) FL (State) 34210 (Zip)

Contact person: Len Bramble, P.E. Telephone: (941) 792-8811

Title: Director of Public Works

9. Authorized agent/Consultant: HDR Engineering, Inc.

Mailing address: 5100 W. Kennedy Blvd., #300 Tampa FL 33609
Street or P.O. Box City State Zip

Contact person: Fred W. Sebesta, P.E. Telephone: (813) 282-1960

Title: Senior Project Manager

10. Landowner(if different than applicant): Manatee County Board of County Commissioners

Mailing address: 112 Manatee Avenue West Bradenton FL 34205-7804
Street or P.O. Box City State Zip

Contact person: Len Bramble, P.E. Telephone: (941) 792-8811
Director of Public Works

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 ~~yds³/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: N/A To: N/A

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 contractor. Collection and processing of yard waste.

2. Facility site supervisor: Ben Alex

Title: Solid Waste Technical Coordinator Telephone: (941) 748-5543

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

4. Weighing scales used: Yes [X] No [ ]

5. Security to prevent unauthorized use: Yes [X] No [ ]

6. Charge for waste received: _____ $/yds^3 23 $/ton

7. Surrounding land use, zoning:

Residential	[X]	Industrial	[ ]	
Agricultural	[X]	None	[ ]	
Commercial	[ ]	Other	[X]	Transportation & utilities

8. Types of waste received:

Residential	[X]	C & D debris	[X]
Commercial	[X]	Shredded/cut tires	[X]
Incinerator / WTE ash	[X]	Yard trash	[X]
Treated biohazardous	[X]	Septic tank	[X]
Water treatment sludge	[X]	Industrial	[X]
Air treatment sludge	[X]	Industrial sludge	[X]
Agricultural	[X]	Domestic sludge	[X]
Asbestos	[X]		
Other	[ ]	_____	

9. Salvaging permitted: Yes [ ] No [X]

10. Attendant: Yes [X] No [ ] Trained operator: Yes [X] No [ ]

11. Spotters: Yes [X] No [ ] Number of spotters used: 2

12. Site located in: Floodplain [ ] Wetlands [ ] Other [X] Uplands

13. Property recorded as a Disposal Site in County Land Records: Yes [X] 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 wells

19. Number of surface monitoring points: 5 existing with one to be eliminated.

20. Gas controls used: Yes [X] No [ ] Type controls: Active [ ] Passive [X]

Gas flaring: Yes [ ] No [X] Gas recovery: Yes [ ] No [X]

21. Landfill Unit - liner type:

Natural soils	[X]	Double geomembrane	[ ]
Single clay liner	[ ]	Geomembrane & composite	[ ]
Single geomembrane	[ ]	Double composite	[ ]
Single composite	[ ]	None	[ ]
Slurry wall	[X]		
Other	[ ]		

22. Leachate collection method:

Collection pipes	[X]	Sand layer	[ ]
Geonets	[ ]	Gravel layer	[ ]
Well points	[ ]	Interceptor trench	[ ]
Perimeter ditch	[ ]	None	[ ]
Other	[ ]		

23. Leachate storage method:

Tanks	[ ]	Surface impoundments	[X]
Other	[ ]		

24. Leachate treatment method:

Oxidation	[ ]	Chemical treatment	[ ]
Secondary	[ ]	Settling	[ ]
Advanced	[ ]	None	[ ]
Other	[ ]		

25. Leachate disposal method:

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

26. For leachate discharged to surface waters:

Name and Class of receiving water: N/A

27. Storm Water:

Collected: Yes [X] No [ ] Type of treatment: sand filter *

Name and Class of receiving water: Cypress Strand, Gates Creek via on-site wetlands, Class III

28. 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 That in Stages II and III is further permitted by MSSW Permit Number 403143.01.

*See the Operations Plan in Appendix A for treatment under emergency conditions.

C. MATERIALS RECOVERY / VOLUME REDUCTION FACILITY GENERAL INFORMATION - N/A

1. Provide brief description of materials recovery / volume reduction facility design and operations planned by this application:

_____

_____

_____

2. Facility site supervisor: _____

Title: _____ Telephone: (___)_____

3. Disposal area: Total _____ acres; Used _____ acres; Available _____ acres

4. Security to prevent unauthorized use: Yes [ ] No [ ]

5. Site located in: Floodplain [ ] Wetlands [ ] Other [ ] _____

6. Days of operation: _____

7. Hours of operation: _____

8. Number of operating staff: _____

9. Expected useful life: _____ Years

10. Weighing scales used: Yes [ ] No [ ]

11. Normal processing rate: _____ yd^3/day _____ tons/day _____ gal/day

12. Maximum processing rate: _____ yd^3/day _____ tons/day _____ gal/day

13. Charge for waste received: _____

14. Type of facility (check one or more):

Incinerator	[ ]	Composting	[ ]
Pulverizer / shredder	[ ]	Materials recovery	[ ]
Compactor/baling	[ ]	Energy recovery	[ ]
Sludge concentration	[ ]	Pyrolysis	[ ]
Other	[ ]	_____	

15. Material recovered, tons/week:

_____	Paper	_____	Glass
_____	Ferrous metals	_____	Non-ferrous metals
_____	Aluminum	_____	Plastics
_____	Other:	_____	

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^3/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. MSSW 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)

S	LOCATION	N/A	N/C		
X				1.	Six copies, at minimum, of the completed application form, all supporting data and reports; (62-701.320(5)(a),FAC)
X				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)
X				3.	A letter of transmittal to the Department; (62-701.320(7)(a),FAC)
X				4.	A completed application form dated and signed by the applicant; (62-701.320(7)(b),FAC)
X				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)
X				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))
	Part D, 7			7.	Operation Plan; (62-701.320(7)(e)1,FAC)
	Part D, 8			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)
	Appendix B Drawing No. 1				a. A regional map or plan with the project location;
	Appendix B Drawing No. 1				b. A vicinity map or aerial photograph no more than 1 year old;
	Appendix B Drawing No. 3				c. A site plan showing all property boundaries certified by a registered Florida land surveyor;
	Appendix B Drawing No. 4				d. Other necessary details to support the engineering report.
			X	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)

S	LOCATION	N/A	N/C		
___	Part D. 11	___	___	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)
___	Part D. 12	___	___	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)
___	_____	___	X	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)
___	_____	X	___	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)

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

S	LOCATION	N/A	N/C		
___	Appendix B Drawing No. 1	___	___	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)
___	Part D	___	___	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)
___	Appendix B Drawing 2	___	___	3.	Plot plan with a scale not greater than 200 feet to the inch showing; (62-701.330(4)(c),FAC)
___	"	___	___		a. Dimensions;
___	"	___	___		b. Locations of proposed and existing water quality monitoring wells;
___	"	___	___		c. Locations of soil borings;
___	"	___	___		d. Proposed plan of trenching or disposal areas;
___	Appendix B ~~Drawing 4~~	___	___		e. Cross sections showing original elevations and proposed final contours which shall be included either on the plot plan or on separate sheets;
___	Appendix B Drawing 2	___	___		f. Any previously filled waste disposal areas;
___	"	___	___		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):
___	Appendix B Drawing No. 2	___	___		a. Proposed fill areas;
___	"	___	___		b. Borrow areas;
___	"	___	___		c. Access roads;
___	"	___	___		d. Grades required for proper drainage;
___	"	___	___		e. Cross sections of lifts;
___	"	___	___		f. Special drainage devices if necessary;
___	"	___	___		g. Fencing;
___	"	___	___		h. Equipment facilities.

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

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

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

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

S	LOCATION	N/A	N/C		
___	_____	X	___	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):
___	_____	X	___	(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;
___	_____	X	___	(2)	Document foundation is adequate to prevent liner failure;
___	_____	X	___	(3)	Constructed so bottom liner will not be adversely impacted by fluctuations of the ground water;
___	_____	X	___	(4)	Designed to resist hydrostatic uplift if bottom liner located below seasonal high ground water table;
___	_____	X	___	(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)
___	_____	X	___	(1)	Upper geomembrane thickness and properties;
___	_____	X	___	(2)	Design leachate head for primary LCRS including leachate recirculation if appropriate;
___	_____	X	___	(3)	Design thickness in accordance with Table A and number of lifts planned for lower soil component.
				c.	Double liners; (62-701.400(3)(c),FAC)
___	_____	X	___	(1)	Upper and lower geomembrane thicknesses and properties;
___	_____	X	___	(2)	Design leachate head for primary LCRS to limit the head to one foot above the liner;
___	_____	X	___	(3)	Lower geomembrane sub-base design;

S	LOCATION	N/A	N/C	
___	_____	X	___	(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)

___	_____	X	___	(1) Field seam test methods to ensure all field seams are at least 90 percent of the yield strength for the lining material;
___	_____	X	___	(2) Design of 24-inch-thick protective layer above upper geomembrane liner;
___	_____	X	___	(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)

___	_____	X	___	(1) Definition and qualifications of the designer, manufacturer, installer, QA consultant and laboratory, and QA program;
___	_____	X	___	(2) Material specifications for geomembranes, geotextiles, geogrids, and geonets;
___	_____	X	___	(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;
___	_____	X	___	(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;
___	_____	X	___	(5) Geotextile and geogrid specifications including handling and placement, conformance testing, seams and overlaps, repair, and placement of soil materials;
___	_____	X	___	(6) Geonet specifications including handling and placement, conformance testing, stacking and joining, repair, and placement of soil materials;

S	LOCATION	N/A	N/C	
				f. Standards for soil components (62-701.400(3)(f),FAC):
___	_____	X	___	(1) Description of construction procedure including overexcavation and backfilling to preclude structural inconsistencies and procedures for placing and compacting soil component in layers;
___	_____	X	___	(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;
___	_____	X	___	(3) Procedures for testing in-situ soils to demonstrate they meet the specifications for soil liners;
				(4) Specifications for soil component of liner including at a minimum:
___	_____	X	___	(a) Allowable particle size distribution, Atterberg limits, shrinkage limit;
___	_____	X	___	(b) Placement moisture and dry density criteria;
___	_____	X	___	(c) Maximum laboratory-determined saturated hydraulic conductivity using simulated leachate;
___	_____	X	___	(d) Minimum thickness of soil liner;
___	_____	X	___	(e) Lift thickness;
___	_____	X	___	(f) Surface preparation (scarification);
___	_____	X	___	(g) Type and percentage of clay mineral within the soil component;
___	_____	X	___	(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	___	(1) Constructed of materials chemically resistant to the waste and leachate;
___	_____	X	___	(2) Have sufficient mechanical properties to prevent collapse under pressure;

S	LOCATION	N/A	N/C	
___	_____	X	___	(3) Have granular material or synthetic geotextile to prevent clogging;
___	_____	X	___	(4) Have method for testing and cleaning clogged pipes or contingent designs for rerouting leachate around failed areas;

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

___	_____	X	___	(1) Bottom 12 inches having hydraulic conductivity $\geq 1 \times 10^{-3}$ cm/sec;
___	_____	X	___	(2) Total thickness of 24 inches of material chemically resistant to the waste and leachate;
___	_____	X	___	(3) Bottom slope design to accomodate for predicted settlement;
___	_____	X	___	(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)

___	_____	X	___	a. Describe general procedures for recirculating leachate;
___	_____	X	___	b. Describe procedures for controlling leachate runoff and minimizing mixing of leachate runoff with storm water;
___	_____	X	___	c. Describe procedures for preventing perched water conditions and gas buildup;
___	_____	X	___	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;
___	_____	X	___	e. Describe methods of gas management to control odors and migration of methane;
___	_____	X	___	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.

S	LOCATION	N/A	N/C	
				5. Leachate storage tanks and leachate surface impoundments; (62-701.400(6),FAC)
				a. Surface impoundment requirements; (62-701.400(6)(b),FAC)
—	———	X	—	(1) Documentation that the design of the bottom liner will not be adversely impacted by fluctuations of the ground water;
—	———	X	—	(2) Designed in segments to allow for inspection and repair as needed without interruption of service;
				(3) General design requirements;
—	———	X	—	(a) Double liner system consisting of an upper and lower 60-mil minimum thickness geomembrane;
—	———	X	—	(b) Leak detection and collection system with hydraulic conductivity $\geq$ 1 cm/sec;
—	———	X	—	(c) Lower geomembrane placed on subbase $\geq$ 6 inches thick with k $\leq$ $1x10^{-5}$cm/sec;
—	———	X	—	(d) Design calculation to predict potential leakage through the upper liner;
—	———	X	—	(e) Daily inspection requirements and notification and corrective action requirements if leakage rates exceed that predicted by design calculations;
—	———	X	—	(4) Description of procedures to prevent uplift, if applicable;
—	———	X	—	(5) Design calculations to demonstrate minimum two feet of freeboard will be maintained;
—	———	X	—	(6) Procedures for controlling vectors and off-site odors.
				b. Above-ground leachate storage tanks; (62-701.400(6)(c),FAC)
—	———	X	—	(1) Describe tank materials of construction and ensure foundation is sufficient to support tank;
—	———	X	—	(2) Describe procedures for cathodic protection if needed for the tank;

S	LOCATION	N/A	N/C	
___	_____	X	___	(3) Describe exterior painting and interior lining of the tank to protect it from the weather and the leachate stored;
___	_____	X	___	(4) Describe secondary containment design to ensure adequate capacity will be provided and compatibility of materials of construction;
___	_____	X	___	(5) Describe design to remove and dispose of stormwater from the secondary containment system;
___	_____	X	___	(6) Describe an overfill prevention system such as level sensors, gauges, alarms and shutoff controls to prevent overfilling;
				(7) Inspections, corrective action and reporting requirements;
___	_____	X	___	(a) Overfill prevention system weekly;
___	_____	X	___	(b) Exposed tank exteriors weekly;
___	_____	X	___	(c) Tank interiors when tank is drained or at least every three years;
___	_____	X	___	(d) Procedures for immediate corrective action if failures detected;
___	_____	X	___	(e) Inspection reports available for department review.
				c. Underground leachate storage tanks; (62-701.400(6)(d),FAC)
___	_____	X	___	(1) Describe materials of construction;
___	_____	X	___	(2) A double-walled tank design system to be used with the following requirements;
___	_____	X	___	(a) Interstitial space monitoring at least weekly;
___	_____	X	___	(b) Corrosion protection provided for primary tank interior and external surface of outer shell;
___	_____	X	___	(c) Interior tank coatings compatible with stored leachate;
___	_____	X	___	(d) Cathodic protection inspected weekly and repaired as needed;
___	_____	X	___	(3) Describe an overfill prevention system such as level sensors, gauges, alarms and shutoff controls to prevent overfilling and provide for weekly inspections;

S	LOCATION	N/A	N/C	
___	_____	X	___	(4) Inspection reports available for department review.
___	_____	X	___	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)
___	_____	X	___	a. Provide CQA Plan including:
___	_____	X	___	(1) Specifications and construction requirements for liner system;
___	_____	X	___	(2) Detailed description of quality control testing procedures and frequencies;
___	_____	X	___	(3) Identification of supervising professional engineer;
___	_____	X	___	(4) Identify responsibility and authority of all appropriate organizations and key personnel involved in the construction project;
___	_____	X	___	(5) State qualifications of CQA professional engineer and support personnel;
___	_____	X	___	(6) Description of CQA reporting forms and documents;
___	_____	X	___	b. An independent laboratory experienced in the testing of geosynthetics to perform required testing;
				7. Soil Liner CQA (62-701.400(8)FAC)
___	_____	X	___	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;
___	_____	X	___	b. Description of field test section construction and test methods to be implemented prior to liner installation;
___	_____	X	___	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)
___	_____	X	___	a. Design of surface water management system to isolate surface water from waste filled areas and to control stormwater run-off;
___	_____	X	___	b. Details of stormwater control design including retention ponds, detention ponds, and drainage ways;

S	LOCATION	N/A	N/C		
				9.	Gas control systems; (62-701.400(10),FAC)
___	_____	X	___		a. Design details for gas control system including collection pipes and vents, and passive venting or vacuum extraction details;
___	_____	X	___		b. Documentation that the gas control system will not impact the liner or leachate control system;
___	_____	X	___		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:
___	_____	X	___		(1) Location of monitoring points;
___	_____	X	___		(2) Requirements for quarterly sampling of all monitoring points;
___	_____	X	___		(3) Description of corrective measures to be completed within 60 days of detection of elevated levels of explosive gases;
___	_____	X	___		e. Description of condensate collection and disposal methods.
				10.	Landfill gas recovery facilities; (62-701.400(11),FAC)
___	_____	X	___		a. Information required in Rules 62-701.320(7) and 62-701.330(4), FAC supplied;
___	_____	X	___		b. Information required in Rule 62-701.600(4), FAC supplied where relevant and practical;
___	_____	X	___		c. Estimate of current and expected gas generation rates and description of condensate disposal methods provided;
___	_____	X	___		d. Description of procedures for condensate sampling, analyzing and data reporting provided;
___	_____	X	___		e. Closure plan provided describing methods to control gas after recovery facility ceases operation;
___	_____	X	___		f. Performance bond provided to cover closure costs if not already included in other landfill closure costs.
___	_____	X	___	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, FAC)

S	LOCATION	N/A	N/C		
				1.	Submit a hydrogeological investigation and site report including at least the following information:
___	_____	___	X	a.	Regional and site specific geology and hydrogeology;
___	_____	___	X	b.	Direction and rate of ground water and surface water flow including seasonal variations;
___	_____	___	X	c.	Background quality of ground water and surface water;
___	_____	___	X	d.	Any on-site hydraulic connections between aquifers;
___	_____	___	X	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;
___	_____	___	X	f.	Site topography and soil characteristics;
___	_____	___	X	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;
___	_____	___	X	h.	Description of topography, soil types and surface water drainage systems;
___	APPENDIX B DRAWING NO. 1	___	___	i.	An inventory of all public and private water wells within one mile of the landfill.
___	_____	___	X	j.	Existing contaminated areas on landfill site.
___	_____	___	X	2.	Report signed, sealed and dated by PE or PG.

Hydrogeological investigation requirements have been previously addressed in "Hydrogeological Investigation, Existing Lena Road Landfill, Manatee County, Florida," Ardaman & Associates, Inc.; January 26, 1983

I. GEOTECHNICAL INVESTIGATION REQUIREMENTS (62-701.420,FAC)

S	LOCATION	N/A	N/C		
				1.	Submit a geotechnical site investigation report defining the engineering properties of the site including at least the following:
___	_____	___	X		a. Description of subsurface conditions including soil stratigraphy and ground water table conditions;
___	_____	___	X		b. Investigate for the presence of muck, previously filled areas, soft ground, lineaments and sink holes;
___	_____	___	X		c. Estimates of average and maximum high water table across the site;
					d. Foundation analysis including:
___	_____	___	X		(1) Foundation bearing capacity analysis;
___	_____	___	X		(2) Total and differential subgrade settlement analysis;
___	_____	___	X		(3) Slope stability analysis;
___	_____	___	X		e. Description of methods used in the investigation and includes soil boring logs, laboratory results, analytical calculations, cross sections, interpretations and conclusions;
___	_____	___	X		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.
___	_____	___	X	2.	Report signed, sealed and dated by PE or PG.

Hydrogeological investigation requirements have been previously addressed in "Hydrogeological Investigation, Existing Lena Road Landfill, Manatee County, Florida," Ardaman & Associates, Inc.; January 26, 1983.

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

S	LOCATION	N/A	N/C		
___	_____	X	___	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;
___	_____	X	___	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;
___	_____	X	___	3.	Provide foundation and settlement analysis for the vertical expansion;
___	_____	X	___	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;
___	_____	X	___	5.	Minimum stability safety factor of 1.5 for the lining system component interface stability and deep stability;
___	_____	X	___	6.	Provide documentation to show the surface water management system will not be adversely affected by the vertical expansion;
___	_____	X	___	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)

___	Part K, 1	___	___	1.	Provide documentation that landfill will have at least one trained operator during operation and at least one trained spotter at each working face; (62-701.500(1),FAC)
				2.	Provide a landfill operation plan including procedures for: (62-701.500(2), FAC)
___	Appendix A	___	___		a. Designating responsible operating and maintenance personnel;
___	"	___	___		b. Contingency operations for emergencies;
___	"	___	___		c. Controlling types of waste received at the landfill;
___	"	___	___		d. Weighing incoming waste;
___	"	___	___		e. Vehicle traffic control and unloading;
___	"	___	___		f. Method and sequence of filling waste;
___	"	___	___		g. Waste compaction and application of cover;
___	"	___	___		h. Operations of gas, leachate, and stormwater controls;
___	"	___	___		i. Water quality monitoring.

S	LOCATION	N/A	N/C		
___	Part K, 3	___	___	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)
___	Part K, 4	___	___	4.	Describe the waste records that will be compiled monthly and provided to the Department quarterly; (62-701.500(4),FAC)
___	Part K, 5	___	___	5.	Describe methods of access control; (62-701.500(5),FAC)
___	Part K, 6	___	___	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)
___	Part K, 7, a	___	___	a.	Waste layer thickness and compaction frequencies;
___		X	___	b.	Special considerations for first layer of waste placed above liner and leachate collection system;
___	Part K, 7, c	___	___	c.	Slopes of cell working face and side grades above land surface, planned lift depths during operation;
___	Part K, 7, d	___	___	d.	Maximum width of working face;
				e.	Description of type of initial cover to be used at the facility that controls:
___	Part K,7, e	___	___		(1) Disease vector breeding/animal attraction
___	" "	___	___		(2) Fires
___	" "	___	___		(3) Odors
___	" "	___	___		(4) Blowing litter
___	" "	___	___		(5) Moisture infiltration
___	Part K, 7, f	___	___	f.	Procedures for applying initial cover including minimum cover frequencies;
___	Part K, 7, g	___	___	g.	Procedures for applying intermediate cover;
___	Part K, 7, h	___	___	h.	Time frames for applying final cover;
___	Part K, 7, i	___	___	i.	Description of litter policing methods;
___	Part K, 7, j	___	___	j.	Erosion control procedures.

S	LOCATION	N/A	N/C		
				8.	Describe operational procedures for leachate management including; (62-701.500(8),FAC)
___	Part K, 8, a	___	___		a. Leachate level monitoring, sampling, analysis and data results submitted to the Department;
___	Part K, 8, b	___	___		b. Operation and maintenance of leachate collection and removal system, and treatment as required;
___	Part K, 8, c	___	___		c. Procedures for managing leachate if it becomes regulated as a hazardous waste;
___	Part K, 8, d	___	___		d. Agreements for off-site discharge and treatment of leachate;
___	Part K, 8, e	___	___		e. Contingency plan for managing leachate during emergencies or equipment problems;
___	Part K, 8, f	___	___		f. Procedures for recording quantities of leachate generated in gal/day;
___	Part K, 8, g	___	___		g. Procedures for comparing precipitation experienced at the landfill with leachate generation rates.
___	Part K, 9	___	___	9.	Describe routine gas monitoring program for the landfill as required by Rule 62-701.400(10),FAC; (62-701.500(9),FAC)
___	Part K, 10	___	___	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)
___	Part K, 11, a	___	___		a. Sufficient equipment for excavating, spreading, compacting and covering waste;
___	Part K, 11, b	___	___		b. Reserve equipment or arrangements to obtain additional equipment within 24 hours of breakdown;
___	Part K, 11, c	___	___		c. Communications equipment;
___	Part K, 11, d	___	___		d. Personnel shelter and sanitary facilities, first aid equipment;
___	Part K, 11, e	___	___		e. Dust control methods;
___	Part K, 11, f	___	___		f. Fire protection capabilities and procedures for notifying local fire department authorities in emergencies;
___	Part K, 11, g	___	___		g. Litter control devices;
___	Part K, 11, h	___	___		h. Signs indicating operating authority, traffic flow, hours of operation, disposal restrictions.

S	LOCATION	N/A	N/C		
___	Part K, 12	___	___	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)
				13.	Additional record keeping and reporting requirements; (62-701.500(13),FAC)
___	Part K, 13, a	___	___	a.	Records used for developing permit applications and supplemental information maintained for the design period of the landfill;
___	Part K, 13, b	___	___	b.	Monitoring information, calibration and maintenance records, copies of reports required by permit maintained for at least 10 years;
___	Part K, 13, c	___	___	c.	Background water quality records shall be maintained for the design period of the landfill;
___	Part K, 13, d	___	___	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)

S	LOCATION	N/A	N/C	
___	_____	___	___	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;
___	_____	___	___	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)
___	_____	___	___	b. All sampling and analysis preformed 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)
___	_____	___	___	(1) Detection wells located downgradient from and within 50 feet of disposal units;
___	_____	___	___	(2) Downgradient compliance wells as required;
___	_____	___	___	(3) Background wells screened in all aquifers below the landfill that may be affected by the landfill;
___	_____	___	___	(4) Location information for each monitoring well;
___	_____	___	___	(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;
___	_____	___	___	(6) Well screen locations properly selected;
___	_____	___	___	(7) Procedures for properly abandoning monitoring wells;
___	_____	___	___	(8) Detailed description of detection sensors if proposed.
				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)

S	LOCATION	N/A	N/C	
				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)

S	LOCATION	N/A	N/C		
	Part M, 1	___	___	1.	Describe procedures for managing motor vehicles; (62-701.520(1),FAC)
___	Part M, 2	___	___	2.	Describe procedures for landfilling shredded waste; (62-701.520(3),FAC)
___	Part M, 3	___	___	3.	Describe procedures for asbestos waste disposal; (62-701.520(4),FAC)
___	Part M, 4	___	___	4.	Describe procedures for contaminated soil disposal; (62-701.520(5), FAC)

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

				1.	Closure schedule requirements; (62-701.600(2),FAC)
___	_____	X	___	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;
___	_____	X	___	b.	Notice to user requirements within 120 days of final receipt of wastes;
___	_____	X	___	c.	Notice to public requirements within 10 days of final receipt of wastes.
				2.	Closure permit general requirements; (62-701.600(3),FAC)
___	_____	X	___	a.	Application submitted to Department at least 90 days prior to final receipt of wastes;
				b.	Closure plan shall include the following:
___	_____	X	___	(1)	Closure report;
___	_____	X	___	(2)	Closure design plan;
___	_____	X	___	(3)	Closure operation plan;
___	_____	X	___	(4)	Closure procedures;
___	_____	X	___	(5)	Plan for long term care;
___	_____	X	___	(6)	A demonstration that proof of financial responsibility for long term care will be provided.

S	LOCATION	N/A	N/C	
				3. Closure report requirements; (62-701.600(4),FAC)
				a. General information requirements;
___	_____	X	___	(1) Identification of landfill;
___	_____	X	___	(2) Location, description and vicinity map;
___	_____	X	___	(3) Total acres of disposal areas and landfill property;
___	_____	X	___	(4) Legal property description;
___	_____	X	___	(5) History of landfill;
___	_____	X	___	(6) Identification of types of waste disposed of at the landfill.
___	_____	X	___	b. Geotechnical investigation report and water quality monitoring plan required by Rule 62-701.330(4),FAC;
___	_____	X	___	c. Land use information report indicating: identification of adjacent landowners; zoning; present land uses; and roads, highways right-of-way, or easements.
___	_____	X	___	d. Report on actual or potential gas migration at landfills containing biodegradable wastes including detailed description of test and investigation methods used;
___	_____	X	___	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)
___	_____	X	___	a. Plan sheet showing phases of site closing;
___	_____	X	___	b. Drawings showing existing topography and proposed final grades;
___	_____	X	___	c. Provisions to close units when they reach approved design dimensions;
___	_____	X	___	d. Final elevations before settlement;
___	_____	X	___	e. Side slope design including benches, terraces, down slope drainage ways, energy dissipators and discussion of expected precipitation effects;

S	LOCATION	N/A	N/C		
		X		f.	Final cover installation plans including:
		X			(1) CQA plan for installing and testing fina cover;
		X			(2) Schedule for installing final cover afte final receipt of waste;
		X			(3) Description of drought-resistant species t be used in the vegetative cover;
		X			(4) Top gradient design to maximize runoff an minimize erosion;
		X			(5) Provisions for cover material to be use for final cover maintenance.
				g.	Final cover design requirements:
		X			(1) Protective soil layer design;
		X			(2) Barrier soil layer design;
		X			(3) Erosion control vegetation;
		X			(4) Geomembrane barrier layer design.
		X		h.	Proposed method of stormwater control;
		X		i.	Proposed method of access control;
		X		j.	Description of proposed final use of the closed landfill, if any;
				5.	Closure operation plan shall include: (62-701.600(6),FAC)
		X		a.	Detailed description of actions which will be taken to close the landfill;
		X		b.	Time schedule for completion of closing and long term care;
		X		c.	Describe proposed method for demonstrating financial responsibility;
		X		d.	Indicate any additional equipment and personnel needed to complete closure.
		X		e.	Development and implementation of the water quality monitoring plan required in Rule 62-701.510, FAC.
		X		f.	Development and implementation of routine gas monitoring program required in Rule 62-701.400(10)(c), FAC.
		X		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)

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

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

___	Part P, 1	___	___	1.	Right of property access requirements; (62-701.620(4),FAC)
___	Part P, 2	___	___	2.	Successors of interest requirements; (62-701.620(5),FAC)
___	Part P, 3	___	___	3.	Requirements for replacement of monitoring devices; (62-701.620(7),FAC)
___	Part P, 4	___	___	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)

___	Part Q, 1	___	___	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).
___	Part Q, 2	___	___	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).
___	Part Q, 3	___	___	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)

___	_____	X	___	1.	Demonstration that facility does not pose a bird hazard to aircraft as specified in Rule 62-701.320(12)(b), FAC.
___	_____	X	___	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.

S	LOCATION	N/A	N/C		
___	_____	X	___	3.	Demonstration that facility is not located in a fault area, seismic zone or unstable area as specified in Rule 62-701.420(1)(c), FAC.
				4.	Request for extension of closure criteria as specified in Rule 62-701.640(2)(a) & (2)(b), FAC.
___	_____	X	___		a. Demonstration of no alternative disposal capacity.
___	_____	X	___		b. Demonstration of no threat to human health or the environment.

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

___	_____	X	___	1.	Proof of posting a performance bond payable to the Department to cover closing costs, if required; (62-701.700(4),FAC)
___	_____	X	___	2.	Materials recovery facility requirements; (62-701.700,FAC)
___	_____	X	___		a. Submit information required in Rule 62-701.320,FAC
___	_____	X	___		b. Submit an engineering report including the following:
___	_____	X	___		(1) Description of the solid waste proposed to be collected, stored, processed or disposed;
___	_____	X	___		(2) Projection with assumptions for waste types and quantities expected in future years;
___	_____	X	___		(3) Description of operation and functions of all processing equipment with design criteria and expected performance;
___	_____	X	___		(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;
___	_____	X	___		(5) Description of loading, unloading, and processing areas;
___	_____	X	___		(6) Identification and capacity of temporary on-site storage areas for materials handled and provisions for solid waste and leachate containment;
___	_____	X	___		(7) Identification of potential ground water and surface water contamination;

S	LOCATION	N/A	N/C	
___	_____	X	___	(8) Plan for disposal of unmarketable recyclables and residue and contingencies for waste handling during breakdowns.
				c. Submit the following operational information:
___	_____	X	___	(1) Operation and maintenance manual;
___	_____	X	___	(2) Waste control plan to manage unauthorized wastes;
___	_____	X	___	(3) Contingency plan for emergencies;
___	_____	X	___	(4) Closure plan including the following:
___	_____	X	___	(a) Notification to Department 180 days prior to closure;
___	_____	X	___	(b) Procedures for removal of all waste within 30 days of receipt of final waste;
___	_____	X	___	(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 Landfill Operation Permit from the Florida Department of Environmental Regulation and certifies that the information in this application is true, correct and complete to the best of his knowledge and belief. Further, the undersigned agrees to comply with the provisions of Chapter 403, Florida Statutes, and all rules and regulations of the Department. It is understood that the Permit is not transferable, and the Department will be notified prior to the sale or legal transfer of the permitted facility.

Signature of Applicant or Agent

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

Date: 12/31/97

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 12/31/97

Fred W. Sebesta, P.E.
Name and Title (please type)

38264
Florida Registration Number
(please affix seal)

STATE OF FLORIDA REGISTERED FRED W. SEBESTA 38264 CERTIFICATE ENGINEER

HDR Engineering, Inc.
5100 W. Kennedy Blvd., Suite 300
Mailing Address

Tampa FL 33609
City, State, Zip Code

(813) 287-1960
Telephone Number

Date: 12/31/97

PART A. GENERAL INFORMATION

HDR Engineering, Inc., (HDR) has been retained by Manatee County to prepare this Operation Permit Renewal Application for the Lena Road Landfill. This Class I Landfill accepts municipal solid waste for disposal. Detailed general information regarding the services provided by this facility is provided on pages 4 and 5 of the Florida Department of Environmental Protection Solid Waste Management Facility Permit Application Form.

PART B. DISPOSAL FACILITY GENERAL INFORMATION

Detailed general information regarding the Lena Road Landfill facility is provided on pages 6 and 7 of the Florida Department of Environmental Protection Solid Waste Management Facility Permit Application Form.

PART C. MATERIALS RECOVERY / VOLUME REDUCTION FACILITY GENERAL INFORMATION

This section is not applicable to this application since this site is neither a materials recovery or volume reduction facility.

PART D. GENERAL REQUIREMENTS

1. APPLICATION AND SUPPORTING DOCUMENTS

Five copies of this permitting package are being submitted to FDEP.

2. ENGINEERING CERTIFICATION

This application and all engineering plans and reports have been signed and sealed as required.

3. TRANSMITTAL LETTER

A letter of transmittal is included just before the application form.

4. APPLICATION FORMS

The proper application forms are included in the application section.

5. PERMIT FEE

The permit fee accompanies this application package.

6. ENGINEERING REPORT

The entire package makes up the engineering report.

7. OPERATION PLAN

The Operation Plan is attached as an independent document and is included as Appendix A.

In accordance with the applicable prohibitions in Rule 62-701.300, F.A.C., Manatee County, in operating Lena Road Landfill, will not knowingly:

1. Store or dispose of solid waste in a manner or location that causes violations to air or water quality standards or causes criteria of receiving waters to be violated.
2. Store or dispose of materials except as approved by permit.
3. Burn solid waste except in the case of disaster debris which may be burned in accordance with Rule 62-701.520(2). F.A.C.
4. Accept for disposal at Lena Road Landfill:
   a. Hazardous waste regulated under Chapter 62-730, F.A.C.
   b. Liquid wastes or soil, rags or other debris containing PCB concentrations of 50 ppm or greater.
   c. Biohazardous wastes which have not been properly incinerated or properly processed by a method approved by the Department pursuant to Chapter 62-712, F.A.C.
   d. Lead acid batteries, used oil, white goods, yard trash, or whole tires.

e. Noncontainerized free liquids in the landfill unless it is a household waste other than septic wastes, the waste is leachate or gas condensate or treatment byproducts of leachate or condensate.

5. Place containerized liquids in the landfill unless the container is similar in size to normal household use, or the container is designed to hold liquids for use other than storage, or the liquid is a household waste.
6. Place containers larger than 20 gallons unless one end has been removed or cut open, or punctured to ensure the container is empty and free of residue.
7. Except as provided below, mix used oil with solid waste that is to be disposed of in the landfill or directly dispose of used oil in the landfill.

Oily wastes may be disposed of in the landfill unless prohibited by other Department rules. Disposal of used oil commingled with solid waste is allowable if the Department determines that it is not practicable to separate the used oil from the solid waste and if it does not pose a threat to public health or the environment.

8. CONTINGENCY PLAN

The Contingency Plan is an integral part of the Operation Plan and is included in Appendix A.

9. DRAWINGS

Appendix B contains all large drawings (24 by 36 inches). Included with these drawings are the:

a. Vicinity Maps (Drawing Numbers 1A through 1D)
b. Plot Plan (Drawing Number 2)
c. Property Boundary (Drawing Number 3)

10. PROOF OF OWNERSHIP

There have been no changes in ownership since submission of the previous permit application. Drawing Number 3 in Appendix B shows the property boundaries and legal description.

11. RECYCLING RATE

Based on the tonnages reported to FDEP as part of the Recovered Material Report Forms and additional tonnages of recycled materials discovered by HDR during telephone interviews, Manatee County's 1996 recycling rate was 29 percent with 148,051 tons of recycled material. Since FDEP limits special wastes to 15 percent of the total, the recycling rate requires adjustment. Manatee County's adjusted 1996 recycling rate was 27 percent. A portion of this recycled material including white goods, whole tires and yard waste is collected, processed, or stored at the landfill.

12. ENFORCEMENT HISTORY

There has been one enforcement case against the Lena Road Landfill within the past five years. This case involved operational deficiencies resulting in the County completing an in-kind project at least

1.5 times the proposed penalty of $10,500.

13. PROOF OF PUBLICATION

Manatee County will publish an advertisement of the application upon receipt of advertisement language from FDEP. The County will provide proof of publication thereafter.

14. AIRPORT SAFETY

This section is not applicable since the landfill was constructed prior to January 6, 1993 and there have been no lateral expansions.

PART E. LANDFILL GENERAL REQUIREMENTS

1. VICINITY MAP

The area vicinity maps are included as Drawings 1A through 1D in Appendix B which shows the land use, zoning, structures, roads, and water bodies within one mile of the landfill. This map was derived from Land Information System records provided by the County on November 19, 1997.

2. AIRPORT MAP

Figure E-1 indicates that no airports are within five miles of the landfill. This figure was derived from the FAA approved Miami Sectional Aeronautical Chart dated September 11, 1997.

3. PLOT PLAN

The Plot Plan is included as Drawings 2 (Plot Plan-South) and 2A (Plot Plan-North) in Appendix B. The Plot plan scale is one inch equals 200 feet and includes the following information:

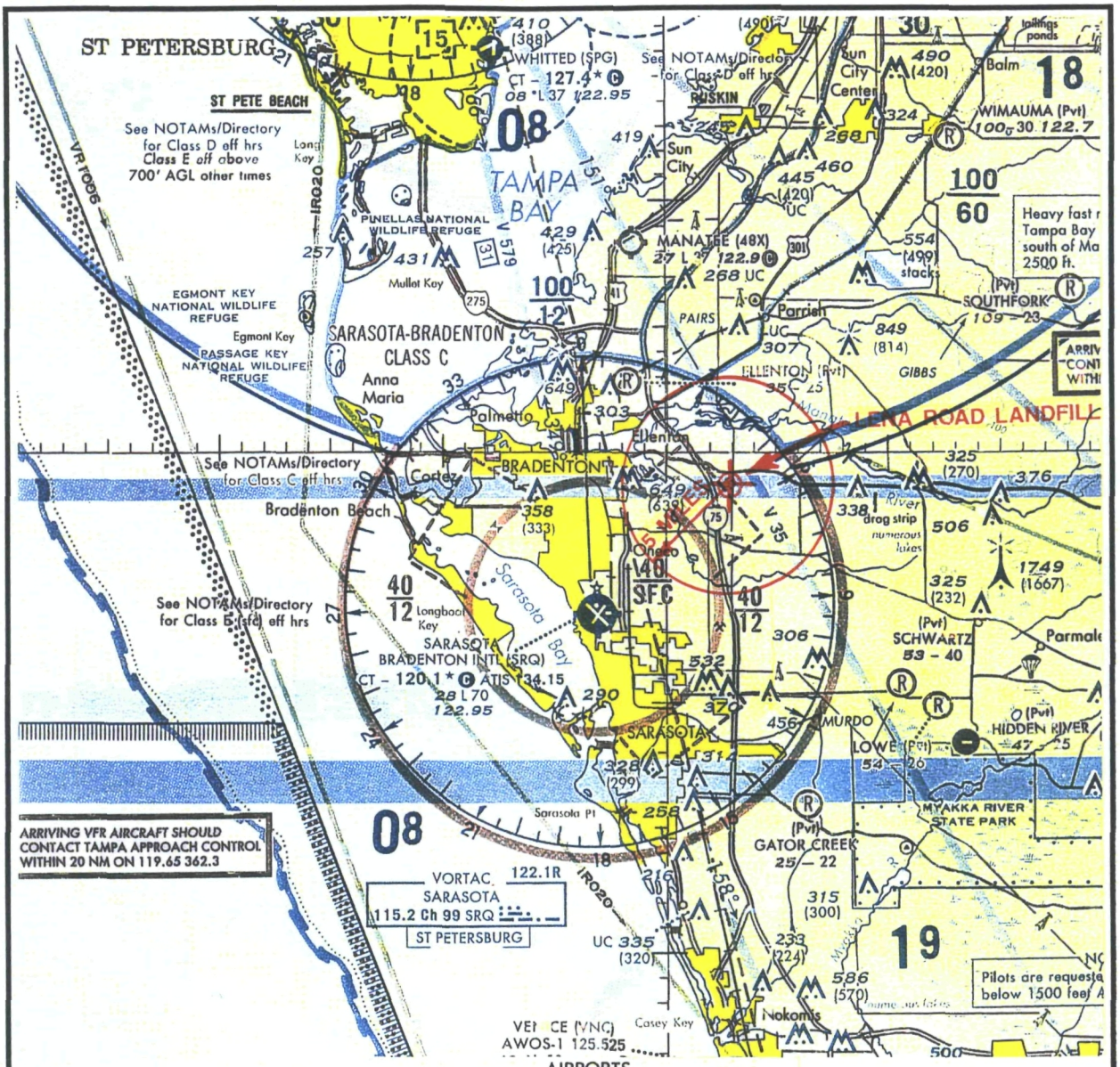
a. Proposed and Existing Wells
b. Soil Borings
c. Disposal Plan Areas
e. Previously Filled Areas
f. Access Restrictions
e. Slurry Wall Alignment

Site cross-sections are included in the previously approved Fill Sequence Plan and are incorporated into this application by reference.

4. TOPOGRAPHIC PLAN

A new (flight date: May 29, 1997) topographic plan is included as Drawings 2 and 2A in Appendix B. This topographic plan includes the following information:

a. Proposed Fill Areas
b. Borrow Areas
c. Access Roads
d. Drainage Grades
e. Lift Cross-Sections
f. Special Drainage Features
g. Fencing
h. Equipment Facilities
I. Slurry Wall Alignment



SCALE 1:500,000 MAP DATE: SEPT 11, 1997

HDR Engineering, Inc.

AIRPORT LOCATION MAP
5 MILE RADIUS

MANATEE COUNTY FLORIDA

FIG NO. E-1

DATE NOV. 1997

5. LANDFILL REPORT

a. Service Population

The 1998 estimated population for Manatee County is 245,889 based on projections from "Florida Population Studies, Volume 30, Number 3, Bulletin 118, July 1997, University of Florida, Bureau of Economic and Business Research". However, a portion of the waste is generated outside of the County. Figures from the 1996 Recycling Grant tables indicate that total County-generated wastes disposed at the landfill were 338,079 tons. The total waste disposed in 1996 as recorded at the scale house was 361,489 tons. This implies that 23,410 tons were generated outside of the County. Based on 1.53 tons per capita, the additional population added from out-of-County service for 1996 was 15,301. Assuming this out-of-County service remained constant and no waste was exported, the projected 1998 service population is estimated at 261,190.

b. Waste Source, Type, and Quantity

Waste sources and types include residential, commercial, and industrial waste generators primarily within Manatee County borders. Based on a projected generation rate of 525,734 tons for 1998 and a required 30 percent recycling rate (the 1996 total recycling rate was 29 percent), the total projected waste disposed at this landfill will be 368,014 tons in 1998. The solid waste projections are included in Table E-1.

c. Site Life

Based on the solid waste generation and recycling projections in Table 1, the site life would be exhausted in the year 2034. The population projections are based on the University of Florida Bureau of Economic and Business Research data base.

d. Cover Material

Cover material is excavated by the County from on-site borrow pits south of the landfill. While no soil borings have been taken from the borrow areas, two borings (Geotechnical and Hydrogeological Investigation at the Existing and Proposed Expansion for the Lena Road Landfill, Manatee County, Florida, Figure 1, Test Holes 6 and 9, Ardaman & Associates, Inc., March 3, 1983) have been performed within 900 and 1400 feet from the borrow areas. Boring logs indicate the surficial soils are similar to other boring locations in the southern portion of the landfill site. These soils are described as light gray to gray and light brown to yellowish brown fine sand with a blow count typically indicating a medium dense soil.

6. APPROVED WATER QUALITY LABORATORY

As noted by DEP correspondence dated June 17, 1997, the Comprehensive Quality Assurance Plan received by the Department on May 22, 1997 was approved as annotated. Annotations are required to be incorporated into the next renewal due May 23, 1998. A copy of the DEP approval is included in Appendix C.

TABLE E-1
Lena Road Landfill
Remaining Life Projection [1]

MSW Compacted Density (lb/cy) [2]: 1,491

Year	Population [3]	Total Landfilled [4] (TPY)	Per Capita Amount Landfilled (TPCPY)	Total Volume (CY)	Cumulative Total Volume (CY)	Remaining Capacity [5] Beginning of Year (CY)
1990	211,707	296,936	1.40	398,304		
1991	216,086	314,634	1.46	422,044		
1992	220,464	323,074	1.47	433,366	433,366	27,500,000
1993	224,843	312,675	1.39	419,416	852,782	26,647,218
1994	229,221	360,080	1.57	483,005	1,335,787	26,164,213
1995	233,600	358,692	1.54	481,143	1,816,930	25,683,070
1996	236,778	361,489	1.53	484,895	2,301,824	25,198,176
1997	241,333	359,796	1.49	482,624	2,784,448	24,715,552
1998	245,889	368,014	1.50	493,647	3,278,095	24,221,905
1999	250,444	376,135	1.50	504,541	3,782,636	23,717,364
2000	254,999	387,704	1.52	520,060	4,302,695	23,197,305
2001	259,200	391,912	1.51	525,703	4,828,398	22,671,602
2002	263,401	397,233	1.51	532,841	5,361,239	22,138,761
2003	267,603	402,738	1.50	540,226	5,901,465	21,598,535
2004	271,804	409,701	1.51	549,565	6,451,030	21,048,970
2005	276,005	416,524	1.51	558,718	7,009,748	20,490,252
2006	280,503	423,651	1.51	568,278	7,578,026	19,921,974
2007	285,002	429,966	1.51	576,749	8,154,775	19,345,225
2008	289,500	436,591	1.51	585,635	8,740,409	18,759,591
2009	293,999	443,374	1.51	594,734	9,335,143	18,164,857
2010	298,497	450,312	1.51	604,041	9,939,184	17,560,816
2011	302,995	457,162	1.51	613,229	10,552,413	16,947,587
2012	307,494	463,934	1.51	622,312	11,174,725	16,325,275
2013	311,992	470,639	1.51	631,306	11,806,031	15,693,969
2014	316,491	477,417	1.51	640,398	12,446,430	15,053,570
2015	320,989	484,223	1.51	649,528	13,095,958	14,404,042
2016	325,487	491,034	1.51	658,664	13,754,622	13,745,378
2017	329,986	497,821	1.51	667,768	14,422,390	13,077,610
2018	334,484	504,596	1.51	676,856	15,099,246	12,400,754
2019	338,983	511,373	1.51	685,946	15,785,192	11,714,808
2020	343,481	518,162	1.51	695,053	16,480,245	11,019,755
2021	347,979	524,953	1.51	704,163	17,184,408	10,315,592
2022	352,478	531,742	1.51	713,269	17,897,677	9,602,323
2023	356,976	538,526	1.51	722,369	18,620,046	8,879,954
2024	361,475	545,310	1.51	731,469	19,351,515	8,148,485
2025	365,973	552,096	1.51	740,571	20,092,086	7,407,914
2026	370,471	558,883	1.51	749,676	20,841,762	6,658,238
2027	374,970	565,670	1.51	758,779	21,600,541	5,899,459
2028	379,468	572,456	1.51	767,882	22,368,423	5,131,577
2029	383,967	579,242	1.51	776,984	23,145,407	4,354,593
2030	388,465	586,028	1.51	786,087	23,931,494	3,568,506
2031	392,963	592,814	1.51	795,190	24,726,684	2,773,316
2032	397,462	599,600	1.51	804,293	25,530,977	1,969,023
2033	401,960	606,387	1.51	813,396	26,344,373	1,155,627
2034	406,459	613,173	1.51	822,499	27,166,872	333,128
2035	410,957	619,959	1.51	831,601	27,998,473	(498,473)

Lena Road Landfill is projected to provide disposal space until 2034.

Notes:

1. The total volume available for waste disposal is based on August 1992 contours and final contours from the closing plan.
2. The average in-place density of solid waste for each year, 1991 through 1996, was determined by dividing the number of tons of waste landfilled by the number of cubic yards of air space consumed. These in-place densities for each year were averaged to obtain the density used in this projection.
3. Population projected base on projections from "Florida Population Studies, Volume 30, Number 3, Bulletin 118, July 1997," University of Florida, Bureau of Economic and Business Research.
4. Waste landfilled is projected based on scale records, population projections, and a moving 5 year per capita average rate of waste landfilled.
5. Remaining landfill capacity estimed by HDR is based on the Manatee County drawings 6, 8, and 9 of Project 485 4615-534.

7. FINANCIAL RESPONSIBILITY

Financial responsibility reports for 1997 were submitted to the Department on August 26, 1997. A copy of the Financial Responsibility tables are included as Appendix D-1. These tables have been updated to 1998 with each individual item being reconsidered. Updated tables are included as Appendix D-2.

PART F. GENERAL CRITERIA FOR LANDFILLS

1. FLOOD PLAIN

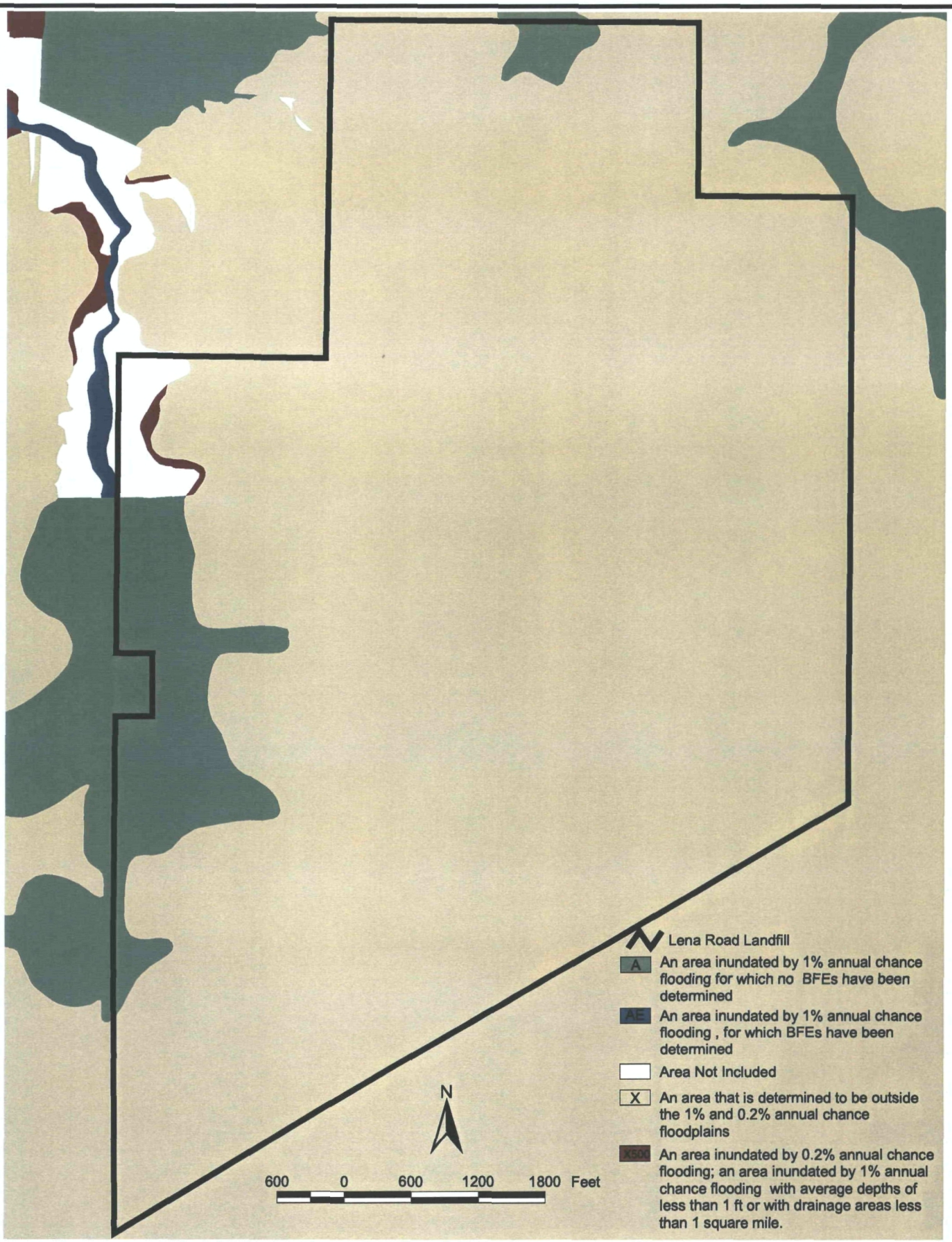
As shown in Figure F-1, developed from Federal Emergency Management Agency National Flood Insurance Program Q3 Flood Data, the landfill area lies outside the 100-year floodplain.

2. HORIZONTAL SEPARATION

The distance from the fill toe to the property line is typically at least 900 feet. A minimum of 100 feet of separation between in-place waste and the property line will be maintained at the landfill.

3. VISUAL SCREENING FROM PUBLIC VIEW

The landfill can not presently be viewed from SR 64. However, at build-out, the toe of Phase II will be approximately 1700 feet from SR 64. Approximately 1100 feet of this buffer is forested. The landfill is not screened from view on Lena Road, but this public road has minimal non-landfill use as it terminates at the landfill.



FLOODPLAINS MAP

MANATEE COUNTY FLORIDA

FIG NO. F-1

DATE 12/17/97

PART G. LANDFILL CONSTRUCTION REQUIREMENTS

This section is not applicable for this Operation Permit Renewal. No further construction is planned within the permit renewal period.

PART H. HYDROGEOLOGICAL INVESTIGATION

Please refer to the Ardaman report entitled "Hydrogeological Investigation, Existing Lena Road Landfill, Manatee County, Florida" dated January 26, 1983.

PART I. GEOTECHNICAL INVESTIGATION

Please refer to the Ardaman report entitled "Hydrogeological Investigation, Existing Lena Road Landfill, Manatee County, Florida" dated January 26, 1983. This report contains the geotechnical and hydrogeological investigations at the site.

PART J. VERTICAL EXPANSION

This part is not applicable to this application. No vertical expansion is presently planned for this landfill.

Manatee County
Florida

Lena Road Landfill

Operation Plan

Revised
See Separate Document

November 5, 1998

HDR Engineering, Inc.

PART L. WATER QUALITY AND LEACHATE MONITORING PLAN

The water quality and leachate monitoring program for the Lena Road Landfill complies with the requirements of 62-701.510 FAC regulations for solid waste facilities. The plan described in this section will be implemented at the landfill during the next permit period. All field testing, sample collection, preservation and laboratory testing, including quality control procedures, will adhere to the applicable methods approved by the Department.

Collected groundwater samples will be analyzed by P.E. LaMoreaux & Associates, Inc. (PELA), a geochemistry laboratory located in Lakeland, Florida. The DEP approved the CompQAP for PELA on June 17, 1997. Copies of the Annotated QAP pages and the DEP approval letter are presented in Appendix C. The Methods used by PELA are from *"Standards Methods for the Analysis of Water and Wastewater"*, latest edition APHA, AWWA, and WPCF, and/or other EPA approved methods which meet FDEP protocol.

GROUNDWATER MONITORING PROGRAM

Groundwater Sampling and Analysis.

The objective of the monitoring program will be to determine groundwater quality outside of the slurry wall in the vicinity of the Lena Road Landfill, and to evaluate the gradient. The groundwater monitoring well and piezometer locations are shown on Drawings 2 and 2A, Appendix B. The plan shows 27 monitoring wells and 19 piezometers along the perimeter of the slurry wall system which will be included in the monitoring program. The 27 monitoring wells are located outside the slurry wall and are divided into 19 wells which monitor the surficial aquifer and eight wells which monitor the deep artesian aquifer. The 19 piezometers are all located inside the slurry wall system. The groundwater monitoring wells are listed below.

WELL NUMBER	AQUIFER	WELL TYPE
LR11-1	Surficial	Detection/Compliance
LR11-2	Surficial	Detection/Compliance
LR11-3	Surficial	Detection/Compliance
LR11-4	Surficial	Detection/Compliance
LR11-5	Surficial	Detection/Compliance
MW-1	Surficial	Background
MW-2	Surficial	Detection/Compliance
MW-3	Surficial	Detection/Compliance
MW-5	Surficial	Detection/Compliance
MW-6	Surficial	Detection/Compliance
CW-4	Surficial	Compliance
CW-5A	Surficial	Detection/Compliance

WELL NUMBER	AQUIFER	WELL TYPE
GC-1A	Surficial	Detection/Compliance
GC-2	Surficial	Detection/Compliance
GC-3	Surficial	Detection/Compliance
GC-4	Surficial	Detection/Compliance
GC-5	Surficial	Detection/Compliance
GC-6	Surficial	Background
SMR-1	Surficial	Background
SA-2	Artesian (Deep)	Detection/Compliance
SA-3	Artesian (Deep)	Detection/Compliance
SA-4	Artesian (Deep)	Detection/Compliance
SA-5	Artesian (Deep)	Detection/Compliance
SA-6	Artesian (Deep)	Detection/Compliance
SA-7	Artesian (Deep)	Detection/Compliance
SA-8	Artesian (Deep)	Detection/Compliance
SMR-2	Artesian (Deep)	Background

Note: Wells located adjacent to the slurry wall function as both detection and compliance wells.

The surficial aquifer wells adjacent to the slurry wall are considered both "down gradient" and "upgradient" wells depending upon the parameters monitored. If water quality parameters are being monitored these wells are considered "down gradient" because they monitor the water quality outside the slurry wall system. (Meaning if groundwater standards are exceeded in these wells the groundwater flow is originating from the landfill and flowing through the slurry wall towards the wells.) If the inward gradient across the slurry wall is being monitored, then these wells are considered "upgradient" wells. (Meaning the surficial aquifer monitoring wells will have a higher water levels then their corresponding piezometers.)

Each groundwater monitoring well at the landfill will undergo semi-annual analysis for the parameters specified in 62-701.510 F.A.C., for Solid Waste Management Facilities. All analyses will be performed by a certified laboratory with an FDEP approved ComQAP. All detection wells and background wells will be sampled and analyzed semi-annually for the groundwater indicator parameters listed below.

Groundwater Indicator Parameters:

Field Parameters

Static water level in wells before purging.
Specific conductivity
pH
Dissolved Oxygen
Turbidity
Temperature
Colors, Sheens

Laboratory Parameters

Total Ammonia - N
Iron
Mercury

Nitrate - N
Chlorides

Sodium
Total Dissolved Solids (TDS)
Parameters listed in 40 CFR, Part 258, Appendix I

In accordance with 62-701.510(7), F.A.C., if monitoring parameters are detected in concentrations which exceed background water quality, or at levels above the DEP water quality standards or criteria specified in 62-520 F.A.C., the wells will be resampled within fifteen days after the sampling data is received to confirm the data. If the data is confirmed, the DEP will be notified in writing within fourteen days of the finding. Upon notification by the FDEP, the County will initiate assessment monitoring as specified by 62-701.510 (7)(a), 1 through 5.

Gradient Monitoring Program

A slurry wall containment system is in place at the Lena Road Landfill to isolate the surficial aquifer along the perimeter of the landfill. Drawings 2 and 2A show the approximate slurry wall location. Inside of the slurry wall, groundwater levels are controlled by a leachate collection system and leachate pond. The objective of the system is to maintain the water elevation inside of the slurry wall at a lower elevation than the groundwater outside of the slurry wall, inducing an inward gradient. A series of piezometers and monitoring well pairs located inside and outside of the slurry wall, as shown on Drawings 2 and 2A, will be utilized to monitor the gradient.

The piezometers (PZ-1 through PZ-17, PZ-15A, PZ-15B, PZ-16A, PZ-18, PZ-19) are located between the slurry wall system and the leachate collection system, and are located adjacent to a surficial monitoring well outside of the slurry wall. When the leachate collection system is operating as designed the groundwater gradient will be inward - resulting in the piezometers having lower water levels than their corresponding surficial monitoring well. The piezometers are shallow wells containing a screened interval of approximately five feet which is located below the seasonal high water table elevation.

The nineteen piezometers and all surficial aquifer monitoring wells listed previously will be monitored monthly for water levels to an accuracy of 0.01 feet. This data will be submitted monthly to the Department, and used to evaluate the presence/absence of an inward gradient at the landfills' perimeter slurry wall.

Groundwater Quality Reporting .

The County will continue to submit to the DEP all water quality monitoring analyses by July 15th and January 15th for the semi-annual periods January - July and July - December, respectively. The

Departments' Quarterly Report on Groundwater Monitoring Form 62-1.216(2) will continue to be used and will include at least the following:

1. The facility name and identification number, sample collection dates, and analysis dates;
2. All analytical results, including all peaks even if below maximum contaminant levels;
3. Identification number and designation of all groundwater water monitoring points;
4. Applicable water quality standards;
5. Quality assurance, quality control notations;
6. Method detection limits;
7. STORET code numbers for all parameters;
8. Water levels recorded prior to evaluating wells or sample collection. Elevation reference shall include the top of the well casing and land surface at each well site at a precision of plus or minus 0.01 foot (NGVD);
9. An updated groundwater table contour map, with contours at no greater than one foot intervals, which indicates groundwater levels and flow direction;
10. A summary of any water quality standards or criteria that are exceeded.

A technical report as per 62-701.510(9),F.A.C., shall be submitted to the Department every two years and shall be updated at the time of permit renewal. The report shall be prepared, signed and sealed by a professional geologist or engineer with experience in hydrogeologic investigations, and submitted to the FDEP. The biannual evaluation shall include an assessment of the effectiveness of the existing landfill design and operation as related to the prevention of groundwater contamination, and shall summarize and interpret the water quality data and water level measurements collected during the permit period. The report shall contain the following:

1. Tabular and graphical displays of any data which shows that a parameter has been detected;
2. Trend analysis of any monitoring parameters detected;
3. Comparison of water quality between shallow and deeper acquifer zones;
4. Comparisons between upgradient and downgradient wells;
5. Correlation between related parameters such as total dissolved solids and specific conductance;
6. Discussions of erratic and/or poorly correlated data;
7. An interpretation of the groundwater contour maps, including an evaluation of the groundwater flow rates;
8. An evaluation of the adequacy of the water quality monitoring frequency and sampling locations based on site conditions.

The latest Groundwater Monitoring Plan Biannual Evaluation was performed by Professional Service Industries, Inc. (PSI). This report included data compiled monthly, quarterly, and semi-annually over the time period of January 1, 1994 to December 31, 1995. The following are PSI's

findings:

- "Based on a comparison of the average water table elevations in the monitor wells around the landfill stages, regional groundwater flow appears to be towards the northwest. The construction of the slurry wall system around the landfill stages and the leachate collection systems within the stages has created localized cells with opposing gradients around each stage. Due to the confining layer beneath the landfill, it is assumed that these localized cells are restricted to the shallow or surficial aquifer."
- "For the shallow monitor wells, the analytical parameters that vary from FDEP Groundwater Guidance Concentrations include pH, total dissolved solids, and iron. Low concentrations of several EPA 8260 compounds were detected in twelve of the shallow monitor wells over the two year monitoring period."
- "For deep monitor wells, the analytical parameters that vary from FDEP Groundwater Guidance Concentrations include pH, total dissolved solids, and iron. Low concentrations of EPA 8260 compounds were detected in five of the deep monitor wells over the two year monitoring period."
- "The upgradient/downgradient monitor well analysis revealed negligible increases in the levels of various parameters in monitor wells to the south and west of the landfill. These increases represent minor fluctuations above the background levels measured in monitor well SMR-1."

All piezometers and wells not a part of the approved groundwater monitoring plan will be plugged and abandoned in accordance with Rule 62-532.500 (4), F.A.C., and the Southwest Florida Water Management District. Within ninety days of the abandonment, the County will submit a written report to the Department providing documentation.

The County will notify the DEP should any monitoring well become damaged or inoperable.

SURFACE WATER MONITORING

Surface water monitoring is proposed for Lena Road Landfill to comply with F.A.C. rule 62-701.510(4). Two surface water monitoring points are proposed. SW-1 is located at Cypress Strand at the location shown on Drawing 2. Cypress Strand runs along the west side of the landfill site. SW-1 is located downstream of the landfill, and would intercept waters potentially affected by the landfill. Proposed sampling point, SW-2 is located approximately 4,000 feet south of the point where the landfill maintenance road and Cypress Strand intersect near Monitoring Well, MW-2. See Drawing 2. Proposed sampling point SW-2 is upstream from the landfill and will provide background data for comparison with the data from SW-1.The surface water points will be sampled semi-annually for the following parameters as specified by 62-701.510 F.A.C.:

Field Parameters:

Dissolved Oxygen	Temperature
Turbidity	pH
Specific conductivity	Colors, Sheens (by observation)

Laboratory Parameters:

Unionized Ammonia	Total Organic Carbon
Total Hardness	Fecal Coliform
Biochemical Oxygen Demand (BOD5)	Total Phosphates
Copper	Chlorophyll A
Iron	Total Nitrogen
Mercury	Chemical Oxygen Demand
Nitrate	Total Suspended Solids
Zinc	Those parameters listed in 40 CFR
Total Dissolved Solids	Part 258, Appendix I

NPDES Sampling

According to the National Pollutant Discharge Elimination System (NPDES) Permit No. FL0038881, the site has six permitted outfall locations which the County is authorized to discharge stormwater. The outfall structures are:

- Outfall 001, Stage I landfill detention pond west weir outlet.
- Outfall 002, southern weir of the Stage I landfill perimeter ditch.
- Outfall 003, northern weir of the Stage I landfill perimeter ditch.
- Outfall 004, perimeter ditch of the Stage III landfill area.
- Outfall 005, perimeter ditch of the Stage II landfill area.
- Outfall 006, perimeter ditch of the Stage II landfill area.

Since the time that the NPDES was approved (Feb. 1993), outfall 003 has been removed by the County. A copy of the NPDES Permit is located in Appendix F which contains a map which depicts the locations of the authorized outfalls and the parameters for which the surface water is tested.

The stormwater management system will continue to be managed as required by 62-701.500 (10), F.A.C., to meet applicable standards of 62-302 and 62-330, F.A.C. The system is operated and maintained to minimize stormwater from entering waste filled areas and avoid the mixing of stormwater with leachate. Interceptor berms are maintained at the working area to prevent leachate runoff from the working face from entering the stormwater management system. Modifications of the approved stormwater design will be submitted to the Department for approval prior to implementation.

The County will continue to:

- Inspect all stormwater conveyances weekly to verify adequate performance,
- Remove restrictive sedimentation and vegetation within three working days,
- Regrade stormwater conveyances to prevent ponding, and
- Document all inspections and repairs to the stormwater system.

LEACHATE MONITORING

The County will continue to be responsible for leachate level monitoring, sampling, analysis of the landfill leachate, and for providing to the Department copies of the leachate analysis and monthly leachate generation reports.

The Lena Road Landfill leachate is sampled (grab sample) from the pump stations receiving water from waste-filled areas prior to pumping. The samples will be combined to create one sample from the site. Leachate will be sampled and analyzed semi-annually for the leachate indicator parameters listed below.

Leachate Monitoring Parameters:

Field Parameters	
Specific conductivity	Dissolved Oxygen
pH	Colors, Sheens

Laboratory Parameters	
Total Ammonia - N	Nitrate
Bicarbonates	Sodium
Chlorides	Total Dissolved Solids (TDS)
Iron	Those parameters listed in
Mercury	40 CFR Part 258 Appendix I

The County will also sample and analyze annually for the parameters listed in 40 CFR Part 258, Appendix II.

PART M. SPECIAL WASTE HANDLING

1. MOTOR VEHICLES

Motor vehicles are not presently accepted for disposal or temporary storage at Lena Road Landfill while awaiting recycling. If the County wishes to accept motor vehicles for storage while awaiting recycling in the future, they will be stored temporarily in a separate area until they are removed for recycling. Any vehicles not recycled will have all fluids and batteries removed and will be compacted to minimize voids before being placed in the landfill area. A temporary storage area will be identified and approval of this area will be obtained from FDEP prior to accepting motor vehicles for temporary storage and recycling.

2. SHREDDED WASTE

Shredded municipal waste is not presently accepted for disposal at Lena Road Landfill. Shredded tires and or automobile fluff may be accepted. Such waste will either be landfilled along with the municipal solid waste or, with FDEP approval, used to supplement daily cover soil.

3. ASBESTOS

Asbestos containing materials from sources covered under the National Emission Standards for Asbestos, 40 CFR Part 61, Subpart M are accepted at Lena Road Landfill, with prior approval of the County. These materials will be placed in the landfill by appointment only, covered with non-asbestos containing waste or soil, and the location will be recorded in accordance with 40 CFR Part 61.154. A record of the location of asbestos containing waste will be maintained.

4. CONTAMINATED SOIL

Soils contaminated with non-hazardous waste and petroleum contaminated soil which has been treated pursuant to Chapter 62-775, F.A.C. will be accepted at the discretion of the County. Properly treated petroleum contaminated soils may be used to supplement initial cover soil.

PART N. FINAL CLOSURE

This section is not applicable since the landfill is not ready for final closure.

PART O. CLOSURE PROCEDURES

This section is not applicable since the landfill is not ready for final closure.

PART P. LONG TERM CARE

1. RIGHT OF PROPERTY ACCESS

After termination of solid waste operations, Manatee County shall retain the right of entry to the landfill property for the long-term care period for inspection, monitoring, and maintenance purposes.

2. SUCCESSORS OF INTEREST

In the event of the sale of the landfill site to another authority, the County will assure that the long-term care requirements of the permit are adhered to by contractual agreement or by retention of access rights. Any lease or transfer of property will include specific conditions to delineate the following responsibilities:

1. Maintenance of proof of financial responsibility
2. Continuance of monitoring and maintenance of the landfill
3. Correction of problems or deficiencies
4. Ownership of minerals or other recoverable materials buried on site, including any landfill gasses than may be produced

3. REPLACEMENT OF MONITORING DEVICES

If a monitoring well or other device required by the monitoring plan is destroyed or fails to operate for any reason, the County will notify the Department in writing within 60 days of the discovery. All inoperative monitoring devices shall be replaced with functioning devices.

4. LONG-TERM CARE COMPLETION

Following completion of the long-term care period for each solid waste management unit, the County shall notify the DEP that a certification verifying that long-term care has been completed in accordance with the closure plan has been placed in the operating record. This certification will be signed and sealed by a professional engineer.

PART Q. FINANCIAL RESPONSIBILITY

1. COST ESTIMATES

Estimates of closure and long-term care costs are included in Appendix D-1. These estimates have been prepared and certified by a professional engineer, for a third party performing the work, on a per unit basis with the source of estimates indicated.

No estimate for corrective action is included because no need for corrective action is presently known. An estimate for corrective action will be prepared if such action is needed.

2. ANNUAL COST ADJUSTMENTS

Cost estimates for closure and long-term care will be adjusted and provided to the Department prior to September 1 each year. Costs will be listed separately for closure and for long-term care. These estimates will be based on one of the two following methods as appropriate:

a. Prepared and certified by a professional engineer, for a third party performing the work, on a per unit basis with the source of estimates indicated.

b. Inflating the previous year's estimate by the appropriate inflation factor as required by Rule 62-701.630, F.A.C.

3. FUNDING MECHANISM

The County uses and plans to continue to use an escrow account to demonstrate financial responsibility. Appropriate audits and forms will be provided as required by Rule 62-701.630, F.A.C.

PART R. CLOSURE OF EXISTING LANDFILLS

This section is not applicable since this landfill is not ready for final closure.

PART S. MATERIALS RECOVERY FACILITIES

This section is not applicable. This site is not a materials recovery facility.

PART T. CERTIFICATION BY APPLICANT AND ENGINEER OR PUBLIC OFFICER

See the last page of the Permit Application Form.

Appendix A

[redacted]

[redacted]

[redacted]

STORM WATER/LEACHATE MANAGEMENT PLAN
LENA ROAD LANDFILL
MANATEE COUNTY

Manatee County
Public Works Department
Solid Waste Section
3333 Lena Road
Bradenton Florida, 34202

REVISED
SEE SEPARATE DOCUMENT

November 1998

Appendix A-2

Household Hazardous Waste Collection Plan

HOUSEHOLD HAZARDOUS WASTE COLLECTION PLAN

LENA ROAD LANDFILL

MANATEE COUNTY

Prepared by

Manatee County Public Works Department
Solid Waste Section
3333 Lena Road
Bradenton, Florida 34202

Revised By

HDR Engineering, Inc.

Revised
April 7, 1999

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HOUSEHOLD HAZARDOUS WASTE COLLECTION AND STORAGE FACILITY

DEFINITIONS

Conditionally Exempt Small Quantity Generators (CESQG): (40 CFR 261.5) A generator who produces no more than 100 kg (220 lbs) of hazardous waste or no more than 1 kg of acutely hazardous waste per month.

Hazardous Material: A substance or material including a hazardous substance, which has been determined by the Secretary of Transportation capable of posing an unreasonable risk to health, safety, and property during transportation.

Household Hazardous Waste Collection and Storage Facility: A facility established by the Manatee County Board of County Commissioners to provide hazardous waste disposal services to households.

Household: Single and multiple dwellings and other residential sources within Manatee County.

Personal Protective Equipment: Equipment used to protect individuals from chemical, physical and biological hazards.

Training: Instruction in the use of equipment, personal protective equipment, site safety and handling.

HISTORY

The Manatee County Household Hazardous Waste Collection and Storage Facility was opened in May, 1993. The facility is sited within the foot print of the landfill. The landfill has groundwater monitoring detection wells, which are sampled semi-annually.

The facility initially consisted of a prefabricated metal storage building with a covered containment area on the south side of the building and set on concrete slabs. The entire facility is fenced with a six foot fence with access via three separate locking gates.

The metal storage building was purchased from Safety Storage, Inc., Cupertino, California. The building has options including forced air ventilation, dry chemical fire suppression system, and two metal bulkheads creating three separate storage spaces. The building is engineered to comply with EPA, NAPA, and OSHA standards and regulations for storing hazardous chemicals and wastes. The building is also corrosion resistant and features secondary containment for the prevention of spills or leaks.

A second single-bay building was purchased in May, 1995, and added to the facility. The building is intended to be used for new or nearly new materials such as paint, automotive fluids and cleaning supplies that would be useable in the home and are considered non-hazardous. A "swap shop"

program for distribution of these materials will be submitted to the Board of County Commissioners when appropriate research is completed.

FACILITY PROGRAM

The Manatee County Household Hazardous Waste Collection Facility (HHW Facility), located at 3333 Lena Road, Bradenton, Florida consists of two secured manufactured metal storage buildings specifically designed for the storage of hazardous materials and/or wastes. The major components of the HHW Facility are as follows:

- Security System: The entire site is fenced with a six (6) foot high chain link fence topped with a triple strand of barbed wire. Three gates provide ingress and egress to the facility. When not in use, the facility is locked and secured. A double security exists in that the main access road into the County Landfill has a gate and is secured when the Landfill is not in operation.

- Containment and Storage System: The storage buildings consist of prefabricated metal storage buildings specifically designed for hazardous materials featuring secondary containment in the event of a spill. The buildings are corrosion resistant and equipped with forced air ventilation and dry chemical fire suppression systems. One building is constructed with two metal bulkheads creating three (3) separate storage bays. The second building is a single bay unit. A heavy-duty locked aluminum storage cabinet anchored to a concrete slab serves as the ammunition locker and does not have a dry chemical fire suppression system.

- The larger of the two metal storage buildings has covered exterior containment areas for storage of drums (antifreeze, empty drums, etc.), fluorescent bulb closed storage rack, and the waste oil tank. The containment areas are surrounded by cement reinforcement walls approximately two (2)-foot high.

- The storage buildings sit flush with an impervious, slightly sloped, reinforced containment area. The Facility is located inside the confines of the Manatee County Solid Waste Management Landfill Facility.

The facility is open to Manatee County residents on the third Saturday of each month from 9:00 a.m. to 3:00 p.m. Wastes that are classed as medical or radioactive are not accepted. There is not a disposal weight limit during the collections and disposal is provided free of charge to County residents. The cost of the program is funded by landfill disposal tipping fees.

A semi-annual event is held at two (2) sites (one for residential and one for commercial entities) in the Spring and Fall of the year. Siting of the event is at the HHW Facility and at the Public Works Administration Complex, 4501 66th Street West, Bradenton, Florida. All businesses participating in the collection program are referred directly to the County's contracted hazardous waste disposal vendor, who is on site, for collection and payment arrangements. Milk run collection information is provided to the commercial generator categories under the same rate schedule as that of Manatee County.

Six times per year, or more frequently if needed, Manatee County's Hazardous Waste Contractor is on-site to perform shed cleanouts. The certified hazardous waste technician reviews all paperwork and has the responsibility of approving and signing outgoing manifests.

Materials are accepted from County residents during non-operating hours by appointment only after determination by the HHW technician that the resident is unable to attend during the scheduled collection days. In addition, collection services at the residence is available for those persons who are unable to attend the event due to circumstance of health, handicap or age.

Manatee County has permanent household hazardous waste programs and Conditionally Exempt Small Quantity Generator (CESQG) programs for the collection of materials at the facility. Due to the origin of these materials, by statute, they are exempt from all Subtitle C Federal and State regulations. Monthly collections are conducted for the residential citizens and annual or semi-annual events for the CESQGs. These events are advertised in the County's utility billing and the local newspapers.

Monthly collection events are operated by a certified, trained technician and one trained assistant. The CESQG events also include staff and equipment from the contracted hazardous waste collector/transporter. Materials such as paint, used motor oil, etc. are bulked for removal. Pesticides, herbicides, etc. are lab-packed by the contracted vendor during their collection and building clean out events.

PHYSICAL FACILITY MINIMUM STANDARDS

Containment

- Paints and aerosol cans are stored in drums adjacent to the outside containment areas on concrete slabs covered with plastic sheeting prior to removal by the contracted vendor.

- Other wastes are stored either in the storage building or in drums located in the secondary containment areas.

- Liquid waste are stored within secondary containment areas capable of containing the entire contents of the largest two containers in storage.

- Containers holding liquid shall be placed so that material escaping from a small leak in a non-pressurized container will not fall outside the containment structure.

- Storm water is precluded from accumulating within in-service containment structures.

- Containers are protected from deterioration due to excessive exposure to Storm water.

Waste Acceptance Criteria

Household Waste is accepted only during the monthly collection events *unless* circumstances of the generator prohibit such a collection time. The waste must fall within the categories permitted by the contracted collection/disposal vendor and not be of a bio-hazardous or medical nature. The waste must also have been generated by a residential disposer.

CESQG Waste is collected at our annual or semi-annual events by arrangement directly between the contracted collection/disposal vendor and the generator.

PERSONNEL

Training: Facility supervisory personnel must successfully complete a 40-hour OSHA training program that teaches performance of duties in a way that ensures the facility is operated in a manner that protects them and the public from potential health and safety hazards at the site and is protective of the environment.

The instructor providing the training includes appropriate aspects of hazardous waste/material management including selection of protective clothing and equipment and emergency response. At a minimum, the training program is designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing them with emergency procedures, emergency equipment, and emergency systems, including where applicable:

I. Contact List for departments to respond to fire and/or explosions, discharges to the land surface; incidents;
II. Shutdown of operations.

Facility personnel shall take part in an annual review of the initial training.

Facility personnel has on staff at least one person who has no less than 40 hours training in appropriate aspects of hazardous waste/material management whenever waste is being received and whenever any hazardous material is being bulked or otherwise treated.

RECORDS

The following documents and records shall be maintained at the Facility offices:

I. A record of all personnel engaged in work, either full-time or temporary.

II. A record of training that has been completed by facility personnel.

PERSONNEL TRAINING REQUIREMENTS

All County personnel participating in the HHW collection programs shall be trained to the appropriate level for their participation. All trained County personnel are specifically trained as

Hazardous Waste Collection Staff. The HHW technician is responsible for enforcing all safety policies. The following guidelines outline the training requirements to be completed by personnel so they may safely work with hazardous materials during the collection programs. This training will, therefore, reduce the potential for hazardous material-related accidents.

Paint Sorters

Training for this level is limited to on-the-job instruction. Personnel will have minimal contact with the waste but will function under direct supervision of a certified Recycling Service Technician. They sort paints into water-based or oil-based categories and place in the appropriate area for bulking procedures.

Facility Staff

Training for this level of participation includes both class room instruction and on-the-job training. Staff assists with opening and closing the Facility, screening incoming materials, and assisting with spills, releases, or any other emergency. Specific training includes but is not limited to:

- HAZWOPER Operational Level (29 CFR 1910.120),
- On-the-job training in accepting, identifying, segregating, and sorting waste, and
- Hazardous waste rules and regulations.

The objective of Hazardous Waste Operations and Emergency Response, 29 CFR.1910.120 training is provide personnel with the knowledge and skills necessary to safely and successfully respond to any on-site spills and/or releases. A five level classification system is used to provide appropriate training to indicate the scope of their authorized response activities;

- First Responder Awareness Level
- First Responder Operations Level
- Hazardous Materials Technician

Personnel trained in accordance with this Section shall receive annual refresher training of sufficient content and duration to maintain their competency

PERSONAL PROTECTION EQUIPMENT PROCEDURES

Personal Protective Equipment (PPE) is used to limit exposure to various hazardous materials and wastes at the hazardous Waste Collection and Storage Facility. PPE is necessary when handling hazardous materials to prevent skin contact with harmful substances. Whenever removing and/or working with hazardous materials or waste, personnel are required to wear, at a minimum, the following protective equipment:

<u>Paint Sorters</u>

- Safety glasses
- Protective gloves
- Protective apron (optional)

Facility Staff

- Safety glasses
- Protective gloves
- Respirator with organic vapor cartridge on high efficiency particulate air filter (HEPA), if necessary, as determined by the waste material being handled
- Steel toed boot or safety shoes
- Protective apron

In the event of a spill or release of a hazardous material or waste, full-faced air purifying respirators is on site for use by any personnel:

When specialized training is required to properly utilize personal protective equipment, this training must be provided to the employee prior to its use.

SPILL/RELEASE PROCEDURES

The Facility Site Supervisor and/or Assistant shall be properly trained in hazardous material emergency response to efficiently mitigate, contain, and clean up any accidental spill/release that might occur at the Facility. At all times, the safety of personnel and program participants are the primary concern.

The following will be considered emergencies at the Facility:

- Fire or smoke is noticed
- An explosion occurs
- A leak or spill is discovered
- Medical emergencies, including heat induced injuries
- Discovery of explosive devices

When a spill/release or any other emergency occurs, the following guidelines will be followed:

- Cease operations/perform initial evaluation
- Make mental note of nature, extent, source, and amount of any released product
- Evaluate potential harm to human health and the environment
- Scene control. Keep all unauthorized persons away from the scene
- Protect individuals directing them, if not contaminated, away from the scene
- If flammable materials are involved, check for all ignition sources
- Take measures to contain release or fire from spreading to other hazardous areas as quickly as possible
- Notify 911 if warranted
- Notify Facility Manager/Director of the Solid Waste Management Facility, if necessary
- Notify State Warning Point if reportable quantity
- Perform basic first aid to stabilize any victims until EMS arrives
- Clean up any spills using compatible materials
- Place waste in proper container for disposal through the County's Hazardous Waste Transporter

Under no circumstances will the health and safety of County staff be placed in harm's way in the attempt to handle suspected explosives. If explosives are discovered, evacuate the immediate area, cease traffic flow, and notify the Manatee County Sheriff's Department Haz-Mat Team.

If a reportable quantity of a hazardous material has been spilled or released, a follow-up written report will be forwarded within fifteen working days to the State Emergency Response Center.

An eye-wash station and shower is permanently installed on site. In the event of materials being splashed into staff's eyes, a minimum eye-wash of fifteen minutes shall take place.

EQUIPMENT

Following is a partial list of the equipment on site:

Forklift with drum grabber	
Fire extinguishers	Assorted tools
Funnels	Utility carts
Shovels and brooms	55-gallon drums
3 and 5 gallon buckets	Traffic cones
Absorbent	Assorted tape
Neutralizing agents	Combustible Gas Indicator
Two-way radio communication	Eye-wash station and shower

TECHNICAL APPROACH

Safety is the primary concern of all personnel participating at the HHW Facility. Appropriate staff are instructed in how to handle emergencies as well as site safety. The collection program is maintained in a neat and organized manner at all times. Good housekeeping practices are followed. The unloading area will be kept clean and free of excess materials. It is the responsibility of all Facility staff to follow these guidelines. No smoking signs are posted. Smoking is prohibited at the Facility.

Facility staff will assist participants by unloading vehicles, answering questions about proper disposal methods and handing out informational literature as necessary. Only hazardous waste generated by residential customers will be accepted during the HHW disposal programs. In the event a participant arrives to dispose of waste generated from a business, the CESQG hazardous waste disposal program will be explained and contractor contact information provided.

Following are guidelines to follow in processing the participants' waste.

Safety Procedures

Facility staff will, at all times, act in a safe manner. Work practices are carried out to minimize or eliminate the possibility of an injury-related accident. Proper ergonomics are followed. Correct lifting techniques are used by all personnel in order to prevent injury to the body. Containers are removed from vehicles one at a time into the utility carts.

Appropriate Personal Protective Equipment (PPE) is worn when handling hazardous waste. Close attention is given to staff during the summer months to reduce the risk of heat related injuries. All Facility staff monitor themselves for any signs or symptoms of heat stress and act accordingly.

Removal From Vehicles

Traffic is directed from the scale house and/or by signs on the entrance road of the Landfill to the HHW Facility. All incoming cars are directed by signs to a stopping point where participants will be greeted by trained County staff. An initial spotting of the chemicals is performed *before* removal of chemicals from the vehicle. The participants are questioned on the contents of any unknown materials or unmarked containers. If any unacceptable or unknowns are spotted, personnel will immediately notify the Facility Site Supervisor or Assistant.

The waste from the vehicles will then be unloaded into carts by the Facility staff. Participants remain in or at their vehicles. This reduces the risks of spills or injuries. Facility staff evaluate the contents as they unload. If any leaking containers are spotted, the container will be placed into an additional container. The participant will be informed of the leak. It is not the responsibility of Facility staff to clean up the leak or spill in the participant's vehicle beyond the initial containment.

Waste Segregation

County personnel transport the waste from the cart to the preliminary sorting area located at the interior front of the Facility. Cardboard boxes, packaging, similar debris, and/or household trash will be removed and placed in the dumpsters designated for trash. The HHW technician examines all materials received. The waste is then sorted and in the appropriate storage area. Usually used motor oil, pesticides, paints, and flammables represent the majority of the waste received..

Locker Storage

Each chemical storage unit is clearly labeled with DOT placards.

Wastes are stored according to their primary hazard. The basic categories of wastes are as follows:

- Flammables
- Pesticides
- Corrosives

The HHW technician shall have the final decision on what wastes to accept or not accept, classification, and any other decision regarding the waste.

Waste Bulking

Only the HHW technician determines which wastes should be bulked. All labels are read before bulking any wastes together to ensure compatibility. Safety is the major factor in bulking. No bulking shall take place in inclement weather.

Containers of compatible waste are opened and drained directly into fifty-five gallon drums. When the drum is full or bulking is discontinued for the work period, the lid shall be securely replaced. A small space for vapor expansion shall be left at the drum head space.

Drums are required to have the proper markings adhered to them. The markings are placed so that they are clearly visible. The HHW marking contains the following information:

- The material contents
- The accumulation start date

The proper marking is applied at the beginning of the bulking procedure.

Unknowns

On occasion, unknowns are accepted. These items are materials which cannot be identified by either original labels or by participant knowledge. The following procedures are adhered to:

- Unknowns will be placed in a separate on-site transport cart.
- Place material into appropriate storage building according to suspected hazards.

During weather emergencies or other emergencies which could potentially cause a release of household hazardous wastes, it is anticipated that no household hazardous waste will be collected. However, any such emergency could cause problems at the facility with existing stored wastes. The Solid Waste Manager, or his designee, will function as the Emergency Coordinator in such situations and will take or direct others to take appropriate action to protect the health and welfare of facility employees or users as well as other persons which could be affected.

Emergency Coordinator

At all times, there should be at least one employee either on the facility premises, or on call (i.e., available to respond to an emergency by reaching the facility within a short period of time) with the responsibility for coordinating all emergency response measures. This emergency coordinator should be thoroughly familiar with all aspects of the facility's operations and activities, the locations and characteristics of waste handled, the location of all records within the facility, and the facility layout. In addition, this person will have the authority to commit the resources needed to carry out needed emergency action.

The emergency coordinator's responsibilities vary, depending on factors such as type and variety of waste(s) handled by the facility, and type and complexity of coordinator is responsible for.

Emergency Procedures

Whenever there is an imminent or actual emergency situation, the emergency coordinator (or his/her designee when the emergency coordinator is on call) should immediately:

- Activate internal facility alarms or communication systems, where applicable, to notify needed

personnel and inform them of needed action.
- Notify appropriate State or local agencies with designated response roles if their help is needed.

A table of emergency personnel and their telephone, beeper, cellular telephone and radio numbers, where applicable, is attached at the end of this document.

Whenever there is a release, fire, or explosion, the emergency coordinator should immediately identify the character, exact source, amount, and the extent of any released materials. He or she may do this by observation or review of facility records, or if necessary, by chemical analysis.

Concurrently, the emergency coordinator should assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment should consider both direct and indirect effects of the release, fire, or explosion (e.g., the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface water run-off from water or chemical agents used to control fire, or heat-induced explosions).

If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health, or the environment, outside the facility, he/she should report his findings as noted below:

- If the assessment indicates that evacuation of local areas may be advisable, the proper authorities should be immediately notified. The emergency coordinator should be available to help appropriate officials decide whether local areas should be evacuated.
- The government official designated as the on-scene coordinator for the area or the State should be notified immediately. The report should include:
  - Name and telephone number of reporter
  - Name and address of the facility
  - Time and type of incident (e.g., release, fire, explosion)
  - Name and quantity of material(s) involved, to the extent known
  - The possible hazards to human health, or the environment outside the facility.

During the emergency, the emergency coordinator shall take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other areas of the facility. These measures should include, where applicable, stopping processes and operations, collecting and containing release waste, and removing or isolating containers.

During an emergency, the emergency coordinator shall monitor for leaks, pressure buildup, gas generation, or ruptures in containers and/or equipment, wherever this is appropriate.

Immediately after an emergency, the emergency coordinator should provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material contaminated by a release, fire, or explosion at the facility.

OPERATIONS

Maintenance and Operation of Facility

The facility shall be maintained and operated to minimize the possibility of fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water that could threaten human health or the environment.

All facility communications, alarm system and spill control equipment, where required, shall be tested and maintained in accordance with manufacturer's recommendations and as necessary to assure its proper operation in time of emergency.

Facility personnel shall maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless aisle space is not needed for any of these purposes.

Whenever hazardous waste facility is staffed, all personnel involved in the operation shall have immediate access to an emergency communication device, either directly or through visual or voice contact with another employee, unless such a device is not necessary.

Normal operational procedures require one member of personnel on site. This member shall, while in the facility, have immediate access to a two-way radio capable of summoning external emergency assistance. Telephones and/or radios shall not be placed in areas where the atmosphere may be come explosive due to the presence of flammable vapors, dusts, or gases.

Accumulation Time

The Household Hazardous Waste Facility will be accumulating hazardous waste on site, and shall store the material as follows:

- The waste will be placed in containers. A container is a storage building or a DOT shippable drum.
- The amount of waste accumulated will not place the facility in violation of any regulations required on a Federal, State, or Local level.
- While being accumulated on-site, each container is labeled with a description of the contents and date.

The household hazardous waste collected for treatment or disposal shall not be accumulated on site for more than 210 days. Once the capacity limit is reached, all hazardous waste collected shall be shipped to a permitted hazardous waste facility for treatment or disposal. The operator may request FDEP approval of a longer accumulation time period for specific wastes which are accumulated slowly.

Management of Containers

If a container holding hazardous waste is not in good condition or if it begins to leak, the operator

shall pack the container and its contents in a larger container that is in good condition, or manage the waste in some other way that complies with the requirements of this part.

The operator shall use containers made of or lined with materials which will not react with, and are otherwise compatible with, the hazardous waste to be stored, so that the ability of the container to contain the waste is not impaired.

A container holding hazardous waste shall always be closed during storage except when it is necessary to add or remove waste. Also a container holding hazardous waste should not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.

The operator shall inspect areas where containers are stored, at least weekly, looking for leaks and for deterioration caused by corrosion or other factors.

Special Requirements for Ignitable or Reactive Waste

Containers holding ignitable or reactive waste shall be located within the transfer/containment slab or within the proper hazardous waste storage building bay. An overhead fire suppression system is located in the storage buildings.

The operator shall take precautions to prevent accidental ignition of ignitable waste. This waste shall be separated and protected from sources of ignition including but not limited to: open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical), spontaneous ignition (e.g., from heat-producing chemical reactions), and radiant heat. The facility is a posted "no smoking" area.

Reactive wastes shall receive special handling and storage as needed to prevent unintentional reactions.

Handling Requirements for Ignitable, Reactive, or Incompatible Wastes

Repackaging or treatment, including bulking, or neutralizing of ignitable, reactive, or incompatible waste is conducted by the contracted transport/disposal vendor so that it does not:

- Generate extreme heat or pressure, fire or explosion, or violet reaction;
- Produce uncontrolled toxic vapors, dusts, or gases in sufficient quantities to threaten human health;
- Produce uncontrolled flammable vapors, dusts, or gases in sufficient quantities to pose a risk of fire or explosion;
- Damage the structural integrity of the devise or facility containing the waste; or
- Threaten human health or the environment.

Material Redistribution Guidelines

In the event Manatee County decides to establish a Material Redistribution Program in the future, the following shall serve as the *basic* program guideline for facility personnel.

Materials selected for exchange programs should include but not be limited to meet the following minimum criteria:

- Original containers only
- Original label with ingredients, instructions, and warnings must be present and readable
- Contents should be visually inspected and should look like correct material in new condition
- Containers should be at least three-quarters full.

The following items will be excluded from redistribution programs:

- ammunition
- reactive materials
- canceled or banned products
- pesticides
- poisons

Each item selected for the redistribution program should be approved by the facility manager or his/her designee.

Storage

Materials designated for redistribution should be stored in a separate area of the facility. This area will be clearly marked and secured from unauthorized access.

At a minimum, secondary containment sufficient to contain the entire contents of the largest two containers in storage should be provided.

Customers

All customers should be at least 18 years of age and shall be allowed to "shop" only in the designated area.

Documentation

The redistribution program will develop and use a waiver/inventory form, pre-approved in format by the County Attorney's Office, which includes the following elements:

- Customer's printed name and signature
- Date
- Name and quantity of each material received
- Liability statement ("hold harmless" statement)

The form shall be kept on file in the offices of the facility manager or his/her designee.

PREPAREDNESS AND PREVENTION (INCLUDING ARRANGEMENTS WITH LOCAL AUTHORITIES)

The following arrangements have been made with off-site organizations to aid them in assisting with emergencies.

- The fire department and emergency response teams have been provided with the layout of the facility, properties of the facility, properties of hazardous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to roads inside the facility, and possible evacuation routes.

- Manatee County has secured agreements with State emergency response teams, emergency response contractors, and equipment suppliers.

Emergency and After Hours Contacts
Lena Road Landfill

Persons or Agencies to be Contacted in the Event of Fire or Other Emergency.

Person/Agency	Telephone Number
Fire Department Chief Henry Sheffield Braden River Fire Department	911 746-7675
Ambulance	911
Sheriff	911
Gus A. DiFonzo, Solid Waste Manager	Pager: 569-1486 Cellular: 745-6690
Dan Gray, Utilities Operations Manager	Pager: 569-2523 Cellular: 742-7427
Mike Gore, Landfill Superintendent	Home: 322-8094 Pager: 331-4499 Radio: 709
Cari L. Walz, Recycling Service Technician	Home: 358-6820 Pager: 569-8739 Radio: 701
Ervin (Bud) Bell, Chief Equipment Operator	Home: 322-1710 Pager: 331-4652 Radio: 705
Gary Seeley, Chief Equipment Operator	Home: 753-7517 Pager: 331-4653 Radio: 710
Department of Environmental Protection Kim Ford Bob Butera	Phone: 813/744-6100 Extension: 382 Extension: 451

Appendix A-3

Leachate Treatment Agreement Letter

MANATEE COUNTY GOVERNMENT
Public Works Department

June 29, 1998

Kim Ford, P. E.
Division of Waste Management
Department of Environmental Protection, Southwest District
3804 Coconut Palm Drive
Tampa, FL 33619

Re: Manatee County, Lena Road Landfill, Operating Permit Renewal
Leachate Management Agreement Between Solid Waste Division and Wastewater Division

Dear Mr. Ford:

The Manatee County Wastewater Division, Southeast Wastewater Treatment Plant agrees to treat all leachate received from the Lena Road Landfill. The water level in the leachate pond will be maintained at 28 NGVD or less at all times under normal operations.

In the event of extended plant shut down, as an alternate plan, leachate will be trucked to either the Southwest Wastewater Treatment Plant or the North Wastewater Treatment Plant until such time normal operations have resumed at the Southeast Plant. My signature below certifies this Department's commitment to the above agreement.

Sincerely,

Len Bramble, P. E.
Public Works Director

hps

Copy: Dan Gray, Utilities Operations Manager
Gus DiFonzo, Solid Waste Manager
Ed McAdam, P. E., Wastewater Manager
Bob Butera, P. E., FDEP
Fred Sebesta, HDR Eng., Inc.

ADMINISTRATION • 4410 - 66th Street West, Bradenton, Florida 34210 • (941) 792-8811 • FAX (941) 795-3490

P.O. Box 25010, Bradenton, Florida 34206

Appendix B

Drawings

Including

Drawing Number 1A:	**Location Map**
Drawing Number 1B:	**Vicinity-Structures**
Drawing Number 1C:	**Vicinity-Land Use and Wells**
Drawing Number 1D:	**Vicinity-Zoning**
Drawing Number 2:	**Plot Plan-South**
Drawing Number 2A:	**Plot Plan-North**
Drawing Number 3:	**Property Boundary**

(RESERVED)

1094169 (1)

Braden River

I-75

Lena Rd.

SR 64

LANDFILL PROPERTY

SR 70

N

0.5 0 0.5 1 Miles

HDR

LENA ROAD LANDFILL
OPERATIONS PERMIT

MANATEE COUNTY

FLORIDA

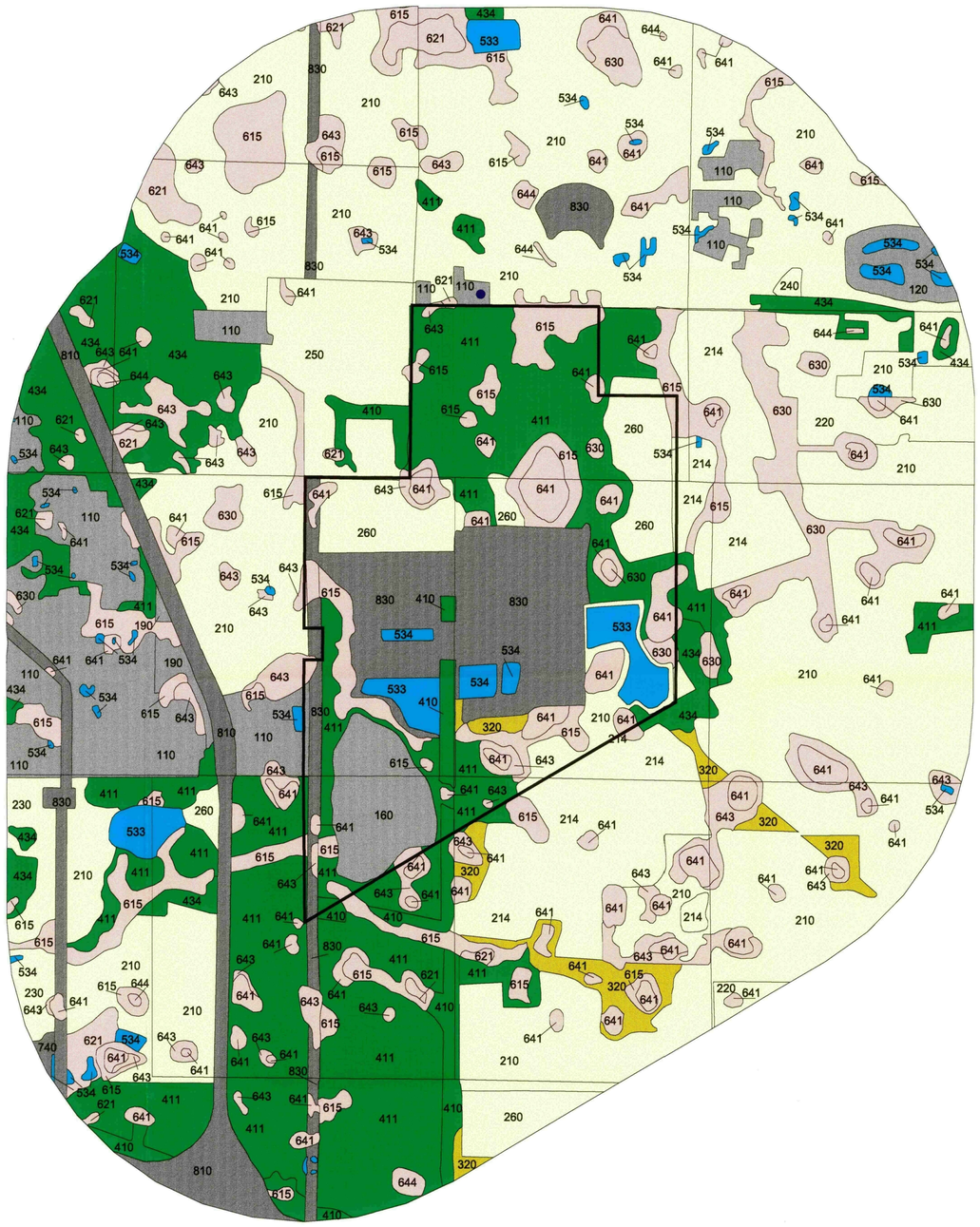
1A

PROJECT LOCATION MAP

12/17/97

07982-024-096

1094169
(2)



N

1200 0 1200 2400 3600 Feet

LEGEND

- Potable Water Well (Permitted)
- Lena Road Landfill

Land Use

- 110 Low Density Residential
- 120 Medium Density Residential
- 160 Extractive
- 190 Open Land (Urban)
- 210 Cropland and Pastureland
- 214 Row Crops
- 220 Tree Crops
- 230 Feeding Operations
- 240 Nurseries and Vineyards
- 250 Specialty Farms
- 260 Other Open Lands (Rural)
- 320 Shrub and Brushland
- 410 Upland Coniferous Forests
- 411 Pine Flatwoods
- 434 Mixed Coniferous/Hardwood
- 533 Reservoirs (10 acres or larger)
- 534 Reservoirs (Less than 10 acres)
- 615 River/Lake Swamp
- 621 Cypress
- 630 Wetland Forested Mixed
- 641 Freshwater Marsh
- 643 Wet Prairie
- 644 Aquatic Vegetation
- 740 Disturbed Land
- 810 Transportation
- 830 Utilities

HDR

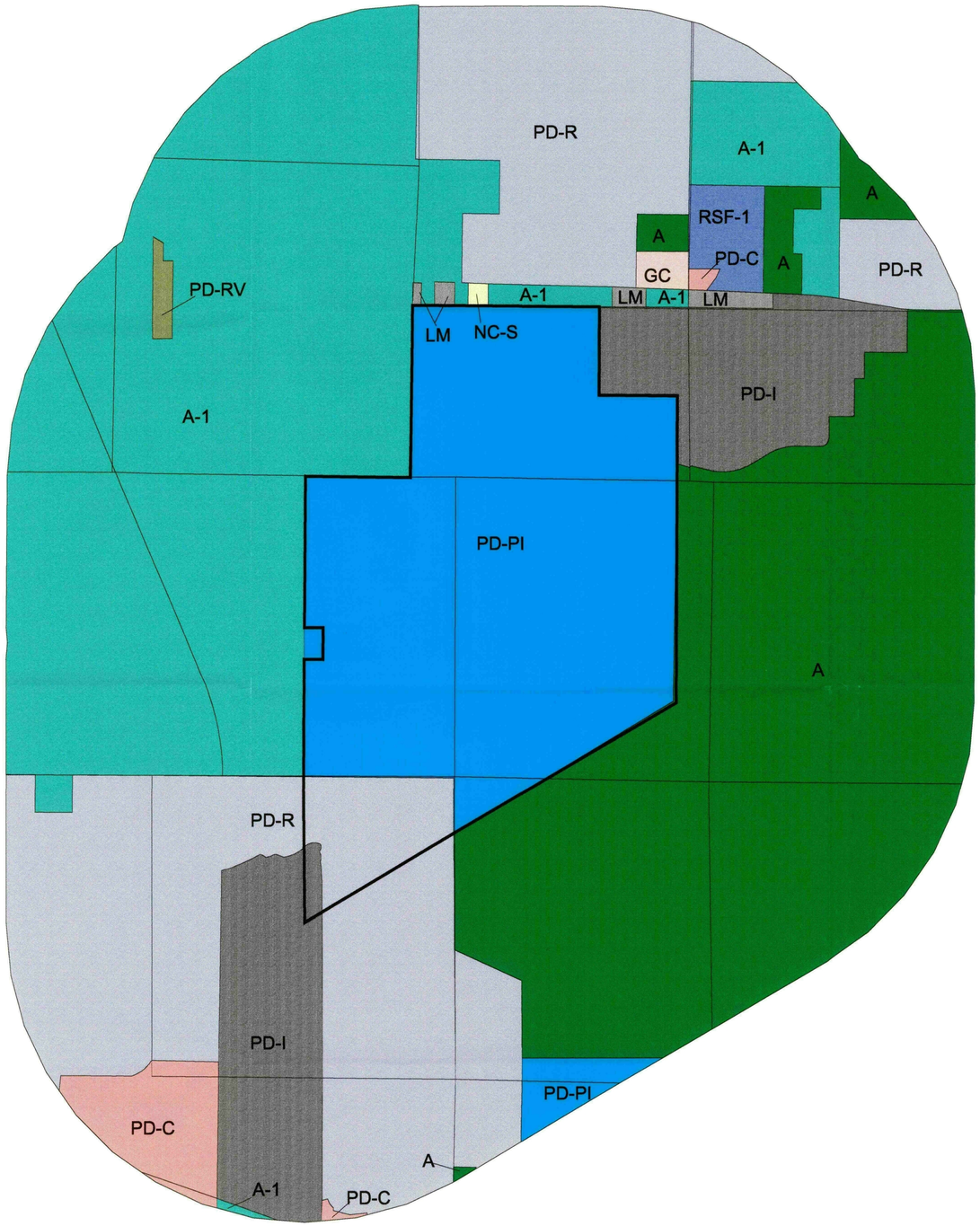
LENA ROAD LANDFILL
OPERATIONS PERMIT

MANATEE COUNTY FLORIDA

VICINITY MAP - LAND USE 1C

12/17/97 07982-024-096

1094169 (3)



1200 0 1200 2400 3600 Feet

LEGEND

Lena Road Landfill

Zoning

- A — General Agriculture
- A-1 — Suburban Agriculture
- GC — General Commercial
- LM — Light Manufacturing
- NC-S — Neighborhood Commercial Small
- PD-C — Planned Development - Commercial
- PD-I — Planned Development - Industrial
- PD-PI — Planned Development - Public Interest
- PD-R — Planned Development - Residential
- PD-RV — Planned Development - Recreational Vehicle
- RSF-1 — Residential Single Family District

HDR

LENA ROAD LANDFILL
OPERATIONS PERMIT

MANATEE COUNTY FLORIDA

VICINITY MAP - ZONING

1D

12/17/97

07982-024-096

1099 1169 (4)

MAINTENANCE FACILITIES TO BE RELOCATED.
2. LOCATION OF SLURRY WALL, LEACHATE COLLECTION SYSTEM, BORINGS, AND SAMPLING POINTS ARE APPROXIMATE.

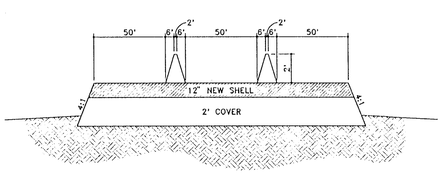
GRAPHIC SCALE
200 0 200 400
1 inch = 200 feet

STAGE I

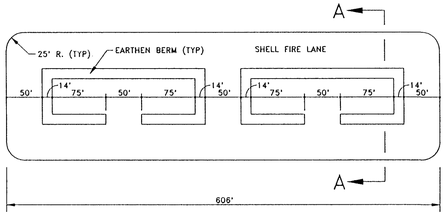
SW-2 IS LOCATED ON CYPRESS STRAND NEAR THE SOUTHWEST CORNER OF THE LANDFILL PROPERTY.

NOTES:
1) ALL WELL, BORING, AND PIEZOMETER LOCATIONS ARE APPROXIMATE AND SHOWN FOR ILLUSTRATIVE PURPOSES ONLY.

LEGEND:
- CONTROL POINT TARGET
- UTILITY POLE
- TREE
- UNPAVED ROAD
- SWAMP
- TREE LINE
- PAVED ROAD
- LIGHT POLE
- STRUCTURE
- EDGE OF WATER
- FENCE
- WATER ELEVATION
- TYPICAL SPOT ELEVATION
- OBSCURED CONTOUR
- SHRUB LINE
- DEPRESSION CONTOUR
- STAND PIPE
- SLURRY WALL
- LEACHATE COLLECTION SYSTEM
- MONITORING PLAN SURFICIAL AQUIFER WELL
- MONITORING PLAN PIEZOMETER
- MONITORING PLAN ARTESIAN AQUIFER WELL
- BORING LOCATION
- GAS MONITORING WELL
- GAS MONITORING POINT
- SURFACE WATER MONITORING POINT



SECTION A-A



WASTE TIRE FACILITY PLAN

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
JUN 3 0 1999
SOUTHWEST DISTRICT TAMPA

Issue No.	Description	Date	Drwn.	Chkd.	Resp. Engr.	Proj. Mgr.
F	ADD 2ND SCRAP METAL STORAGE AREA	3/99	JAM	FWS	FWS	FWS
E	ADD SWM PTS/MOD ANC. AREA	7/98	JAM	FWS	FWS	FWS
D	MONITORING WELL / TIRE DETAILS MOD	3/98	JES	FWS	FWS	FWS
C	MONITORING WELL LOCATIONS MODIFIED	1/98	JES	FWS	FWS	FWS
B	PLANS FOR PERMIT APPLICATION ONLY	12/97	ME	FWS	FWS	FWS
A	30 PERCENT PLANS	10/97	TJT	DMP	FWS	
G	RELOCATE SW-2	6/99	JAM	FWS	FWS	FWS

HDR Engineering, Inc.
Tampa, Florida

Project Manager: F. SEBESTA
Architect: -
I&C/Process: -
Civil: D. PELHAM
Mechanical: -
Electrical: -
Structural: -
Environmental: -
Drawn By: J. MERLY

LENA ROAD LANDFILL OPERATIONS PERMIT

MANATEE COUNTY FLORIDA

Plot Plan and Topographic Map South

Date: 6/99
Scale: As Noted
Project No.: 07982-024-096
Drawing No.: 2
Issue: G

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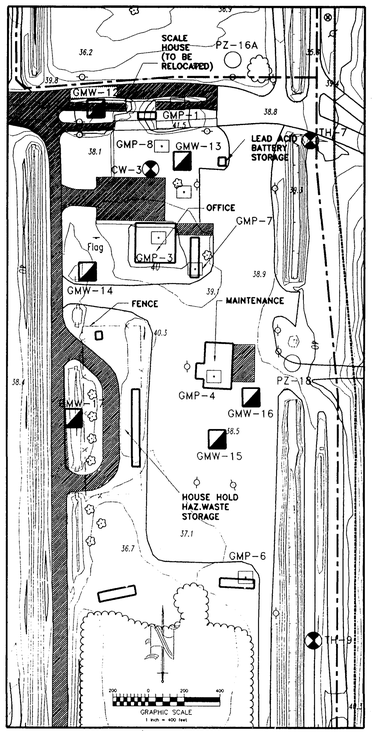
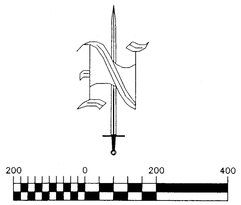
(5)

ADMINISTRATIVE AND MAINTENANCE AREA





LEGEND:

- CONTROL POINT TARGET
- UTILITY POLE
- TREE
- UNPAVED ROAD
- SWAMP
- TREE LINE
- PAVED ROAD
- LIGHT POLE
- STRUCTURE
- EDGE OF WATER
- FENCE
- WATER ELEVATION
- TYPICAL SPOT ELEVATION
- OBSCURED CONTOUR
- SHRUB LINE
- DEPRESSION CONTOUR
- STAND PIPE
- SLURRY WALL
- LEACHATE COLLECTION SYSTEM
- MONITORING PLAN SURFICIAL AQUIFER WELL
- MONITORING PLAN PIEZOMETER
- MONITORING PLAN ARTESIAN AQUIFER WELL
- BORING LOCATION
- GAS MONITORING WELL
- GAS MONITORING POINT
- SURFACE WATER MONITORING POINT

NOTES:

1) ALL WELL, BORING, AND PIEZOMETER LOCATIONS ARE APPROXIMATE AND SHOWN FOR ILLUSTRATIVE PURPOSES ONLY.

TH-26 IS 600 FEET NORTH OF TH-27

TH-25 IS 650 FEET NORTH OF TH-24

TH-22 & MW 22 ARE 650 FEET NORTH OF TH-29

TH-34 IS 600 FEET NORTH OF TH-33

PROCESSING OF C&D WASTE, YARD WASTE, WHITE GOODS AND TIRES WILL BE MOVED TO THIS AREA IN THE FUTURE.

CONSTRUCTION DETAILS FOR WASTE TIRE FACILITY WILL BE THE SAME AS PRESENT WASTE TIRE FACILITY.

STAGE II

SMR 1&2 APPROX. 1800 FEET EAST OF SLURRY WALL

FUTURE LOCATION OF OFFICE AND MAINTENANCE FACILITIES.

NOTE:1.ALL OFFICE AND MAINTENANCE FACILITIES TO BE RELOCATED.
2.LOCATION OF SLURRY WALL,LEACHATE COLLECTION SYSTEM, BORINGS,AND SAMPLING POINTS ARE APPROXIMATE.

YARD WASTE PROCESSING

WASTE TIRE FACILITY

STORM WATER OUTFALL

C SLURRY WALL = C ROAD

WET WEATHER

E	ADD SWM PTS/ MOD ANC. AREA	7/98	JAM	FWS	FWS	FWS								
D	MONITORING WELL / TIRE DETAILS MOD	3/98	JES	FWS	FWS	FWS								
C	MONITORING WELL LOCATIONS MODIFIED	1/98	JES	FWS	FWS	FWS								
B	PLANS FOR PERMIT APPLICATION ONLY	12/97	ME	FWS	FWS	FWS								
A	30 PERCENT PLANS	10/97	TJT	DMP	FWS									
Issue No.	Description	Date	Drawn.	Chkd.	Resp. Engr.	Proj. Mgr.	Issue No.	Description	Date	Drawn.	Chkd.	Resp. Engr.	Proj. Mgr.	

HDR Engineering, Inc.
Tampa, Florida

MANATEE COUNTY FLORIDA

Project Manager: F. SEBESTA

Architect	I&C/Process
-	-
Civil: D. PELHAM	Mechanical: -
Electrical: -	Structural: -
Environmental: -	Drawn By: -

LENA ROAD LANDFILL OPERATIONS PERMIT

MANATEE COUNTY FLORIDA

Plot Plan and Topographic Map North

Date	Project No.	Drawing No.	Issue
7/98	07982-024-096	2A	E

Scale: As Noted

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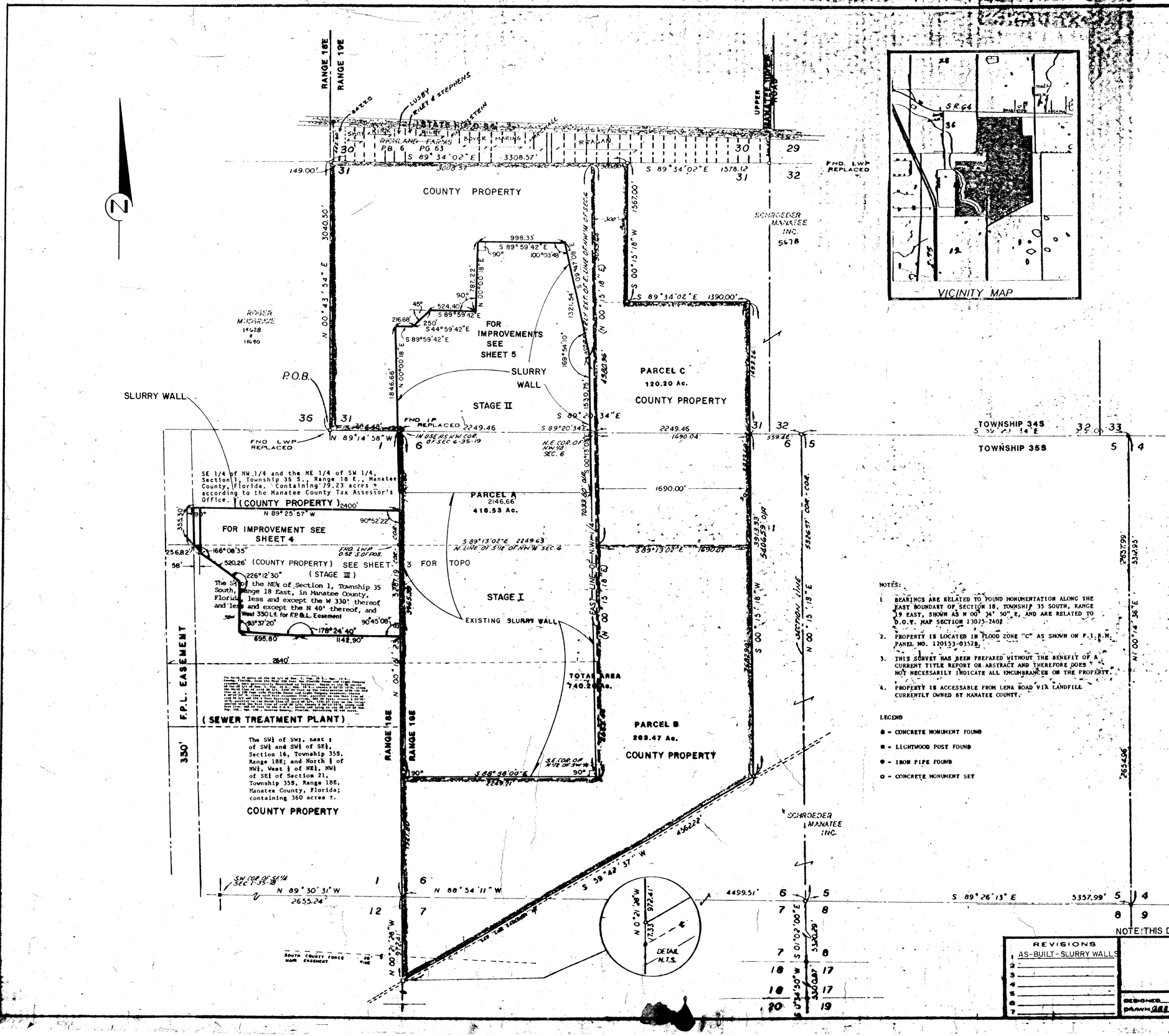


BEST AVAILABLE COPY

1094169 (6)

SE 1/4 of NW 1/4 and the NE 1/4 of SW 1/4, Section 1, Township 35 S., Range 18 E., Manatee County, Florida. Containing 79.23 acres + according to the Manatee County Tax Assessor's Office.

The S 1/2 of the NE 1/4 of Section 1, Township 35 South, Range 18 East, in Manatee County, Florida, less and except the W 330' thereof and less and except the N 40' thereof, and West 330 Lf. for F.P.&L. Easement

The SW 1/4 of SW 1/4, East 1/2 of SW 1/4 and SW 1/4 of SE 1/4, Section 16, Township 35S, Range 18E; and North 1/2 of NW 1/4, West 1/2 of NE 1/4, NW 1/4 of SE 1/4 of Section 21, Township 35S, Range 18E, Manatee County, Florida; containing 360 acres ±.

VICINITY MAP

PARCEL "A" (FORMERLY PARCEL A AND B) DESCRIPTION: AS FURNISHED

THE SOUTH 1/2 OF THE N.W. 1/4 AND THE NORTH 1/2 OF THE S.W. 1/4 OF SECTION 6, TOWNSHIP 35 SOUTH, RANGE 19 EAST.

ALSO;

THE NORTH 1/2 OF THE N.W. 1/4 OF SECTION 6, TOWNSHIP 35 SOUTH, RANGE 19 EAST, AND ALL OF SECTION 31, TOWNSHIP 34 SOUTH, RANGE 19 EAST; LESS THAT PART OF SECTION 31, LYING EAST OF A LINE WHICH IS THE NORTHERLY EXTENSION OF THE EAST LINE OF THE N.W. 1/4 OF SECTION 6, TOWNSHIP 35 SOUTH, RANGE 19 EAST.

PARCEL "B" DESCRIPTION: AS FURNISHED.

THAT PART OF SECTION 6, TOWNSHIP 35 SOUTH, RANGE 19 EAST, LYING NORTHERLY OF THE NORTHERLY LINE OF THAT CERTAIN GAS LINE EASEMENT RUNNING DIAGONALLY THROUGH THE PROPERTY; LESS THE SOUTH 1/2 OF THE N.W. 1/4 AND THE NORTH 1/2 OF THE S.W. 1/4 OF SAID SECTION 6; ALSO LESS THAT PART OF SECTION 6, LYING NORTHERLY OF A LINE WHICH IS THE EASTERLY EXTENSION OF THE NORTH LINE OF THE SOUTH 1/2 OF THE N.W. 1/4 OF SAID SECTION 6; ALSO LESS THAT PART OF SECTION 6 LYING EASTERLY OF A LINE WHICH IS PARALLEL WITH AND 1690 FEET EASTERLY OF THE EAST LINE OF THE N.W. 1/4 OF SAID SECTION 6 AND ANY NORTHERLY OR SOUTHERLY EXTENSION THEREOF.

ALSO:

THAT PART OF SECTION 7, TOWNSHIP 35 SOUTH, RANGE 19 EAST LYING NORTHERLY OF THE NORTHERLY LINE OF THAT CERTAIN GAS LINE EASEMENT RUNNING DIAGONALLY THROUGH THE PROPERTY.

PARCEL "C" DESCRIPTION: AS FURNISHED

THAT PART OF SECTION 6, TOWNSHIP 35 SOUTH, RANGE 19 EAST, MORE FULLY DESCRIBED AS BEING BOUNDED ON THE NORTH BY THE NORTH LINE OF SAID SECTION 6, AND BOUNDED ON THE WEST BY THE EAST LINE OF THE N.W. 1/4 OF SAID SECTION 6, AND BOUNDED ON THE SOUTH BY THE EASTERLY EXTENSION OF THE NORTH LINE OF THE SOUTH 1/2 OF THE N.W. 1/4 OF SAID SECTION 6, AND BOUNDED ON THE EAST BY A LINE WHICH LIES 1690 FEET EASTERLY OF AND PARALLEL WITH THE EAST LINE OF THE N.W. 1/4 OF SAID SECTION 6

ALSO:

THAT PART OF SECTION 31, TOWNSHIP 34 SOUTH, RANGE 19 EAST, MORE FULLY DESCRIBED AS BEING BOUNDED ON THE NORTH BY THE NORTH LINE OF SAID SECTION 31, AND BOUNDED ON THE WEST BY A LINE WHICH IS THE NORTHERLY EXTENSION OF THE EAST LINE OF THE N.W. 1/4 OF SECTION 6, TOWNSHIP 35 SOUTH, RANGE 19 EAST, AND BOUNDED ON THE SOUTH BY A LINE WHICH LIES 1567 FEET SOUTHERLY OF AND PARALLEL WITH THE NORTH LINE OF SECTION 31, TOWNSHIP 34 SOUTH, RANGE 19 EAST AND BOUNDED ON THE EAST BY A LINE WHICH LIES 300 FEET EASTERLY OF AND PARALLEL WITH THE NORTHERLY EXTENSION OF THE EAST LINE OF THE N.W. 1/4 OF SECTION 6, TOWNSHIP 35 SOUTH, RANGE 19 EAST.

ALSO:

THAT PART OF SECTION 31, TOWNSHIP 34 SOUTH, RANGE 19 EAST, MORE FULLY DESCRIBED AS BEING BOUNDED ON THE NORTH BY A LINE WHICH LIES 1567 FEET SOUTHERLY OF AND PARALLEL WITH THE NORTH LINE OF SECTION 31, TOWNSHIP 34 SOUTH, RANGE 19 EAST AND BOUNDED ON THE WEST BY THE NORTHERLY EXTENSION OF THE EAST LINE OF THE N.W. 1/4 OF SECTION 6, TOWNSHIP 35 SOUTH, RANGE 19 EAST, AND BOUNDED ON THE SOUTH BY THE SOUTH LINE OF SECTION 31, TOWNSHIP 34 SOUTH, RANGE 19 EAST, (ALSO BEING THE NORTH LINE OF SECTION 6, TOWNSHIP 35 SOUTH, RANGE 19 EAST) AND BOUNDED ON THE EAST BY A LINE WHICH LIES 1690 FEET EAST OF AND PARALLEL WITH THE NORTHERLY EXTENSION OF THE EAST LINE OF THE N.W. 1/4 OF SECTION 6, TOWNSHIP 35 SOUTH, RANGE 19 EAST.

ALL OF THE ABOVE BEING AND LYING IN MANATEE COUNTY, FLORIDA.

DESCRIPTION:

PARCELS A, B AND C, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE S.W. CORNER OF SECTION 31, TOWNSHIP 34 SOUTH, RANGE 19 EAST; THENCE N 00° 43' 54" E, ALONG WEST BOUNDARY OF SAID SECTION 31, A DISTANCE OF 3040.50 FEET TO THE N.W. CORNER OF SAID SECTION 31; THENCE S 89° 34' 02" E, ALONG NORTH BOUNDARY OF SAID SECTION 31, A DISTANCE OF 3308.57 FEET; THENCE S 00° 15' 18" A DISTANCE OF 1567.00 FEET; THENCE S 89° 34' 02" E, A DISTANCE OF 1390.00 FEET; THENCE S 00° 15' 18" W, DISTANCE OF 5406.39 FEET TO THE NORTH RIGHT OF WAY LINE OF A GAS LINE EASEMENT; THENCE S 59° 42' 37" W, ALONG SAID RIGHT OF WAY LINE, A DISTANCE OF 4562.22 FEET TO THE WEST BOUNDARY OF SECTION 7, TOWNSHIP 35 SOUTH, RANGE 19 EAST; THENCE N 00° 21' 28" W, ALONG SAID WEST BOUNDARY LINE OF SAID SECTION 7, TO THE S.W. CORNER OF SECTION 6, TOWNSHIP 35 SOUTH, RANGE 19 EAST; THENCE N 00° 15' 23" E, ALONG WEST BOUNDARY OF SAID SECTION 6, A DISTANCE OF 5287.19 FEET TO THE N.W. CORNER OF SAID SECTION 6; THENCE N 89° 14' 58" W, ALONG SOUTH BOUNDARY OF SECTION 31, TOWNSHIP 34 SOUTH, RANGE 19 EAST, A DISTANCE OF 784.48 FEET TO THE POINT OF BEGINNING. LYING AND BEING IN MANATEE COUNTY, FLORIDA.

SUBJECT TO PERTINENT EASEMENTS, RIGHTS OF WAY AND RESTRICTIONS OF RECORD.

CONTAINING 740.20 ACRES, MORE OR LESS.

NOTES:

1 BEARINGS ARE RELATED TO FOUND MONUMENTATION ALONG THE EAST BOUNDARY OF SECTION 18, TOWNSHIP 35 SOUTH, RANGE 19 EAST, SHOWN AS N 00° 34' 50" E, AND ARE RELATED TO D.O.T. MAP SECTION 13075-2402

2. PROPERTY IS LOCATED IN FLOOD ZONE "C" AS SHOWN ON F.I.R.M. PANEL NO. 120153-0352B.

3. THIS SURVEY HAS BEEN PREPARED WITHOUT THE BENEFIT OF A CURRENT TITLE REPORT OR ABSTRACT AND THEREFORE DOES NOT NECESSARILY INDICATE ALL ENCUMBRANCES ON THE PROPERTY.

4. PROPERTY IS ACCESSABLE FROM LENA ROAD VIA LANDFILL CURRENTLY OWNED BY MANATEE COUNTY.

LEGEND

▲ - CONCRETE MONUMENT FOUND
■ - LIGHTWOOD POST FOUND
● - IRON PIPE FOUND
○ - CONCRETE MONUMENT SET

BOUNDARY SURVEY
OF
MANATEE COUNTY LANDFILL
IN
SEC 31 TWP 34 S., RGE 19 E.&
SEC 6&7, TWP 35 S., RGE 19 E.
MANATEE COUNTY, FLORIDA

FOR : MANATEE COUNTY

NOTE: THIS DWG. IS A SEPIA OF SHEET 2 FOR PROJECT 485-0190-534

REVISIONS
1 AS-BUILT-SLURRY WALLS
2
3
4
5
6
7

DRAWING NUMBER 3

PROJECT 485-0190-530

DESIGNED M.V. CHECKED GGS/ DATE 1/3/90 SCALE 1"=
DRAWN GGS COMP. ___ JOB NO. ___ FILE NO. SHEET 2 OF 12

Appendix C

FDEP
Comprehensive Quality Assurance Plan
Approval

FLORIDA

Department of
Environmental Protection

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Lawton Chiles
Governor

Virginia B. Wetherell
Secretary

June 17, 1997

MR. E E PENNELL
P E LAMOREAUX & ASSOCIATES
4320 OLD HWY 37
LAKELAND, FL 33807

SUBJECT: Quality Assurance Review; P E LAMOREAUX & ASSOCIATES Comprehensive QA Plan; CompQAP #870072, Submittal #14; Annual Renewal

Dear Mr. Pennell:

The amendment for the referenced document was received on May 22, 1997 and was reviewed with the supporting information. The CompQAP for your organization is approved as annotated for the Analytical methods per Tables 2.2.1-2.3.3.21 and the Field Sampling activities in Table 2.1 of your CompQAP with the conditions stated below.

This approval required annotations to the CompQAP (see attached pages). **The necessary changes to your procedures, as a result of these annotations, must be implemented immediately as a condition of this approval.** Revised pages to reflect these changes must be included with your next submittal.

Your next amendments must include revisions that address all comments or annotations made with this review, to include the annotated pages copied from the CompQAP. These amendments must be received with the next renewal, which is due May 23, 1998, unless you anticipate the addition of new capabilities. If you anticipate the addition of new capabilities all required changes stated in this review must be addressed with the next amendment to the document.

If you have any questions concerning this matter, please call Michael Blizzard (staff reviewer) at (904) 921-9727 (direct line) or e-mail at blizzard_m@dep.state.fl.us.

Sincerely,

Sylvia S. Labie, QA Officer
Quality Assurance Section

SSL/mwb

Attachments (1): Copies of Annotated QAP pages

c: CompQAP
FDOH, Water Certification (with copy of Section 2)

PELA

COMPREHENSIVE QUALITY ASSURANCE PLAN

(PLAN # 870072G)

for

P.E. LaMoreaux & Associates, Inc.
4320 Old Highway 37
Lakeland, FL 33813
(941) 646-8526
Fax (941) 646-1042

REVISED MAY 97

STATEMENT OF INTENT TO COMPLY WITH THE DEPARTMENT OF ENVIRONMENTAL REGULATION STANDARD OPERATING PROCEDURES FOR LABORATORY OPERATIONS AND SAMPLE COLLECTION ACTIVITIES

FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION
Quality Assurance Section

Part I: STANDARD OPERATING PROCEDURES TO BE INCORPORATED INTO COMPREHENSIVE QA PLANS

Name of Organization:

P. E. LAMOREAUX & ASSOCIATES, INC.

Address:

4320 OLD HIGHWAY 37, LAKELAND, FL. 33813

Comprehensive QA Plan Number: 870072G

Check the specific protocols that your organization will be using while collecting and/or analyzing environmental samples. NOTE check only documents and protocols as listed in the "DER Standard Operating Procedures for Laboratory Operations and Sampl. Collection Activities" (DER-QA-001/92) dated September 30, 1992 for which your organization has current equipment capabilities

THIS FORM MUST BE ACCOMPANIED BY THE SUPPORTING DOCUMENTATION SPECIFIED IN DER-QA-001/92

__X__ ORGANIZATION AND RESPONSIBILITY (Chapter 3)

FIELD ACTIVITIES (Chapter 4):

Field Decontamination and Cleaning Protocols:

__X__ Container Cleaning protocols (4.4.1):
- ___ Sample containers cleaned by organization
- __X__ Sample containers obtained precleaned from commercial vendor
- ___ Sample containers obtained precleaned from laboratory with an approved Comprehensive QA Plan

__X__ General Considerations and Reagents (4.1.1 through 4.1.3)
__X__ Sampling Equipment (4.1.4)
__X__ Automatic Samplers (4.1.5)
__X__ Field Filtration Equipment (4.1.6)
__X__ Teflon Tubing (4.1.7.1)
__X__ Non-teflon Tubing (4.1.7.2 through 4.1.7.5)
__X__ Pumps used only for Purging (4.1.8.1 and 4.1.8.2)
__X__ Pumps used for Purging and Sampling (4.1.8.1 and 4.1.8.2)
__X__ Non-Sampling Equipment (Augers, etc.) (4.1.9)
__X__ Analyte-Free Water Containers (4.1.10)
__X__ Ice Chests and Shipping Containers (4.1.11)
__X__ Field Meters, Flow Meters and Other Field Instruments including Lanyards, Well Sounders and Tapes (4.1.9)

Sampling Protocols:

__X__ General (4.0)

Aqueous Matrices:

__X__ General Concerns and Special Sample Handling Procedures (4.2.1 and 4.2.2)
__X__ Surface Water (4.2.3)
__X__ Wastewater (4.2.4)
__X__ Groundwater (4.2.5)
__X__ Wells with in-place Plumbing (4.2.6)
__X__ Potable Well Sampling (4.2.7)
__X__ Drinking Water Supply System (4.2.8)
__X__ Temporary Well Points (4.2.9)
___ Air Stripper and Remedial Treatment Systems (4.2.10)
___ Bioassay (4.2.11)

Solid Matrices:

__X__ General Concerns and Special Sample Handling Procedures (4.3.1 through 4.3.3)
__X__ Soil (4.3.4)
__X__ Sediment (4.3.5)
___ Fish Tissue (4.3.6)
___ Shellfish (4.3.7)
__X__ Domestic Waste Sludges (Residuals) (4.3.8)
__X__ Sludges - Solid and Hazardous Wastes (4.3.9)
__X__ Liquid Hazardous Wastes (4.3.9)
___ Macrobenthic Invertebrates (4.3.10)

Preservation, Holding Times and Containers Types:

__X__ Aqueous samples - 40 CFR Part 136, Table II (4.4.2)
__X__ Aqueous samples - 17-160.700, F.A.C., Table 4 (4.4.2)
__X__ Aqueous samples - 17-160.700, F.A.C., Table 8 (4.4.2)
__X__ Solid samples - 17-160.700, F.A.C., Table 5 (4.4.2)

TABLE OF CONTENTS

Part II: CERTIFICATION

The undersigned, AMAL EL-SHERIF MOSTAFA (name) LABORATORY DIRECTOR (title) P.E. LAMOREAUX & ASSOCIATES, INC. (organization), and E.E. PENNELL (name) QUALITY ASSURANCE OFFICER (title) P.E. LAMOREAUX & ASSOCIATES, INC. (organization), hereby certify that they have obtained copies of all documents pertinent to the products that they have identified on the document titled "Standard Operating Procedures to be Incorporated into Comprehensive QA Plans" and that these documents shall be incorporated by reference into the Comprehensive Quality Assurance Plan attached hereto or identified herein. They further certify that the organization of which they are officials or officers as identified herein has the instrumentation and/or equipment and capability to perform the protocols specified by these documents and that they will be responsible for the implementation of said protocols when performing the specified activity. They certify that the officials and employees of the organization identified herein are committed to generating data of a known and verifiable quality. They further certify that they understand that final approval of the Comprehensive Quality Assurance Plan attached hereto or identified herein in contingent upon satisfying the Department's review requirements.

They further certify that the information, statements, facts and representations given and made above are true and correct to the best of their knowledge and belief, and that they are aware that any misrepresentations or falsifications constitute grounds for rejection of approval of the Comprehensive QA Plan attached hereto or identified herein, and that anyone who knowingly makes a false statement in writing with the intent to mislead a public servant in the performance of his official duty shall be guilty of a misdemeanor, or the second degree in violation of Section 837.06, Florida Statutes.

5-14-97
DATE

Amal M. Stafa

(print name AMAL MOSTAFA)

(Title: LABORATORY DIRECTOR)

(Organization: P.E. LAMOREAUX & ASSOCIATES, INC.)

5-14-97
DATE

E E Pennell

(print name E.E. PENNELL)

Quality Assurance Officer(s)

(Organization: P.E. LAMOREAUX & ASSOCIATES, INC.)

5/20/97
DATE

Lois D George

(print name LOIS D. GEORGE)

(Title: Corporate QA Officer, Laboratory Activities)

(Organization: P.E. LAMOREAUX & ASSOCIATES, INC.)

5/20/97
DATE

James W Lamoreaux

(print name JAMES W. LAMOREAUX)

(Title: PRESIDENT, CHAIRMAN OF THE BOARD)

(Organization: P.E. LAMOREAUX & ASSOCIATES, INC.)

Part I: STANDARD OPERATING PROCEDURES TO BE INCORPORATED INTO COMPREHENSIVE QA PLANS, cont.

Preservatives are:

- X Provided by the laboratory in separate containers
- X Provided by the laboratory already premeasured into the containers
- ___ Provided by the field consultant

Field-Related Activities:

- X Sample Dispatch (4.4.3)
- X Reagent and Standard Storage (4.4.4)
- X Field Waste Disposal (4.4.5)

SAMPLE CUSTODY AND DOCUMENTATION (Chapter 5):

- X General Requirements (5.1)
- X Preparation of Field-Sampling Supplies (5.2)
- X Custody and Documentation for Field Operations (5.3)
- X Custody and Documentation for Laboratory Operations (5.4)
- X Electronic Data Documentation (5.5)
- X Legal or Evidentiary Custody (5.6)

ANALYTICAL PROCEDURES (Chapter 6):

- X Laboratory Glassware Cleaning and Storage Protocols (6.1)
- X Laboratory Reagent Storage (6.2)
- X Laboratory Waste Disposal (6.3)

CALIBRATION PROCEDURES AND FREQUENCY (Chapter 7):

- X General Requirements and Documentation (7.1, 7.2, 7.8 and 7.9)
- X Standard Receipt and Traceability (Sec. 7.3)
- X Frequency of Standard Preparation and Standard Storage (Sec. 7.4)

Field:

- X General Requirements (7.5.1)
- X pH (7.5.2)
- X Temperature (7.5.3)
- X Dissolved Oxygen (7.5.4)
- X Specific Conductance (7.5.5)
- X Chlorine Measurements (7.5.6)
- X OVAs (7.5.7)
- X Automatic Wastewater-type Samplers (7.5.8)

Laboratory:

- X Laboratory Instruments (7.6)
- X Support Equipment Calibration (7.7)

X **PREVENTATIVE MAINTENANCE (Chapter 8.0)**

QUALITY CONTROL REQUIREMENTS AND ROUTINES TO CALCULATE AND ASSESS PRECISION, ACCURACY AND METHOD DETECTION LIMITS (Chapter 9):

- X Documentation (9.4)

Field Quality Control Requirements:

- X Minimum Field Quality Control Requirements (9.1.1)

Laboratory Quality Control Requirements:

- X Chemical Analysis (9.1.2.1)
- X Microbiological Analysis (9.1.2.2)
- ___ Toxicity (Bioassay) Tests (9.1.2.3)
- ___ Macrobenthic Species Identification (9.1.2.4)
- X Formulae for Calculating and Assessing Precision and Accuracy (9.2)
- X Formulae for Calculating Method Detection Limits (9.3)

X **DATA REDUCTION, VALIDATION AND REPORTING (Chapter 10)**

X **CORRECTIVE ACTION (Chapter 11)**

X **PERFORMANCE AND SYSTEMS AUDITS (Chapter 12)**

X **QUALITY ASSURANCE REPORTS (Chapter 13)**

DER Form 17-160 [illegible] Revised 12-92

Appendix D-1

Financial Assurance Tables (1997)

Manatee County, Florida

Lena Road Landfill
Annual Cost Adjustment Statement

August 26, 1997

This Annual Cost Adjustment Statement, required by Rule 62-701.630(4)(b) FAC, has been prepared for Manatee County by HDR Engineering, Inc. The adjustment is based on the Financial Assurance Cost Estimates (Applicable to Stages 1,2 and 3 of Lena Road Landfill) submitted to Florida Department of Environmental Protection on September 30, 1997 and subsequently approved by the Department as well as the inflation factor calculated below.

Item	Estimate Year 1996	1997
Estimated Closure Cost	$ 26,740,030	$ 27,274,831
Estimated Long-Term Care Cost (30 Years)	$ 12,162,257	$ 12,405,502

Calculation of Inflation Factor

The FDEP, in Rule 62-701.630 FAC establishes the method for inflating cost estimates for financial responsibility by referencing and adopting 40 CFR Part 264 Subpart H, which sets forth the method of annual adjustment for cost estimates used for establishing financial responsibility. These regulations specify that such adjustment may be made by recalculating the maximum costs of closure in current dollars, or by using an inflation factor derived from the most recent Implicit Price Deflator for Gross National Product published by the U. S. Department of Commerce in its Survey of Current Business. The inflation factor is the result of dividing the latest published annual Deflator by the Deflator for the previous year. The annual deflators are calculated by averaging four quarterly deflators.

Quarter	Deflator
2nd 1995	107.32
3rd 1995	107.87
4th 1995	108.40
1st 1996	108.98
Total	432.57
Average	108.14
2nd 1996	109.46
3rd 1996	109.92
4th 1996	110.32
1st 1997	110.93
Total	440.63
Average	110.16

Inflation Factor = Current Deflator/Previous Deflator

Inflation Factor = 1.02

Note: Gross National Product Implicit Price Deflators were taken from July 1997 issue of *Survey of Current Business.*

Certification by Engineer

Fred W. Sebesta 8/26/97

Fred W. Sebesta, P.E.
Senior Project Manager
Florida Registration Number 38264
August 26, 1997

HDR Engineering, Inc.
5100 West Kennedy Blvd., Suite 300
Tampa, Florida 33609

(813) 287-1960

Manatee County

Lena Road Landfill
Remaining Life Projection [1]

August 15, 1997

MSW Compacted Dens 1,250 Cover Material (% of MSW Vol.): 20%

Year	Population [2]	Total Landfilled [3] (TPY)	Per Capita Amount Landfilled (TPCPY)	MSW Volume (CY)	Cover Volume (CY)	Total Volume (CY)	Cumulative Total Volume (CY)	Remaining Capacity [4] Beginning of Year (CY)
1990	211,707	296,936	1.40	475,098	95,020	570,117		
1991	216,086	314,634	1.46	503,414	100,683	604,097		
1992	220,464	323,074	1.47	516,918	103,384	620,302	620,302	27,500,000
1993	224,843	312,675	1.39	500,280	100,056	600,336	1,220,638	26,279,362
1994	229,221	360,080	1.57	576,128	115,226	691,354	1,911,992	25,588,008
1995	233,600	358,692	1.54	573,907	114,781	688,689	2,600,680	24,899,320
1996	236,778	361,489	1.53	578,382	115,676	694,059	3,294,739	24,205,261
1997	241,333	359,796	1.49	575,673	115,135	690,808	3,985,547	23,514,453
1998	245,889	368,014	1.50	588,822	117,764	706,586	4,692,134	22,807,866
1999	250,444	376,135	1.50	601,817	120,363	722,180	5,414,313	22,085,687
2000	254,999	387,704	1.52	620,327	124,065	744,392	6,158,706	21,341,294
2001	259,200	391,912	1.51	627,059	125,412	752,471	6,911,176	20,588,824
2002	263,401	397,233	1.51	635,572	127,114	762,687	7,673,863	19,826,137
2003	267,603	402,738	1.50	644,381	128,876	773,258	8,447,121	19,052,879
2004	271,804	409,701	1.51	655,521	131,104	786,625	9,233,746	18,266,254
2005	276,005	416,524	1.51	666,439	133,288	799,726	10,033,472	17,466,528
2006	280,503	423,651	1.51	677,842	135,568	813,411	10,846,883	16,653,117
2007	285,002	429,966	1.51	687,946	137,589	825,535	11,672,418	15,827,582
2008	289,500	436,591	1.51	698,545	139,709	838,254	12,510,672	14,989,328
2009	293,999	443,374	1.51	709,399	141,880	851,279	13,361,951	14,138,049
2010	298,497	450,312	1.51	720,500	144,100	864,600	14,226,550	13,273,450
2011	302,995	457,162	1.51	731,459	146,292	877,751	15,104,302	12,395,698
2012	307,494	463,934	1.51	742,294	148,459	890,752	15,995,054	11,504,946
2013	311,992	470,639	1.51	753,022	150,604	903,627	16,898,681	10,601,319
2014	316,491	477,417	1.51	763,867	152,773	916,641	17,815,321	9,684,679
2015	320,989	484,223	1.51	774,757	154,951	929,709	18,745,030	8,754,970
2016	325,487	491,034	1.51	785,654	157,131	942,785	19,687,816	7,812,184
2017	329,986	497,821	1.51	796,514	159,303	955,816	20,643,632	6,856,368
2018	334,484	504,596	1.51	807,354	161,471	968,825	21,612,457	5,887,543
2019	338,983	511,373	1.51	818,196	163,639	981,836	22,594,293	4,905,707
2020	343,481	518,162	1.51	829,059	165,812	994,871	23,589,164	3,910,836
2021	347,979	524,953	1.51	839,925	167,985	1,007,910	24,597,074	2,902,926
2022	352,478	531,742	1.51	850,787	170,157	1,020,944	25,618,018	1,881,982
2023	**356,976**	**538,526**	**1.51**	**861,642**	**172,328**	**1,033,970**	**26,651,989**	**848,011**
2024	361,475	545,310	1.51	872,496	174,499	1,046,996	27,698,984	(198,984)
2025	365,973	552,096	1.51	883,353	176,671	1,060,024	28,759,008	(1,259,008)

Lena Road Landfill is projected to provide disposal space until 2023.

Notes:
1. August 1992 contours and projected final contours from the closing plan were used as the basis of this projection.
2. Population projected based on projections from" Florida Population Studies, Volume 30, Number 3, Bulletin 118, July 1997," University of Florida, Bureau of Economic and Business Research.
3. Waste landfilled is projected based upon historical scale data, population projections and a moving 5 year per capita average rate of waste landfilled.
4. Remaining landfill capacity estimated by HDR based on the Manatee County drawings 6, 8 and 9 of Project 485-4615-534.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

FINANCIAL ASSURANCE COST ESTIMATES

Date: September 27, 1996

Date of FDEP Approval: _____

I. GENERAL INFORMATION:

Facility Name: Manatee County Lena Road Landfill GMS No.: 4041C02025

Permit No.: SO41-211176 Expiration Date: April 1, 1998

Address (facility): 3333 Lena Road, Bradenton, FL 34202

Address (mailing): 4615 66th Street West, Bradenton, FL 34210

Permittee (operating authority): Manatee County Government

Facility Lat. 27°28'00" N Long 82°27'00" W or UTM's _____

Description of the Solid Waste Disposal Units included: Class I sanitary landfill, C&D facility, waste tire processing and used oil collection center, (Stages I, II and III are included.)

Landfill Acreage included in this Estimate: 312

Date Disposal Unit Began Accepting Waste 1972 Design Life of Disposal Unit 50 years

Type of Landfill: X Class I _____ Class III

_____ Exempt; Type of Exemption: _____

Closure Plan Approved: [Yes] / No

II. TYPE OF FINANCIAL DOCUMENT SUBMITTED TO ENSURE FINANCIAL ASSURANCE:

_____ Trust Fund Agreement
_____ Letter of Credit
_____ Insurance Certificate
_____ Financial Guarantee Bond
_____ Performance Bond (only for landfills with an approved closure plan)
_____ Standby Trust Fund Agreement
X Escrow Account
_____ Other (Explain) _____

III. ESTIMATED CLOSING COST

For the time period in the landfill operation when the extent and manner of its operation makes closing most expensive.

**** Third Party Estimate/Quote must be provided for each item.**

**** Costs must be for a third party providing all material and labor.**

All items must be addressed. Attach a detailed explanation for all items marked not applicable (N/A).

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL**	
1. Monitoring Wells:					
Borehole Excavation	CY				
Backfill	CY				
Gravel Pack	CY				
Casing	LF				
Screen	EA				
Cap	EA				
			Subtotal Monitoring Wells		NA
2. Slope and Fill:					
Excavation	CY				
Placement/Spreading	CY	1,253,366	$ 1.00	$ 1,253,366	
Compaction	CY	1,253,366	$ 0.75	$ 940,025	
Off-Site Material	CY	1,253,366	$ 3.25	$ 4,073,440	
			Subtotal Slope and Fill		$6,266,830
3. Cover Material (Barrier Layer):					
Off-Site Clay	CY				
On-Site Clay	CY				
Synthetics - 40 mil	SY	1,510,080	$ 3.08	$ 4,643,496	
Synthetics - 30 mil	SY				
Synthetics - GCL	SY	1,510,080	$ 4.00	$ 6,036,545	
			Subtotal Cover Material		$ 10,680,041

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL**
4. Top Soil Cover:				
On-Site Material	CY			
Off-Site Material	CY	251,680	$ 6.15	$ 1,547,832.00
Delivery	CY			
Spreading	LF			
Compaction	EA			
			Subtotal Top Soil Cover	$ 1,547,832
5. Stormwater Control:				
Excavation, Grading & Recontouring	CY	5,691	$ 1.38	$ 7,874.92
Stormwater Sideslope Conveyances	EA	67	$ 10,593.38	$ 709,756.13
Ditch Construction	LF			
Berm Construction	CY			
			Subtotal Stormwater Control	$ 717,631
6. Gas Migration Control:				
Wells	LF	12,600	$ 93.96	$ 1,183,918.05
Pipe and Fittings	LF			
Traps	EA			
Sump	EA			
Flare Assembly	EA			
Flame Arrestor	EA			
Mist Eliminator	EA			
Flow Meter	EA			
Blowers	EA			
Monitoring Probes	EA			
			Subtotal Gas Migration Control	$ 1,183,918

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL**	
7. Revegetation:					
Sodding	SY	1,510,080	$ 1.25	$ 1,887,600	
Soil Preparation/Grading	SY				
Hydroseeding	AC				
Fertilizer	AC				
Mulch	AC				
			Subtotal Revegetation		$ 1,887,600
8. Landscape Irrigation System:					
Pipe and Fittings	LF				
Pumps	EA				
			Subtotal Landscape Irrigation System		NA
9. Security System:					
Fencing	LF				
Gate(s)	EA				
Sign(s)	EA				
			Subtotal Security System		NA
10. Engineering:					
Closure Plan Report	LS				
Certified Engineering Drawings (for construction)	LS	1	$ 179,375.00	$ 179,375.00	
Closure Permit	LS	1	$ 266,500.00	$ 266,500.00	
Other (Detail): Construction Specifications		1	$ 102,500.00	$ 102,500.00	
			Subtotal Engineering		$ 548,375

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL**	
11. Benchmark Installation	EA				
Benchmark Survey	LS				
				Subtotal Benchmark Installation	NA
12. Certification of Closure	LS	1	$ 15,375.00	$ 15,375.00	
				Subtotal Certification of Closure	$ 15,375
13. Administrative:		Hours	@ $/hour		
P.E. Supervisor	HR	742	$ 102.86	$ 76,321.19	
On-Site Engineer	HR	3,226	$ 85.85	$ 276,965.00	
Office Engineer	HR	323	$ 68.70	$ 22,188.65	
On-Site Technician	HR	3,226	$ 49.20	$ 158,719.20	
Other-(explain): Clerical	HR	613	$ 33.83	$ 20,734.73	
				Subtotal Administrative	$ 554,929
14. Quality Assurance:		Hours	@ $/hour		
P.E. Supervisor	HR	400	$ 92.50	$ 37,000.00	
On-Site Engineer	HR	96	$ 82.50	$ 7,920.00	
Office Engineer	HR	160	$ 82.50	$ 13,200.00	
On-Site Technician	HR	2,880	$ 48.50	$ 139,680.00	
QA Testing	LS	1	$ 195,262.50	$ 195,262.50	
Other-(explain):	HR				
Clerical, report prep, review				$ 20,500.00	
				Subtotal Quality Assurance	$ 413,563

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL**

15. Site Specific Costs (explain):

Waste Tire Facility (if applicable)				$ 11,275.00	
Construction Mobilization				$ 481,750.00	
				Subtotal Site Specific Costs	$ 493,025
16. Contingency	% of Total	10%			$ 2,430,912
				TOTAL CLOSING COSTS	$ 26,740,030

CERTIFICATION BY ENGINEER

This is to certify that the Financial Assurance Cost Estimates pertaining to the engineering features of this solid waste management facility have been examined by me and found to conform to engineering principals applicable to such facilities. In my professional judgment, the Cost Estimates are a true, correct and complete representation of the financial liabilities for closing and long-term care of the facility, and comply with the requirements of Florida Administrative Code (FAC), Rule 17-701.630 and all other Department of Environmental Protection rules, and statutes of the State of Florida. It is understood that the Financial Assurance Cost Estimates shall be revised and submitted to the Department **annually** as required by FAC 17-701.630(4).

Signature

Fred W. Sebesta, P.E.
Senior Project Manager
Name and Title (please type)

38264
Florida Registration Number (please affix seal)

HDR Engineering, Inc.
5100 West Kennedy Blvd., Suite 300
Mailing Address

Tampa, Florida 33609
City, State, Zip Code

(813) 287-1960
Telephone Number

Date: September 27, 1996

IV. ANNUAL COST FOR LONG-TERM CARE

(for 20 or 30 yrs., see 62-701.600(1)a.1.)

(circle one)

****Third Party Estimate/Quote must be provided for each item.**

****Costs must be for a third party providing material and labor.**

All items must be addressed. Attach a detailed explanation for all items marked not applicable (N/A).

DESCRIPTION	UNIT (A)	QUANTITY (B)	UNIT COST (C)	ANNUAL COST** (D)=(A)x(B)x(C)
1. Groundwater Monitoring 62-701.510(6),(8)(	sampling frequency events/yr	# of wells	$/well/event	$/yr
Monthly				
Quarterly				
Semi-Annual	2	27	$ 400.00	$ 21,600.00
Annual				
			Subtotal Groundwater Monitoring	$ 21,600
2. Gas Monitoring 62-701.400(10)	sampling frequency events/yr	# of locations	$/location/event	$/yr
Monthly				
Quarterly	4	20	$ 82.00	$ 6,560.00
Semi-Annual				
Annual				
			Subtotal Gas Migration Monitoring	$ 6,560
3. Leachate Monitoring 62-701.510(5),(6)(b), 62-701.510(8)(c)	sampling frequency events/yr	# of locations	$/location/event	$/yr
Monthly				
Quarterly				
Semi-Annual	2	1	$ 668.79	$ 1,337.58
Annual	1	1	$ 1,279.50	$ 1,279.50
			Subtotal Leachate Monitoring	$ 2,617

DESCRIPTION	UNIT (A)	QUANTITY (B)	UNIT COST (C)	ANNUAL COST** (D)=(A)x(B)x(C)
4. Surface Water Monitoring 62-701.510(4), (8)(b)	sampling frequency events/yr	# of locations	$/location/event	$/yr
Monthly				
Quarterly				
Semi-Annual	2	1	$ 1,060.79	$ 2,121.58
Annual				
			Subtotal Surfacewater Monitoring	$ 2,122

5. Maintenance of Leachate Collection/Treatment Systems

Collection Pipes	LF	23,500	$ 1.00	$ 23,500.00
Sumps, Traps	EA			
Lift Stations	EA	1	$ 105.58	$ 105.58
Impoundments-				
Liner Repair	SF			
Sludge Removal	CY	28	$ 23.23	$ 650.34
Aeration Systems-				
Floating Aerators	EA			
Spray Aerators	EA			
Off-Site Disposal (include transportation and disposal)	1000 gal	1,100	$ 2.53	$ 2,783.00

On-Site Pretreatment System Maintenance-(Describe)

Other (Describe)-

Replace/maintain valves, pumps & controls			$ 2,712.15
		Subtotal Leachate Collection/Treatment System Maintenance	$ 29,751

DESCRIPTION	UNIT (A)	QUANTITY (B)	UNIT COST (C)	ANNUAL COST** (D)=(A)x(B)x(C)	
6. Maintenance of Groundwater Monitoring Wells	LF	756	$ 7.11	$ 5,377.81	
		Subtotal Groundwater Monitoring Well Maintenance			$ 5,378
7. Maintenance of Gas Migration System					
Piping, Vents	LF	12,600	$ 0.41	$ 5,166.00	
Blowers	EA				
Flaring Units	EA				
Meters, Valves	EA				
		Subtotal Gas Migration System Maintenance			$ 5,166
8. Landscape Maintenance					
Mowing	AC	3,282	$ 55.43	$ 181,927.82	
Fertilizer	AC				
Irrigation	AC				
		Subtotal Landscape Maintenance			$ 181,928
9. Benchmark Maintenance	EA	1	$ 1,025.00	$ 1,025.00	
		Subtotal Benchmark Maintenance			$ 1,025
10. Administrative/Overhead		Hours	@ $/hour		
P.E. Supervisor	HR	278	$ 102.86	$ 28,594.73	
On-Site Engineer	HR	100	$ 85.85	$ 8,585.40	
Office Engineer	HR				
On-Site Technician	HR	632	$ 49.20	$ 31,094.40	
Other (explain):					
Electricity:	LS	See note 10.3	$ 51.25	$ 51.25	
- include Leachate Pumps, Blowers, Lighting, etc.					
		Subtotal Administrative			$ 68,326

DESCRIPTION	UNIT (A)	QUANTITY (B)	UNIT COST (C)	ANNUAL COST** (D)=(A)x(B)x(C)

11. Maintenance of Cover

Sodding, Soil	AC	312	$ 54.75	$ 17,082.00
Regrading	AC	312	$ 6.92	$ 2,158.65
Liner Repair-synthetic	SY	25	$ 105.58	$ 2,639.38
Clay	CY			

Subtotal Cover Integrity Maintenance $ 21,880.03

12. Surface Water Drainage Maintenance

Ditch Cleaning	LF	20,090	$ 0.75	$ 15,067.50
Stormwater Conveyance Maint.	EA	49	$ 107.15	$ 5,250.52

Subtotal Drainage Maintenance $ 20,318.02

13. Security System Maintenance

Fences	LF	29,900	$ 0.15	$ 4,485.00
Gate(s)	EA	2	$ 21.12	$ 42.23
Sign(s)	EA	10	$ 21.12	$ 211.15

Subtotal Security Sytem Maintenance $ 4,738.38

14. Remedial Actions LS

Subtotal Remedial Actions NA

15. Site Specific Costs (explain):

Permit Renewal	$ 30,000.00
Bi-Annual Water Quality Report (62-701.510 F.A.C.)	$ 4,000.00

Subtotal Site Specific Costs $ 34,000

LONG-TERM CARE COSTS ($/yr) $ 405,409

TOTAL LONG-TERM CARE COSTS ($) $12,162,257

($/year times required years of long-term care)

CERTIFICATION BY ENGINEER

This is to certify that the Financial Assurance Cost Estimates pertaining to the engineering features of this solid waste management facility have been examined by me and found to conform to engineering principals applicable to such facilities. In my professional judgment, the Cost Estimates are a true, correct and complete representation of the financial liabilities for closing and long-term care of the facility, and comply with the requirements of Florida Administrative Code (FAC), Rule 17-701.630 and all other Department of Environmental Protection rules, and statutes of the State of Florida. It is understood that the Financial Assurance Cost Estimates shall be revised and submitted to the Department annually as required by FAC 17-701.630(4).

	HDR Engineering, Inc.
	5100 West Kennedy Blvd., Ste. 300
Signature	Mailing Address
Fred W. Sebesta, P.E.	
Senior Project Manager	Tampa, Florida, 33609
Name and Title (please type)	City, State, Zip Code
38264	(813) 287-1960
Florida Registration Number (please affix seal)	Telephone Number
	Date September 27, 1996

Appendix D-2

Financial Assurance Tables (1998)

(Reserved)

(RESERVED)

Appendix E

Current Operator Training Documentation

FDEP LANDFILL OPERATOR RECORD

BENJAMIN L ALEX
ATEE COUNTY PUBLIC WORKS DEPT
.. BOX 25010
BRADENTON FL 34206
Phone: (941)753-7517
SS# 264-47-8462
Fax: (941)795-3451

Initial Landfill Operator Short School Taken: 07/07/1996

[15 credit hours is needed to meet the F.A.C. 62-703.610(6) requirement for the 3-year time period.]

* * * * * * * * * * * * * * * *

Time period: 07/07/1996 - 07/06/1999

Course #	Course Name	Course Date	Contact Hours
64	WHEN IT RAINS IT POURS & WE STAY OP	09/10/96	2.0
65	WHAT CAN I ACCEPT & HOW CAN I KEEP	09/10/96	2.0
7364	HLTH & SAF TRNG FOR HAZMAT ACT: 8 H	04/30/97	4.0
89	LANDFILL GAS: HOW TO PROFIT NEW MAN	06/19/97	7.0
		Total hours completed:	**15.0**

Congratulations, you have completed the 15 hour requirements for this time period.

* * * * * * * * * * * * * * * *

If any information is incorrect, please contact UF/TREEO at 352/392-9570
Dawn Jenkins, EXT 127 or Janet Touchton, EXT 112

Printed July 08, 1997

FDEP LANDFILL OPERATOR RECORD

~~VIN L BELL SS# 241-54-2535
ATEE CO/PUBLIC WORKS/LANDFILL
..33 LENA ROAD
BRADENTON FL 34205 Phone: (813)748-5543

Initial Landfill Operator Short School Taken: 11/15/1996

[15 credit hours is needed to meet the F.A.C. 62-703.610(6) requirement for the 3-year time period.]

* * * * * * * * * * * * * * * *

Time period: 11/15/1996 - 11/14/1999

Course #	Course Name	Course Date	Contact Hours
8041	BIRD & WILDLIFE MGMT AT SOLID WASTE	10/20/97	7.0
8037	LANDFILL GAS & LEACHATE SYSTEMS	10/21/97	8.0
		Total hours completed:	**15.0**

Congratulations, you have completed the 15 hour requirements for this time period.

* * * * * * * * * * * * * * * *

If any information is incorrect, please contact UF/TREEO at 352/392-9570
Dawn Jenkins, EXT 127 or Janet Touchton, EXT 112

rinted November 17, 1997

FDEP LANDFILL OPERATOR RECORD

STEVEN G TUCKER SS# 265-49-5224
MANATEE COUNTY GOVERNMENT
3333 LENA ROAD
BRADENTON FL 34202 Phone: (813)748-5543

Initial Landfill Operator Short School Taken: 11/20/1992

(15 credit hours is needed to meet the F.A.C. 62-703.610(6) requirement for the 3-year time period.)

* * * * * * * * * * * * * * * *

Time period: 11/20/1995 - 11/19/1998

Course #	Course Name	Course Date	Contact Hours
64	WHEN IT RAINS IT POURS & WE STAY OP	09/10/96	2.0
65	WHAT CAN I ACCEPT & HOW CAN I KEEP	09/10/96	2.0
8041	BIRD & WILDLIFE MGMT AT SOLID WASTE	10/20/97	7.0
8037	LANDFILL GAS & LEACHATE SYSTEMS	10/21/97	8.0
		Total hours completed:	**19.0**

Congratulations, you have completed the 15 hour requirements for this time period.

* * * * * * * * * * * * * * * *

If any information is incorrect, please contact UF/TREEO at 352/392-9570
Dawn Jenkins, EXT 127 or Janet Touchton, EXT 112

Printed November 17, 1997

FDEP LANDFILL OPERATOR RECORD

GARY SEELEY
MANATEE COUNTY GOVERNMENT
33 LENA RD
BRADENTON FL 34202

SS# 061-42-5568

Phone: (941)753-7517

Initial Landfill Operator Short School Taken: 11/19/93

[15 credit hours is needed to meet the F.A.C. 62-703.610(6) requirement for the 3-year time period.]

* * * * * * * * * * * * * * * *

Time period: 11/19/96 - 11/18/99

Course #	Course Name	Course Date	Contact Hours

Total hours completed: 0.0

You need 15 hours to complete the 15 contact hour requirement for this time period.

* * * * * * * * * * * * * * * *

If any information is incorrect, please contact UF/TREEO at 352/392-9570
Dawn Jenkins, EXT 127 or Janet Touchton, EXT 112

Printed June 18, 1997

Appendix F

NPDES PERMIT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IV
345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

REF: 4WM-WPEB

Mr. Richard A. Wilford
Director of Public Works
Manatee County
Caller Service 25010
Bradenton, Florida 34206

RE: Final Issuance of NPDES Permit No. FL0038881
Lena Road Landfill

Dear Mr. Wilford:

Enclosed is the National Pollutant Discharge Elimination System (NPDES) permit for the above referenced facility. This action constitutes the Environmental Protection Agency's final permit decision in accordance with Title 40, Code of Federal Regulations (C.F.R.) Section 124.15(a). The permit will become effective as specified, provided that no timely request for an evidentiary hearing is received by the Agency.

Any interested person may contest this decision by submitting a timely request for an evidentiary hearing (hearing) pursuant to the procedures at 40 C.F.R. § 124.74. If a request for a hearing is received by the Agency, following review, a determination will be made and the requester advised of the Agency's decision on the request. Until that time, please be advised that any request will render the permit ineffective pursuant to 40 C.F.R. § 124.15(b). For a new source, a new discharger, a recommencing discharger, or a facility for which an untimely permit renewal application was submitted, a hearing request renders the facility without an NPDES permit and the facility may not discharge (unless relief is granted by the Presiding Officer under 40 C.F.R. § 124.60(a)).

If the evidentiary hearing request is granted, in whole or part, to an existing source, the effect of the contested provision(s), and any other conditions not severable from those conditions, will be stayed and not subject to judicial review pending final Agency action. In this case, all provisions of the prior permit shall continue fully enforceable and effective pending final Agency action on the permit appeal. See 40 C.F.R. § 124.60.

To request an evidentiary hearing under 40 C.F.R. § 124.74, you must submit an original and two copies of the request to the Regional Hearing Clerk at the letterhead address within thirty (30) days from service of this notice. A copy of the procedures and requirements for evidentiary hearing requests and appeals to the Administrator is enclosed.

For purposes of judicial review under the Clean Water Act, 33 U.S.C. § 1251 et seq., final Agency action on a permit does not occur unless and until a party has exhausted its administrative remedies as required by 40 C.F.R. Part 124.

Further information on procedures pertaining to the filing of an evidentiary hearing request or other legal matters may be obtained by contacting Kevin B. Smith, Assistant Regional Counsel, at 404/347-3777.

Sincerely yours,

R G McGhee for

W. Ray Cunningham, Director
Water Management Division

Enclosures (3): Evidentiary Hearing Procedures
Final NPDES Permit
Amendment to Fact Sheet

cc: Florida DER (with all enclosures, except Evidentiary Hearing Procedures)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

DATE: FEB 11 1993

AMENDMENT TO THE STATEMENT OF BASIS AT THE TIME OF FINAL PERMIT ISSUANCE

APPLICATION NO: FL0038881

NAME OF APPLICANT: Manatee County
Caller Service 25010
Bradenton, FL 34206

1. Changes to Permit from Draft Permit to Final Permit Stage:

The effective date of the cover sheet was changed to April 1, 1993.

Total hardness (expressed as mg/l $CaCO_3$) is a component in the equations used to calculate the permit concentration limits for:

- Total recoverable cadmium
- Total recoverable lead
- Total recoverable nickel
- Total recoverable zinc

The permittee must measure for total hardness in order to calculate the permit concentration limits for these metals. For this reason, total hardness (as $CaCO_3$) was added to the final permit as a reporting requirement.

2. Public comment:

None.

3. State Certification:

State Section 401 certification was requested on November 25, 1992. The Florida Department of Environmental Regulation waived certification in a letter dated January 13, 1993.

PERMIT NO. FL0038881
Minor Non-POTW

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IV

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Clean Water Act, as amended (33 U.S.C. 1251 et seq.; the "Act"),

Manatee County
Caller Service 25010
Bradenton, Florida 34206

is authorized to discharge from a facility located

Lena Road Landfill
3333 Lena Road
Manatee County
Bradenton, Florida 34202

to receiving waters named

Manatee River via Cypress Strand (Outfall 001, 002, and 004)
Manatee River via Gates Creek (Outfall 003, 005, and 006)

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein. The permit consists of this cover sheet, Part I 7 pages, Part II 16 pages, Part III 1 page, and Part IV 2 pages.

This permit shall become effective on April 1, 1993.

This permit and the authorization to discharge shall expire at midnight, February 28, 1998.

FEB 11 1993
Date Issued

W. Ray Cunningham, Director
Water Management Division

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - FINAL

1. During the period beginning on the effective date and lasting through the expiration date of this permit, the permittee is authorized to discharge from:

Outfall 001, storm water discharge from the Stage I landfill detention pond west weir outlet;
Outfall 002, storm water discharge from the southern weir of the Stage I landfill perimeter ditch;
Outfall 003, storm water discharge from the northern weir of the Stage I landfill perimeter ditch;
Outfall 004, storm water discharge from the perimeter ditch of the Stage III landfill area;
Outfall 005, storm water discharge from the perimeter ditch of the Stage II landfill area; and
Outfall 006, storm water discharge from the perimeter ditch of the Stage II landfill area.

Such discharges from Outfalls 001, 002, 004, 005, and 006 shall be limited and monitored by the permittee as specified below. Such discharges from Outfall 003 shall be limited and monitored by the permittee as specified below until such time that Outfall 003 is abandoned due to landfilling operations in the Stage II area.

PARAMETERS	DISCHARGE LIMITATIONS	MONITORING REQUIREMENTS		
	Daily Maximum	Measurement Frequency (During Discharge)	Sample Type	Sampling Point
Flow, MGD	N/A	Continuous	Weir Recorder	Effluent
pH, standard units	See Page I-4, Item 6	Quarterly	Grab	Effluent
Specific Conductance, micromhos/cm	1275.0 See Page I-4, Item 5	Quarterly	Grab	Effluent
Chemical Oxygen Demand, mg/l (COD)	Report	Quarterly	Grab	Effluent
Total Organic Carbon (TOC), mg/l	Report	Quarterly	Grab	Effluent

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - FINAL (continued)

PARAMETERS	DISCHARGE LIMITATIONS	MONITORING REQUIREMENTS		
	Daily Maximum	Measurement Frequency (During Discharge)	Sample Type	Sampling Point
Biochemical Oxygen Demand-5 Day, mg/l (BOD_5)	Report	Quarterly	Grab	Effluent
Total Dissolved Solids, mg/l (TDS)	Report	Quarterly	Grab	Effluent
Total Suspended Solids, mg/l (TSS)	Report	Quarterly	Grab	Effluent
Total Alkalinity, mg/l (as $CaCO_3$)	Not to be less than 20.0	Quarterly	Grab	Effluent
Total Hardness (as $CaCO_3$), mg/l	Report	Quarterly	Grab	Effluent
Dissolved Oxygen, mg/l	See Page I-4, Item 7	Quarterly	Grab	Effluent
Total Kjeldahl Nitrogen, mg/l (TKN) (as N)	Report	Quarterly	Grab	Effluent
Chlorides, mg/l	10% above background See Page I-5, Item 10	Quarterly	Grab	Effluent
Oil and Grease, mg/l	5.0 See Page I-3, Item 3	Quarterly	Grab	Effluent
Turbidity, NTU	29 NTU's above natural background See Page I-5, Item 10	Quarterly	Grab	Effluent
Total Recoverable Arsenic, mg/l	0.05	Quarterly	Grab	Effluent

32 08 12 16

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - FINAL (continued)

AMETERS	DISCHARGE LIMITATIONS	MONITORING REQUIREMENTS		
	Daily Maximum	Measurement Frequency (During Discharge)	Sample Type	Sampling Point
al Recoverable Cadmium, g/l	See Page I-4, Item 8	Quarterly	Grab	Effluent
al Recoverable Chromium, mg/l	1.0	Quarterly	Grab	Effluent
al Recoverable Copper, mg/l	0.03	Quarterly	Grab	Effluent
al Recoverable Iron, mg/l	1.0	Quarterly	Grab	Effluent
al Recoverable Lead, mg/l	See Page I-5, Item 11	Quarterly	Grab	Effluent
al Recoverable Mercury, ug/l	0.012	Quarterly	Grab	Effluent
al Recoverable Nickel, mg/l	See Page I-5, Item 12	Quarterly	Grab	Effluent
al Recoverable Silver, ug/l	0.07	Quarterly	Grab	Effluent
al Recoverable Zinc, mg/l	See Page I-5, Item 13	Quarterly	Grab	Effluent
te Whole Effluent oxicity	See Page I-4, Item 9	See Part IV	See Part IV	Effluent

All monitoring, except for the acute whole effluent toxicity, shall be conducted on two separate grab samples. The first grab sample shall be collected within the first 30 minutes of the discharge event or as soon thereafter as practicable. The second grab sample shall be collected after 2 hours of the discharge event or upon termination of the rainfall, whichever occurs first. The analytical results of the samples shall be reported separately.

The effluent shall not cause a visible sheen on the receiving water.

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - FINAL (continued)

4. There shall be no discharge of floating solids or visible foam in other than trace amounts.

5. Specific conductance shall not exceed 1275.0 micromhos per centimeter or be increased more than 50% above background, whichever is greater. Background samples for specific conductance shall be taken immediately upstream of this outfall on the same day that effluent samples are taken. However, background samples are not required if the effluent specific conductance is less than 1275.0 micromhos per centimeter or if there is no effluent discharge during the monitoring period.

6. The pH of the effluent shall not be less than 6.0 standard units nor greater than 8.5 standard units.

7. The concentration of dissolved oxygen in the effluent shall not be less than 5.0 milligrams per liter.

8. In predominantly fresh waters, the concentration of cadmium shall not exceed the amount resulting from the following equation:

$$ug/l\ Cd = e^{(0.7852(lnH) - 3.49)}$$

where lnH is the natural logarithm of the total hardness expressed as mg/l $CaCO_3$

9. Lethality to more than 50% of any test species in 100% effluent in a test of 96 hours duration or less will constitute a violation of FAC §17-4.244(3)(a) (June 4, 1992) and the terms of this permit. The testing for this requirement must conform with Part IV of this permit.

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - FINAL (continued)

10. If a background sample is required for chlorides or turbidity, the sample shall be taken by the permittee as follows:

- The background sample for Outfalls 001, 002, and 004 shall be taken upstream in the Cypress Strand tributary directly south of the landfill operation. See attached map on Page I-7.
- The background sample for Outfalls 003, 005, and 006 shall be taken upstream in the Gates Creek tributary east of the landfill operation. See attached map on Page I-7.

11. In predominantly fresh waters, the concentration of lead shall not exceed the amount resulting from the following equation:

$$ug/l\ Pb = e^{(1.273(\ln H) - 4.705)}$$

where lnH is the natural logarithm of the total hardness expressed as mg/l $CaCO_3$

12. In predominantly fresh waters, the concentration of nickel shall not exceed the amount resulting from the following equation:

$$ug/l\ Ni = e^{(0.846(\ln H) + 1.1645)}$$

where lnH is the natural logarithm of the total hardness expressed as mg/l $CaCO_3$

13. In predominantly fresh waters, the concentration of zinc shall not exceed the amount resulting from the following equation:

$$ug/l\ Zn = e^{(0.8473(\ln H) + 0.7614)}$$

where lnH is the natural logarithm of the total hardness expressed as mg/l $CaCO_3$

14. This permit does not authorize the discharge of landfill leachate from any outfall.

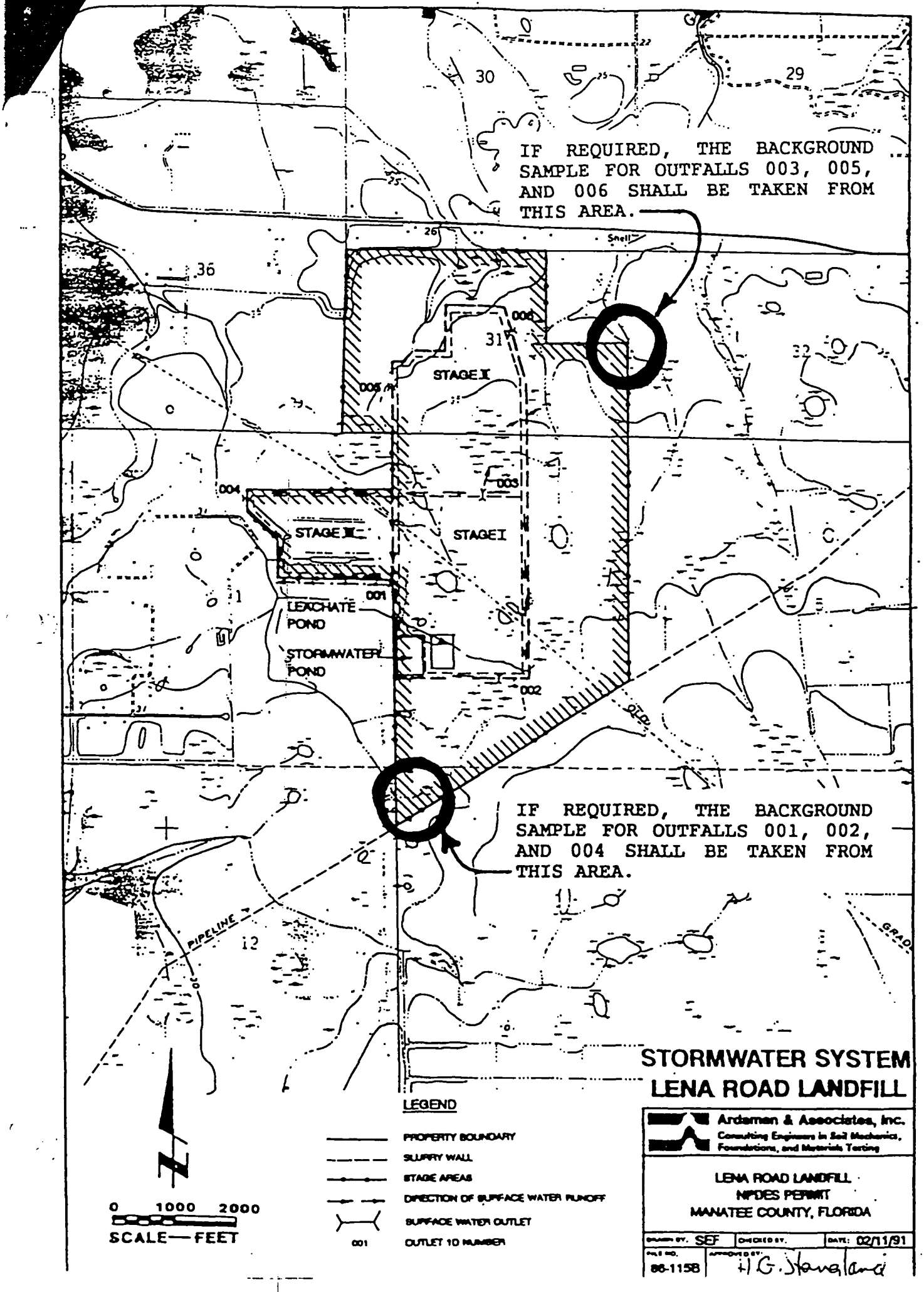
PART I

B. SCHEDULE OF COMPLIANCE

1. The permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule:

Operational level attained . . . Effective Date of Permit

2. No later than 14 calendar days following a date identified in the above schedule of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.


IF REQUIRED, THE BACKGROUND SAMPLE FOR OUTFALLS 003, 005, AND 006 SHALL BE TAKEN FROM THIS AREA.
IF REQUIRED, THE BACKGROUND SAMPLE FOR OUTFALLS 001, 002, AND 004 SHALL BE TAKEN FROM THIS AREA.
STAGE II
STAGE III
STAGE I
LEACHATE POND
STORMWATER POND
001
002
003
004
005
006
PIPELINE
Shell
GRADE
30
29
36
31
32
1
12
11
LEGEND
PROPERTY BOUNDARY
SLURRY WALL
STAGE AREAS
DIRECTION OF SURFACE WATER RUNOFF
SURFACE WATER OUTLET
001 OUTLET ID NUMBER
0 1000 2000
SCALE—FEET
STORMWATER SYSTEM
LENA ROAD LANDFILL
Ardaman & Associates, Inc.
Consulting Engineers in Soil Mechanics, Foundations, and Materials Testing
LENA ROAD LANDFILL
NPDES PERMIT
MANATEE COUNTY, FLORIDA
DRAWN BY: SEF
CHECKED BY:
DATE: 02/11/91
FILE NO. 86-1158
APPROVED BY: H G Stanland

Part II

STANDARD CONDITIONS FOR NPDES PERMITS

SECTION A. GENERAL CONDITIONS

1. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

2. Penalties for Violations of Permit Conditions

Any person who violates a permit condition is subject to a civil penalty not to exceed $25,000 per day for each violation. Any person who negligently violates any permit condition is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment for not more than 1 year, or both. Any person who knowingly violates permit conditions is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than 3 years, or both. Also, any person who violates a permit condition may be assessed an administrative penalty not to exceed $10,000 per violation with the maximum amount not to exceed $125,000. [Ref: 40 CFR 122.41(a)]

3. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

4. Permit Modification

After notice and opportunity for a hearing, this permit may be modified, terminated, or revoked for cause including, but not limited to, the following:

a. Violation of any terms or conditions of this permit;

b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;

c. A change in any conditions that requires either temporary interruption or elimination of the permitted discharge; or

d. Information newly acquired by the Agency indicating the discharge poses a threat to human health or the environment.

If the permittee believes that any past or planned activity would be cause for modification or revocation and reissuance under 40 CFR 122.62, the permittee must report such information to the Permit Issuing Authority. The submittal of a new application may be required of the permittee. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

5. Toxic Pollutants

Notwithstanding Paragraph B-4, above, if a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Act for a toxic pollutant which is present in the discharge and such standard or prohibition is more stringent than any limitation of such pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition and the permittee so notified.

6. Civil and Criminal Liability

Except as provided in permit conditions on "Bypassing" Section B, Paragraph B-3, and "Upsets" Section b, Paragraph B-4, nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

7. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 or the Act.

8. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Act.

9. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations.

10. Onshore or Offshore Construction

This permit does not authorize or approve the construction of any onshore or offshore physical structures or facilities or the undertaking of any work in any waters of the United States.

11. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

12. Duty to Provide Information

The permittee shall furnish to the Permit Issuing Authority, within a reasonable time, any information which the Permit Issuing Authority may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Permit Issuing Authority upon request, copies of records required to be kept by this permit.

SECTION B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

2. Need to Halt or Reduce not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the condition of this permit.

3. Bypass of Treatment Facilities

a. Definitions

(1) "Bypass means the intentional diversion of waste streams from any portion of a treatment facility, which is not a designed or established operating mode for the facility.

(2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Bypass not exceeding limitations.

The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Paragraphs c. and d. of this section.

c. Notice

(1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass; including an evaluation of the anticipated quality and effect of the bypass.

(2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section D, Paragraph D-8 (24-hour notice).

d. Prohibition of bypass

(1) Bypass is prohibited and the Permit Issuing Authority may take enforcement action against a permittee for bypass, unless:

(a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgement to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

(c) The permittee submitted notices as required under Paragraph c. of this section.

(2) The permit Issuing Authority may approve an anticipated bypass, after considering its adverse effects, if the Permit Issuing Authority determines that it will meet the three conditions listed above in Paragraph d.(1) of this section.

4. Upsets

"Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, lack of preventive maintenance, or careless or improper operation. An upset constitutes an affirmative defense to an action brought for non-compliance with such technology based permit limitation if the requirements of 40 CFR 122.41(n)(3) are met.

5. Removed Substances

This permit does not authorize discharge of solids, sludge, filter backwash, or other pollutants removed in the course of treatment of control of wastewaters of the United States unless specifically limited in Part 1.

SECTION C. MONITORING AND RECORDS

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring points specified in this permit and, unless otherwise specified, before the effluent joins or is diluted by any other wastestream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the Permit Issuing Authority.

2. Flow Measurements

Appropriate flow measurements devices and methods consistent with accepted scientific practices shall be selected and used to insure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to insure that the accuracy of the measurements are consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than ±10% from the true discharge rates throughout the range of expected discharge volumes. Once-through condenser cooling water flow which is monitored by pump logs, or pump hour meters as specified in Part I of this permit and based on the manufacture's pump curves shall not be subject to this requirement. Guidance in selection, installation, calibration, and operation of acceptable flow measurement devices can be obtained from the following references:

(1) "A Guide of Methods and Standards for the Measurement of Water Flow", U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 421, May 1975, 97 pp. (Available from the U.S. Government Printing Office, Washington, D.C. 20402. Order by SD catalog No. C13.10:421.)

(2) "Water Measurement Manual", U.S. Department of Interior, Bureau of Reclamation, Second Edition, Revised Reprint, 1974, 327 pp. (Available from the U.S. Government Printing Office, Washington, D.C. 20402. Order by catalog No. 127.19/2:W29/2, Stock No. S/N 24003-0027.)

(3) "Flow Measurement in Open Channels and Closed Conduits", U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 484, October 1977, 982 pp. (Available in paper copy or microfiche from National Technical Information Service (NTIS), Springfield, VA 22151. Order by NTIS No. PB-273 535/5ST.)

(4) "NPDES Compliance Flow Measurement Manual", U.S. Environmental Protection Agency, Office of Water Enforcement, Publication MCD-77, September 1981, 135 pp. (Available from the General Service Administration (8BRC), Centralized Mailing Lists Services, Building 41, Denver Federal Center, Denver, CO. 80255.)

3. Monitoring Procedures

Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.

4. Penalties for Tampering

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or imprisonment for not more than 2 years, or both.

5. Retention of Records

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report, or application. This period may be extended by the Permit Issuing Authority at any time.

6. Record Contents

Records of monitoring information shall include:

a. The date, exact place, and time of sampling or measurements;

b. The individual(s) who performed the sampling of measurements;

c. The date(s) analyses were performed;

d. The individual(s) who performed the analyses;

e. The analytical techniques or methods used; and

f. The results of such analysis.

7. Inspection and Entry

The permittee shall allow the permit Issuing Authority, or a authorized representative, upon the presentation of credentials and other documents as may be required by law, to;

a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit.

c. Inspect at reasonable time any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

SECTION D. REPORTING REQUIREMENTS

1. Change in Discharge

The permittee shall give notice to the Permit Issuing Authority as soon as possible of any planned physical alterations or additions to the permitted Facility. Notice is required only when:

a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source; or

b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under Section D, Paragraph D-10(a).

2. Anticipated Noncompliance

The permittee shall give advance notice to the Permit Issuing Authority of any planned change in the permitted facility or activity which may result in noncompliance with permit requirements. Any maintenance or facilities, which might necessitate unavoidable interruption of operation and degradation of effluent quality, shall be scheduled during noncritical water quality periods and carried out in a manner approved by the Permit Issuing Authority.

3. Transfer of Ownership or Control

A permit may be automatically transferred to another if:

a. The permittee notifies the Permit Issuing Authority of the proposed transfer at least 30 days in advance of the proposed transfer date;

b. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and

c. The Permit Issuing Authority does not notify the existing permittee of his or her intent to modify or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph b.

4. Monitoring Reports

See Part III of this permit.

5. Additional Monitoring by the Permittee

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Discharge Monitoring Report (DMR). Such increased frequency shall also be indicated.

6. Averaging of Measurements

Calculations for limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Permit Issuing Authority in the permit.

7. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date. Any reports of noncompliance shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

8. Twenty-Four Hour Reporting

The permittee shall orally report any noncompliance which may endanger health or the environment, within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause, the period of noncompliance, including the exact dates and times; and if the noncompliance has not been corrected, the anticipated time it is expected to continue, and steps taken or planned to reduce, eliminate and prevent reoccurrence of the noncompliance. The Permit Issuing Authority may verbally waive the written report, on a case-by-case basis, when the oral report is made.

The following violations shall be included in the 24 hour report when they might endanger health or the environment:

a. An unanticipated bypass which exceeds any effluent limitation in the permit.

b. Any upset which exceeds any effluent limitation in the permit.

9. Other Noncompliance

The permittee shall report in narrative form, all instances of noncompliance not previously reported under Section D, Paragraphs D-2, D-4, D-7, and D-8 at the time monitoring reports are submitted. The reports shall contain the information listed in Paragraph D-8.

10. Changes in Discharges of Toxic Substances

The permittee shall notify the Permit Issuing Authority as soon as it knows or has reason to believe:

a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic substance(s) (listed at 40 CFR 122, Appendix D, Table II and III) which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

(1) One hundred micrograms per liter (100 ug/l);

(2) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony; or

(3) Five (5) times the maximum concentration value reported for that pollutant(s) in the application.

b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant (listed at 40 CFR 122, Appendix D. Table II and III) which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

(1) Five hundred Micrograms per liter (500 ug/l);

(2) One milligram per liter (1 mg/l) for antimony; or

(3) Ten (10) times the maximum concentration value reported for that pollutant(s) in the permit application.

11. Duty to Reapply 180 DAYS FEB 28 1998 ⟹ REAPPLY B/F SEPT. 1, 1997

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The application should be submitted at least 180 days before the expiration date of this permit. The Permit Issuing Authority may grant permission to submit an application less than 180 days in advance but not later than the permit expiration date.

Where EPA is the Permit Issuing Authority, the terms and conditions of this permit are automatically continued in accordance with 40 CFR 122.6, only where the permittee has submitted a timely and complete application for a renewal permit and the Permit Issuing Authority is unable through no fault of the permittee to issue a new permit before expiration date.

12. Signatory Requirements

All applications, reports, or information submitted to the Permit Issuing Authority shall be signed and certified.

a. All permit applications shall be signed as follows:

(1) For a corporation: by a responsible corporate officer. For the purpose of this Section, a responsible corporate officer means: (1) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or (2) the manager of one or more manufacturing production facilities employing more than 250 persons or having gross annual sales or expenditures exceeding 25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

(2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

(3) For a municipality, State, Federal, or other public agencies by either a principal executive officer or ranking elected official.

b. All reports required by the permit and other information requested by the Permit Issuing Authority shall be signed by a person described above or by a duly authorized representative only if:

(1) The authorization is made in writing by person described above;

(2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may this be either a named individual or any individual occupying a named position.); and

(3) The written authorization is submitted to the Permit Issuing Authority.

c. Certification. Any person signing a document under paragraphs (a) or (b) of this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

13. Availability of Reports

Except for data determined to be confidential under 40 CFR Part 2, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Permit Issuing Authority. As required by the Act, permit applications, permits and effluent data shall not be considered confidential.

14. Penalties for Falsification of Reports

The Clean Water Act provides that any person who knowingly makes any false material statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, or who knowingly falsifies, tampers with, or renders inaccurate any monitoring device or method required to be maintained under the Clean Water Act, shall, upon conviction, be punished by a fine of not more than $10,000 or by imprisonment for not more than 2 years, or both.

SECTION E. DEFINITIONS

1. Permit Issuing Authority

The Regional Administrator of EPA Region IV or his designee, unless at some time in the future the State receives authority to administer the NPDES program and assumes jurisdiction over the permit; at which time, the Director of the State program receiving the authorization becomes the issuing authority.

2. Act

"Act" means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act) Public Law 92-500, as amended by Public Laws 95-217, 95-576, 96-483, 97-117, and 100-4, 33 U.S.C. 1251 et seq.

3. Mass/Day Measurements

a. The "average monthly discharges" is defined and the total mass of all daily discharges sampled and/or measured during a calendar month on which daily discharges are sampled and measured, divided by the number of daily discharges sampled and/or measured during such month. It is therefore, and arithmetic mean found by adding the weights of the pollutant found each day of the month and then dividing this sum by the number of days the tests were reported. The limitation is identified as "Daily Average" or "Monthly Average" in Part I of the permit and the average monthly discharge value is reported in the "Average" column under "Quantity" on the Discharge Monitoring Report (DMR).

b. The "average weekly discharge" is defined as the total mass of all daily discharges sampled and/or measured during the calendar week on which daily discharges are sampled and measured, divided by the number of daily discharges sampled and/or measured during such week. It is, therefore, an arithmetic mean found by adding the weights of pollutants found each day of the week and then dividing this sum by the number of days the tests were reported. This limitation is identified as "Weekly Average" in Part I of the permit. Enter the highest weekly average of sample measurements obtained during the reporting period in the "Maximum" column under "Quantity" on the DMR.

c. The "maximum daily discharge" is the total mass (weight) of a pollutant discharged during a calendar day. If only one sample is taken during any calendar day the weight of pollutant calculated from it is the "maximum daily discharge". This limitation is identified as "Daily Maximum", in Part I of the permit and the highest such value recorded during the reporting period is reported in the "Maximum" column under "Quantity" on the DMR.

d. The "average annual discharge" is a rolling average equal to the arithmetic mean of the mass measured in all discharges sampled and/or measured during consecutive reporting periods which comprise one year. For parameters that are measured at least once per month, the annual average shall be computed at the end of each month and is equal to the arithmetic mean of the monthly average of the month being reported and the monthly average of each of the previous eleven months. This limitation is defined as "Annual Average" in Part I of the permit and the average annual discharge value is reported in the "Average" column under "Quantity" on the DMR.

4. Concentration Measurements

a. The "average monthly concentration", other than for fecal coliform bacteria, is the sum of the concentrations of all daily discharges sampled and/or measured during a calendar month on which daily discharges are sampled and measured, divided by the number of daily discharges sampled and/or measured during such month (arithmetic mean of the daily concentration values). The daily concentration value is equal to the concentration of a composite sample or in the case of grab samples is the arithmetic mean (weighted by flow value) of all the samples collected during that calendar day. This limitation is identified as "Monthly Average" or "Daily Average" under "Other Limits" in Part I of the permit and the average monthly concentration value is reported under the "Average" column under "Quality" of the DMR.

b. The "average weekly concentration", other than for fecal coliform bacteria, is the sum of the concentrations of all daily discharges sampled and/or measured during a calendar week on which daily discharges are sampled and measured divided by the number of daily discharges sampled and/or measured during such week (arithmetic mean of the daily concentration values). The daily concentration value is equal to the concentration of a composite sample or in the case of grab samples is the arithmetic mean (weighted by flow value) of all the samples collected during that calendar day. This limitation is identified as "Weekly Average" under "Other Limits" in Part I of the permit. Enter the highest weekly average of sample measurements obtained during the reporting period in the "Maximum" column under "Quality" on the DMR.

c. The "maximum daily concentration" is the concentration of a pollutant discharged during a calendar day. It is identified as "Daily Maximum" under "Other Units" in Part I of the permit and the highest such value recorded during the reporting period is reported under the "Maximum" column under "Quality" on the DMR.

d. The "average annual concentration", other than fecal coliform bacteria, is the rolling average equal to the arithmetic mean of the effluent or influent samples collected during consecutive reporting periods which comprise one year. For parameters that are measured at least once per month, the annual average shall be computed at the end of each month and is equal to the arithmetic mean of the monthly average of the month being reported and the monthly average of each of the previous eleven months. This limitation is identified as "Annual Average" under "Other Limits" in Part I of the permit and the average annual concentration value is reported under the "Average" column under "Quality" on the DMR.

5. Other Measurements

a. The effluent flow expressed as million gallons per day (MGD) is the 24 hour average flow averaged monthly. It is the arithmetic mean of the total daily flows recorded during the calendar month. Where monitoring requirements for flow are specified in Part I of the permit the flow rate values are reported in the "Average" column under "Quantity" on the DMR.

b. An "instantaneous flow measurement" is a measure of flow taken at the time of sampling, when both the sample and flow will be representative of the total discharge.

c. Where monitoring requirements for pH, dissolved oxygen or fecal coliform bacteria are specified in Part I of the permit, the values are generally reported in the "Quality or Concentration" column on the DMR.

d. The "average annual discharge" for fecal coliform bacteria shall be calculated in the same manner as that for mass limitations (see item II.E.3.d.).

6. Types of Samples

a. Composite Samples: A "composite sample" is a combination of not less than 8 influent or effluent portions, of at least 100 ml, collected over the full time period specified in Part I.A. The composite sample must be flow proportioned by either time interval between each aliquot or by volume as it relates to effluent flow at the time of sampling or total flow since collection of the previous aliquot. Aliquots may be collected manually or automatically.

b. Grab Samples: A "grab sample" is a single influent or effluent portion which is not a composite sample. The sample(s) shall be collected at the period(s) most representative of the total discharge.

7. Calculation of Means

a. Arithmetic Mean: The "arithmetic mean" of any set of values is the summation of the individual values divided by the number of individual values.

b. Geometric Mean: The "geometric mean" of any set of values is the N^{th} root of the product of the individual values where N is equal to the number of individual values. The geometric mean is equivalent to the antilog of the arithmetic mean of the logarithms of the individual values. For purposes of calculating the geometric mean, values of zero (0) shall be considered to be one (1).

c. Weighted by Flow Value: "Weighted by flow value" means the summation of each concentration times its respective flow divided by the summation of the respective flows.

8. Calendar Day

A "calendar day" is defined as the period from midnight of one day until midnight of the next day. However, for purposes of this permit, any consecutive 24-hour period that reasonably represents the calendar day may be used for sampling.

9. Hazardous Substance

A "hazardous substance" means any substance designated under 40 CFR Part 116 pursuant to Section 311 of the Clean Water Act.

10. Toxic Pollutants

A "toxic pollutant" is any pollutant listed as toxic under Section 307(a)(1) of the Clean Water Act.

Part III

Other Requirements

A. Reporting of Monitoring Results

Monitoring results obtained for each calendar month shall be summarized and reported on a Discharge Monitoring Report (DMR) Form, EPA No. 3320-1. These forms shall be submitted after each calendar quarter and postmarked no later than the 28th day of the month following the completed calendar quarter. For example, data for January-March shall be submitted by April 28th. Calendar quarters are January-March, April-June, July-September, and October-December. Signed copies of these, and all other reports required by Section D of Part II, Reporting Requirements, shall be submitted to the Permit Issuing Authority at the following address:

Environmental Protection Agency
Region IV
Enforcement Section
Water Permits and Enforcement Branch
Water Management Division
345 Courtland Street, N.E.
Atlanta, GA 30365

If no discharge occurs during the reporting period, sampling requirements of this permit do not apply. The statement "No Discharge" shall be written on the DMR form. If, during the term of this permit, the facility ceases discharge to surface waters, the Permit Issuing Authority and the State shall be notified immediately upon cessation of discharge. This notification shall be in writing.

B. Reopener Clause

This permit shall be modified, or alternatively, revoked and reissued to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the Clean Water Act (the Act), as amended, if the effluent standard or limitation so issued or approved:

1. Contains different conditions or is otherwise more stringent than any condition in the permit; or

2. Controls any pollutant or disposal method not addressed in the permit.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Act then applicable.

Part IV
Whole Effluent Toxicity Testing Program

As required by Part I of this permit, the permittee shall initiate the series of tests described below beginning in April 1993 to evaluate whole effluent toxicity of the discharge from the referenced outfalls in Part I (A)(1). All test species, procedures and quality assurance criteria used shall be in accordance with Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms, EPA/600/4-90/027, or the most current edition. The control water used will be moderately hard water as described in EPA/600/4-90/027, Table 6, or the most current edition. In addition, for the fathead minnow test, feeding and solution renewal shall be done at 48 hours with a portion of the original sample that has been kept refrigerated. A standard reference toxicant quality assurance test shall be conducted concurrently with each species used in the toxicity tests and the results submitted with the discharge monitoring report (DMR). Alternatively, if monthly QA/QC reference toxicant tests are conducted, these results must be submitted with the DMR.

1. a. The permittee shall conduct 48-hour acute static toxicity tests using the daphnid (Ceriodaphnia dubia) and 96-hour acute static-renewal toxicity tests using the fathead minnow (Pimephales promelas). All tests will be conducted on a maximum of three separate grab samples. The first grab sample shall be collected within the first 30 minutes of the discharge event with the remaining samples following at one hour intervals thereafter until additional three grab samples are collected or until the discontinuation of the discharge, whichever occurs first. Grab samples may be collected manually or automatically. A separate test is performed on each collected grab sample in order to catch any peaks of toxicity in the effluent quality.

   b. If control mortality exceeds 10% for either species in any test, the test(s) for that species (including the control) shall be repeated. A test will be considered valid only if control mortality does not exceed 10% for either species. If, in any separate grab sample test, 100% mortality occurs prior to the end of the test, and control mortality is less than 10% at that time, that test (including the control) shall be terminated with the conclusion that the sample demonstrates unacceptable acute toxicity.

Whole Effluent Toxicity Testing Program (continued)

2. a. The toxicity tests specified above shall be conducted once per discharge event or every two months, whichever is less, for the first year, and twice per year thereafter for the duration of the permit, unless notified othervise by EPA. These tests are referred to as "routine" tests.

   b. Results from "routine" tests shall be reported according to EPA/600/4-90/027, Section 12, Report Preparation (or the most current edition), and shall be submitted as an attachment to the DMR. Such results are to be entered on the DMR in the following manner: if less than 50% survival of a test species occurs in any of the three separate grab sample tests, '<100%' should be entered on the DMR for that species. If 50% or greater survival occurs in all three separate grab sample tests, '>100%' should be entered.

3. All tests shall be conducted using a control (0% effluent) and one test concentration of 100% final effluent.