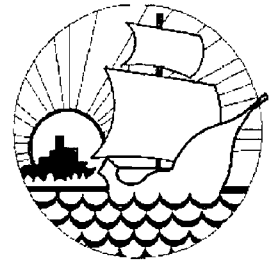


**Manatee County
Florida**



Lena Road Landfill

Operation Plan

D.E.P.

DEC - 8 1998

SOUTHWEST DISTRICT
TAMPA

November 5, 1998

HDR Engineering, Inc.

HDR

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PART K. LANDFILL OPERATIONS PLAN

(Prepared by Manatee County Public Works Department, Solid Waste Section)

1. TRAINED OPERATORS

Manatee County Government personnel operate the Landfill. The County requires at least one trained landfill operator certified in accordance with F.A.C., Chapter 62-701.500 (1) and one spotter at the working face at all times during waste disposal operations. The spotter is responsible for guiding vehicles and for enforcing provisions for controlling the waste received. An example of a typical work week staff schedule is shown in Figure K-1.

General daily operations are as follows:

Time	Activity
5:00 am	Fuelers arrive and begin cleaning, greasing, fueling, and otherwise preparing the equipment for the day.
7:00 am	Landfill Operations Supervisor and/or Chief Equipment Operator (all certified, trained operators) arrives, distributes daily assignments and checks Attendance and Equipment sheets. The equipment moves to the working area to prepare the roads and sites for that working day. At least one trained operator is always on site during operations.
8:00 am	The Scalehouse opens and traffic is routed to the appropriate disposal area.
8:30 am	The Landfill Attendant Begins his monitoring schedule. Mail run to 66th Street complex by Office Trailer staff.
10:00 am	Personnel begin the 15-minute morning break
12:00 p.m.	Personnel begin the lunch break
3:00 p.m.	Personnel begin the 15-minute afternoon break
5:00 p.m.	The Scalehouse closes, entry gates are closed, and the working faces are cleared and covered with approved cover material.
5:45 p.m.	Operators leave work sites and cleanup equipment.
6:00 p.m.	Equipment and Buildings are secured, alarm set, gates locked and personnel depart.

2. OPERATIONS PLAN

a. Designation of Responsible Operating and Maintenance Personnel

The Manatee County Solid Waste Management Facility (Landfill) is owned by Manatee County Government and operated under the direction of the Public Works Department, Solid Waste Section. An After Hours Contact List is provided in Table K-1, and a list of landfill positions is given below:

Solid Waste Manager*	Solid Waste Technical Coordinator*
Landfill Superintendent*	Recycling Coordinator*
Recycling Service Technician	Chief Equipment Operators (2)*
Equipment Operator III (10)	Landfill Attendants (3)
Equipment Operator I	Solid Waste Program Specialist
Office Assistant IV	Office Assistant III

* Certified Staff

b. Contingency Operations for Emergencies

In the event of an emergency, the County will maintain open access to the landfill. On-site equipment may not be sufficient to maintain the excess volume of waste generated in an emergency. If so, backup equipment will be rented from the County's approved bid list. Additionally, back-up equipment will be provided for equipment breakdowns and down time for routine maintenance. In the case of equipment failure or emergencies, rental equipment or equipment from other County agencies will be delivered to the site if necessary.

Emergency conditions at the landfill may occur as a result of natural weather events (tornado, flooding, etc.) or fire. Staff is currently equipped to mobilize to temporary sites that will be designated as such in conjunction with the Manatee County Emergency Management Department. In the event that emergency conditions interrupt operations at the landfill, a contingency plan will be developed and implemented to establish temporary operations on a case by case basis, dependent on conditions at the Lena Road Landfill. Such temporary operations will accept storm debris only and will be terminated and disposal operations resumed at Lena Road Landfill as soon as practical.

Refuse is not normally delivered to the site during emergency conditions; however, should an emergency situation arise, the following actions will be taken:

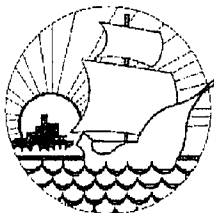
1. Daily cover shall be applied to all exposed refuse before a major storm arrives, if possible.
2. All landfill equipment shall be parked near any natural wind screens such as earthen mounds and berms.
3. All lightweight signs and equipment shall be secured.
4. When operation resumes, work shall commence in dry areas only (up from the active face).
5. Refuse shall not be deposited in standing water.

LANDFILL OPERATIONS

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		Bud Bell Certified Operator Supervisor Various Responsibilities	Bud Bell Certified Operator Supervisor Various Responsibilities	Bud Bell Certified Operator Supervisor Various Responsibilities	Bud Bell Certified Operator Supervisor Various Responsibilities
	Steve Tucker Certified Operator Chief Equip. Oper. Backhoe/Dozer	Steve Tucker Certified Operator Chief Equip. Oper. Backhoe/Dozer	Steve Tucker Certified Operator Chief Equip. Oper. Backhoe/Dozer	Steve Tucker Certified Operator Chief Equip. Oper. Backhoe/Dozer	
Gary Seeley Certified Operator Chief Equip. Oper. Supervisor/Backhoe	Gary Seeley Certified Operator Chief Equip. Oper. Supervisor/Dozer	Gary Seeley Certified Operator Chief Equip. Oper. Dozer	Gary Seeley Certified Operator Chief Equip. Oper. Dozer		
	Ron Cox Equip. Oper. III Dozer	Ron Cox Equip. Oper. III Dozer	Ron Cox Equip. Oper. III Dozer	Ron Cox Equip. Oper. III Dozer	
		Joe Dobosz Equip. Oper. III Dozer	Joe Dobosz Equip. Oper. III Dozer	Joe Dobosz Equip. Oper. III Dozer	Joe Dobosz Equip. Oper. III Dozer
Douglas Hart Equip. Oper. III Dozer/Scraper	Douglas Hart Equip. Oper. III Dozer/Scraper	Douglas Hart Equip. Oper. III Dozer/Scraper	Douglas Hart Equip. Oper. III Dozer/Scraper		
		Darrell Mills Equip. Oper. III Compactor	Darrell Mills Equip. Oper. III Compactor	Darrell Mills Equip. Oper. III Compactor	Darrell Mills Equip. Oper. III Compactor
Philip Smith Equip. Oper. III Dozer/Loader	Philip Smith Equip. Oper. III Dozer/Loader	Philip Smith Equip. Oper. III Dozer/Loader	Philip Smith Equip. Oper. III Dozer/Loader		
Frank Defer Equip. Oper. III Dozer	Frank Defer Equip. Oper. III Dozer			Frank Defer Equip. Oper. III Dozer	Frank Defer Equip. Oper. III Dozer
Vince Ettore Equip. Oper. III Dozer			Vince Ettore Equip. Oper. III Dozer	Vince Ettore Equip. Oper. III Dozer	Vince Ettore Equip. Oper. III Dozer
Lanny Hammitt Equip. Oper. I General Maintenance Equip. Refueling	Lanny Hammitt Equip. Oper. I General Maintenance Equip. Refueling	Lanny Hammitt Equip. Oper. I General Maintenance Equip. Refueling	Lanny Hammitt Equip. Oper. I General Maintenance Equip. Refueling		
Joe Ziegler Equip. Oper. III Scraper	Joe Ziegler Equip. Oper. III Scraper	Joe Ziegler Equip. Oper. III Scraper		Joe Ziegler Equip. Oper. III Scraper	
Gary Lemay Equip. Oper. III All-Terrain Dump/Dozer	Gary Lemay Equip. Oper. III All-Terrain Dump/Dozer			Gary Lemay Equip. Oper. III All-Terrain Dump/Dozer	Gary Lemay Equip. Oper. III All-Terrain Dump/Dozer
	Harry Maguire Equip. Oper. I Monitoring Refueling/Gen'l Maint.	Harry Maguire Equip. Oper. I Monitoring Refueling/Gen'l Maint.	Harry Maguire Equip. Oper. I Monitoring Refueling/Gen'l Maint.	Harry Maguire Equip. Oper. I Monitoring Refueling/Gen'l Maint.	
Early Peters Equip. Oper. III Compactor/Scraper	Early Peters Equip. Oper. III Compactor/Scraper			Early Peters Equip. Oper. III Compactor/Scraper	Early Peters Equip. Oper. III Compactor/Scraper
Ernesto Bernal Landfill Attendant I Mowing Spotter/Puller	Ernesto Bernal Landfill Attendant I Mowing Spotter/Puller	Ernesto Bernal Landfill Attendant I Mowing Spotter/Puller	Ernesto Bernal Landfill Attendant I Mowing Spotter/Puller	Ernesto Bernal Landfill Attendant I Mowing Spotter/Puller	
Bridget Frattallone Office Asst. III Mail	Cari Walz Recycl. Service Tech. Mail	Bridget Frattallone Office Asst. III Mail	Gwen Pagington S.W. Program Specialist Mail	Bridget Frattallone Office Asst. III Mail	



HDR Engineering, Inc.



TYPICAL STAFF SCHEDULE

MANATEE COUNTY FLORIDA

FIG NO.
K-1

JULY
1998

Table K-1
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	911
Chief Henry Sheffield	
Braden River Fire Department	746-7675
Ambulance	911
Sheriff	911
Gus A. DiFonzo, Solid Waste Manager	Beeper: 569-1486 Cellular: 745-6690
Dan Gray, Utilities Operations Manager	Beeper: 569-2523 Cellular: 742-7427
Mike Gore, Landfill Superintendent	Home: 322-8094 Beeper: 569-8739 Radio: 701
Cari L. Walz, Recycling Service Technician	Home: 358-6820 Pager: 331-4499 Radio: 701
Ervin (Bud) Bell, Chief Equipment Operator	Home: 322-1710 Beeper: 331-4652 Radio: 705
Gary Seeley, Chief Equipment Operator	Home: 753-7517 Beeper: 331-4653 Radio: 710
Department of Environmental Protection	Phone: 813/744-6100
Kim Ford	Extension: 382
Bob Butera	Extension: 451

Small fires on the working face will be controlled by a water wagon, bulldozer or landfill compactor and ample water and cover material to extinguish the fire. On-site stockpiles of soil cover material are available for suppressing fires. In the event an uncontrollable fire does occur at the landfill site, the Braden River Fire Department (941/746-7675) is the responding Department and will be called immediately. The Braden River Fire Department presently maintains a fire station approximately 3.5 miles west of the facility. In the event of a fire or other emergency, the landfill operator will notify the FDEP within twenty-four (24) hours by telephone and within seven (7) days a written report will be submitted describing the origins of the emergency, actions taken, result of the actions taken, and an analysis of the success or failure of the actions.

A hot load area is provided in a location away from the working face to allow vehicles arriving at the landfill with a fire in their load to dump quickly in an area where the material can be spread out and quickly covered with soil. The location of the hot load area will change from time to time with the changing working face locations. Hot loads will not be dumped on the working face until sufficiently cool to avoid combustion.

Accommodations for wet weather solid waste disposal for the residential or small business patrons is located in Stage I. See Drawing 2 in Appendix B. The location of the wet weather operations area may change, depending upon progression of the Fill Sequence Plan. The area is bermed and a shell stabilized tipping surface is provided.

The solid waste deposited in the wet weather area is loaded into dump trucks and transported to the working face for proper disposal. The wet weather area is also cleaned at the end of each day in order to provide proper litter and vector control.

c. Control of types of Materials Received:

Procedures for observing waste as it is brought to the landfill and unloaded are provided in Section K.2.e.. The load checking program is described in Section K.6..

The landfill is authorized to accept MSW/C&D, inert wastes, sludge, and street cleanings. MSW includes the following: residue, nonhazardous industrial solid waste, white goods, tires, asbestos, yard wastes, household hazardous wastes, and conditionally exempt small quantity generator wastes.

The following separate areas are maintained for specific wastes:

- | | |
|--|----------------------------------|
| 1. Asbestos Area | 5. Yard Waste Processing Area |
| 2. Lead-Acid Battery Collection Area | 6. Tire Storage Area |
| 3. Household Hazardous Waste Collection Site | 7. Freon Containing Staging Area |
| 4. White Goods/Scrap Metal Storage Areas | |

Special wastes such as white goods, tires, and yard wastes, require special handling and management. The County temporarily stores white goods and whole tires prior to processing. The white goods are stored in an upright position until such time as the contracted commercial recyclers remove them. Waste tires are stored in the permitted waste tire site prior to removal by the recycler. Tires mixed in loads are removed from the active face. Yard wastes are processed on site by a commercial recycler and removed from the site for re-use in landscaping or waste-to-energy plants as fuel. Waste types not accepted include all hazardous wastes, all infectious wastes, pesticides and unexpended pesticide containers, free liquids, flammable and volatile wastes, and radioactive wastes.

Procedures for storage and disposal of unauthorized waste can be found in Section K.6.

Asbestos

Asbestos waste haulers are required to notify the landfill operator in advance and provide information on the estimated volume and delivery date of friable asbestos. All incoming asbestos material is required to comply with all applicable permit conditions and to be wet down and double bagged. Asbestos will not be accepted if adverse weather conditions prohibit access to the asbestos disposal area. Asbestos is covered with a minimum 6-inch layer of cover material upon disposal. If additional deliveries are scheduled for the same day, cover material will be applied upon disposal of the last scheduled delivery. The disposal location will be recorded in accordance with 40 C.F.R., Part 61.154, and a record of the asbestos location will be maintained.

Hazardous Waste

If hazardous waste materials are located at any area of the Landfill, the area must be isolated and Management notified immediately. Management/Supervisory staff must notify the below listed agencies dependent on the type of material brought to the Landfill.

Management/Supervisory staff must notify the following offices for handling and proper disposal of hazardous wastes:

1. Environmental Management Department - 742-5980
2. Sheriff's Department/HazMat Section - 747-3011, Extension 2285
3. Utilities Operations Manager - 792-8811, Extension 5323
4. Recycling Service Technician - 795-3423 (X5423) (Household Hazardous Waste Only)

All events regarding receipt of non-household hazardous waste material at the Landfill are to be documented in the daily log maintained by the Landfill Superintendent.

A brief outline of the following materials/programs is given below. More specific information regarding these areas is outlined in the Special Wastes Section of this manual.

Typical household hazardous wastes (HHW) are as follows:

paint	pesticides	used motor oil
herbicides	aerosol cans	propane tanks
gasoline	mercury containing devices	cleaning supplies

The Recycling Service Technician responsible for operation of the Household Hazardous Waste Collection Site must be notified if HHW material is to be disposed. The Technician will arrange for removal and proper disposal.

White Goods

All white goods containing freon (e.g. refrigerators, air conditioners) are segregated from the waste stream and placed upright in the staging area. Freon is removed by a certified operator. The compressors are removed and oils drained for collection by a licensed hazardous waste transporter. The white goods are then moved to the general white goods/scrap metal area for collection by the scrap metal processor.

All non-contaminated white goods entering the landfill in clean loads are sent directly to the designated white goods/scrap metal storage area to be collected by a private contractor for recycling purposes.

Yard Waste

Disposal of yard waste is prohibited. All in-coming yard waste is directed to the designated area for processing into mulch or fuel. The contracted vendor then removes the shredded material for re-sale to various outlets for recycling/waste-to-energy purposes.

Tires

All tires entering the landfill are directed to the permitted storage area. The contracted vendor removes the tires to a waste-to-energy facility for processing and use as a fuel additive. Removal by the vendors is conducted on an on-call basis; approximately every two weeks.

Batteries

State regulations require that lead-acid batteries cannot be disposed in a lined landfill. The County prohibits collection of batteries by its franchised waste haulers. The Solid Waste Management Act aids in providing for proper disposal by requiring that all entities who sell batteries at retail shall accept used batteries as trade-ins for new batteries.

The County accepts batteries at no cost to its citizens who bring them to the Landfill Facility. Upon entering the scales, the transporter is advised to place all batteries in the storage shed located to the right of the roadway as you drive off the scales. In addition, batteries are accepted at the HHW Facility during its collection events.

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The Technician conducts frequent inspections of the storage shed and HHW Facility to monitor the number of batteries on site. When the on-site count reaches the 75 to 80 range, the contracted battery vendor is called to remove them for recycling and/or proper disposal.

The current contracted vendor has agreed to collect the batteries on an "on-call" basis. Past history has indicated a steady increase in the public's awareness of proper disposal and during the Fiscal Year beginning October, 1996, collection has been done approximately every six weeks. When the vendor arrives on site, he/she is met by the Tech who observes the transfer of batteries from the collection shed to the vendor's vehicle. The vendor must sign a battery log before the batteries are removed from the Facility and the log is also signed by the Technician verifying the count of batteries removed.

The collection agreement is provided for on an annual basis ending in the month of June. Paperwork is tracked and accounted for by a Blanket Purchase Order/Release Order system. Since its inception, the collection agreement has been revenue generating; however, due to the annual nature of the agreement, there may be a no cost/no revenue or possibly, a cost assessed to this program.

d. Weighing Incoming Waste

The scale operations are supervised and operated by the Manatee County Public Works Department, Fiscal Services Section. A scale is located at the entrance to the landfill. The weighing of waste is required prior to entering the landfill and weight records are reported to the Department quarterly. Vehicles that enter the 45 ton electronic scales are recorded on an information management system. This system records the date, type of vehicle, weight, material to be disposed, daily transaction number, and any other information available pertaining to account name or status. The driver is directed to the appropriate disposal area by the scale attendant.

e. Vehicle Traffic Control and Unloading

The landfill facility is surrounded by fencing and other natural barriers which limit vehicle access to the landfill. Directional signs have been placed to safely direct vehicles to the current waste disposal area. These signs have large legible letters and are cleaned, refurbished and moved as necessary. The signs are strategically placed so that the route is clear to the drivers. In addition, verbal instruction is issued by the scale attendant as required. Fencing or temporary barricades are employed as additional traffic control features. Speed limit, safety, and prohibitive practice signs are also placed as necessary in order to encourage a safe, clean operating area.

The landfill attendant directs disposal operations. The landfill attendant also acts as the spotter at the active face. Unloading is permitted only at the designated working face. At the fill areas, temporary signs and at least one spotter direct vehicles to the proper tipping areas. The spotter

directs those persons requiring additional assistance. Haulers are responsible for unloading their own vehicles. Wastes requiring special handling are coordinated with and unloaded under the direct supervision of Landfill personnel. Spotters move about the working face as needed to properly direct the positioning of vehicles for unloading and to observe waste as it is unloaded.

Any suspicious loads or vehicles are stopped by the scale staff for inspection. The County also has a random load inspection program in place as discussed in Section K.6. Spot checking also occurs at the active face. If the spotter detects a load of unauthorized waste while the hauler is still present, the waste is reloaded into the vehicle and is removed from the site. If the hauler cannot be identified, it is the County's responsibility to remove the waste from the landfill for proper disposal. Procedures for storage and disposal of unauthorized waste can be found in Section K.6.

f. Method and Sequence of Filling Waste

A seven-year fill sequence plan has been approved by the Department. This plan was submitted to the Department on January 29, 1997. The Fill Sequence Plan is incorporated into this application by reference. Insert Revision 2 - Page K-9A

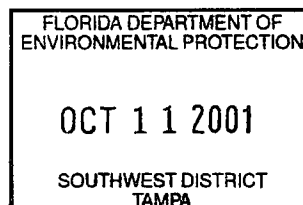
g. Waste Compaction and Application of Cover

Waste is typically dumped at the toe of the active face and is spread over the face in a maximum two-foot lift with dozers. Upon completion of waste spreading, compactors typically roll the waste with three to five passes prior to spreading of additional waste. To achieve the optimum compaction, while minimizing initial cover usage, the active face slopes are maintained at approximately 5:1 (H:V). The flatter the slope, the greater the compaction rate and greater amount of soil to cover the waste. The 5:1 face slope provides a good compromise between compaction and soil usage. The compaction with the given equipment and working conditions is approximately 1,200 lb/cy. An analysis of the historical annual aerial topographic mapping and scale records indicates the actual compaction rate to be 1,491 lb/cy. Table K-2 shows the measured compaction rates from 1991 through 1996.

Cover material for daily operations of the landfill is obtained from the designated stockpile area. The landfill currently has sufficient cover material available for one year. To minimize soil usage, Manatee County has purchased mechanically installed tarp type alternate daily cover system (ADC). Tarps are laid across the working face and taken up the next day. Tarps are loaded to minimize the effects of wind uplift. If waste is not deposited on the working face within 24 hours, the soil is used as the cover material. The areas of the working face not covered by the tarps are covered with soil.

h. Operations of Gas, Leachate, and Storm Water Controls

See the Stormwater/Leachate Management Plan in Appendix A-1. Gas is passively vented so no operation is necessary. Gas migration monitoring is described in Section K.9.



Insert to Page K-9 of the Operation Plan

F: Method and Sequence of Filling Waste

In September 2001, the fill sequence plan was revised. Prior to filling in Stage III Landfill, the leachate pond will be filled with solid waste.

This will add about one year to the landfill. The Fill Sequence Drawings were revised to show this modification. Four new drawings were prepared and included in Section 3 of the application.

K-9A

Revision 2- 9/21/01

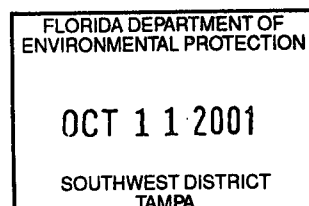


Table K-2
Measured Waste Compaction Rates

YEAR	WASTE (TONS)	VOLUME (CY)	DENSITY (LB/CY)
1991	273,322	410,000	1,333
1992	284,726	471,400	1,208
1993	385,210	514,000	1,499
1994	351,825	465,300	1,512
1995	358,890	575,705	1,247
1996	317,451	295,915	2,146
AVERAGE			1,491

i. Water Quality Monitoring

See Part L of this permit application.

3. LANDFILL RECORDS AND RECORD LOCATIONS

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

A permanent log denoting events is maintained by the Landfill Supervisor in accordance with the Operational Permit. Some examples of daily operations of the landfill are:

Operation and maintenance of the facility	Special wastes monitoring
Manpower and equipment usage	Fill sequence plan adherence
Storm water and leachate issues	
Compliance with permits, applicable rules, regulations and laws	

4. WASTE RECORDS

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

Residential Mixed	Commercial Mixed	Longboat Key South
Cleanup	Illegal	Sludge
Out-of-County	Yard Waste	Const. & Demolition
Mulch (Out)	Mulch (No Charge)	Fuel (Out-Mulch)
Debris (Mulch In)	Tires	Tires (Out-of-County)
Illegal Tires	White Goods (Out-of-County)	White Goods

Monthly waste records are kept on site and submitted to the Department upon request.

5. ACCESS CONTROLS

Access to the landfill is controlled by a six-foot high chain link fence along the west side of the landfill and a barbed-wire fence around the remainder of the site. The access gates are locked at the close of each business day. Signs indicating hours of operation, operating and permitting authorities, and directions for person's delivering waste are posted at the entrance. Additional signs are used along site access roads and at the working face to direct traffic to the proper disposal areas.

6. LOAD CHECKS

The County has a random load inspection program in accordance with F.A.C. Chapter 62.701 in place and inspects at least three loads per week. Drivers with loads selected for random inspection are instructed to dump their loads at a designated location near the working face but segregated from other waste. The selected load is inspected to determine if the load contains any unauthorized waste. Spot checking also occurs at the active face. If the spotter detects a load of unauthorized waste while the hauler is still present, the waste is reloaded into the vehicle and is removed from the site. If the hauler has left the site, attempts will be made to identify the generator, hauler, or other party responsible for shipping the waste. Identified responsible parties will be contacted and asked to remove the unauthorized waste. If the generator, hauler, or other party responsible for shipping the waste cannot be identified, or if they will not remove the waste, the County will remove the waste from the landfill for proper disposal.

If any regulated hazardous wastes are identified by random load inspection, or are otherwise discovered to be improperly deposited at Lena Road Landfill, the landfill operator shall notify the FDEP, the person responsible for shipping the wastes to the landfill and the generator of the wastes, if known. The area where the wastes are deposited shall be immediately cordoned off from public

access. If the generator or hauler cannot be identified, the landfill operator shall assure the cleanup, transportation, and disposal of the waste at a permitted hazardous waste management facility.

A small quantity of unauthorized waste which must be stored on-site while awaiting removal for disposal will be stored in the household hazardous waste collection facilities until it can be removed by contractor for proper disposal. For quantities too large to store in the two household hazardous waste collection buildings, it will be isolated at the landfill face with temporary berms constructed around the waste to ensure containment of any surface runoff. The area will be properly marked with signs and temporary fencing will be used to prevent unauthorized access to the material until it can be shipped off-site for proper disposal.

Sources found or suspected to be previously responsible for shipping regulated hazardous waste will be informed of landfill requirements and referred to FDEP for hazardous waste information. Subsequent shipments from such sources will be scrutinized for unauthorized or hazardous waste.

Inspection results, information and observations resulting from each random inspection will be recorded and retained at the landfill for at least three years. A copy of the inspection form used for random load inspections is shown as Figure K-2.

Inspectors, equipment operators, weigh station attendants and spotters are trained to identify unauthorized wastes or potential sources of regulated hazardous wastes. This training emphasizes familiarity with containers and labels typically used for hazardous wastes and hazardous materials. Controlling types of waste received is discussed in Section K.2.e.

7. WASTE COMPACTION

a. Waste Layer Thickness

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

b. First Waste Layer

The area to be filled has been completely covered by waste during previous permit periods. The first layer of waste placed above the leachate collection system in Stage II will be a minimum of four feet in compacted thickness and shall consist of selected wastes containing no large rigid objects that may damage the leachate collection system. Special care shall be exercised when filling around pump stations to prevent damage.

LOAD INSPECTION FORM

DATE: _____ TIME: _____ INSPECTOR: _____

LOCATION: _____

DRIVER NAME: _____

COMPANY NAME: _____

TAG NO: _____ TRUCK DESCRIPTION: _____

ORIGIN OF WASTE: _____

WASTE COMPOSITION: _____

IF ANY, NOTE NUMBER OF FOLLOWING ITEMS:

FLOURESCENT LAMPS (10 or more): _____

MERCURY CONTAINING DEVICES*: _____

BIO-HAZARD MATERIALS FOUND: _____

OTHER HAZARDOUS MATERIALS FOUND: _____

TIRES, LEAD ACID BATTERIES: _____

OIL BASE PAINT: _____

IF YES, EXPLAIN CIRCUMSTANCES OF COLLECTION: _____

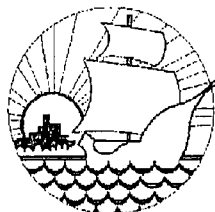
IF YES, MANAGEMENT INFORMED: Yes _____ No _____

NAME AND TITLE: _____

*Thermostats, Thermometers, Bilge Pumps, Manometers, etc.

HDR

HDR Engineering, Inc.



LOAD INSPECTION FORM

MANATEE COUNTY

FLORIDA

FIG NO.
K-2

JULY
1998

c. Slopes and Lift Depths

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

d. Working Face

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

e. Initial Cover Controls

Materials used as cover include tarp alternative daily cover (ADC) and soil as the initial cover material. The ADC, when used, covers the working face with a weighted tarp. Currently, four 100' x 40' tarps are used to cover the working face. Soil, when used, is applied daily at a minimum thickness of six inches.

f. Initial Cover Applications

The tarp alternative daily cover system is the primary method of daily cover. Soil is used to supplement ADC and when conditions prohibit use of ADC. For those times when conditions prohibit the use of ADC, initial cover will be stockpiled near the active face for use at the end of each day. Dozers used for spreading waste will spread cover soil, when used, or authorized equipment for tarp cover application will be utilized to cover the exposed refuse when ADC is used.

g. Intermediate Cover

An additional 12 inches of compacted cover soil (intermediate cover) is placed over six inches of initial cover, within seven days of cell completion, on areas which are not scheduled to receive wastes within 180 days. These areas are grassed to reduce erosion. Prior to placement of additional wastes in these areas, the intermediate cover is removed and stockpiled adjacent to the active face for use as initial cover.

h. Final Cover Timing

The next closure project is planned to occur in the year 2000 as shown in the FDEP-approved Fill Sequence Plan. The timing of this partial closure sequence was due to the availability of areas at final grade. Based on the waste generation projections used in the Fill Sequence development, the slopes along the south and west sides of Stage I will not be at final grade until 1999 and the top deck will be available for closure in 2000. Therefore, to reduce construction costs associated with

contractor mobilization, economies of scale, and engineering costs of design and construction related services, one closure project was proposed to include all of the available areas in Stage I upon moving to Stage III. This area will receive final cover as scheduled in the FDEP-approved Fill Sequence Plan.

i. Litter Policing

Litter fences are installed near the active face to capture wind-blown litter. The site is policed daily to insure that litter outside the working area is picked up within 24 hours. Litter fences are also installed along the top of the banks, parallel with interior Storm Water ditches to minimize litter from entering the storm water management system.

j. Erosion Control

Erosion is controlled with grassing and terraces. Manatee County has implemented an aggressive sodding plan to protect intermediately covered side slopes from erosion. Temporary piping is used to remove runoff from the sodded terraces rather than allowing the terrace to merely reduce the sheet flow velocity. This temporary piping drains collected runoff for discharge into the perimeter Storm Water ditch system.

k. Scavenging

All employees have signed a letter by the Director of Public Works acknowledging that scavenging is prohibited and severe penalties including dismissal may result if found scavenging.

8. LEACHATE MANAGEMENT

a. Leachate Level Monitoring

See Section VI, Gradient Monitoring, in the Storm Water/Leachate Management Plan (S/LMP) found in Appendix A.

b. Operation and Maintenance of Leachate Collection System

See Section V, Maintenance Plan, in the S/LMP found in Appendix A.

c. Leachate as Hazardous Waste

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

d. Off-Site Discharge Agreements

All collected leachate is treated at the waste water treatment plant (WWTP) located adjacent to the landfill. See Section III, Leachate Collection and Removal System Overview, in the S/LMP, found in Appendix A-1. Due to the common ownership of the landfill and the WWTP, the Public Works Director has issued a letter stating leachate will be accepted at another off-site treatment plant as required. See Appendix A-3.

e. Leachate Management Contingency Plan

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

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

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

Leachate will be trucked to the County's Southwest Treatment Plant or North Wastewater Treatment Plant, if necessary. For more detail, see Appendix A-1.

f. Leachate Generation Recording

See Appendix A-1.

g. Precipitation/Leachate Comparison

See Table K-3 for a comparison of leachate and rainfall at Lena Road Landfill. A comparison of leachate and rainfall for 1997 only is enclosed in Table K-3A. The table with graph will be updated annually and submitted to FDEP.

9. GAS MONITORING

The landfill has a routine gas migration monitoring plan in-place. Gas migration is monitored using the gas monitoring wells around the site. Landfill gas migration monitoring points are shown in Figure K-3. While sampling is conducted monthly, the minimum sample frequency for this permit shall be quarterly. With the presence of the slurry wall and surrounding ponds, gas migration is

extremely unlikely. Monitoring results are recorded as shown in Table K-4 and K-4A. For ease reading these tables, LEL concentration values of zero were not included. No data available is indicated with a "dash". Gas monitoring results will be submitted quarterly.

10. STORM WATER MANAGEMENT

See Sections II (Storm Water System Overview), IV (Compliance Monitoring), and V (Maintenance Plan) of the Storm Water and Leachate Management Plan found in Appendix A.

11. EQUIPMENT/OPERATION FEATURES

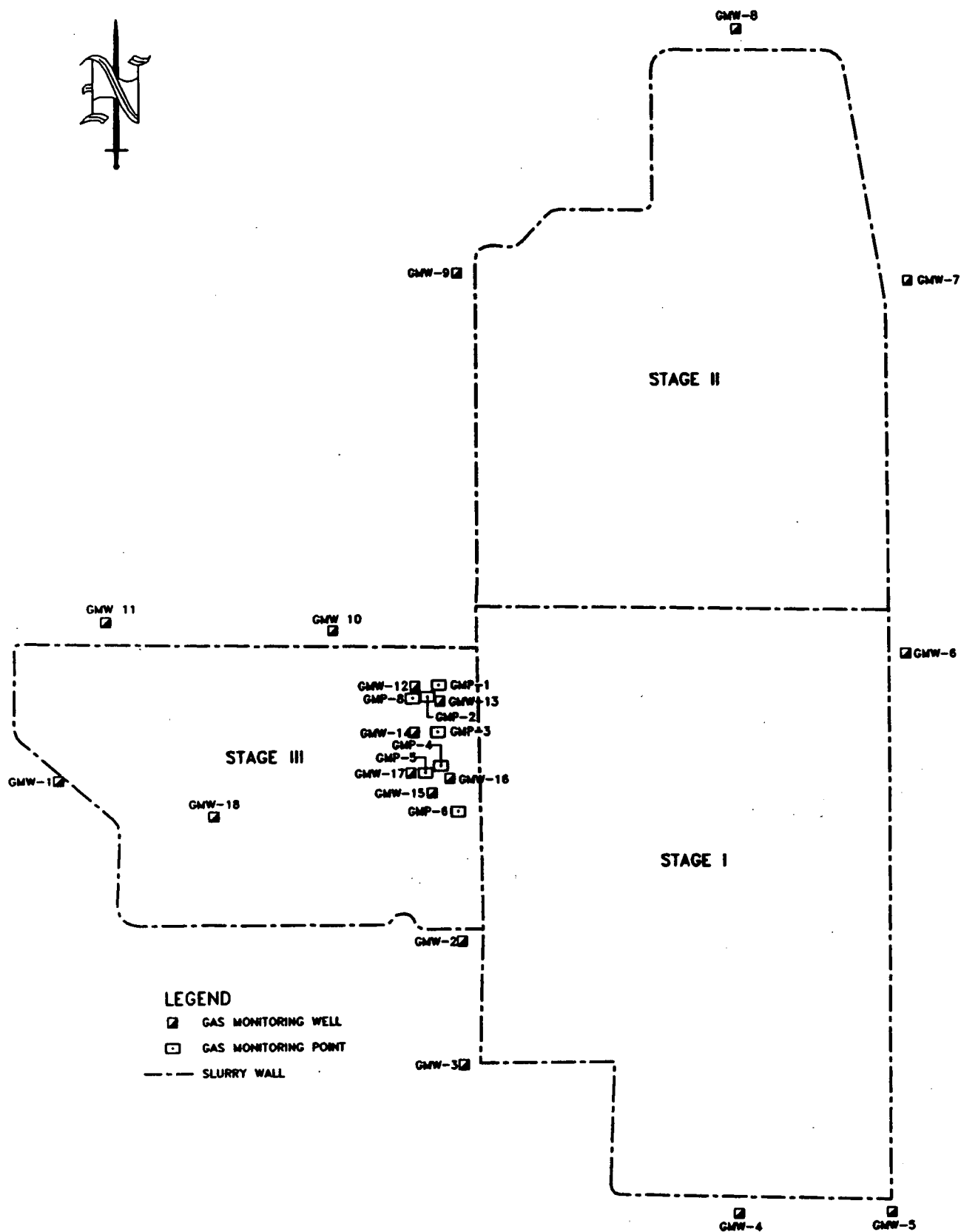
a. Sufficient Equipment

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

All landfill equipment that will be in operation on that day is serviced with special attention to any maintenance or minor repair needs. If the repair work required is more than minor in nature, it is sent to the "landfill garage". The equipment is primarily serviced by Manatee County Fleet Services which operates a repair center at the Landfill Facility.

The following procedures are used in fueling equipment each day:

1. Check the following fluids to ensure they are at the manufacturer's recommended level:
pivot shaft oil engine oil hydraulic oil fuel
transmission oil radiator water battery water level
2. Check and clean the following filters:
air cleaner interior/exterior air conditioner filters
3. Pressure wash with water and/or air:
radiator core transmission oil coolers hydraulic oil coolers
4. Clean all air intake openings such as door panels, steps, hood, air breather intake
5. Visually check for water, fuel and oil leaks in the final drive, radiator hoses, hydraulic hoses, fuel lines, injector pumps, fuel filters, etc.
6. Check tire inflation and/or track adjustment, chain tension and alignment on scrapers.
7. Grease all fittings at recommended intervals.
8. Complete the Daily Equipment Maintenance Report.



HDR
HDR ENGINEERING, INC.

**LANDFILL GAS MIGRATION
MONITORING LOCATIONS**

MANATEE COUNTY

FLORIDA

FIG NO.
K-3

DATE
NOV 1998

Table K-3
Rainfall / Leachate Comparison

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

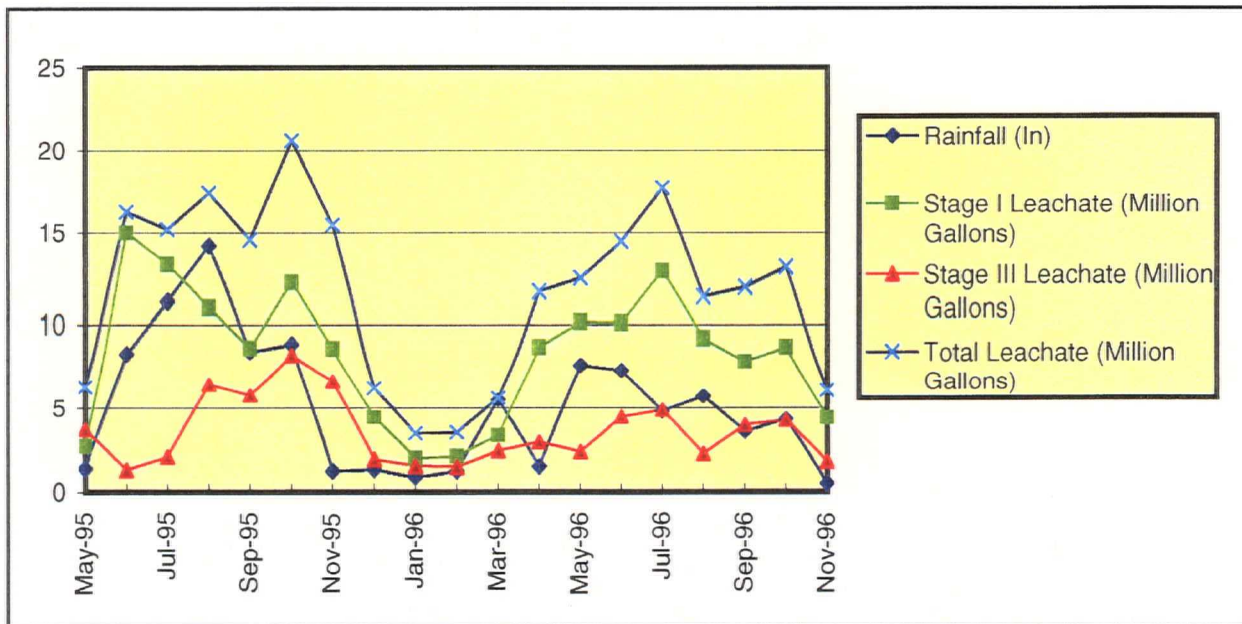
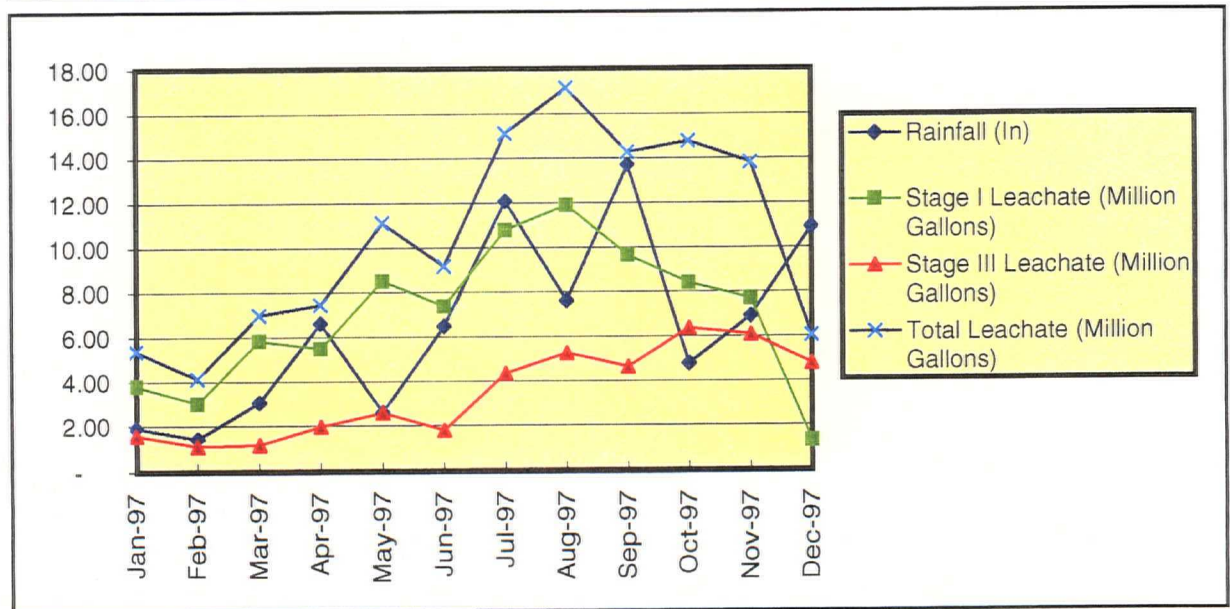


Table K-3A
Rainfall / Leachate Comparison

Month	Rainfall (In)	Leachate (Million Gallons)				
		Stage I	Stage III	Total	Treated	Recirculation
Jan-97	1.90	3.80	1.57	5.37	1.27	4.10
Feb-97	1.41	3.02	1.10	4.12	1.00	3.12
Mar-97	3.05	5.82	1.16	6.98	2.76	4.22
Apr-97	6.62	5.48	1.96	7.44	2.57	4.87
May-97	2.60	8.52	2.58	11.10	4.60	6.50
Jun-97	6.48	7.37	1.79	9.16	13.56	-4.40
Jul-97	12.07	10.77	4.34	15.11	11.51	3.60
Aug-97	7.61	11.88	5.26	17.14	9.38	7.76
Sep-97	13.70	9.65	4.62	14.27	1.19	13.08
Oct-97	4.78	8.40	6.38	14.78	3.43	11.35
Nov-97	6.92	7.71	6.09	13.80	7.32	6.48
Dec-97	10.92	1.28	4.77	6.05	5.60	0.45
Average	6.51	6.98	3.47	10.44	5.35	5.09



Note:

Stage I and Stage III leachate data is not available separately for June through December 1997.

b. Reserve Equipment

Table K-5 indicates the County possesses sufficient equipment to operate the landfill. In the event the dozer is out of service, the compactors can be used to spread refuse over the active face. In addition, the County can rent backup equipment from its approved Bid List or from County sources within 24 hours if necessary.

c. Communication Equipment

All equipment operators and traffic controllers are equipped with hand held radios. This radio transmission service links the field personnel to the office and management. Telephones are available in the office, maintenance garage and scalehouse.

d. Shelter/Sanitation/First Aid Features

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

e. Dust Control

Internal access roads are sprayed with water to control dust. Vegetation on filled areas assists in controlling dust from these area.

f. Fire Protection

Further details regarding the fire protection can be found in Section K.2.b.

g. Litter Control Devices

See Section K.7.i.

h. Signs

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

i. First Aid

First aid kits are located in the Landfill Administration Office and are maintained and inspected regularly. The kits will contain, at a minimum, the following:

sterile gauze pads	band aids (regular and non-stick)
rolls of gauze bandage	adhesive tape
bandage scissors	sterile cotton balls
roll of sterile cotton gauze	safety razors
mouth gag	safety pins
tweezers	rubbing alcohol
peroxide	merthiolate

In the case of accidental poisoning:

Step 1: Carefully remove poison from contact with person.

Eyes: Flush with lukewarm water, NOT HOT WATER, in a gentle stream for 10-15 minutes with eyelids open. Pour water from a container held 2-4 inches above the eye. **DO NOT RUB THE EYES.**

Skin: REMOVE any clothing that has come in contact with the poison. Flush poison off with large amounts of water poured from a container held 2-4 inches above the affected skin area for 10-15 minutes.

Mouth: REMOVE any poison from the mouth. Rinse the mouth out with water. If unable to rinse, gently rub out mouth with a clean cloth. Check mouth for any burns, cuts, unusual coloring, swelling or irritations.

Lungs: Get to fresh air as soon as possible. Loosen clothing if exposed to gases or fumes. Initiate mouth to mouth resuscitation if necessary.

Step 2: Give water when potential poisons have been swallowed. DO NOT give water if the person is unconscious, having convulsions or cannot swallow.

Step 3: **NEVER** make the person vomit **unless** the poison center or a physician directs you to do so.

Step 4: KEEP CALM. **DO NOT DELAY IN SEEKING HELP!**

12. ALL-WEATHER ACCESS ROADS

The main haul road in the landfill is paved. Vehicles leaving the main haul road en route to the working face travel across an interior road. The interior road base is constructed of C&D material and covered with a sand-shell mixture. The road is routinely maintained to provide waste hauler access to the work face. As discussed in K.2.b., during severe wet weather, small vehicles are directed to the wet weather disposal area for tipping.

13. ADDITIONAL RECORD KEEPING

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

a. Permit Application Development

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


b. Monitoring Records

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

In accordance with various Environmental Protection Agency (EPA), Southwest Florida Water Management District (SWFWMD), and the Department of Environmental Protection (DEP) rules, regulations and permits, the Landfill must conduct various field monitoring /maintenance activities and submit reports on a scheduled basis. The following information is intended as an overview of required activities and reports and is also addressed in individual sub-sections regarding the activity or program.

Wetlands

The wetland areas are to be inspected and monitoring of the staff gauges done weekly. Maintenance to remove the exotic species is conducted on an "as-needed" basis. A report to SWFWMD is required on a semi-annual basis denoting, at a minimum, the following information: rainfall on a monthly basis, staff gauge readings, wildlife utilization, plant species, and maintenance events.



Groundwater

A contracted vendor inspects and samples 27 groundwater monitoring wells semi-annually and the data is submitted to FDEP. A review of the analyses, comparisons of the data, and comments on any substantial differences in parameters is to be submitted to FDEP on a bi-annual basis. Sample parameters are given in the Operational Permit.

Leachate

Flow meters which record leachate directed to the Southeast Waste Water Treatment Plant are inspected daily. The leachate is to be sampled semi-annually.

Leachate Pond

The staff gauge reading is to be recorded daily.

Stormwater Pond

Staff gauges are to be recorded daily.

Stormwater Ditch

As is required in the Permit Modification, the flow meter charts are to be changed on a monthly basis. The flow is to be checked and recorded daily. In addition, the west weir PH is to be recorded daily.

Department of Environmental Protection Reports\

Prepare monthly groundwater report.
Prepare annual compaction and fill volumes.
Prepare groundwater and leachate analysis report semi-annually.

Environmental Protection Agency Reports

Prepare NPDES permit quarterly and sample for listed parameters if discharge occurs.

Southwest Florida Water Management District Reports

Prepare semi-annual wetland report.

Public Works Department Reports

Prepare monthly water balance reports.

Table K-4
Landfill Gas Migration Monitoring Data
(Percent LEL)

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

Table K-4A
Landfill Gas Migration Monitoring Data
(Percent LEL)

	LFG Migration Well																		LFG Monitoring Point							
Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	1	2	3	4	5	6	7	8
Jan-97																										
Feb-97															-											
Mar-97															-											
Apr-97														17				99								
May-97																		99								
Jun-97																		-								
Jul-97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aug-97																		69								
Sep-97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oct-97																										
Nov-97																										
Dec-97																										

TABLE K-5
Landfill Equipment

YEAR	MAKE	MODEL	DESCRIPTION
1990			WATER TANKER
1989	CATERPILLAR	623E	PAN
1996	CATERPILLAR	623F	PAN
1996	CATERPILLAR	623F	PAN
	FORD		TRACTOR
1992	MICHIGAN		LOADER
1995	JOHN DEERE		TRACTOR
	JOHN DEERE		BACKHOE
1996	CATERPILLAR		COMPACTOR
1992	CATERPILLAR		COMPACTOR
1996	CATERPILLAR		COMPACTOR
1994	CATERPILLAR	D7H	DOZER
1994	CATERPILLAR	D7H	DOZER
1996	CATERPILLAR	D7HLGP	DOZER
1996	CATERPILLAR	D7HLGP	DOZER
		D4OOD	DUMP TRUCK
	Tarpomatic		ADC System

c. Background Water Quality

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

d. Remaining Site-Life Estimates

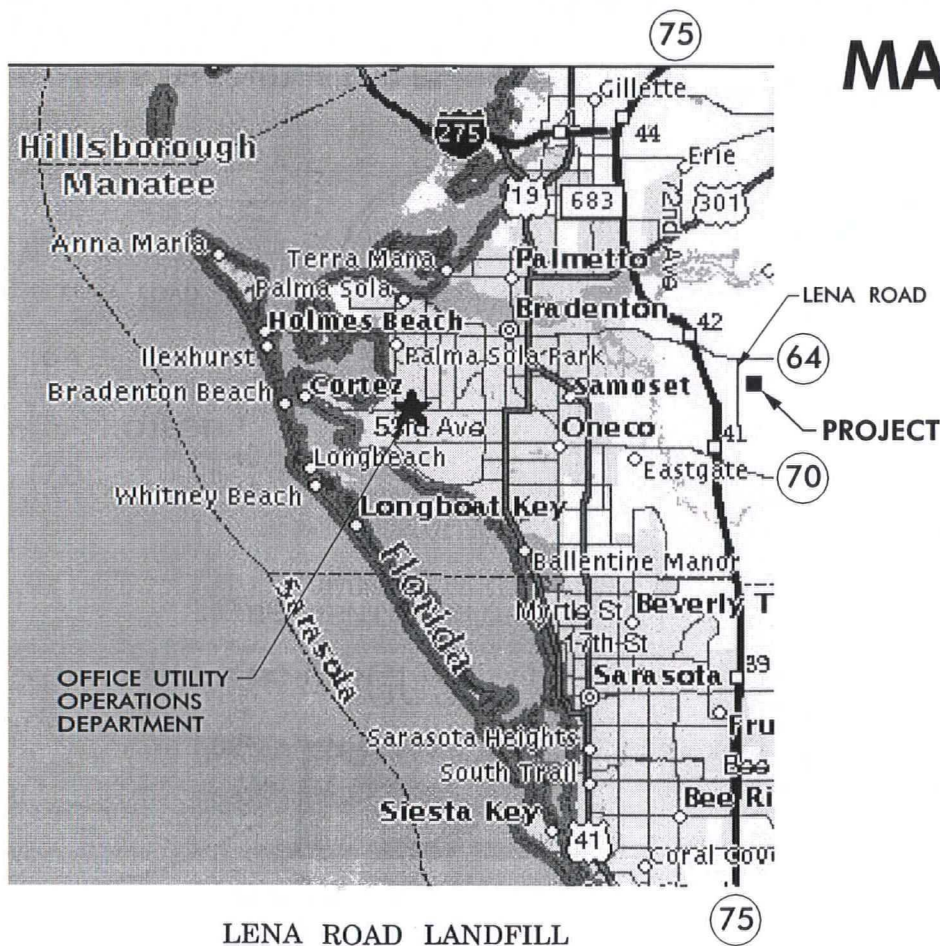
Estimated site-life projections are required and will be submitted annually to the Department.

D.E.P.

DEC - 8 1998

SOUTHWEST DISTRICT
TAMPA

PERMIT DRAWINGS FOR
LENA ROAD LANDFILL
REVISED SEQUENTIAL FILLING PLAN
FDEP LANDFILL OPERATION PERMIT # 39884-001-S0



LENA ROAD LANDFILL
3333 LENA ROAD
BRADENTON, FLORIDA 34202

Name: JOSEPH L. MILLER
Florida P.E. No.: 39177
Address: PBS&J
482 S. Keller Road
Orlando, FL 32813-6201

Signature _____ Date _____

MANATEE COUNTY



MANATEE COUNTY
UTILITY OPERATIONS
DEPARTMENT

4410 66th STREET WEST
BRADENTON, FLORIDA 34210

AUGUST 2001



An Employee - Owned Company

Consulting Engineers and Planners
482 South Keller Road
Orlando, Florida 32810
PBS&J
200 N.W. 10th Ave., Miami, FL 33137-2597
FDEP Certificate of Authorization No.: 24

PERMIT DOCUMENT

ENGINEER'S PROJECT NO. 120498.01 1001

LIST OF DRAWINGS (REVISED SEQUENCE)

SHEET 1/4	COVER		
C-9A	SHEET 2/4	PLAN VIEW	JUL. 2001 (t=57)
C-10*		PLAN VIEW	DEC. 2001 (t=63)
C-10A	SHEET 3/4	PLAN VIEW	JAN. 2003 (t=75)
C-10B	SHEET 4/4	CROSS SECTIONS	JAN. 2003 (t=75)
C-11*		PLAN VIEW	JUL. 2003 (t=81)
C-12*		PLAN VIEW	JAN. 2004 (t=87)
C-13*		PLAN VIEW	JUL. 2004 (t=93)
C-14*		PLAN VIEW	JAN. 2005 (t=99)
C-15*		PLAN VIEW	JUL. 2005 (t=105)

NOTE:

THIS IS A REVISION TO THE SEQUENTIAL FILLING PLAN. AFTER COMPLETING THE FILLING OF THE STAGE I LANDFILL, THE LEACHATE STORAGE POND WILL BE FILLED WITH SOLID WASTE PRIOR TO STARTING THE FILLING OF THE STAGE III LANDFILL. FILLING THE LEACHATE STORAGE POND WILL TAKE AN ESTIMATED 12 MONTHS, AND START IN JANUARY 2002.

DRAWINGS C-10*, C-11*, C-12*, C-13*, C-14* AND C-15* CAN BE FOUND IN "LENA ROAD LANDFILL SEQUENTIAL FILLING PLAN" BY HDR ENGINEERING, INC., JANUARY 1997. THIS REVISION OF THE SEQUENTIAL FILLING PLAN CHANGES ONLY THE SEQUENTIAL FILLING DATES AND TIME FROM START OF PLAN (t=TIME IN MONTHS WITH OCTOBER 1996 BEING t=0). DRAWING C-9A JULY 2001 (t=57) SHOWS THE MOST RECENT LANDFILL CONTOURS. DRAWING C-10 DECEMBER 2001 (SEE HDR'S DRAWINGS) SHOWS THE LANDFILL CONTOURS AFTER FILLING STAGE I, AND JUST PRIOR TO STARTING THE FILLING OF THE LEACHATE STORAGE POND. DRAWINGS C-10A PLAN VIEW AND C-10B CROSS SECTIONS SHOWS THE LANDFILL CONTOURS IN JANUARY 2003 AFTER COMPLETING THE FILLING OF THE LEACHATE STORAGE POND. THE SEQUENTIAL FILLING PLAN THEN RESUMES WITH THE START OF FILLING IN STAGE III LANDFILL. THE ONLY CHANGE BEING IN THE TIME OF FILLING AS INDICATED ON THIS DRAWING.

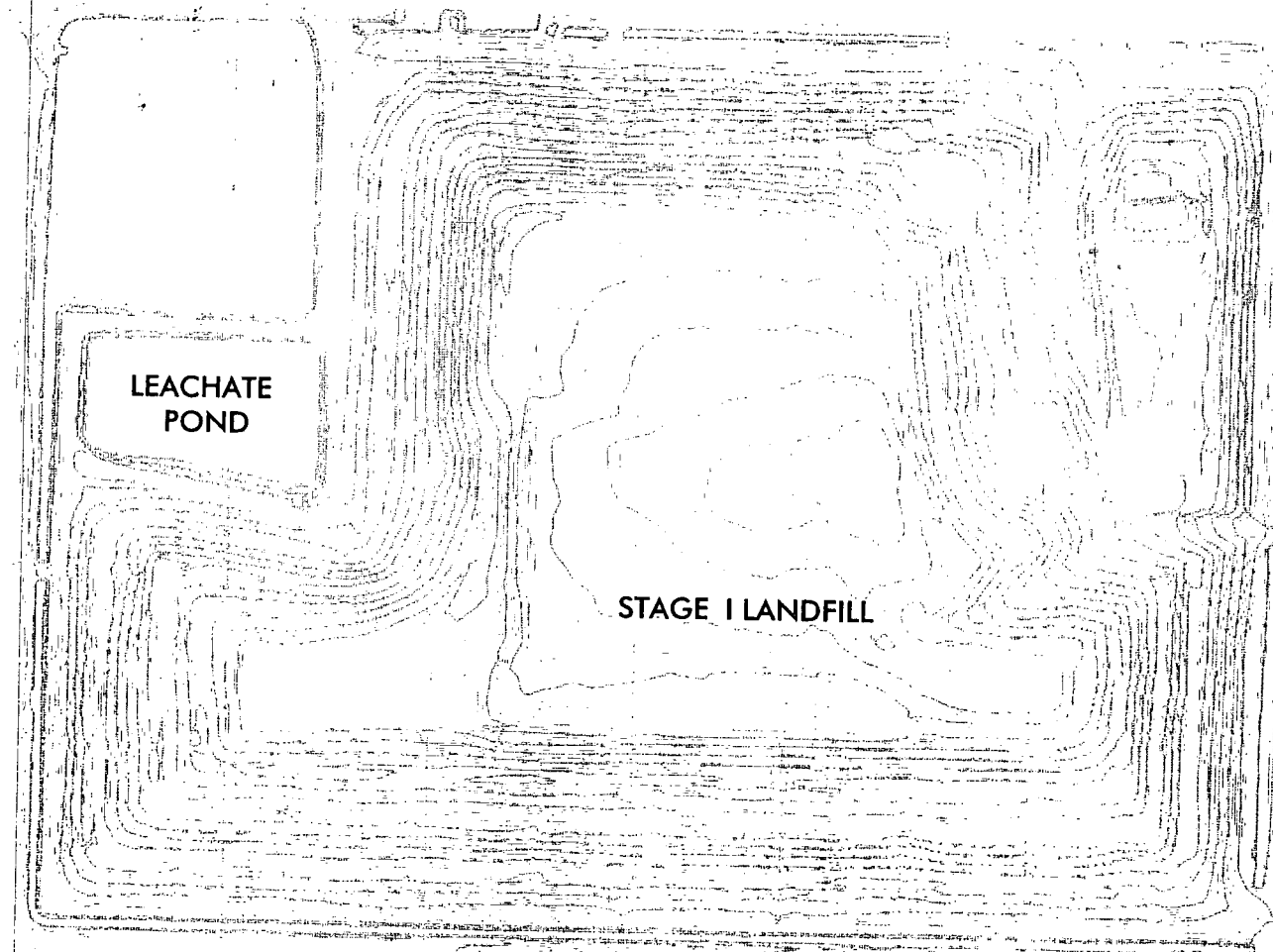
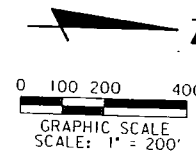
SHEET 1 / 4

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION

OCT 11 2001

SOUTHWEST DISTRICT
TAMPA

MANATEE COUNTY - LENA ROAD LANDFILL



SEQUENCE PLAN
SCALE: 1" = 200'

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION

OCT 11 2001

SOUTHWEST DISTRICT
TAMPA

NOTE:
ALL ELEVATIONS ARE NATIONAL
GEODETIC VERTICAL DATUM (NGVD)

EXISTING TOPOGRAPHY
PROVIDED BY:
I.F. ROOK & ASSOCIATES, INC.
106 N.W. DRANE ST.
PLANT CITY, FL. 33566
DATE OF TOPOGRAPHY:
07/18/01

C-9A



482 SOUTH KELLER ROAD
ORLANDO, FLORIDA 32810
TEL. (407) 647-7275
FAX (407) 647-6945

CLIENT

MANATEE COUNTY
UTILITY OPERATIONS
DEPARTMENT

4410 66th STREET WEST
BRADENTON, FLORIDA 34210



PROJECT

LENA ROAD LANDFILL

OPERATION PERMIT

TASK

AERIAL TOPOGRAPHY

SEQUENTIAL FILLING PLAN

PLAN VIEW

JULY 2001 (t=57)

ORIGINAL: AUG. 2001

REVISIONS:

1
2
3
4
5

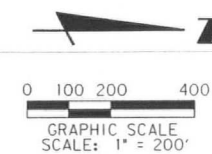
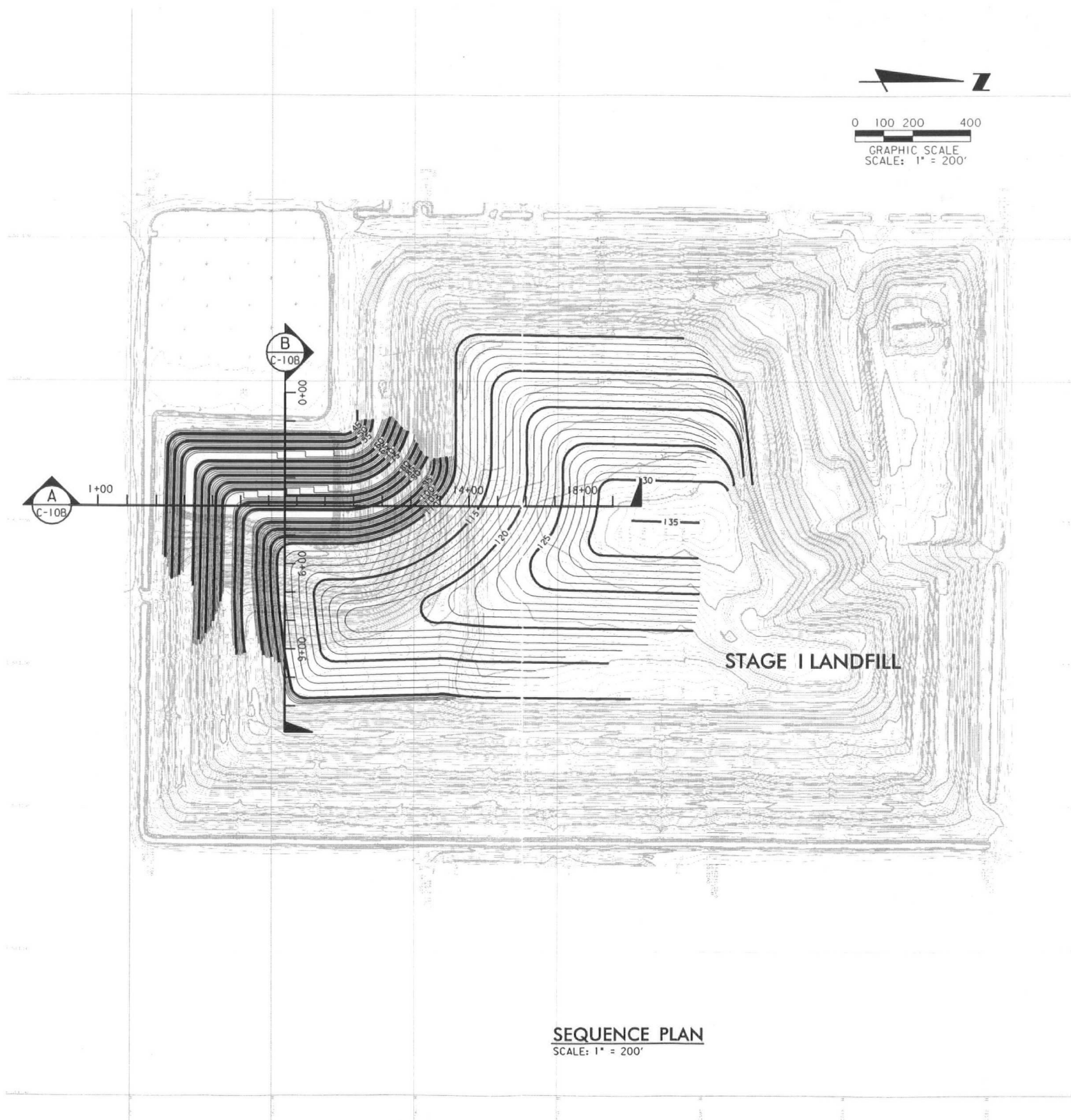
6
7
8
9
10
11
12

Name: Joseph R. Miller
Address: 482 S. Keller Road
Orlando, FL 32810-6100

Signature: _____ Date: _____
NOT VALID FOR CONSTRUCTION
UNLESS SIGNED IN THIS BLOCK

JOB NO. 00-000.00
DRAWN: EGC
DESIGNED: JLM/RGC
CHECKED: JLM
OC: DED

SHEET 2/4



FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION

OCT 11 2001

SOUTHWEST DISTRICT
TAMPA

NOTE:
ALL ELEVATIONS ARE NATURAL
GEODETIC VERTICAL DATUM (NGVD)

EXISTING TOPOGRAPHY
PROVIDED BY:
I.F. ROOK & ASSOCIATES, INC.
106 N.W. DRANE ST.
PLANT CITY, FL. 33566
DATE OF TOPOGRAPHY:
07/18/01

C-10A



482 SOUTH KELLER ROAD
ORLANDO, FLORIDA 32810
TEL (407) 647-7275
FAX (407) 647-6945

CLIENT

MANATEE COUNTY
UTILITY OPERATIONS
DEPARTMENT

4410 66th STREET WEST
BRADENTON, FLORIDA 34210



PROJECT

LENA ROAD LANDFILL

OPERATION PERMIT

TASK

SEQUENTIAL FILLING PLAN

PLAN VIEW

2003 (t=75)

ORIGINAL: AUG. 2001

REVISIONS:

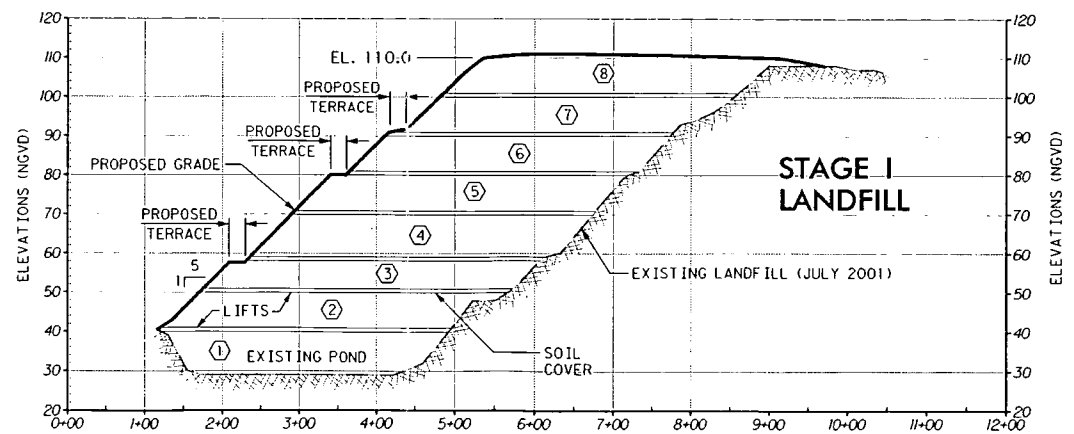
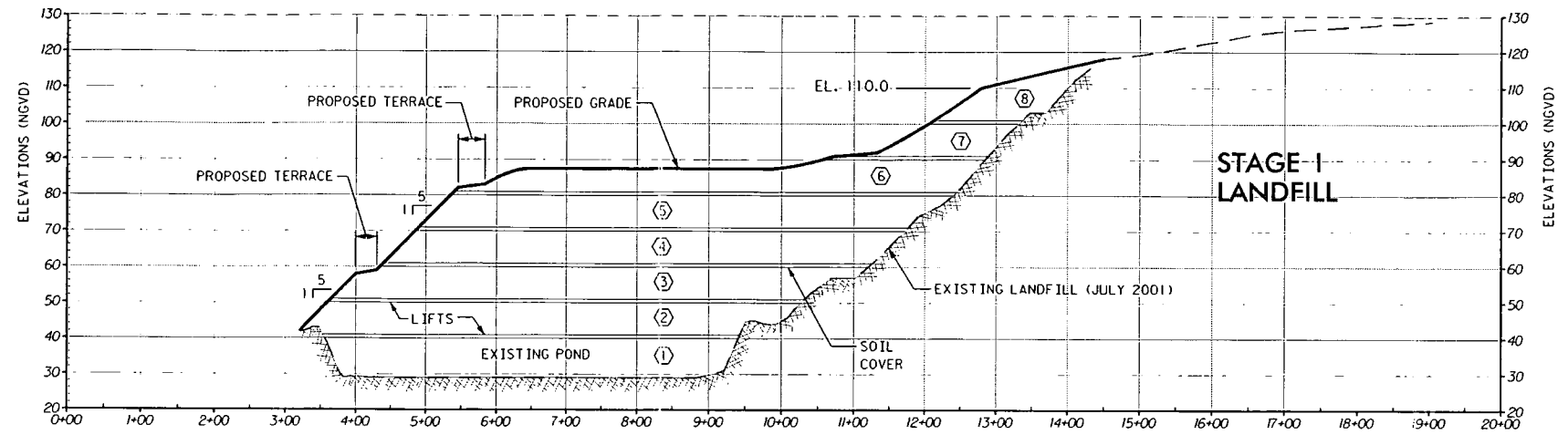
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2	
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Name: Joseph S. Miller
Florida License: 39177
Address: PBS&J
482 S. Keller Road
Orlando, FL 32810-6101

Signature: _____ Date: _____
NOT VALID FOR CONSTRUCTION
UNLESS SIGNED IN THIS BLOCK

JOB NO. 00-000.00
DRAWN: RGC
DESIGNED: JLM/RGC
CHECKED: JLM
QC: DED

SHEET 3/4



TOTAL AIR SPACE INCLUDING COVER - 823,000 (CY)

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
OCT 11 2001
SOUTHWEST DISTRICT
TAMPA

NOTE:
ALL ELEVATIONS ARE NATURAL
GEODETIC VERTICAL DATUM (NGVD)

H:\ENVCAAD\WASTE\MANATEE\LENA\SEQUENCE\MLR_PONDSECTIONS.DGN

PBS&
482 SOUTH KELLER ROAD
ORLANDO, FLORIDA 32810
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CLIENT
**MANATEE COUNTY
UTILITY OPERATIONS
DEPARTMENT**
4410 66th STREET WEST
BRADENTON, FLORIDA 34210



PROJECT	LENA ROAD LANDFILL
OPERATION PERMIT	

TASK	SEQUENTIAL FILLING PLAN
	CROSS - SECTIONS
	2003 (t=75)

ORIGINAL: AUG. 2001
REVISIONS:
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2
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2008 NO. 00-000.00
DRAWN: RGC
DESIGNED: JLM/RCC
CHECKED: JLM
OC: DED
SHEET 4/4

Handwritten signature and date: 10/4/01