

PASCO COUNTY, FLORIDA

DADE CITY (904) 521-4274 LAND O' LAKES (813) 996-7341 NEW PORT RICHEY (813) 847-8040 (813) 847-8064 FAX

UTILITIES CONSTRUCTION AND CONTRACT MANAGEMENT DEPT. PUB. WKS./UTILITIES BLDG., S-205 7530 LITTLE ROAD NEW PORT RICHEY, FL 34654

Department of Environmental Protection

SOUTHWEST DISTRICT

May 14, 1996

Mr. Kim Ford Florida Department of Environmental Protection 3804 Coconut Palm Drive Tampa, FL 33619-8318

Landfill Operations Plan for Class III Landfill

Dear Mr. Ford:

For your information, attached herewith is a copy of the Landfill Operations Plan for Class III Landfill.

Should you have any questions or need additional information, please feel free to call me.

Simcerely

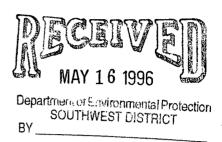
Mannella, P.E.

acting Utilities Construction and Contract Management Director

VM/mr

Attachment

cc: Douglas S. Bramlett, Assistant County Administrator (Utilities Services)



LANDFILL OPERATIONS PLAN FOR CLASS III LANDFILL

TABLE OF CONTENTS

		PAGE
1	Landfill Operations Plan	1
2	Responsible Operating and Maintenance Personnel	2
3	Operating Record	6
4	Waste Records	6
5	Access Control	6
6	Load Checking Program	6
7	Landfilling Procedures	7
8	Operations of Gas, Leachate, and Stormwater Controls	8
9	Routing Gas Monitoring Program	9
10	Landfill Stormwater Management System	9
11	Equipment and Operation Feature Requirements	10
12	All Weather Access Roads	13
13	Record Keeping and Reporting Requirements	13

LANDFILL OPERATIONS PLAN FOR CLASS III LANDFILL

The landfill addressed in this application is an integral unit of the Pasco County Solid Waste System ("System"). The System is comprised of a mass-burn resource recovery facility, the West Pasco Class I Landfill, the West Pasco Class III Landfill and Recycling Center, the East Pasco Transfer Station and Recycling Center, and the East Pasco Class I Landfill. The Resource Recovery Facility, the West Pasco Class I Landfill, and the West Pasco Class III Landfill and Recycling Center are colocated on an 800-acre site. The Resource Recovery Facility and the West Pasco Class I Landfill are permitted under the Florida Electrical Power Plant Siting Act, while the West Pasco Class III Landfill and Recycling Center was permitted separately under Chapter 62-701, FAC.

The Resource Recovery Facility is designed to receive and process 1,050 tons per day of waste generated by residential, commercial, and industrial sources. Three separate combustion units with a capacity of 350 tons per day and a boiler system generate steam for conversion to electrical energy. Emissions controls include dry scrubbers, fabric filter baghouses, and carbon injection for mercury control for each combustion unit. The residue ash handling system is completely enclosed. Bottom ash and grate siftings from the combustion units, as well as fly ash and spent scrubber reagent, are collected and quenched. Ash is moved by conveyor through a scalper screen to remove large materials and through a magnetic separator to remove ferrous metal. Processed residue (MSW ash) is loaded into trucks for disposal in an ash monofil disposal unit at the adjacent West Pasco Class I Landfill.

Deliveries are accepted at the Solid Waste Resource Recovery Facility (SWRRF) ten hours each day, Monday through Saturday, except legal holidays. Refuse is delivered to the SWRRF in standard packer vehicles, open body dump trucks, semitruck transfer trailers, and by smaller private vehicles. The waste transferring vehicles pass through an entrance and exit over an automated truck scale system. The scale system is operated by an adjacent scale house with a computerized record keeping system that maintains an accurate accounting of all refuse delivered and ash residue removed from the building.

All processible waste received is dumped inside the Resource Recovery Facility in a refuse storage pit with the exception of some waste from small private vehicles which are directed to a public drop-off area outside the building. Inside the facility building on the tipping floor, roll-off containers are provided for removing of nonprocessible waste. The County provides a trained spotter on the tipping floor to observe refuse dumping. The spotter has communication links with the scale house and the facility operators to advise them of the delivery of any unacceptable waste.

The entire 800-acre site is enclosed by chain-link and barbed-wire fence to limit access. To further limit access, the Resource Recovery Facility, the West Pasco Class I Landfill, and the West Pasco Class III Landfill and Recycling Center are separated internally by a chain-link and barbed-wire fence to control movement between the units.

1 Responsible Operating and Maintenance Personnel

Vincent Mannella, P.E., Acting Utilities Construction and Contract Management
Director and Solid Waste Facility Manager
Ronald J. Walker, Solid Waste Superintendent
Jim Geiger, Landfill Operator
Walter Dradransky, Attendant III, Landfill Operator
Keith Wallace, Special Equipment Operator and Landfill Operator
John Milliner, Attendant III
Nick Purdy, Attendant II
Jake West, Attendant II
Mike Simpson, Attendant II
Sam Johns, Attendant II
Gary Ackerman, Attendant II
Ron Moore, Attendant I
Barry Wright, Special Equipment Operator

2 a. Designated Responsible Operating and Maintenance Personnel Contingency Operations

See Section 1

b. Contingency Operations

Class III materials due to a natural disaster or other emergency may be stockpiled for later removal. The access road is designed to allow normal operations under adverse conditions. Cooperative lending agreements with other Pasco County departments will be pursued for back-up equipment.

Emergency Fire Procedures:

In the highly unlikely event that an UNCONTROLLABLE fire does occur at the landfill site:

- (1) Field staff will contact scale attendant via two-way radio, provide details.
- (2) Scale attendant will contact 9-1-1, requesting fire company response.
- (3) Scale attendant will notify landfill operator.
- (4) Landfill operator will direct additional equipment and manpower as may be required.

Controllable Fire:

- (1) See Item (1) above.
- (2) Field staff will put out the fire using landfill equipment and soil from an on-site stockpile maintained for the suppression.
- (3) See Item (1) above.
- (4) Landfill supervisor will inspect scene.

Natural Disaster Procedures:

If notice is available of a pending natural disaster (tornado, hurricane, etc.), the landfill supervisor will direct staff to:

- (1) Check stormwater management system for any blockages at culverts, pipes, etc.
- (2) Check leachate management system levels, pumping units, etc.
- (3) Apply daily cover to working face where appropriate.
- (4) Secure equipment where appropriate.

After the natural disaster has occurred, the landfill supervisor will direct staff to assess damage to and operational status of:

- (1) Access roads.
- (2) Stormwater management system.
- (3) Leachate management system.
- (4) Landfill equipment.
- (5) Disposal units.
- c. Controlling Types of Waste Received at the Landfill

The Class III disposal unit is primarily a construction and demolition (C & D) disposal unit. All incoming material is inspected to acquire reasonable assurances that no oil, tires, batteries, and/or large metal items are deposited in the cell. Particular care is addressed to hazardous and medical wastes; should they be detected, arrangements will be made for proper handling and disposal under the direction of the Pasco County Hazardous Waste Manager.

Yard trash and/or lot clearing debris is not accepted for disposal. Pasco County does not intermingle the County used tire collection program with the Class III Landfill operation.

d. Weighing Incoming Waste

No waste can enter the site without passing the main entrance scale and/or the Class III disposal unit scale. Incoming vehicles are weighed. Loaded vehicles entering the landfill site will be weighed and will be documented prior to unloading. Vehicles with a franchise or commercial license will be weighed at the Class I/Resource Recovery Facility, issued a receipt indicating the weight and payment received, and C & D loads will be redirected to the Class III Landfill. Small vehicles will be charged by the type of vehicle and size of the load.

e. Vehicle Traffic Control and Weighing

Private refuse haulers are not permitted to drive at random into the Class III cell in this solid waste unit. Individual vehicles and trucks containing C & D cross the scale for weight and placing directions. The spotter on the cell directs the vehicle on where to place his load.

Directional signs are placed to safely direct vehicles to the current waste unloading area. These signs have large, legible letters and will be cleaned when necessary. Signs will be placed at points so that the route is clear to the drivers. Speed limit, safety, and prohibitive practice signs have been placed as necessary to encourage a safe, clean operating area.

Unloading will be permitted only at designated working faces of currently operating cell. Haulers will be responsible for unloading their own vehicles. A spotter will be present near the active disposal areas to direct vehicles to appropriate off-loading areas and to observe the off-loading process to ensure that nonspecified materials are not part of the delivery.

f. Method and Sequence of Filling Waste

The landfill will be developed using four disposal areas as shown on Figure 1. Each area is approximately 3.5 acres. Disposal cells and their integral liner and leachate collection systems are constructed with permanent roads and swales for access and surface water management.

Cells 1, 2, 3, and 4 have been constructed and are ready for disposal of Class III materials.

The method of filling wastes in an individual cell is described below:

All incoming Class III materials waste will be directed to the working face. Class III materials will be placed against the side slope of the previous day's refuse. The first row will act as a berm to provide a guide for the placement of refuse for the remaining rows. In each row, cells will be constructed having a minimum length of working face to control the operation and leachate quantities, yet of sufficient length to provide adequate dumping areas and room for the landfill equipment to operate. A slope of 2:1 on a 75-foot wide working face will provide for centralization of operations, while

providing maneuvering area for private and commercial vehicles unloaded each day. See Figure 2 for additional details.

The sequence of filling future lined cell areas with installed leachate collection systems is developed to meet the following objectives:

- Complete subsequent lifts over lower lifts frequent enough to minimize infiltration and conserve the field capacity of the lower lift cell.
- Design landfill slopes during operation to maximize surface runoff away from the working face and minimize leachate generation.
- Provide a bench terrace along side slopes to minimize erosion.

Efficient use of these techniques will reduce the need for intermediate cover and decrease leachate volumes.

Final cover will be applied over cell lifts within 180 days after the final lift over an area is completed. Final cover will consist of 18 inches of clayey material covered with six inches of native soils. The top six inches will be uncompacted and vegetated with native grasses or other vegetation to promote evapotranspiration.

g. Waste Compaction and Application of Cover

Sufficient cover material will be available by purchase from fill dirt pit to provide a continuous supply of cover through the period of operational site life.

The Class III materials will be placed at the top of the working face, spreading outward in approximately two-foot layers. The Class III materials will be compacted as necessary by a front-end loader or bulldozer and/or landfill compactor. The material types comprising Class III refuse are not always conducive to compaction. Therefore, compaction equipment is not included as required equipment, but will be provided.

Application of initial, intermediate, and final cover is to be performed as required per Chapter 62-701.500(7), FAC. Six inches of initial cover will be applied to the working face at least once a week. Intermediate cover consisting of one foot of compacted native sandy soil from a private dirt pit will be applied within seven days of cell completion if final cover or an additional lift is not to be applied within 180 days of cell completion. Any intermediate areas that will not be landfilled or covered with final cover within six months will be seeded or covered with wood chips, straw, or other appropriate cover material to avoid slope erosion.

h. See Sections 8, 9, and 10 for Gas, Leachate, and Stormwater Controls

i. Groundwater Quality Monitoring

Groundwater Monitoring Plan was prepared by Law Engineering and has been previously submitted under separate cover.

3 Operating Record

The Operating Record shall consist of all records, reports, analytical results, demonstrations, and notifications required by Chapter 62-701, FAC, including the Department-approved permit, engineering drawings, and supporting information, and the landfill operator training verifications required by Chapter 62-703, FAC. The record is considered part of the operation plan and is kept at the Pasco County Government Utilities Services Branch office located in New Port Richey. Duplicates of the permit, engineering drawings, and the operating plan are kept on-site at the office of the landfill supervisor.

The Operating Record will be available for inspection at reasonable times by Department personnel.

4 Waste Records

Waste records are kept on file at the Pasco County Utilities Services Branch, Public Works/Utilities Building, Suite 213, 7530 Little Road, New Port Richey, of tonnage received and/or compiled monthly and provided to the Department quarterly.

5 Access Control

To prevent unauthorized access to the 800-acre site in West Pasco, the entire site is enclosed with either barbed-wire or chain-link fencing. Interior fencing separates the Resource Recovery Facility, the West Pasco Class I Landfill, and the West Pasco Class III Landfill and Recycling Center. Entrance gates at the Resource Recovery Facility and the West Pasco Class III Landfill are chain-link and are closed and secured during nonworking hours. The primary entrance gate to the Class III Landfill is from Hayes Road.

The landfill supervisor will check or have checked the integrity of the perimeter fencing on a regular basis. The landfill operators will secure the entrance gates at the end of the operating day. The landfill supervisor will ensure that the existing signs indicating the hours of operations and types of waste accepted are maintained.

6 Load Checking Program

A load checking program has been implemented to detect and discourage attempts to dispose of unauthorized wastes at the West Pasco Class III Landfill.

A minimum of three loads each week shall be examined. Loads will be discharged at a designated location within the landfill for a content inspection. Should unacceptable wastes be found, the hauler will be notified to determine the waste sources from his haul/pickup route.

No hazardous wastes are accepted at the West Pasco Class III Landfill. Should hazardous waste be found, the following action is taken by Pasco County:

- The Environmental Deputy Sheriff is notified.
- The Pasco County Health Department is notified.
- The hauler is called and requested to report to the site by the Environmental Deputy Sheriff.
- Depending on circumstances, the Environmental Deputy Sheriff may make an arrest.
- Proper disposal of hazardous waste if any is found is required via licensed DOT hauler at hauler/generator's expense.

7 Landfilling Procedures

Waste layer thickness and compaction frequencies are covered in Section 2. Special considerations are made for the first layer of waste placed above the liner and leachate collection system. The first layer of waste placed above the liner and leachate collection system will be four feet in compacted thickness and consist of special selected wastes containing no large, rigid objects that may damage the liner or leachate collection system. Lift depth should not exceed ten feet but may vary depending on specific operations and daily volume of waste, width of working face, and good safety practices. The West Pasco Class III working face will be only wide enough to accommodate vehicles discharging waste, and to control exposed area and conserve cover material. A temporary berm will be constructed around the working face to minimize the formation of leachate. The temporary berm will be moved as the working face/lift progresses.

Initial cover will be applied to solid waste disposal units in order to minimize any adverse environmental, safety, or health effects such as those resulting from birds, blowing litter, odors, disease vectors, or fires. Initial cover at the solid waste disposal units will be applied at the end of each working week. The initial cover will be comprised of soil material and be six inches in compacted thickness.

Intermediate cover, in addition to six-inch initial cover, will be applied and maintained within seven days of disposal unit completion if additional solid waste will not be deposited within 180 days of disposal unit completion. The intermediate cover, when disposal to the initial fill phase and disposal activity is shifted to a new adjacent disposal unit for more than 180 days, will be graded to provide a surface slope and will also be seeded or sodded with grass to further promote run-off and minimize infiltration. When disposal activity is resumed in the disposal unit, the intermediate cover will be pushed aside and stockpiled for use as initial cover for the resumed disposal activity.

Once the solid waste disposal units have been filled to the final grades, final cover will be applied in accordance with the closure plan. Areas of final cover will be seeded with grass or other suitable cover.

8 Operations of Gas, Leachate, and Stormwater Controls

All four units are separated by a lined berm of 4'0 (plus); there is no liner penetration on the berm liner. There is no piping connection between any of the cell units. Therefore, leachate contamination or backflow cannot occur. Excessive leachate flows into tanks are automatically provided for or the leachate alarm floats (described in detail later in this narrative) are set to go off at elevations below the liner elevation of the cells. At the alarm, either the pump system will be repaired or Pasco County will utilize their tanker fleet to pump and haul leachate to a wastewater treatment plant.

The leachate holding tanks each have five floats:

- a. Low level alarm shutoff, to protect pump motors.
- b. Low level shutoff after pumping cycle.
- c. Turn on pumps for pumping cycle.
- d. Float for future use (not activated at this time).
- e. High level alarm (set at approximately 5'0 below the top of leachate holding tank).

A detailed sketch of both leachate holding tanks and the four cells showing piping to holding tanks is attached hereto. Exterior valves from Cells 2 and 3 to holding leachate tank are closed at this time as shown on Figures 3 and 4.

Both leachate holding Tanks 1 and 2 are activated and deactivated by the turnon of the high level float and deactivated by the low level shutoff float. Cell 1 drains into Leachate Tank 1. Cell 2, when activated, will also drain into Leachate Tank 1. Cell 2 presently drains to the drainage swale around Class III's all four cells.

Cell 3 drains into the drainage swale around the Class III unit. Cell 4 drains into the Leachate Holding Tank 2.

Tank pumping is implemented as previously described. Should automatic pumping fail, the high level alarm flashes, alerting the County to repair the automatic pumping system and/or the pump. In any event, if the automatic system fails, the County tanker fleet will start hauling leachate from Leachate Holding Tanks 1 and 2 to a wastewater treatment plant. Until repairs to the automatic pumping system are made and the system once again is functional, tanker hauling will continue.

Leachate level monitoring is by a float valve in the holding tank. When level limitation (one foot above liner) is reached, the duplex pumps pump leachate to the Shady Hills Wastewater Treatment Plant for treatment, receiving secondary treatment. Volume leachate generated is reported to the Florida Department of Environmental Protection with rainfall data each month.

Leachate is managed by duplex pumps mounted in the leachate collection tanks. Removal is via pressure mains to the Shady Hills Wastewater Treatment Plant for secondary treatment.

Pasco County has no plans for managing leachate as a hazardous waste. If, when, and should leachate be, sometime in the future, classified as a hazardous waste, Pasco County will be obligated to comply with the law. To attempt to prognosticate ten or 15 years into the future, when present manager's replacements will be on board and rules and regulations will most likely be changed, would be an exercise in futility. This matter may be best addressed at the time of reclassification.

Pasco County maintains a fleet of tanker trucks which will haul leachate to a wastewater treatment plant in case of emergency.

The leachate holding tanks are metered and recorded in daily logs. Rainfall is recorded by visual rain gauges and is recorded on the daily leachate log sheets.

9 Routine Gas Monitoring Program

Of the Class III Landfill disposal's four units, only one unit (No. 1) is used for acceptance of C & D material. The volume received amounted to 1,883 tons for Fiscal Year 1994-95. The bottom of Unit 1 has not been covered to date. The Class III C & D Landfill is situate in excess of 750 feet from all property boundaries, with the closest structure being in excess of 1,000 feet. The scale house and landfill operator's office, the closest structure, will be checked via gas meter quarterly and the results will be reported to the Department. If the methane gas levels exceed the lower explosive limits specified by the FAC, the operator shall:

- a. Notify his supervisor, who will take measures (if necessary) to protect health and safety.
- b. Submit to the department within seven days a remediation plan.
- c. Complete the approved remediation construction within 60 days.
- d. The use of pipe for gas collection shall have a condensate collection method and disposal at each low point in the conveyance system.

10 Landfill Stormwater Management System

The access road encompassing the landfill area and the disposal unit berms are elevated above existing ground elevations to prevent any surface water from entering the waste-filled area.

Additionally, a large swale is located at the base of the landfill slope on the interior side of the access road. The swale is designed to receive runoff from the predeveloped and any closed-out areas of the landfill.

The bottom of each landfill disposal unit is lined and positioned above the seasonal high water table to prevent any lateral flow into the waste-filled areas, if in the unlikely event that standing water was to occur in the swales. Also, closed-out disposal units will be capped to inhibit vertical infiltration/percolation of rain.

The landfill supervisor will routinely inspect the stormwater management system. Particular attention will be given to inspecting the culverts under the access road for any blockage. The stormwater management system will also be inspected prior to an anticipated natural disaster if sufficient notice is available, and after any natural disaster.

11 Equipment and Operation Feature Requirements

a. Adequate In-Service and Reserve Equipment

Table 1 lists equipment proposed for the West Pasco County Class III Landfill. Cooperative lending agreements can also be used as a means of procuring additional back-up equipment either from the nearby Class I facility or the Pasco County Road and Bridge Department:

TABLE 1

Number	Equipment
1 ^a	Bulldozer
1 ^a	Compactor
1 ^b	Water Truck w/Spray Boom
$1^{\mathbf{b}}$	Leachate Transport Vehicle

^aTo be permanent on-site equipment.

b. Reserve Equipment/Arrangements to Obtain Additional Equipment Within 24 Hours of Breakdown

Equipment Failure Procedure:

If equipment fails, the landfill supervisor will be notified so that arrangements can be made for the equipment repair. If the downtime is expected to hinder landfill operations, the landfill supervisor will obtain back-up equipment under established cooperative lending agreements with other solid waste management facilities or other County departments.

c. Communication Equipment

Communication between personnel in the West Pasco Landfill Maintenance Building and the Resource Recovery Facility Scale House, and the West Pasco Class III Scale House and landfill staff operating equipment is maintained by two-way radios and the master communication system maintained for all County departments. Additionally, landfill staff can

To be provided on an as-needed basis from available equipment from the adjacent Class I facility or the Pasco County Road and Bridge Department.

contact each other by two-way radios. A telephone is available in the scale house office.

d. Personnel Shelter and Sanitary Facilities, First-Aid Equipment

Employees have access to two integrated shelters. The Class III Scale House has a lunch room. A microwave, coffee pot, sink, dishes, silverware (stainless), and refrigerator are available for all employees. There is a complete unisex bathroom kept clean and in 100 percent operable condition. The second unit is the Class III Maintenance Building that has crew lockers, wash area, and bathrooms.

e. Dust Control Methods

Dust control will be performed using a spray truck which will wet down unpaved access roads and areas immediately adjacent to the working face. Dust masks will also be available to personnel working in excessively dusty areas.

f. Fire Protection Capabilities and Procedures

In the event that an uncontrollable fire does occur at the landfill site, the fire department will be contacted immediately. Small fires on the working face will be snuffed by a bulldozer. On-site stockpiles of soil will be available for suppressing fires.

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

Emergency Fire Procedures:

In the highly unlikely event that an UNCONTROLLABLE fire does occur at the landfill site:

- (1) Field staff will contact scale attendant via two-way radio, provide details.
- (2) Scale attendant will contact 9-1-1, requesting fire company response.
- (3) Scale attendant will notify landfill operator.
- (4) Landfill operator will direct additional equipment and manpower as may be required.

Controllable Fire:

(1) See Item (1) above.

- (2) Field staff will put out the fire using landfill equipment and soil from an on-site stockpile maintained for the suppression.
- (3) See Item (1) above.
- (4) Landfill supervisor will inspect scene.

g. Litter Control Devices

Litter will be controlled by requiring covered loads, efficient unloading and cover operations, and by routine cleanup as required.

h. Signs, Hours of Operation, and Disposal Restrictions

Sign No.	Size	Wording	Location
1	72" X 42"	West Pasco Recycling Center and Class III Landfill operating hours: 07:00 a.m. to 05:00 p.m.	Front Gate
2	36" X 18"	14606 Hays Road	Front Gate
3	48" X 48"	Special waste fees: Pickup truck unweighed - \$15.00. Single-axle trailer unweighed - \$25.00. All other vehicles weighed at \$45.65/T.	Entry Gate 2
4	48" X 18"	No charge, normal household solid waste/garbage	Entry Gate 2
5	48" X 24"	Construction debris, demolition debris, waste tires, yard waste, proceed over the scale	Just before the Scale House
6 .	24" X 36"	All vehicles must stop at scale house	Just before the Scale House
7	24" X 16"	Construction demolition debris	C & D Cell Unit 1
8	24" X 30"	Children must stay in vehicle	Leaving the Scale
9	16" X 24"	Grass, clippings, leaves	At Cell Unit 1
10	12" X 10"	Tank 1	At Tank 1
11	12" X 10"	Tank 2	At Tank 2
12	15" X 6"	No smoking	At all Leachate Tanks and at Cell 1 and Cell 4

12 All-Weather Access Road

All roads providing access to the landfill disposal units are paved with asphalt. These roads include access roads from the Resource Recovery Facility and the West Pasco Class III Landfill and Recycling Center, a perimeter road, and entrance ramps to the constructed disposal units.

13 Record Keeping and Reporting Requirements

Records used for developing permit applications and other supplemental information will be maintained for the design period of the landfill in the Utilities Services Branch files.

Reports required by the permit will be maintained for at least ten years in the Utilities Services Branch files.

Background water quality records will be maintained for the design period of the landfill in the Utilities Services Branch files.

The Utilities Operations and Maintenance Director will submit annually to the Department estimates of other remaining capacity of the constructed and unconstructed permitted waste disposal units. Estimates will be maintained in the Utilities Services Branch files.

A technical report, prepared, signed, and sealed by a P.G. or P.E. with experience in hydrogeologic investigations, will be submitted to the Department every two years. The report will summarize and interpret the water quality data and water level measurements collected during the previous two years.

The report will also include tabular and graphical displays of any parameters detected and water level hydrographs for all monitoring wells. The report will further show trends and comparisons between zones or aquifers, comparisons between upgradient and downgradient wells, correlations between related parameters, and any discussions of erratic and/or poorly correlated data. Groundwater contour maps will be interpreted as to groundwater flow direction and rates. The report will further evaluate the adequacy of the water quality monitoring frequency and sampling locations based upon the site conditions. The report will be signed, dated, and sealed by a P.G. or P.E.

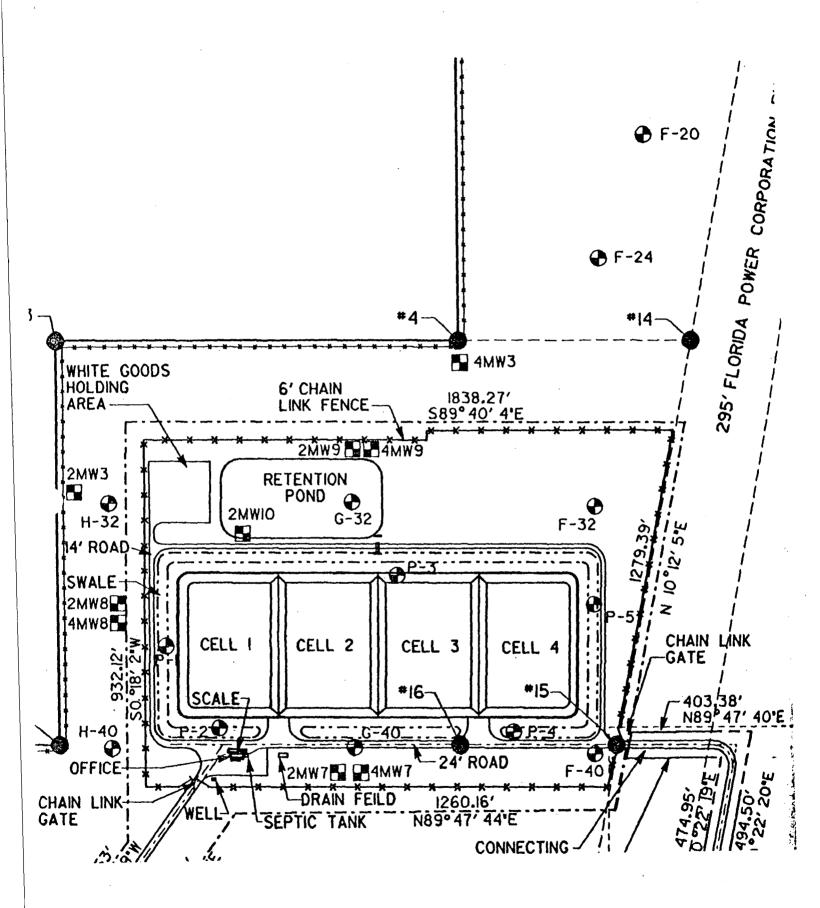


FIGURE Nº 1

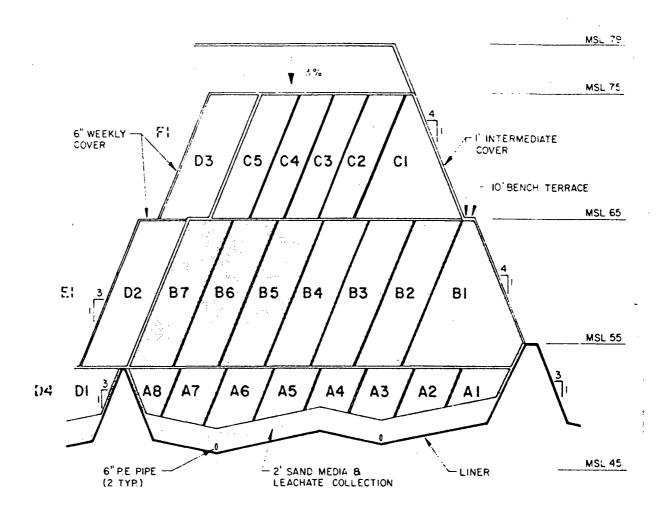
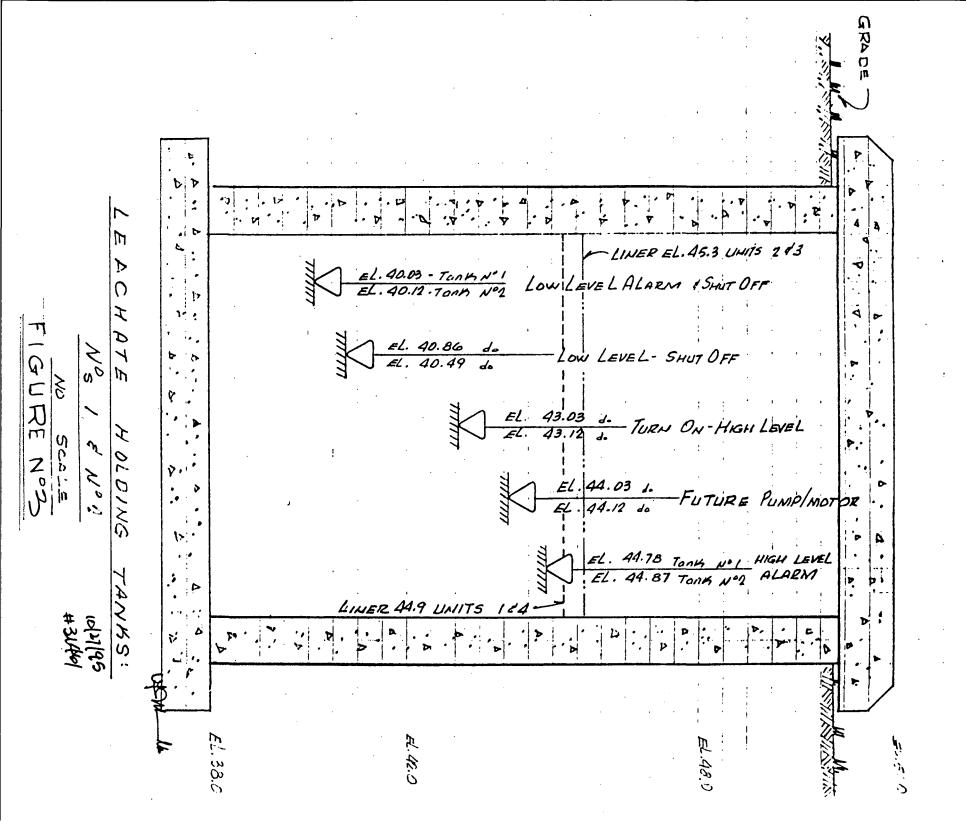


FIGURE Nº 2



1. 44.

WEST PASCO COUNTY LANDFILL CLASS III LINER, INVERT, & TANK ELEY.

TANK #1		TANY 12
Rim	51.03	Rim 51.12
Inv.	39.32	Inv. 39.85
Liner	44.9	Liner 44.9
Complianc	e 45.9	Compliance 45.9

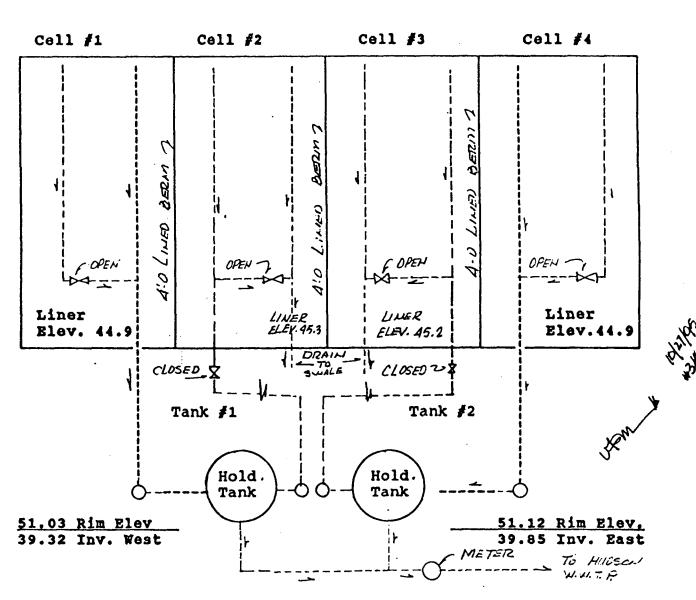


FIGURE Nº 4