FILE

SCS ENGINEERS

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOV 19 2004
SOUTHWEST DISTRICT
TAMPA

# OPERATIONS PLAN FOR HARDEE COUNTY LANDFILL

**Prepared for:**

**Hardee County**
**Board of County Commissioners**
**412 West Orange Street**
**Wauchula, Florida 33873**

**Prepared by:**

**SCS Engineers**
**3012 U.S. Highway 301 North**
**Suite 700**
**Tampa, Florida 33619**
**(813) 621-0080**

INCLUDES INFORMATION RECEIVED 11/19/04, 5/23/05, 7/27/05, 11/30/05 and 1/25/06

**November 19, 2004**
**File No. 09199033.09**

# OPERATIONS PLAN
# FOR
# HARDEE COUNTY LANDFILL

**Prepared for:**

Hardee County
Solid Waste Department
685 Airport Road
Wauchula, Florida
863-773-5089

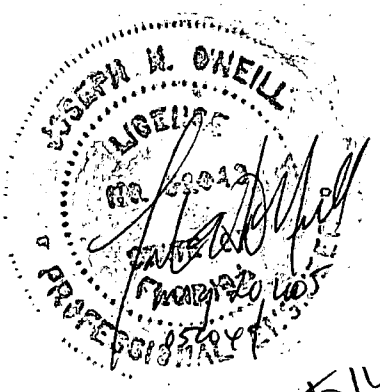
FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
JUL 27 2005
SOUTHWEST DISTRICT
TAMPA

**Prepared by:**

SCS Engineers
3012 U.S. Highway 301 North, Suite 700
Tampa, Florida 33619
(813) 621-0080

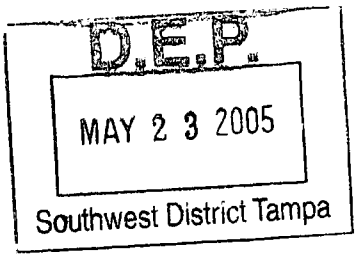
Florida Certificate of Authorization
No. 00004892

File No. 09199033.09
November 19, 2004
Revised May 20, 2005




FILE

# OPERATIONS PLAN
# FOR
# HARDEE COUNTY LANDFILL




**Prepared for:**

Hardee County
Solid Waste Department
685 Airport Road
Wauchula, Florida
863-773-5089

**Prepared by:**

SCS Engineers
3012 U.S. Highway 301 North, Suite 700
Tampa, Florida 33619
(813) 621-0080

Florida Certificate of Authorization
No. 00004892

File No. 09199033.09
November 19, 2004
Revised May 20, 2005

BEST AVAILABLE COPY

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
JUL 27 2005
SOUTHWEST DISTRICT
TAMPA

# TABLE OF CONTENTS

**Section** **Page**

L.1 background information ..... L-1

L.1.a Scalehouse and Administrative Offices ..... L-1
L.1.b Class I Landfill ..... L-2
L.1.c C&D Debris Disposal Area (Closed) ..... L-2
L.1.d MRF Facility ..... L-2
L.1.e Waste Tire Facility ..... L-3
L.1.f Yard Trash Processing Area ..... L-3
L.1.g Scrap Metal and White Goods Storage Site ..... L-4
L.1.h Household Hazardous Waste Collection Center ..... L-4
L.1.i Maintenance Building ..... L-5
L.1.j Borrow Area ..... L-5

L.2 Landfill Operations Plan ..... L-5

L.2.a Personnel Documentation and Training ..... L-5
L.2.b Designation of Responsible Operating and Maintenance Personnel ..... L-6
L.2.c Contingency Operations ..... L-7

L.2.c.1 Equipment ..... L-7
L.2.c.2 Accidental Liquid Spills ..... L-7
L.2.c.3 Handling of Hazardous Waste Materials ..... L-7
L.2.c.4 Fires ..... L-8
L.2.c.5 Landfill Shutdown ..... L-9
L.2.c.6 Natural Disasters ..... L-9
L.2.c.7 Emergency Contacts ..... L-9

L.2.d Controlling Types of Waste Received ..... L-9

L.2.d.1 Unacceptable Wastes ..... L-10
L.2.d.2 Asbestos ..... L-11
L.2.d.3 Contaminated Soils ..... L-11
L.2.d.4 Used Oil ..... L-11
L.2.d.5 Liquid Restrictions ..... L-12
L.2.d.6 Other Special Waste ..... L-12
L.2.d.7 Yard Trash and Clean Wood ..... L-14
L.2.d.8 Biomedical ..... L-14
L.2.d.9 Procedures for Handling Unacceptable or Improperly Placed Waste Loads ..... L-14

**TABLE OF CONTENTS (Continued)**

**Section** **Page**


L.2.e Weighing Incoming Waste ..... L-15
L.2.f Vehicle Traffic Control ..... L-15
L.2.g Method and Sequence of Filling Waste ..... L-15
L.2.h Waste Compaction and Cover Procedures ..... L-16
L.2.i Operations of Gas, Leachate, and Stormwater Controls ..... L-16

L.2.i.1 Landfill Monitoring Locations-- ..... L-17
L.2.i.2 Title V Applicability-- ..... L-17

L.2.j Water Quality Monitoring ..... L-17
L.2.k Maintaining and Cleaning the Leachate Collection System ..... L-17
L.2.l Maintaining and Cleaning the Groundwater Intercept System ..... L-19

L.3 Landfill Operating Record ..... L-20
L.4 Waste Records ..... L-20
L.5 Methods Of Access Control ..... L-20
L.6 Load Checking Program ..... L-20
L.7 Waste Spreading And Compaction Procedures ..... L-21

L.7.a Waste Layer Thickness and Compaction Frequencies ..... L-21
L.7.b First Layer of Waste ..... L-22
L.7.c Slopes of Cell Working Face, Side Grades, and Lift Depths ..... L-23
L.7.d Maximum Width of Working Face ..... L-23
L.7.e Initial Cover Type ..... L-23
L.7.f Initial Cover Application Procedures ..... L-24
L.7.g Intermediate Cover Application Procedures ..... L-24
L.7.h Final Cover Application Time Frame ..... L-24
L.7.i Controlling Scavenging and Salvaging ..... L-25
L.7.j Litter Policing Methods ..... L-26
L.7.k Erosion Control Procedures ..... L-26

L.8 Leachate Management Procedures ..... L-26

L.8.a Leachate Level Monitoring, Sampling, Analysis, and Data Results ..... L-26

L.8.a.1 Leveling ..... L-26
L.8.a.2 Sampling, Analysis, and Results ..... L-27

L.8.b Operation and Maintenance of Leachate Collection and Removal System ..... L-28
L.8.c Procedures for Managing Leachate if Regulated as Hazardous Waste ..... L-30
L.8.d Off-Site Leachate Treatment Agreements ..... L-30

**TABLE OF CONTENTS (Continued)**

**Section** **Page**


L.8.e Contingency Plan for Managing Leachate ..... L-31
L.8.f Procedures for Recording Quantities of Leachate Generation ..... L-31
L.8.g Procedures for Comparing Precipitation with Leachate Generation Rates .... L-32
L.8.h Procedures for Cleaning and Inspecting the Leachate Collection System..... L-32

L.9 Routine Gas Monitoring Program ..... L-32
L.10 Stormwater Management System Operation And Maintenance..... L-34
L.11 Equipment And Operation Feature Requirements..... L-36

L.11.a Sufficient Equipment for Operations..... L-36
L.11.b Reserve Equipment..... L-36
L.11.c Communication Equipment and Shelter..... L-36
L.11.d Dust Control Methods ..... L-37
L.11.e Fire Protection ..... L-37
L.11.f Litter Control Devices ..... L-37
L.11.g Signs L-37

L.12 Site Access Roads..... L-37
L.13 Additional Record Keeping and Reporting Requirements ..... L-38

L.13.a Records for Development of Permit Applications ..... L-38
L.13.b Copies of Reports Maintained for 10 Years ..... L-38
L.13.c Annual Estimates of Remaining Life ..... L-38
L.13.d Archiving and Record Retrieval ..... L-38



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
JUL 27 2005
SOUTHWEST DISTRICT
TAMPA

**TABLE OF CONTENTS (Continued)**

**Appendices**


A Operations Drawings (Reduced Size)
B Waste Hauler Agreement
C Training Courses
D Contingency Equipment
E Fire Contingency Operation Plan
F Waste Facility Contact List
G Policy for Asbestos Waste Disposal
H Contaminated Soil Acceptance Criteria
I Household Sharps Collection Program Operating Procedures
J Waste Quantity Form
K Hardee County Landfill Monitoring Locations
L Agreement between City of Wauchula Municipal Wastewater Treatment Plant and Hardee County Landfill
M Random Load Inspection Form
N Leachate Leveling Form
O Leachate Management Record Keeping Forms
P Gas Monitoring Form

Figure 1 – Yard Trash Processing Area

# SECTION L

# OPERATIONS PLAN

## L.1 BACKGROUND INFORMATION

The Hardee County (County) Landfill facility is located east of the City of Wauchula on Airport Road. This Operations Plan addresses the regulatory requirements for the operation of the Class I facility and ancillary operations on the site, other than the Materials Recovery Facility (MRF) and the Waste Tire Facility. The MRF operates under separate permit conditions that are currently outlined in Permit No. 126620-001-SO. The Waste Tire Facility operates under a separate permit conditions that are currently outlined in Permit No. 129318-002-WT. This landfill Operations Plan will be kept at the administrative offices and shall be accessible to landfill operators. The facilities on the site include:

- Scalehouse and Administrative offices,
- Class I Landfill and Leachate Storage Tanks,
- Construction and Demolition (C&D) Debris disposal area (closed)
- Materials Recovery Facility (MRF),
- Waste Tire Facility,
- Yard Trash Processing Area,
- Scrap Metal Site,
- Household Hazardous Waste Collection Center,
- Maintenance Building, and
- Borrow Area

These facilities are described below and the locations are shown on the Operations Drawings contained in Appendix A. Other facilities present at the site are the County's Animal Control Kennel, located west of the MRF and the Sheriff's Target Range, located in the northeast corner of the site. This Operations Plan does not address operations plans for the Animal Control Kennel or the Sheriff's Target Range.

Normal operating hours for the Hardee County Landfill facility are Monday-Saturday 7:30 am - 5: 15 pm. The Hardee County Landfill facility is closed for the following holidays; New Year Day, July 4, Labor Day, Thanksgiving Day, Christmas Day, Christmas Eve (if waste haulers are not collecting).

### L.1.a Scalehouse and Administrative Offices

The scalehouse and administrative offices are located just inside the entrance to the site. All incoming vehicles must stop at the scalehouse to register. Records, reports, analytical results, and modifications to the operating plan are maintained and kept on file at the administrative offices.

### L.1.b Class I Landfill

The Class I Landfill (Phase I) is located in the northwest corner of the site and comprises approximately 12.5-acres. The Class I Phase II, Section I 5 acre cell is located directly south of the Phase I disposal area. Phase II, Section II is another 5 acres cell located directly west of the Phase I disposal area. The landfill is predominantly a bale fill type operation, with some "loose waste" disposal activities occurring during maintenance periods for the MRF or as needed to achieve the grades shown on the Operations Drawings. The majority of incoming solid waste is baled at the on-site MRF and transported to the Class I landfill for placement within the lined area for disposal. During certain periods of time, the MRF may not be operational due to planned or unplanned maintenance activities. During those periods the waste is taken directly to the lined disposal area.

### L.1.c C&D Debris Disposal Area (Closed)

A closed C&D debris disposal area is located in the southwest corner of the site. This disposal area was covered with 24-inches of soil, compacted, and sloped to promote drainage. Vegetative cover was placed over the entire closed area for erosion control.

### L.1.d MRF Facility

The MRF is operating under separate permit. Refer to the MRF Operations Plan for a detailed discussion on the operations and procedures. Below is a general description of the operations for the MRF as related to the operations of the landfill;

> The MRF is equipped with a Harris Badger Baler. The size of bales are 31" x 46" x 61", and has an average weight of 2150 pounds. Wastes excessively dirty and/or contaminated recyclables, non-recyclables, plastic bags and other residuals, are baled at the MRF and then transported to the Class I landfill for disposal. Dry and clean recyclable materials are picked from the waste materials and placed in separate bins for collection by the private collector for delivery to offsite recycling markets. Large items such as mattresses and other furniture, such as sofas, chairs, tables, etc. separated from the waste prior to being baled. The large items are fed into the baler separately and baled for disposal. Once the waste is baled it is transported to the Class I disposal area, via truck, for disposal.
>
> When electronic items (e-waste), such as computers, VCRs, TVs and TV remote controls, microwaves are found in the incoming waste loads, their batteries are removed and the batteries taken to the on-site Household Hazardous Waste Collection Center. Electronic items such as TVs, computer monitors, cell phones, keyboards, and computer peripherals are separated from the waste, and taken to a covered box trailer located behind the MRF. Bids are taken from various contractors to recycle the electronic waste materials. Should e-waste glass or components be shattered or smashed into small pieces, then the debris will be collected and placed into a container and placed into storage sheds at the HHWCC. The e-waste contractor or Hazardous waste hauler will be contracted to dispose of the small e-waste debris.

## L.1.e Waste Tire Facility

The Waste Tire Facility is currently operating under a separate permit. Refer to the Waste Tire Facility Operations Plan for a detailed discussion on the operations and procedures. Below is a general description of the operations for the Waste Tire Facility as related to the operations of the landfill;

> Incoming waste tires and tires with rims are temporarily stored on-site in a designated area for storage of waste tires. The tires are collected by a contractor on an as-needed basis for removal from the site for processing. Per the existing permit, no more than 1,000 waste tires are to be stored at the facility. Additionally, at least 75 percent of both the waste tires and processed tires that are delivered to or are contained at the Waste Tire Facility at the beginning of each calendar year are to be removed for processing and disposal or recycled during the year. A report on the operations of the Waste Tire Facility is submitted annually to the FDEP.

## L.1.f Yard Trash Processing Area

Yard trash is collected in separate loads by the waste haulers and delivered directly to the Yard Trash Processing Area. When yard trash loads arrive at the landfill, a spotter escort the loads to the area designated for yard trash processing as shown on the Operations Drawings. Loads are spread out to look for unacceptable waste materials or waste material that do not belong in the Yard Trash Processing Area (Refer to Section L.2.d for waste material designations). County personnel or contract labor will remove plastic bags prior to pushing the yard trash into a larger pile. The plastic bags are taken to the MRF for baling.

An independent contractor processes the yard trash material on-site. The minimum frequency for processing yard trash is once every 6 months or when 3000 tons (12,000 cubic yards) are accumulated, which ever is greater. To be considered processed, material must pass a 6-inch sieve. However, logs with a diameter of 6-inches or greater may be stored for up to 12 months before being processed or removed from the area. The logs shall be separated and stored apart from other yard trash material within the area. The processed material is provided to Hardee County residents. The remaining processed yard trash will be used for stabilizing sideslopes, controlling erosion in the Class I landfill area, as an organic additive to cover soils, or as general landscaping around the Hardee County Landfill.

The Yard Trash Processing Area is operated such that a 20-foot wide, all weather, access road around the perimeter of the area will be maintained. Interior lanes will be maintained to be at least a minimum of 15 feet wide. Dust control and fire protection for the area is provided in accordance with Section L.11d and L.11.e, respectively. No part of the area that is occupied by processed or unprocessed material is more than 50 feet from access by motorized fire fighting equipment. Refer to Figure 1 for the Yard Trash Processing Area Layout.

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
NOV 30 2005
SOUTHWEST DISTRICT
TAMPA

## L.1.g Scrap Metal and White Goods Storage Site

When scrap metals and white goods arrive at the landfill, a spotter escort the loads to the area designated for scrap metals and white goods storage as shown on the Operations Drawings. Incoming loads of scrap metal, appliances, and white goods (with and without Freon) are segregated and temporarily stored in this area. The storage area has a stable base comprised of compacted shell to minimize rutting due to traffic. The storage area is surrounded by a two foot vegetated stormwater containment berm designed to prevent stormwater from sheet flowing into the nearby wetland. In addition to the berm, silt fence will also be installed around the outer perimeter of the berm to further contain turbidity that may sheet flow off the outer side of the berm. Clean, unused, recyclable metal cans are also transported to the scrap metal site for temporary storage. Propane tanks are accepted only if they are empty and the valves has been removed.

Lawnmowers are also stored at the scrap metal site. However, lawn mowers are not accepted at the facility unless any oil or gasoline has been removed prior to their delivery. If the scalehouse attendant spots a lawnmower, the attendant will question the driver concerning the gasoline and oil content of the lawnmower; if the lawnmower contains gas or oil, the scalehouse attendant will not accept it. If a lawnmower is found in a load delivered to the MRF for processing, the operating personnel inspect the lawnmower to ensure that it is free of gasoline and oil prior to taking it to the scrap metal site. Gasoline and oil, removed from lawnmowers and other yard tools, will be taken to the Household Hazardous Waste Collection Center for storage.

White goods and appliances with Freon are stored separately from the rest of the scrap pile. These items are stored in an upright position to prevent the Freon from discharging to the atmosphere. An independent contractor is hired to remove the scrap metal and white goods from the site. The contractor is required to provide certification of qualification for removal of any chloro-fluoro-hydrocarbons (i.e., Freon or CFCs) from the white goods. Up to 400 tons of scrap metal and white goods (a maximum of 200 individual pieces of white goods) can be stored in this area. The minimum frequency for scrap metal and white good removal is 12 months.

## L.1.h Household Hazardous Waste Collection Center

A Household Hazardous Waste Collection Center (HHWCC) is located southeast of the MRF. The HHWCC is comprised of a roofed building with a curb in order to promote spill containment. The HHWCC is used for the temporary storage of special wastes such as used oil, paint, lead acid batteries, florescent lightbulbs, and household hazardous wastes. Used oil is consolidated into two double-walled oil storage tanks. Lead acid batteries are stacked three high on pallets, with cardboard placed between each layer, and then shrink wrapped when pallets are full. Private contractors are hired for the removal of the special wastes such as the used oil, paint, lead acid batteries, and fluorescent light bulbs. The maximum onsite storage and frequency for removing these recyclable from the site is as follows:

- Used oil (up to 700 gallons) is removed monthly,
- Paints (up to 100 gallons) removed quarterly,
- Batteries (up two 140 batteries) removed quarterly,
- Light bulbs (Up to 400) are to be removed at least every 6 months, and
- Household Hazardous Waste (up to 50 gallons and 250 pound bags of chemicals) to be removed quarterly.

Household hazardous waste is defined as discarded, small quantity residential waste (less than 220 lbs.) which is either listed by the U.S. Environmental Protection Agency (EPA) in its hazardous waste regulations or exhibits one of the four (4) following hazardous characteristics:

- Ignitability - It may catch fire.
- Corrosivity - It can damage other materials (including human tissue) on contact.
- Reactivity - It reacts violently with water and may catch fire or explode.
- Toxicity - It may cause illness or health problems if handled incorrectly.

Amnesty days are held four times per year in which residents can deliver their household hazardous wastes (including cans of paint) at no charge. The contractor removes these wastes from the site that same day. Only empty dried out paint cans are accepted throughout the year. If a can of paint or a propane tank with a valve is found by landfill personnel it is taken to the Household Hazardous Waste Collection Center for temporary storage in hazardous waste storage sheds until removed from the site by the qualified contractor. The HHWCC is also used to temporarily hold any unacceptable wastes found at any of the other on-site disposal or storage areas. Currently, Clean Harbors is contracted to remove and properly dispose of the household hazardous wastes. The Household Hazardous Waste Haulers Agreement is contained in Appendix B.

### L.1.i Maintenance Building

The onsite maintenance building is within the southeast corner of the lined area of the Class I landfill. Routine maintenance and inspection of landfill equipment is performed in this building. Fuel for the landfill equipment is pumped from a fuel tank, with a containment wall, located immediately adjacent to the maintenance building. Fuel and fluids (engine oil, transmission oil, hydraulic oil, or radiator fluid) are added to the equipment in the maintenance building as needed. If repairs on the equipment are necessary, the equipment is sent to the County's central maintenance shop, located off-site, or to the dealer's authorized maintenance facility.

### L.1.j Borrow Area

A borrow area is located northwest of the MRF. The County utilizes this on-site borrow area as well as contracting with off-site borrow pits for cover material. County personnel conduct portions of the excavation with the dozer and loader. If offsite borrow material is needed for additional cover soils or for other operational uses, then contracted independent contractor will haul in soils.

## L.2 LANDFILL OPERATIONS PLAN

### L.2.a Personnel Documentation and Training

In accordance with Rule 62-701.500(1), Florida Administrative Code (F.A.C.), key supervisory staff has received Landfill Operator Certification training.

A State-certified Landfill Operator will be on site when waste is received for disposal, and a trained spotter is on site during all times when waste is deposited at the landfill working face to detect any unacceptable wastes. In addition, the equipment operators have sufficient training and knowledge to move waste and soil, and to develop the site in accordance with the design and operational standards.

The following staff positions, along with the names of the current staff, are designated for the landfill operation.

- Solid Waste Director – Teresa Carver
- Executive Assistant - Ofelia Reyna
- MRF Operator - Jerry Hutto, Landfill Operator, Spotter
- MRF/Landfill Spotter – Stefhen Wingo ~~Chris Whiters~~, Spotter
- MRF/Landfill Spotter - Moises Serrano, Spotter
- Heavy Equipment Operator, Donald Albritton, Spotter
- Heavy Equipment Operator, Steve Collins ~~Steve Strickland~~, Landfill Operator/Spotter
- Leachate Tanker Driver – David Barnes ~~Ed Pearce~~ - Spotter
- Weighmaster - Joe Roman

Operator training includes a 24-hour course and 16 hours of continuing education every three years. Spotter training includes an 8-hour course and 4 hours of continuing education every three years. Operator and Spotter training courses will be attended as offered by the University of Florida Center for Training, Research and Education for Environmental Occupations (TREEO) and through other FDEP approved sources. A listing of TREEO training courses and schedule is available at www.treeo.ufl.edu and as presented in Appendix C of this Operations Plan.

## L.2.b Designation of Responsible Operating and Maintenance Personnel

The currently designated person responsible for operations and maintenance at the Hardee County Landfill is:

Ms. Teresa Carver,
Solid Waste Director
Hardee County Solid Waste Department
685 Airport Road
Wauchula, FL 33873 Phone: (863) 773-5089

Any inquiries concerning the management and operation of the Hardee County Landfill facility should be submitted to the solid waste director's attention.

## L.2.c Contingency Operations

### L.2.c.1 Equipment--

There is sufficient equipment on-site so that landfill operations would not cease in the event of an equipment failure. If the MRF ceases to operate, the waste will be disposed of as loose waste in the disposal area of the landfill.

The County has budgeted enough funds for one month's leasing or rental of heavy equipment for contingency purposes. The contingency equipment type and source is located in Appendix D. Equipment from the Hardee County Public Works Road and Bridge Section is available to the Solid Waste Department for use during an emergency. During power outages at the Landfill, small portable generators, capable of running the scales and scalehouse computers are available for use from the Hardee County Public Works Department. In addition, the County has developed a comprehensive emergency management plan to allow County department the ability to obtain material and equipment immediately thereby minimizing delays due to purchasing procedures.

### L.2.c.2 Accidental Liquid Spills--

In the case of an accidental spill of oil, fuel, leachate, or chemicals, the spill will be minimized by controlling the source immediately (e.g. by closing a valve, turning off switches, or taking other necessary actions to minimize the amount of spillage). The effected area will be controlled by diverting traffic around the spill. Runoff from the effected area will be controlled by placing a berm around the area, plugging a drain or ditch, or adding absorbent material. The effected area will be cleaned and the effectiveness of the cleanup will be confirmed by sampling, as needed depending upon the nature of the spilled material.

If a liquid spill material is found during offloading of waste materials, then the hauler will be asked to remove the liquid from the site. If a liquid is found and the hauler can not be identified or an accidental spills occurs, then absorbent granules or soils will be placed on the spilled liquid. The absorbent granules or soils will be placed in barrels at the Household Hazardous Waste area until a private hauler can remove the material.

### L.2.c.3 Handling of Hazardous Waste Materials--

Hazardous Waste Materials are not accepted at the landfill. If a hazardous waste is mistakenly delivered to the landfill or identified after unloading, the FDEP will be promptly notified and the hauler identified from a license plate or by hauling records. A front-end loader will isolate the hazardous material from other waste while keeping it within the lined area and marking it with applicable markers. The hazardous materials will be covered with 6-mil Visqueen or waterproof plastic tarp and a perimeter berm will be placed around the area to minimize contact with stormwater. The Visqueen rolls or plastic tarps are available at the Household Hazardous Waste Collection Center. If the hauler is identified, Hardee County will contact the person/entity who dumped the hazardous materials and request removal of the materials within 48 hours. If the 48

hours expire without removal, Hardee County will contact an independent hazardous waste hauler for proper disposal of the hazardous material at a permitted hazardous waste management facility.

Subsequent shipments from sources previously identified for delivery of or delivery from suspected sources of unacceptable waste will only be allowed to dispose of waste materials at the landfill after the load has been thoroughly inspected by County personnel. The inspection will take place prior to unloading the waste and after unloading the waste. After unloading the waste, in a contained designated area, the load will be spread and inspected while the hauler is present. The hauler will be allowed to leave only after the load has been accepted.

In addition to the measures taken at the landfill, the County is involved with several programs, which should reduce the risk of receiving hazardous wastes. Hardee County contracts with the Central Florida Regional Planning Council (Council) to participate in their Site Notification and Verification and Pollution Prevention Program (Program). In this Program, the Council inspects all businesses in the County, once every five years, to verify the types of wastes generated by each facility and provide proper procedures for handling, storage, transporting, and disposing of any hazardous wastes.

**L.2.c.4 Fires--**

In the event of fire, the responding agency is the Hardee County Fire and Rescue Service (HCFRS), located approximately three miles west of the site, in Wauchula, Florida. Additionally, the landfill site is equipped with a dry fire hydrant for the filling of pumper trucks. The dry fire hydrant is located along the access road and is connected to the stormwater pond located immediately north of the scalehouse. Several on-site ponds are also available for filling fire fighting trucks equipped with pumps. Four water hydrants are located along the eastside of Class I landfill, on the eastside of the access road. Fire extinguishers are located in the equipment and at the maintenance barn for use in the event of small fires. There are also six fire extinguishers and five hose bibs located in the on-site MRF.

If a fire or "hot load" is discovered on the working face, the Solid Waste Director is notified immediately. Landfill equipment is used to pull the burning waste away from the working area and smother it with soil. The area is closed and another area opened to allow landfill operations to continue. If necessary, the HCFRS will be called for assistance. The HCFRS is equipped with self-contained breathing devices. While the service does not receive formal training on fighting landfill fires, the Fire Chief is experienced in dealing with landfill fires and has informed his crew of the proper procedures should a landfill fire occur. Should additional help be necessary, the Hardee County Emergency Management is contacted. In the event that a fire is observed or reported when the landfill is closed, the Sheriff's Office is instructed to contact the Solid Waste Director. The Hardee County Landfill's Fire Contingency Operations Plan is contained in Appendix E.

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
JAN 25 2006
SOUTHWEST DISTRICT
TAMPA

All fires occurring at the landfill are reported to FDEP by letter, within seven days, explaining the cause, remedial actions, and measures taken to prevent a recurrence.

**L.2.c.5 Landfill Shutdown--**

Should the landfill be shut down for more than 48 hours, the FDEP will be notified. Hardee County Landfill has a contact list of Class I, Class III, and C&D landfills that neighbor the County. Through the "Small County Coalition", various counties work together during times of emergency. The counties on the contact list will work with Hardee County during a time of emergency. The neighboring county's Waste Facility Contacts list is contained in Appendix F.

**L.2.c.6 Natural Disasters--**

Natural Disasters are handled by the Hardee County Emergency Management personnel. The Hardee County Emergency Management telephone number is (863) 773-6373. The Solid Waste Director will approve and extend the Facility's operating hours during the time of the emergency. The landfill hurricane preparation and recovery plan is included as Appendix Q.

**L.2.c.7 Emergency Contacts--**

The following phone numbers can be used to notify the appropriate individual or agency:

| | |
|---|---|
| Landfill Director: | (863) 773-5089 (Office) |
| (After hours, Call Central Dispatch): | (863) 773-4144 |
| Police: | (863) 773-3265 or 911 |
| Fire and Rescue: | (863) 773-4362 or 911 |
| Hardee Co. Emergency Management | (863) 773-6373 or 911 |
| FDEP, Tampa: | (813) 744-6100 |
| Public Works: | (863) 773-3272 |
| Equipment Rental: | (813) 671-3700 |

**L.2.d Controlling Types of Waste Received**

The landfill operators and scalehouse personnel are responsible for inspecting loads received at the landfill to detect and discourage attempts to dispose of unacceptable wastes. Each vehicle entering the landfill must stop at the scalehouse and have its load weighed in and classified in one of the following categories:

1. Residential
2. Commercial
3. Yard Trash and Clean Wood
4. Appliances/Scrap Metal
5. Construction and Demolition Debris
6. Mixed Loads and Garbage
7. Special Handling (including Asbestos)

8. Pre-tested Contaminated Soil
9. Tires

After classification, the loads are assigned one of the following destinations:

1. Class I Landfill
2. Construction and Demolition Debris sent to the Class I Landfill
3. Yard Trash Processing Area
4. Scrap Metals and White Goods Storage Area
5. Material Recovery Facility (MRF)
6. Waste Tire Facility
7. Household Hazardous Waste Collection Center (HHWCC)

The scalehouse attendant visually checks each load and, depending on the type of material, directs the driver to the appropriate on-site facility. The waste materials is also visually checked by trained County Landfill personnel or spotters at the MRF, landfill working face, Yard Trash Processing Area, Waste Tire Facility, Scrap Metals and White Goods Storage Area, and HHWCC. Random Inspections of loads is also practiced to detect and discourage attempts to dispose of unacceptable waste, hazardous wastes, special waste materials or materials that require special processing (e.g. asbestos, contaminated soil, used oil, or biomedical waste). If this inspection reveals any unacceptable or potentially hazardous wastes, the Solid Waste Director is notified immediately.

### L.2.d.1 Unacceptable Wastes--

The landfill does not accept closed or sealed containers; all drums, tanks and cans must have one end open and must have been flushed. Other unacceptable wastes include septic tank sludge; paint thinners; gasoline or like liquids; biomedical waste from hospitals, doctor's offices or clinics. The facility does not accept any materials that the hauler cannot identify the composition of nor supply certification that the material is non-hazardous waste. Disposal of liquids or non-liquid (soils, rags, or other debris) containing PCB's (polychlorinated biphenyl) are not accepted at the Hardee County Landfill facility for disposal or storage. Solid wastes generated from outside the borders of Hardee County are not accepted without prior written approval from the Board of County Commissioners or their designee. All unacceptable waste must be managed as described in Section L.2.d.9.

A Random Load Inspection Form will be filled out for unacceptable waste; the form is located in Appendix M. If the Solid Waste Director deems that the working face should be shut down for safety reasons, another area within the landfill will be opened to allow continuing landfill operations. A private waste hauler will remove unacceptable wastes; the private waste hauler agreement is located in Appendix B.

### L.2.d.2 Asbestos--

Asbestos Containing Materials (ACM) are accepted at the Hardee County Landfill under certain provision outlined by Chapter 40 CFR Part 61 and the Hardee County Solid Waste Department. The County has notified all known potential asbestos disposers of the required procedures, which must be followed by any person desiring to dispose of ACM. Accepted asbestos material is disposed of using the following procedures (these procedures are also outlined in Appendix G):

- Prepare a hole three feet in depth and adequate diameter to meet the estimated quantity to be received. Place each package by hand into the prepared hole.
- Cover immediately with one foot of soil and compact with dozer, adding more soil cover material with each pass.
- A site map with the location and depth of each disposal site will be attached in a file with the Waste Shipment Record and record weight ticket.

A minimum of one County personnel will escort the waste hauler to the disposal location and remain with the waste hauler until all of the ACM material has been unloaded and placed into the prepared hole.

### L.2.d.3 Contaminated Soils--

The County accepts contaminated soils on the condition that they are not hazardous. As stated in the Contaminate Soil Acceptance Criteria, located in Appendix H, it is a requirement that all incoming contaminated soils be TCLP (Toxicity Characteristic Leaching Procedure) and paint filter (Method 9095) tested first before being accepted at this facility for disposal. Depending on the known or suspected contaminant, additional analyses may be required. Records of tests and analyses are kept on file at the landfill facility. Accepted contaminated soils are disposed of in the currently active disposal cell within the bermed working area. The contaminated soil is mixed with soils obtained on site and disposed of as daily cover used for the solid waste only within the lined and bermed working face. The location of contaminated soil can be determined based on the contaminated soil's date of arrival and the filling sequence at the landfill. A minimum of one County personnel will escort the waste hauler to the location for the soil and remain with the waste hauler until all of the soil has been unloaded.

### L.2.d.4 Used Oil--

Used oil shall not be commingled or mixed with solid waste and will not be accepted. Used oil will also not be directly disposed in the Class I landfill. Only oily wastes, sorbents, or other materials used for maintenance or to clean up or contain leaks, spills, or accidental releases of oil will be accepted and may be disposed of in the Class I landfill.

Used oil, generated by residents only, is collected and stored in the used oil containers in the Household Hazardous Waste Collection Center (HHWCC). The used oil at the HHWCC is collected by a private waste disposal service for proper offsite recycling. A minimum of one County personnel will escort the waste hauler to the HHWCC area for unloading.

**L.2.d.5 Liquid Restrictions--**

Noncontainerized liquid waste shall not be placed in solid waste disposal units that accepts household waste or construction and demolition debris for disposal unless:

1. The waste is household waste other than septic waste; or

2. The waste is leachate or gas condensate derived from the solid waste disposal unit, or byproducts of the treatment of such leachate or gas condensate, and the solid waste disposal unit is lined and has a leachate collection system.

Containers holding liquid waste shall not be placed in a solid waste disposal unit unless:

1. The container is a small container similar in size to that normally found in household waste;

2. The container is designed to hold liquids for use other than storage; or

3. The waste is household waste.

Containers or tanks twenty gallons or larger in capacity shall either have one end removed or cut open, or have a series of punctures around the bottom to ensure the container is empty and free of residue. The empty container or tank shall be compacted to its smallest practical volume for disposal.

**L.2.d.6 Other Special Waste--**

- Batteries – Batteries are not accepted for disposal at the landfill. Batteries are taken to the Household Hazardous Waste Collection Center (HHWCC) and stored under cover of the HHWCC. The batteries are stacked three high on pallets, with cardboard placed between each layer. The batteries are covered in shrink wrapped when pallets are full. A minimum of one County personnel will escort the waste hauler to the HHWCC area for unloading.

- Paints – Containers with liquid or "wet" paints are not accepted for disposal at the landfill. Only empty dried out paint cans are accepted throughout the year. If a can of paint is found by landfill personnel, the can is taken to the Household Hazardous Waste Collection Center for temporary storage in hazardous waste storage sheds until removed from the site by the qualified contractor. A minimum of one County personnel will escort the waste hauler to the HHWCC area for unloading.

- Electronic Waste (e-waste) – E-waste is accepted for storage at the MRF. E-waste is collected in separate loads by the waste haulers. When E-Waste items, such as computers, VCRs, TVs and TV remote controls, microwaves are found in the incoming waste loads, their batteries are removed and the batteries taken to the on-site Household Hazardous Waste Collection Center. E-waste collected at the MRF will be taken to a covered trailer located behind the MRF. Electronic items such as TVs, computer monitors, cell phones, keyboards, and computer peripherals separated from the waste at the working face will be temporarily stored until placed into a truck and taken to the covered trailer, located behind the MRF, by the end of the working day or prior to rainfall. Should e-waste glass or components be shattered or smashed into small pieces, then the debris will be collected and placed into a container and placed into storage sheds at the HHWCC. The e-waste contractor or Hazardous waste hauler will be contracted to dispose of the small e-waste debris. A minimum of one County personnel will escort the waste hauler to the MRF area for unloading of e-waste.

- Tires – Incoming waste tires and tires with rims are accepted. Tires will not be disposed in the landfill. The waste tires and rims are stored at the Waste Tire Facility. A minimum of one trained spotter will escort the waste hauler to the Waste Tire Facility for unloading.

- Scrap Metals and White Goods – Scrap Metals and White goods will be accepted. These materials are temporarily stored at the Scrap Metals and White Goods storage area. The white goods will be stored in an upright position. All refrigerants, or CFC gases will be collected by the scrap metals contractor (Certified to collect refrigerants and gases) prior to being taken off-site for recycling. A minimum of one trained spotter will escort the waste hauler to the Scrap Metals and White Good area for unloading.

- Lawnmowers – Only lawnmowers or other lawncare equipment that has been drained of all the oil and gasoline, prior to delivery, will be accepted. These items will be stored at the White Goods and Scrap Metals Area. If a lawnmower or equipment is later found to contain oil and gasoline, the oil and gasoline is drained and the liquids taken to the Household Hazardous Waste Collection Center. A minimum of one trained spotter will escort the waste hauler to the Scrap Metals and White Good Area for unloading.

- Agricultural Pesticide Containers – Only containers with no pesticide residue, have been thoroughly rinsed, and inspected by landfill personnel, will be accepted. The accepted containers will be disposed in the Class I landfill. Containers with liquid or dried pesticide are not accepted for disposal. All residents and business are directed to follow the disposal recommendations on the pesticide container prior to bringing it to the landfill.

- Construction and Demolition (C&D) Debris – Hardee County Landfill currently does not accept C&D debris from commercial haulers. Residential or mixed loads may contain small amounts of C&D debris material. C&D that is mixed or becomes mixed with Class I waste will be considered Class I waste and will be disposed in the Class I disposal area.

### L.2.d.7 Yard Trash and Clean Wood--

Yard Trash is defined as vegetative matter resulting from landscaping maintenance or land clearing operations. "Clean" wood defined as lumber, trees, shrubs, trunks, branches, and limbs which are free of paints, glue, filler, penthachlorophenol, creosote, tar, asphalt, or other wood preservatives or treatments.

Yard trash is not accepted for disposal in the Class I landfill area. Only "Clean" wood and yard trash will be accepted for storage and processing at the Yard Trash Processing Area. "Unclean" wood, such as painted wood, pressure treated wood, particle board, etc., with the exception of yard trash, will be accepted for disposal in the Class I landfill.

When a yard trash loads arrive at the landfill, a minimum of one trained spotter will escort the loads to the designated for Yard Trash Processing Area.

### L.2.d.8 Biomedical--

Biomedical waste from hospitals, doctor's offices or clinics is not accepted.

The County has a Household Sharps Collection Program permitted through the Florida Department of Health. This program is used to prevent the unauthorized disposal of non-regulated household biomedical waste. The collected materials (i.e. needles, etc.) are temporarily stored in a designated room at the on-site County Animal Control Kennel. The operating procedures for the Sharps Collection program are provided in Appendix I.

### L.2.d.9 Procedures for Handling Unacceptable or Improperly Placed Waste Loads--

- If unacceptable wastes are discovered, the Solid Waste Director is immediately notified. The waste hauler or generator of the waste is contacted to retrieve and remove the unacceptable waste and instructed on the proper disposal.

- If the waste hauler or generator of the waste is unknown and the unacceptable waste that does not pose a threat to County staff, then the unacceptable waste may be stored, if containers and space are available, at the Household Hazardous Waste Collection Center (HHWCC) for temporary storage prior to being removed from the site and disposed of properly.

- If unacceptable wastes are of an unknown waste material or pose a threat to County staff or the waste hauler or generator is identified and the quantity of wastes cannot be moved or stored in the HHWCC, a front-end loader will isolate the unacceptable waste from other waste while keeping it within the lined area and marking it with applicable markers. The load will be covered with 6-mil Visqueen or waterproof tarp and a perimeter berm will be placed around the load to minimize contact with stormwater. The Visqueen rolls or plastic tarps are available at the Household Hazardous Waste Collection Center. Hardee County will contact the person/entity who dumped the unacceptable waste and request removal within 48 hours. If the 48 hours expire without removal, Hardee County will contact an independent waste hauler for proper disposal of the waste at a permitted facility.

- Waste Materials that can be accepted for storage and disposal; however, are not placed in the appropriate disposal or storage area will be separated from the waste and moved to the appropriate storage or disposal area.

- A Random Load Inspection Form will be filled out for unacceptable waste; the form is located in Appendix M. If the Solid Waste Director deems that the working face should be shut down for safety reasons, another area within the landfill will be opened to allow continuing landfill operations. A private waste hauler will remove unacceptable wastes; the private waste hauler agreement is located in Appendix B.

### L.2.e Weighing Incoming Waste

All waste hauling vehicles entering and exiting the landfill are required to pass over the scales located at the facility entrance. Upon entering the facility, the scale house attendant weighs the vehicle and classifies each load, as described in Section L.2.d. The load weights are printed on tickets and recorded on computer. The waste is categorized and the tonnages are annotated in the appropriate category in the Waste Quantity Form located in Appendix J of this Operations Plan.

### L.2.f Vehicle Traffic Control

Signs are posted that indicate name of the operating authority, traffic flow, hours of operation, and restrictions or conditions of disposal. Signs posted at the gate state hours of operation and types of waste restrictions. Upon entering the site, all vehicles are required to stop at the scalehouse for weighing. The scalehouse attendant directs the driver to the appropriate on-site facility for unloading. All site roads are adequate for two-way traffic, and the speed limits are clearly marked. At each on-site facility, landfill personnel direct traffic to unload at the proper area.

### L.2.g Method and Sequence of Filling Waste

Generally most of the incoming waste loads are deposited on the tipping floor of the MRF for processing. After the waste is inspected at the MRF for unacceptable materials, the waste

materials are processed and feed through a baler. The bales are loaded onto a flatbed truck and transported to the Class I landfill for disposal. Front-end loaders with forks unload the flatbed and stack the bales. Waste loads not suitable for the MRF, or bypass from the MRF, are directly routed to the Class I landfill and deposited at the working face of the landfill as loose waste. Only one common active working face will be used for both bale and loose fill during normal operations. The MRF baling operations are the primary waste volume reduction process at the landfill and loose waste is used to supplement the bales and achieve the smooth sideslopes and grades shown on the Operations Drawings. During some periods, the bale filling operation may progress faster than the loose fill operation. This may require two temporary waste filling areas to be in operation as the loose waste placement catches up with the area where bales are being placed. Should this occur, the Landfill Operator will coordinate with the MRF operations and redirect additional loose waste to be placed in the disposal area. By re-directing the additional loose fill to the disposal area, the temporary second working area will be filled within a maximum of 14 days and normal operations (one common working area) will be in operation.

For information concerning the sequence of filling waste, please refer to the Operations Drawings. The Bales are stacked in a lift of less than three high. When loose waste must be disposed of, it is spread in two-foot thick layers and compacted to approximately one foot in thickness. The loose waste is disposed of in layers atop the bales and along the outer sideslope; loose waste is used to supplement the bales and achieve smooth sideslopes and grades shown on the Operations Drawings.

### L.2.h Waste Compaction and Cover Procedures

Waste compaction and cover procedures are discussed in Section L.7 of this Operations Plan.

### L.2.i Operations of Gas, Leachate, and Stormwater Controls

At the present time, gas generated at the Hardee County Landfill vents through the sandy soil cover into the atmosphere. Perimeter gas probes monitor the potential for landfill gas migrating off the landfill property.

Once the final landfill height is achieved, a complete gas management system, including passive gas vents, will be installed. The proposed gas management system components will be installed as part of closure activities, which will commence in segments as substantial acreage has been filled to the design dimensions. The proposed vent locations will be shown on the drawings submitted with the closure permit application.

Operation of the leachate management system is discussed in Section L.8 of this Operations Plan.

Operations of the gas-monitoring program is discussed in Section L.9 of this Operations Plan.

Operation of the stormwater control system is discussed in Section L.10 of this Operations Plan.

### L.2.i.1 Landfill Monitoring Locations--

The locations for the water quality (groundwater and surface water), leachate, and gas sampling locations are shown on the site layout plan contained in Appendix K of this Operation Plan.

### L.2.i.2 Title V Applicability--

On December 20, 1996, an Initial Design Capacity Report was submitted for the Phase I disposal area to FDEP's Division of Air Resources Management in Tallahassee, Florida (to the attention of Mr. Venkata Panchakarla). The report stated that the design capacity of the landfill is approximately 335,590 Mg. Since the facility did not exceed the threshold limit of 2.5 million Mg, the requirements of the New Source Performance Standards (NSPS) of the Clean Air Act are not applicable, and a Title V permit is not required.

Upon approval of the Phase II expansion plans , the Division of Air Resources Management in Tallahassee, Florida will be notified of the design capacity and Title V applicability of the entire landfill.

### L.2.j Water Quality Monitoring

Refer to the Water Quality and Leachate Monitoring Plan for the Hardee County Landfill, contained in Attachment M-~~2~~ of the 200~~3~~4 construction permit application for the Phase II area, for site-specific test parameters, locations, frequencies, and reports.

### L.2.k Maintaining and Cleaning the Leachate Collection System

The Phases I and Phase II disposal cells have independent and separate leachate collection systems.

**Phase I Leachate Collection System**

Leachate generated in the Phase I disposal area (with the natural clay bottom and geomembrane sideliner) is collected in a perimeter collection pipe surrounding the waste materials. The leachate collection pipes are accessible through a series of manholes, designated as Manholes 1 through 9 (Manhole Number 8 is the main leachate collection pump station). Leachate in the collection system drains to Manhole Number 8 and is then pumped to one of the leachate storage tanks. The leachate collection lines in the Phase I cell are eight-inch diameter HDPE pipes. These pipes are adequately sized to allow access for jet cleaning hoses and video cameras.

The Phase I leachate collection system on the westside of Phase I, specifically Manholes five (MH-5), six (MH-6), and seven (MH-7), can be accessed upon filling of the Phase II Section II area by entering the perimeter pipeline through MH-4 and/or MH-8. Manholes one (MH-1), two (MH-2), three (MH-3), four (MH-4), eight (MH-8), and nine (MH-9) will not waste filled above the manhole and therefore will remain accessible for cleanout and inspection of the pipelines. The Phase I leachate collection system can be video inspected as well as cleaned through MH-1, -2,-3,-4,-8, or -9. From MH-4, a camera can travel to MH-5, MH-6, and MH-7 to inspect the

leachate collection lines. Phase II construction also includes a new pipe installed from MH-6 to MH-8; this line can be accessed through MH-8 for inspection and cleaning.

As part of the maintenance of the leachate collection system, the manholes will be opened and inspected, at least monthly, for sediment buildup that may impede the flow of leachate. Jet cleaning and video taping of the entire system will occur prior to renewal of the operations permit. **(Note the manholes can gather landfill gases and are a confined space entry. Personnel are required to properly ventilate the manholes and have proper confined space entry training prior to working in the manholes).** Sediment buildup will be removed, using a vacuum assisted truck, and the manhole re-inspected to assess the clean-up operation.

**Phase II Leachate Collection/Detection System**

The entire Phase II leachate collection and detection system comprises of geocomposite materials that collect and drain leachate toward eight-inch perforated HDPE pipe spaced approximately 105 feet on center. The eight-inch pipes drain towards a sump located on the north east corner of Phase II – Section I. A 24 inch leachate sideslope riser pipe is located in the sump with a pump to discharge leachate into the lift station (MH-8). Access to the leachate collection system can be attained from the 24-inch riser pipe. The leachate collection and detection systems are sized adequately to fit jet cleaning and video camera for cleaning and inspection.

As part of the maintenance of the Phase II leachate collection system, the 24-inch riser pipes can be accessed, annually, for inspection of sediment buildup that may impede the flow of leachate. Jet cleaning and video taping of the entire system will occur prior to renewal of the operations permit. **(Note the sideslope risers can gather landfill gases. Personnel are required to properly ventilate the risers prior to inspecting or cleaning).** Sediment buildup will be removed, using a vacuum assisted truck, and the sideslope riser and sump re-inspected to assess the clean-up operation.

**Leachate Storage Tanks**

The County pumps the leachate tanks on a daily basis and takes loads of leachate to the City of Wauchula Municipal Wastewater Treatment Plant. The Hardee County Landfill has an agreement with the City of Wauchula Municipal Wastewater Treatment Plant to receive and treat leachate from the landfill facility; this agreement is located in Appendix L.

The exterior of the leachate storage tanks will be inspected, at least weekly, for the adequacy of overfill protection system, the cathodic protection system, for leaks, corrosion, and maintenance deficiencies. The interior of the tanks shall be inspected when the tank is drained, at a minimum of every three years, or at the manufacturers recommended frequency. Interior inspection shall include inspection of the tank wall for corrosion, coatings, or structural damage.

If the inspection reveals a tank or equipment deficiency or leaks that could result in the failure of the tank to contain the leachate, then remedial measures shall be taken immediately to correct the deficiency or leak.

As part of the Leachate Management Program, Hardee County personnel monitor the overfill protection system on a weekly basis. County personnel monitor the amount of liquid entering the tanks at the control panel to prevent possible overfilling of the tank, however ultra-sonic liquid level indicators continually monitor the levels in the tank as described in Section L.8.b of this Operations Plan. The ultra-sonic level indicators shut-off flow to the tanks from the lift station should the levels exceed a pre-determined level. Routine inspections of the overfill protection systems include:

- Inspection of flow meters from the lift station to the Tanks to ensure proper operation.
- Inspection and Testing of the overfill alarms and shut-off controls for proper operations.
- Examining the overflow pipes in Tank 1 for obstructions.
- Check the operations of the ultra-sonic level indicators located on top of each of the tanks for proper operations.
- Monitoring the liquid levels in both tanks.

Also refer to additional related information in Section L.8.b.

### L.2.l Maintaining and Cleaning the Groundwater Intercept System

The Phase II expansion area has a series of underground groundwater collection pipes to intercept and collect groundwater variances above the seasonal high groundwater elevations. The underground groundwater collection system consists of a series of laterals that intercepts rises groundwater elevation before it impacts the subbase of the expansion area. The laterals flow into a common header pipe located beneath the eastern side of the expansion area. The header then flows into a groundwater pump station located southeast of the expansion area.

As part of the maintenance of the Phase II groundwater intercept system, a series of groundwater clean-out risers can be accessed to allow periodic jet cleaning of the system. Jet cleaning of the entire system will occur prior to renewal of the operations permit. The groundwater Intercept system laterals are 8-inch diameter pipes and are sized adequately to fit jet cleaning for cleaning. **(Note the groundwater cleanout risers can gather landfill gases. Personnel are required to properly ventilate the risers prior to cleaning).**

Sediment that has been jet cleaned from the system will be flushed toward the groundwater intercept pump station. The flushed sediment will be removed, using a vacuum assisted truck. **(Note: The pump station can gather landfill gases and should be considered a confined**

**space entry. Personnel are required to properly ventilate the pump station and have proper confined space entry training prior to working in the pump station).**

## L.3 LANDFILL OPERATING RECORD

Copies of all operating records, reports, engineering drawings, training records, etc. are kept on file at the landfill. Upon request, the records will be made available for FDEP inspection. All records pertaining to the operation of the facility will be retained throughout the design life of the landfill. All monitoring records, calibration and maintenance records, and reports required by the operating permit will be retained for at least ten years.

## L.4 WASTE RECORDS

Waste reports that include waste type and quantity are compiled monthly and submitted quarterly to FDEP. The waste is categorized and the tonnages are annotated in the appropriate category in the Waste Quantity Form located in Appendix J of this Operations Plan. Reports include: (a) types of solid waste received, and (b) quantities of solid waste received by category. The landfill operator also estimates the amount of the following waste categories:

| | | |
|---|---|---|
| Residential | Scrap Metals White Goods | Used Oil |
| Commercial | Asbestos | |
| C&D Debris | Battery | |
| Clean Wood and Yard Trash | Tires | |

Additionally, the County maintains all manifests provided by the contractors for the recyclable special wastes on file. These manifests are available for FDEP inspection upon request.

## L.5 METHODS OF ACCESS CONTROL

To prevent unauthorized waste disposal and unauthorized access to and use of the landfill, the entire site is surrounded by a fence. The entrance/exit to the facility is controlled by the scalehouse attendant. All vehicles entering the site must pass by the scalehouse. All visitors or customers must stop at the scalehouse either to have their vehicle weighed or to register by signing a "visitor log". When the facility is closed the gates are locked.

## L.6 LOAD CHECKING PROGRAM

Section L.2.d of this Operations Plan lists the waste materials and their proper disposal or storage locations at the landfill. Also listed are waste materials that are prohibited from entering or being disposed of in the landfill. Load inspections at the MRF tipping floor, Yard Trash Processing Area, and the landfill disposal area occur as part of the facility's normal operating procedures. During operations, trained spotters will look for unacceptable waste or waste materials that are not properly stored in the appropriate location on the landfill.

The County will conduct a Load-checking program to detect and discourage attempts to dispose of unacceptable and special waste materials. Of these inspections, a minimum of three (3) random load inspections are recorded each week. Each inspection will be completed by personnel trained to recognize unacceptable wastes, regulated hazardous waste, and PCB waste.

At the landfill working face, a waste delivery vehicle will be selected at random and directed by County personnel to an area away from the active disposal area (but still within the lined area). The waste delivery vehicle will discharge the load for a detailed inspection by a minimum of one trained County personnel. The waste delivery vehicle will not be allowed to leave the facility until the load the inspection is complete and determination on the acceptance has been made on the waste load. The waste hauler will be required to remove unacceptable waste materials from the landfill. Waste materials that are not placed in the appropriate disposal or storage area will be reloaded on the vehicle and County personnel will escort the vehicle to the appropriate unloading area. The Random load inspections will be documented on a inspection form which includes the date and time, name of the hauling company and the driver of the vehicle, the vehicle's license plate number, the source of the waste or generator, and any notes made by the inspector. **The inspector will identify and note all unacceptable or prohibited wastes found during the random load inspection, estimated quantities, and the action taken for the waste material. The inspector will sign the inspection form. The inspection form will be retained at the Hardee County Landfill.**

The inspection results will be recorded on the Random Load Inspection form, located in Appendix M of this Operations Plan.

Upon completion of the random load inspection, the procedures for handling waste loads as described in Section L.2.d will be followed.

## L.7 WASTE SPREADING AND COMPACTION PROCEDURES

As previously discussed, both baled waste and loose waste are disposed of in the Phase I and Phase II Class I cell of the landfill. The majority of incoming waste is baled for volume reduction. Waste that is not baled at the on-site MRF is disposed of as loose waste in the disposal area. Waste material may not be baled due to scheduled or unscheduled maintenance activities at the MRF. Some wastes, such as asbestos as described in Section L.2.d, are never baled and are taken directly to the Class I disposal area for disposal.

### L.7.a Waste Layer Thickness and Compaction Frequencies

At the working face, bales are stacked with a front-end loader equipped with a fork attachment. Each bale measures approximately 61-inches (width) by 46-inches (length) by 31-inches (height). Bales are stacked three high and across the working face. A lift of waste material is generally no more then 10 feet in thickness. When stacking the bales, they are positioned so that their joints are offset to allow the bales to interlock. Wastes that are baled have already been compacted prior to delivery to the disposal area; therefore no additional compaction is required in the bale fill area of the landfill.

When loose waste is disposed of, it is spread in two-foot thick layers and compacted with a Caterpillar D7R Dozer or other equipment of sufficient weight to compact the waste to approximately one-foot in thickness. Generally three to five passes should be sufficient to compact the waste. The loose waste is disposed of in layers atop the bales and along the outer sideslope; loose waste is used to supplement the bales and achieve smooth sideslopes.

To provide additional interlocking and stability of the stacked bales, the following procedures will be followed when placing both bales and loose waste in the landfill:

- Along the outer sideslope of the landfill for the first 20 feet (measured horizontally inward);

    1. loose waste will be placed and compacted; or

    2. Baled waste may be initially be placed along the outer edges; however, the bales will be broken up, crushed, and compacted thoroughly until no visible or distinct bale seams are present.

- Whole, complete bales will then be placed behind the compacted loose waste or crushed bales for the next 25 feet (measured horizontally inward);

- The next 10 feet of space will be filled with compacted loose waste or crushed, compacted bales (measured horizontally inward);

- Whole, complete bales only will be placed on the interior of the landfill after following the above pattern of bale and loose fill placement and compaction.

Loose waste will be placed and compacted on the designated slopes of the landfill to match the contours shown on the Operations Drawings however;

- Previously filled outside slopes designated to receive additional waste shall be surveyed and marked in the field to ensure that at least a two foot compacted thick waste layer is available prior to disturbance, and

- All slopes shall not exceed 3(h):1(v) at any time during waste filling, after application of cover soils, and final closure. All slopes shall conform to the design dimensions, slopes, and elevations shown on the Operations Drawings.

### L.7.b First Layer of Waste

The first layer of waste has been placed over the entire landfill footprint for Phase I. This section does not apply to Phase I.

The procedure for filling and compacting the first layer of waste in the Phase II footprint will protect the integrity of the liner and leachate collection system. An initial lift of selected waste , , a minimum of four feet in thickness, will be placed over the projective sand layer. The selected waste will be either loose municipal solid waste or baled waste. The loose waste will be spread out and inspected for large rigid objects that may puncture the liner system when compacted. The baled waste from the MRF is already spread and large bulky items removed prior to baling. In addition, the bales will be inspected for large rigid objects protruding from the bales prior to placement. A large rigid objects will be removed from the loose waste or bales and placed in an area for future placement and disposal above the initial four foot lift.

### L.7.c Slopes of Cell Working Face, Side Grades, and Lift Depths

The exterior side slopes of the landfill above grade shall not exceed three horizontal to one vertical. The slopes will vary with daily operations. The typical minimum top slopes to promote drainage are generally one percent within the bermed working face and two percent on the intermediate cover areas. All slopes shall conform to the slopes indicated on the Operations Drawings for the landfill.

Bales are stacked three high per lift. The maximum lift height is ten feet high. When the lift height is reached, intermediate cover is placed over the lift. Loose waste will be added to achieve design slopes described in Section L.7.a.

### L.7.d Maximum Width of Working Face

The maximum width of the working face is approximately one hundred feet. The working face of the disposal area of the landfill is kept only wide enough to accommodate the maneuvering room required by the front end loaders with forks that are used to stack the bales and the occasional collection vehicle for loose waste. Bales are stacked three high as shown on the details on the Operation Drawings. Loose waste is spread in layers atop the bales and along the outer sideslope; loose waste is used to supplement the bales and achieve smooth sideslopes.

Berms, comprised of clean, compacted soil around the working face, are to be maintained at all times to contain all leachate and prevent leachate runoff from the working face from entering the stormwater management system or leaving the lined disposal area. Special attention/maintenance will be used on areas where traffic enters the working area to ensure leachate is contained within the bermed area and to prevent leachate from leaving the working area.

### L.7.e Initial Cover Type

Initial cover is used to control disease vector/animal attraction, fires, odors, blowing litter, and moisture infiltration. The initial cover used at the Class I landfill consists of a 6-inch thick layer of compacted soil obtained from the on-site or off-site borrow pit. Tarps maybe used as a temporary daily cover on the exposed side of the working face of the disposal area if additional waste material will be deposited within 18 hours.

## L.7.f Initial Cover Application Procedures

The working face shall be covered with a 6-inch thick layer of compacted soil or tarps at the end of each working day. All waste materials will be compacted prior to application of initial cover.

The initial cover, if soil is used, will be spread to cover the entire working face with a uniform six-inch compacted soil cover (free of waste) using a dozer or applicable equipment. If tarps are used as temporary daily cover then, the tarps will be spread to cover the waste material. Sand or the tarp spreader bar will be used to minimize uplift be wind. When the working face area exceeds the area of available tarp, then six inches of compacted soil will be placed to cover the waste material. Processed yard trash or clean wood (mulch) may be spread over the initial soil cover for stabilization and erosion control measures.

## L.7.g Intermediate Cover Application Procedures

Intermediate cover, an additional 12-inches thick layer of compacted soil on top of the 6-inch thick layer of compacted initial soil cover, will be applied within seven days over areas that will not receive additional waste within 180 days. Intermediate cover consists of compacted sandy soils from the borrow pit or off-site borrow sources. The intermediate cover soils will be spread using a dozer. The dozer will make a minimum of three to four passes to compact the soils.

Soils containing any waste materials cannot be used as intermediate cover and must be placed within the bermed area of the disposal area. Berms will be placed around the working face to contain all leachate and to prevent leachate runoff from the working face from entering the stormwater management system.

The top of the intermediate cover soil will be graded, generally a minimum of two percent, to allow clean, uncontaminated surface water to runoff and to minimize ponding on the top of the cover soil.

When waste is to be placed in areas with intermediate cover, all or part of the intermediate cover can be removed for future use prior to the additional waste placement. The intermediate cover is removed by pushing the cover material into a stockpile on the side or a new berm around the working face with a front-end loader or dozer; the intermediate cover shall be free of waste. After additional waste is placed, the cover material can used as initial cover by pushing the material back with the loader or dozer. Processed yard trash or clean wood (mulch), may be spread over the intermediate cover for stabilization and erosion control measures.

## L.7.h Final Cover Application Time Frame

The Phase I Class I landfill will be closed in segments as substantial acreage has been filled to the design dimension. The northern and eastern sides of the Phase I area will be closed with a final closure cap. The western and southern sides of the Phase I area will capped with a liner prior to being filled over with waste as part of the filling of the Phase II area. The intent of the

filling sequence plans is to complete filling of the Phase I area prior to entering the Phase II area. The placement of waste will then be shifted to the Phase II area. This will allow the Phase I area to be either partially closed or have the liner placed in the western and southern sideslopes.

As areas of the Phase II landfill reach their design elevations they will receive intermediate cover prior to final closure. The initial filling of Phase II Section I is estimated to take 5 years to reach Elevation 110.0. These areas will receive a vegetative cover and processed yard trash and clean wood (mulch) as necessary to establish a grass cover, which will prevent erosion and promote runoff. The landfill area exterior side slopes will be maintained at a maximum ratio of three horizontal to one vertical as shown on the Operations Drawings.

Solid waste disposal units which have been filled to design dimensions shall receive final cover within 180 days after attaining final elevations or in accordance with an approved closure plan for the landfill.

The schedule for final closure of the landfill will comply, at a minimum, with Rule 62-701.600 F.A.C., and is as follows;

- At least one year prior to projected date when wastes will no longer be accepted or when all solid waste disposal units are expected to reach design dimensions, the owner or operator will provide written notice to FDEP with a schedule for cessation of waste acceptance and closure of the landfill,

- At 120 days prior to the date when wastes will no longer be accepted at the landfill, the owner or operator shall advise users of the landfill of the intent to close the landfill by posting signs at the entrance to the landfill. The signs will indicate the date of closure, the location of alternative disposal facilities, and the name of persons responsible for the closure activities.

- At least 10 days prior to the date when waste will no longer be accepted at the landfill, the owner or operator will publish notification of the landfill closure in the legal advertising section of the newspaper of general circulation where the activity is proposed.

- The owner or operator of the landfill shall submit a Closure Permit Application to the FDEP for final closure of the landfill at least 90 days before the date when wastes will no longer be accepted at the landfill.

### L.7.i Controlling Scavenging and Salvaging

Scavenging and salvaging is not permitted at the Hardee County Landfill. The facility has a fence around the entire perimeter to minimize unauthorized access to the landfill.

### L.7.j Litter Policing Methods

On a daily basis, landfill personnel and/or county jail trustees collect litter along the entrance and access roads, at buildings, in the parking areas, and in the vicinity of the working face. Litter control fences are used near the working face to lessen the amount of blown litter.

### L.7.k Erosion Control Procedures

Erosion of the initial or intermediate cover material on landfill areas is repaired as soon as possible to maintain the required depth of cover. The establishment and maintenance of a good stand of grass on the finished slopes is important to maintaining erosion control. In addition, it may be necessary to use processed yard trash, silt fences, straw bales, berms to help prevent erosion. The landfill operator will take appropriate measures to prevent and correct erosion problems on the site.

The fill sequence has been designed to minimize erosion of landfill sideslopes and washout of adjacent areas. The landfill surface will be inspected daily for cracks, eroded areas, and depressions in the landfill surface. In areas where standing water develops, the area will be filled, compacted, and graded to provide positive drainage. For intermediately covered areas, or other areas that discharge to the stormwater management system, which exhibit significant erosion, will be repaired as follows:

- If greater than 50 percent of the soil cover material has eroded, then the area will be repaired within 7 days.
- If waste is exposed, then the area will be repaired by the end of the next working day.
- If erosion cannot be corrected within seven days, the FDEP will be contacted with a corrective actions plan and schedule.

## L.8 LEACHATE MANAGEMENT PROCEDURES

### L.8.a Leachate Level Monitoring, Sampling, Analysis, and Data Results

The landfill operator is responsible for maintenance and monitoring of the leachate collection system. This includes leachate and groundwater level monitoring, biannual sampling and analysis of the landfill leachate.

### L.8.a.1 Leveling--

**Phase I Leveling**

The leachate levels within the Phase I landfill shall be maintained lower than the top of the perimeter liner and a general inward gradient will be maintained between the groundwater levels outside of the lined area and the leachate levels inside the lined area. Leachate levels will be monitored using piezometers P-1, P-2, P-9, P-10, P-15, and P-16. Outside groundwater water

levels monitored by groundwater monitoring wells or piezometers (MW-1, MW-5, MW-2, P-11, MW-8, MW-9). The leachate levels within the landfill can be lowered by adjusting the pumping rate from Manhole Number 8; however leachate levels can only be lowered to the invert of the perimeter collection pipe. The lowest elevation of perimeter collection pipe is located on the southside of the disposal area at approximately Elevation 72.8 (source: PBS&J record drawings dated July, 2000).

On a monthly basis, the landfill operator or designee, will collect depth to leachate level readings from the interior piezometers and depth to water level readings in either a piezometer or monitoring well across from the lined area on the exterior. The depth to water level readings will be subtracted from the top of casings and water elevations calculated. Refer to Appendix N of the section for the "Monthly Leachate Leveling Form" that has the piezometer and monitoring well information to be used on a monthly basis. Based upon the levels of leachate on the interior of the Phase I landfill;

- If the exterior water levels are higher then the interior levels, then an inward gradient is acting on the sidewall barrier geomembrane;

- If the interior water levels are higher then the exterior levels, then increase the leachate removal (pumping) from Manhole Number 8 (Lift Station) until the interior water levels are lower.

- If the interior water levels are not lower, then check the manholes to see if clogs or debris is present which may not be allowing for adequate leachate collection. If clogs or debris is present, then the County will contract with a vacuum truck service to remove the debris and a jet cleaning service to clean the collection pipes.

**Phase II Leveling**

The liquid level inside of the Phase II cells will be controlled by the pressure transducers attached to the pump casing or intakes. Once the levels rise above a predetermined elevation, the pumps will be activated and liquids pumps to MH-8.

**Leachate Tank Leveling**

Liquid levels in the two leachate storage tanks are monitored, either visually or by reading the liquid level readouts on the side of the tanks, to estimate available storage and prevent possible overflow of the tanks. To adjust the levels of leachate in the tanks, liquid can be transferred from one tank to another or additional truckloads can be sent offsite for disposal.

**L.8.a.2 Sampling, Analysis, and Results--**

Leachate is sampled from Manhole 9 every 6 months for water quality standards. The list of leachate test parameters is defined in the Water Quality and Leachate Monitoring Plan contained in Attachment M-~~2~~ of this 2004~~3~~ Operations Permit application.

The Solid Waste Director is responsible for reviewing all data reports and submitting them to the FDEP.

## L.8.b Operation and Maintenance of Leachate Collection and Removal System

Surface water runoff that comes in contact with solid waste is considered leachate. Surface water (leachate) will be directed into low, bermed areas. If this low area is needed to collect leachate generate from runoff for operational purposes, the low area will be excavated downstream and away from the working face. Liquids in the low area will be allowed to percolate or will be pumped to the nearest manhole or lift station. To minimize the amount of surface debris entering the manholes or lift station, the County will use a screened suction intake on the pump and/or hay bales or silt fences placed around the pump intake. Immediately after pumping begins and after pumping is complete, the operator will look into the manhole, if pumped to the manholes directly, for surface debris and sedimentation. Surface debris and sediment will be removed from the manhole using a vacuum assisted truck.

### Phase I Collection System

Leachate, from water that is in contact with the waste materials within the disposal area is collected in a perimeter subsurface collection pipe surrounding the waste materials. The perimeter subsurface collection pipe is a perforated pipe that is located along the outside waste limit. A coarse drainage media, wrapped in geotextile, surrounds the perforated pipe and minimizes migration of fine material into the collection pipe.

The perimeter subsurface leachate collection pipes are accessible through a series of manholes, designated as Manholes 1 through 9 (Manhole Number 8 is the main leachate collection pump station). Leachate in the collection system drains to Manhole Number 8 where it is then pumped to one of the leachate storage tanks. The County pumps the leachate tanks on a daily basis and transports loads of leachate to the City of Wauchula Municipal Wastewater Treatment Plant.

### Phase II Collection/Detection System

The Phase II collection/detection system collects leachate and drains via gravity to a sump. Two sideslope riser pumps will collect and discharge leachate to the lift station. One pump will collect from the detection system and one pump will collect from the collection system. Both pumping systems will be controlled by independent control panels. The control panels will have automatic turn-on and shut-off controls for the pumps.

Independent flow meters will track the amount of leachate collected from collection or detection system.

The main leachate collection header pipe will lie along the eastern and southern toe of slope in a manner so that access can easily be provided to insert a TV camera and flushing equipment. The

leachate collection pipes have also been sized to accommodate a TV camera and flushing equipment.

The leachate pump is easily accessible from the surface and is equipped so that the pump and discharge piping can be completely removed for repairs or replacement. In addition, with the pumps removed, the portion of the pipe forming the intake section in the sump can have TV camera and flushing equipment inserted.

**Leachate Lift Station**

The submersible leachate pump station, designated as Manhole Number 8, is a duplex system having a nominal capacity of approximately 150 gallons per minute (gpm). This pump station is operated by float control using the following five floats:

- Lead pump on,
- Lag pump on,
- Pump(s) off,
- High level alarm, and
- Low level shut-off

A control panel, located immediately adjacent to the pump station, has controls to activate the pumps. The pumps can be activated for manual or automatic operations. Meters on the control panel record the amount of leachate pumped into the storage tanks. The pump station discharges into a 4-inch force main flowing to the leachate storage tanks. For additional reliability, the submersible leachate pump station is also furnished with an emergency pump out connection to allow for removal of leachate directly from the lift station should the storage tanks not be operational.

The **overfill protection system** of the tanks is provided by ultra-sonic liquid level indicators, located on the top of each of the tank, that provide continual monitoring of the liquid levels. The ultra-sonic level indicators provide both overflow protection and low liquid level monitoring to protect the pumps at the truck loading area. As liquid levels rise in the tank above a pre-determined height, the ultra-sonic level indicators send a signal to an alarm (an audible and flashing light) on the control panel located at the lift station. A signal is also send to the control panel at the lift station to shut-off the pump(s). When leachate is pumped from the tanks to the truck loading area, the ultra-sonic level indicators monitor the liquid level in the tanks and shut off the pumps at the truck loading area should the level drop below a pre-determined level. This prevents the pumps from running dry and possibly over heating.

As a back-up contingency plan **(only used should signal alarms and pump shut-offs fail)** the back-up overfill protection system for the tanks is as follows:

1. Tank 1 is filled by the pump station located at Manhole 8 (MH-8). If the liquid level rises above the overfill pipe in Tank 1, the flow is diverted to Tank 2.

2. As Tank 2 fills and equalizes with Tank 1, the two tanks fill simultaneously.

3. Should both tanks continue to fill, each tank has a final overflow pipe, which allows any overfill to be captured in the containment area for each individual tank.

Tanker trucks are used to transport leachate off-site for disposal. The tanker trucks pull around to the western side of the storage tanks and park on top of a concrete lined unloading area. The unloading area is designed to collect accidental spills and convey the spill back into the lift station. After parking the truck, the driver has the option of selecting which tank to begin draining. The control panel, located immediately adjacent to the truck unloading area, allows the truck driver to control the pump while a meter readout allows the driver to monitor the amount of leachate transferred to the truck. Once the truck is full, the leachate is hauled offsite for disposal.

As part of the weekly responsibilities of the landfill operator (also described in Section L.2.k), the condition of the tanks will be visually inspected, for corrosion, leaks, structural damage to the tanks, loose or broken equipment, for leachate in the secondary containment area of the tanks, integrity of the cathodic protection system, overfill protection system and overflow control piping (located near the top of the tanks). Inspection of the interior of the tanks will be performed whenever the tank is drained or at a minimum of every three years. If the inspection reveals a tank or equipment deficiency, leak, or any other deficiency which could result in the failure of the tank to contain the leachate, then remedial actions will be taken to correct the deficiency immediately.

### L.8.c Procedures for Managing Leachate if Regulated as Hazardous Waste

If at any time the leachate is determined to be hazardous, it will be managed in accordance with Rule 62-730, F.A.C. If the leachate analysis indicates a contaminant listed in 40 CFR Part 261.24 exceeds the regulatory level, a monthly sampling of leachate will be instituted and FDEP notified. If in any three consecutive months no listed contaminant is found to exceed the regulatory limit, the monthly sampling will be discontinued and the routine sampling schedule will be implemented.

### L.8.d Off-Site Leachate Treatment Agreements

An agreement between Hardee County ("the County') and the City of Wauchula ("the City") provides for off-site treatment and disposal of leachate. The County retains the City to provide treatment and disposal of leachate. The County is responsible for testing, reporting, and transportation of leachate to the City's wastewater treatment plant.

A copy of the agreement between Hardee County and the City of Wauchula for leachate treatment and disposal is included in Appendix L.

The County has also recently upgraded or completed construction of two other County owned and operated Wastewater Treatment Plants. The County plants at the Vandolah and Wauchula

Hills wastewater treatment facilities are also available to receive leachate for treatment. Since these facilities are owned and operated by the County no agreements are necessary.

## L.8.e Contingency Plan for Managing Leachate

### Treatment Plant Options

Currently, leachate is trucked to the City of Wauchula Wastewater Treatment Plant for treatment. If the City of Wauchula Waste Treatment Plant is unavailable then leachate can be diverted to the Vandolah or Wauchula Hills wastewater treatment plants. Should any or all the available treatment plants become unavailable to the County, arrangements will be made to take the leachate to another treatment facility within seven (7) days.

### Leachate Lift Station or Tank Repair Options

Leachate may be pumped and stored into either of two leachate storage tanks from the pump station allowing for maintenance on one tank while the other remains in service. Leachate may also be pumped from either storage tank or directly from the pump station into tanker trucks for transport to the City of Wauchula Municipal Wastewater Treatment Plant or other treatment plants.

## L.8.f Procedures for Recording Quantities of Leachate Generation

### Phase II Quantities

The leachate collection and detection pumps will have independent flow meters to measure the amount of leachate pumped from each layer in Phase II to the lift station. Daily reading from the two flow meters will be recorded.

### Lift Station

A 4-inch magnetic flow meter is connected to the forcemain leading from the submersible leachate ~~pump~~ Lift station to the leachate storage tanks. Daily readings of leachate generated, in gallons per day, are read directly from the meter.

### Phase I Quantities

The amount of leachate generated from the Phase I area will be the difference between the amount pumped out of the Lift Station and the amount pumped in by the two Phase II pumps.

Leachate Truck Loading Station

Leachate can be pumped from either of the two storage tanks. Flow meters measure flow in the forcemain leading from the tanks to the Truck Loading Station. The amount of leachate hauled off-site will be recorded daily. The amount hauled off-site versus the amount pumped into the

tanks will be recorded as storage. Any differences in storage can be accounted for as precipitation or evaporation.

Leachate generation data and the amounts hauled off-site for treatment is recorded daily by landfill personnel. A copy of the daily leachate summary form and leachate balance form is located in Appendix O.

### L.8.g Procedures for Comparing Precipitation with Leachate Generation Rates

A rain gauge, located onsite is used to compare precipitation with leachate generation. Rain data, in excess of one tenth of an inch, is recorded daily by landfill personnel. In addition, NOAA also has a weather station located in the City of Wauchula that keeps daily records of rainfall in the area.

### L.8.h Procedures for Cleaning and Inspecting the Leachate Collection System

A videotape inspection of the leachate collection system for Phase I and collection/detection system for Phase II shall be conducted prior to permit renewal. The leachate collection and detection system will be pressure jet cleaned prior to the video inspection. The video inspection will be conducted using a camera that can provide sufficient light to illuminate the interior of the pipelines clearly. The video camera will also be capable of recording distances along the pipeline so deficiencies, such as crushed or separated pipe, can be located and repaired if possible.

## L.9 ROUTINE GAS MONITORING PROGRAM

Hardee County will conduct landfill gas (LFG) monitoring along the property boundaries and within structures located on the facility property. The LFG monitoring program will monitor gas from gas monitoring probes, designated as GP-1 though GP-~~11~~13, to detect possible subsurface migration of LFG. The regulatory limit for LFG at the property boundary is 100 percent of the Lower Explosive Limit (LEL) for combustible gases and twenty-five (25) percent of the LEL in the structures.

The LFG monitoring program will also include monitoring for gas from within structures located on the facility property to detect possible gas migration into structures from penetrations in the supporting foundation. The LFG gas monitoring will be conducted at foundation penetrations (restrooms, electrical and mechanical rooms), enclosed spaces such as ground-level cabinets, electrical control boxes, outlets and openings to conduits as well as monitoring the ambient air within the structure for LFG.

The locations of the gas monitoring probes and the monitoring locations within the structure located onsite are shown the site layout map contained in Appendix K and the building layouts contained in Appendix P, respectively.

At a minimum the LFG monitoring points will be tested quarterly and the results forwarded to FDEP. LFG is monitored following the procedure below:

- Calibrate the field instrument (calibrated to methane),

- Monitoring for gas in the Gas Monitor probes (GP-1 through GP-~~11~~13) and on-site structures, which include the maintenance building, materials recovery facility, scalehouse, and animal control kennel for methane. Monitoring in the gas monitoring probes will be conducted in the upper portion of the probe and the probe will not be purged (vented) prior to sampling, and

- Record data on the LFG Monitoring Form, located in Appendix P of this Operations Plan.

The LFG Monitoring Form is located in Appendix P. The gas form includes the required monitoring locations, date and time of the sampling event, weather conditions, and methane content as a percentage of the LEL.

Gas monitoring at the Hardee County Landfill will be performed using the appropriate hand-held gas-monitoring device capable of measuring and reporting methane as a percentage of the lower explosive limit (LEL) for methane. Hardee County currently owns a X-Check Gas Detector for LFG monitoring. Other industry-standard equipment (such as a GEM-500 Landfill Gas Analyzer) also may be utilized.

If methane gas levels exceed twenty five percent of the lower explosive limit for gases in structures, excluding gas control or recovery components, or the LEL in the gas monitoring probes the landfill operator shall:

- Immediately take all necessary steps to ensure protection of human health and notify FDEP;

- Within seven days of detection, submit to FDEP for approval a remediation plan for the methane gas releases. The plan shall describe the nature and extent of the problem and the proposed remedy. The remedy shall be completed within sixty days of detection unless otherwise approved by FDEP.

Personnel will abide by the following precautions before entering areas where dangerous gases may be present and before entering confined spaces, at a minimum, for worker safety:

- Personnel shall follow the requirements in the "Code of Federal Regulations Title 29, Part 1910.146 OSHA" and the safety guidelines outlined in "A Compilation of Landfill Gas and Field Practices and Procedures" prepared by the SWANA Landfill Gas Division Health and Safety Task Force. The Landfill Manager will keep the most up-to-date version of the above documents available at the facility for personnel to use. The above documents can be obtained at the following websites;

- **Title 29 CFR Part 1910.146 – http://www.gpoaccess.gov/cfr/index.html (Browse for Latest version of Title 29 CFR Part 1910.146)**

- **SWANA Landfill Gas Document – http://www.swanastore.com (Publications – landfill Gas Publications)**

- Notify the Landfill Manager prior to entry into the area,

- Follow all County safety procedures,

- Ventilate the area with blowers or fans, if possible, or allow to vent a minimum of 24 hours,

- Monitor the air for explosive or hazardous gases, oxygen, and hydrogen sulfide levels, at a minimum, prior to entering the area,

- Monitor the air quality within the immediate working area at all times, using a hand-held or personal monitoring device.

- Provide safety equipment (radios, respirators, gas monitors, air supplies, ladders, ropes, harnesses, first aid kits, emergency contact list, etc) in case of emergency.

If the facility generates gas concentrations that cause objectionable odors beyond the property boundaries, the follow procedure will be implemented:

- Implement a routine odor monitoring program to determine the timing and extent of any off-site odors;

- If the monitoring program confirms the existence of objectionable odors, an odor remediation plan will be submitted to FDEP for approval. Upon approval, the remediation plan will be initiated within 30 days.

## L.10 STORMWATER MANAGEMENT SYSTEM OPERATION AND MAINTENANCE

The stormwater management system at the Hardee County Landfill consists of a series of swales and pipes that divert stormwater from the non-working areas of the landfill to the stormwater pond. The swales discharge into pipes and/or other swales, or directly into the stormwater pond. Runoff from the detention pond ultimately discharges into the Peace River.

Stormwater water runoff from the areas that have at least a 6-inch compacted soil cover (free of waste) over the waste materials can be directed to flow into the stormwater management system. Stormwater runoff that has been in contact with waste materials is classified as leachate and

cannot be diverted into the stormwater management system. Stormwater runoff from the upper portion of the landfill travels via sheet flow into collection terraces located along the sideslopes of the landfill. Stormwater runoff flows within the collection terraces and is conveyed, via stormwater structures, down the landfill and into ditches that are located on the perimeter of the landfill. The perimeter ditches convey stormwater runoff to a stormwater management pond located in the northeast corner of the facility. Stormwater runoff collected in the pond is allowed to percolate. As the water in the pond rises, an overflow structure located on the southside of the pond, allows water to be discharged into the heavily vegetative wetland area, designated as Wetland No. 1, -located on the eastside of the facility. Two culverts, located beneath the main access road, allow stormwater to flow from the eastside of the site under the road and along a channel to the southwest corner of the site. The stormwater will then enter the old borrow pit that will be transformed into a wet detention system with a manmade littoral zone. The wet detention system will allow for sediments to fall out of suspension. The littoral zone will enhance removal of sediments and turbidity. The wet detention system is designed to allow for the gradual release of stormwater beneath the road where the water will flow into a ditch that leaves the facility. ~~A culvert under the road at this point allows stormwater to flow offsite.~~ Once offsite the runoff flows overland and via naturally occurring channels until the flows eventually flows into the Peace River.

Certain procedures have been implemented at the landfill to minimize maintenance requirements and to ensure efficient performance of the stormwater system operation. These procedures include:

- No excavated cover material is stockpiled in such a manner as to direct sediment laden runoff outside the project site property limits or into any adjacent stormwater collection facility;
- All drainage ditches are inspected periodically for erosion and reshaped and resodded as required;
- Erosion and siltation control devices are cleaned and repaired when clogged or damaged;
- Temporary erosion control features such as silt fencing or haybales are removed after installation of permanent erosion controls been completed and any permanent erosion control features damaged by such removal are repaired;
- After vegetation has been established, all swales, channels, and detention ponds are mowed regularly; minimum-mowing frequency is once per year.
- The plant types in the littoral zone are checked periodically and any intruding vegetation is removed if required;
- Drainage sumps are cleaned out at least once per year and the storm sewer lines checked for plugging;

- The area in front of the control structure is checked at least quarterly to remove any excess plants or debris that could cause the structure to plug;

- Additional erosion control measures are implemented when field conditions warrant (i.e. cover material stockpiling, on-site construction activities, etc.).

## L.11 EQUIPMENT AND OPERATION FEATURE REQUIREMENTS

### L.11.a Sufficient Equipment for Operations

The following equipment is owned by the county and is currently available at the landfill:

| | |
|---|---|
| 1993 | S-10 Chevy Blazer |
| 1994 | Pick-up 1/2 ton Ford F150 4x2 |
| 2002 | Dodge 2500 12 passenger van Ram |
| 1987 | Ford dump truck |
| 1995 | White GMC Tractor Truck, Model WG641, CAT ENG 3306 |
| 1967 | Frue, 5000 gallon Tanker, Model MDM131AS |
| 1993 | Ford Truck, Flat bed Dump 8 Cylinder, F70 |
| 1999 | Bobcat 863 Loader 73.5 HP |
| 2000 | CAT 950G Wheel Loader |
| 1988 | Excavator, CAT Model 215C |
| 2002 | CAT Dozer D7R |
| 2001 | Yale GC060T Fork Lift |

### L.11.b Reserve Equipment

The existing equipment on site, listed in the section above, is sufficient to handle the incoming waste stream. Should unforeseen circumstances require more equipment than is currently available, the County has budgeted enough funds for one month's leasing or rental of heavy equipment. Additionally, equipment from the Hardee County Public Works Road and Bridge Section is available to the Solid Waste Department for use during an emergency.

### L.11.c Communication Equipment and Shelter

The scalehouse and on-site landfill office are equipped with telephones for emergency communications; two-way radios are available at the scalehouse for distribution to landfill personnel to allow for emergency communications between the scalehouse/landfill office and employees are working on the landfill.

The scalehouse is equipped with water supply, toilet facilities, and emergency first-aid supplies. The building also provides shelter for employees in case of inclement weather. The maintenance building is equipped with spare parts, tools, equipment, and electrical services for operations and repair.

### L.11.d Dust Control Methods

During dry periods, when dust control is needed, such as on haul roads, the Yard Trash Processing Area, or in area(s) where dusty conditions cause a vehicle safety problem or dust is blowing offsite, water will be sprayed over these areas as necessary to keep dust particles moist and minimize particles from blowing into the air. Water from the on-site stormwater pond or taken from the onsite water hydrants will be pumped into a 1,000-gallon tanker truck equipped with a spray bar and nozzles to use for wetting the roads. The tanker truck will be provided through the Hardee County Public Works Department.

### L.11.e Fire Protection

As stated in Section L.2.c, in the event of fire, the responding agency is the Hardee County Fire and Rescue Service, located approximately three miles west of the site, in Wauchula, FL. Additionally, the landfill site is equipped with a dry fire hydrant located adjacent to the pond immediately north of the scalehouse for the filling of pump trucks. Four water hydrants are located along the eastside of Class I landfill, on the eastside of the entrance road. Fire extinguishers are located in the equipment and at the maintenance barn for use in the event of small fires. There are also six fire extinguishers and five hose bibs located in the on-site MRF.

A Fire Contingency Operations Plan is contained in Appendix E.

### L.11.f Litter Control Devices

On a daily basis, landfill personnel or contract laborers collect litter along the entrance and access roads, at buildings, in the parking areas, and in the vicinity of the working face. Litter control fences are used along the perimeter of the working face to lessen the amount of blown litter. The fences are erected at the beginning of each workday and removed at the end of the day. Litter is also controlled by baling most of the landfilled wastes.

### L.11.g Signs

A sign at the intersection of S.R. 636 and Airport Road marks the turnoff from S.R. 636 to the Hardee County Landfill. A sign at the entrance to the landfill displays the days and hours of operation. Signs or markers are posted throughout the facility indicating traffic flow directions, types of waste that are not acceptable, speed limits, and under ground liner location. All manholes are marked with a warning sign stating "This Manhole Contains Toxic and Explosive Gasses. Do Not Enter Without Proper Ventilation".

## L.12 SITE ACCESS ROADS

The entrance to the landfill, scalehouse, MRF, Household Hazardous Waste Center, and Animal Control Kennel are asphalt paved. The road leading to the Waste Tire Facility, Scrap Metals and White Good Storage Area, Leachate Storage Tanks, and Class I landfill are also asphalt paved. All other roads are dirt roads. The roads are crowned and slightly elevated above the

surrounding grades with drainage swales on both sides to promote drainage. The roads with excessive washouts are routinely graded by the onsite Landfill personnel or Hardee County Public Works Department. The access ramp to the working faces is compacted soil with pea gravel or shell placed over it. This access ramp is adequate for landfill operating equipment to reach the working area during almost all weather conditions. Should conditions prevent the flatbed truck carrying baled waste from the disposal area, the loader can be used to carry the bales to the working face.

## L.13 ADDITIONAL RECORD KEEPING AND REPORTING REQUIREMENTS

### L.13.a Records for Development of Permit Applications

In addition to waste and operating records, supplemental information from the permit applications and information pertaining to the landfill's construction and maintenance are on file at the facility. These records will be retained at the site for the remainder of the landfill's life.

### L.13.b Copies of Reports Maintained for 10 Years

Records of all monitoring information, including calibration and maintenance records, and copies of reports required by the permit will be retained for at least 10 years.

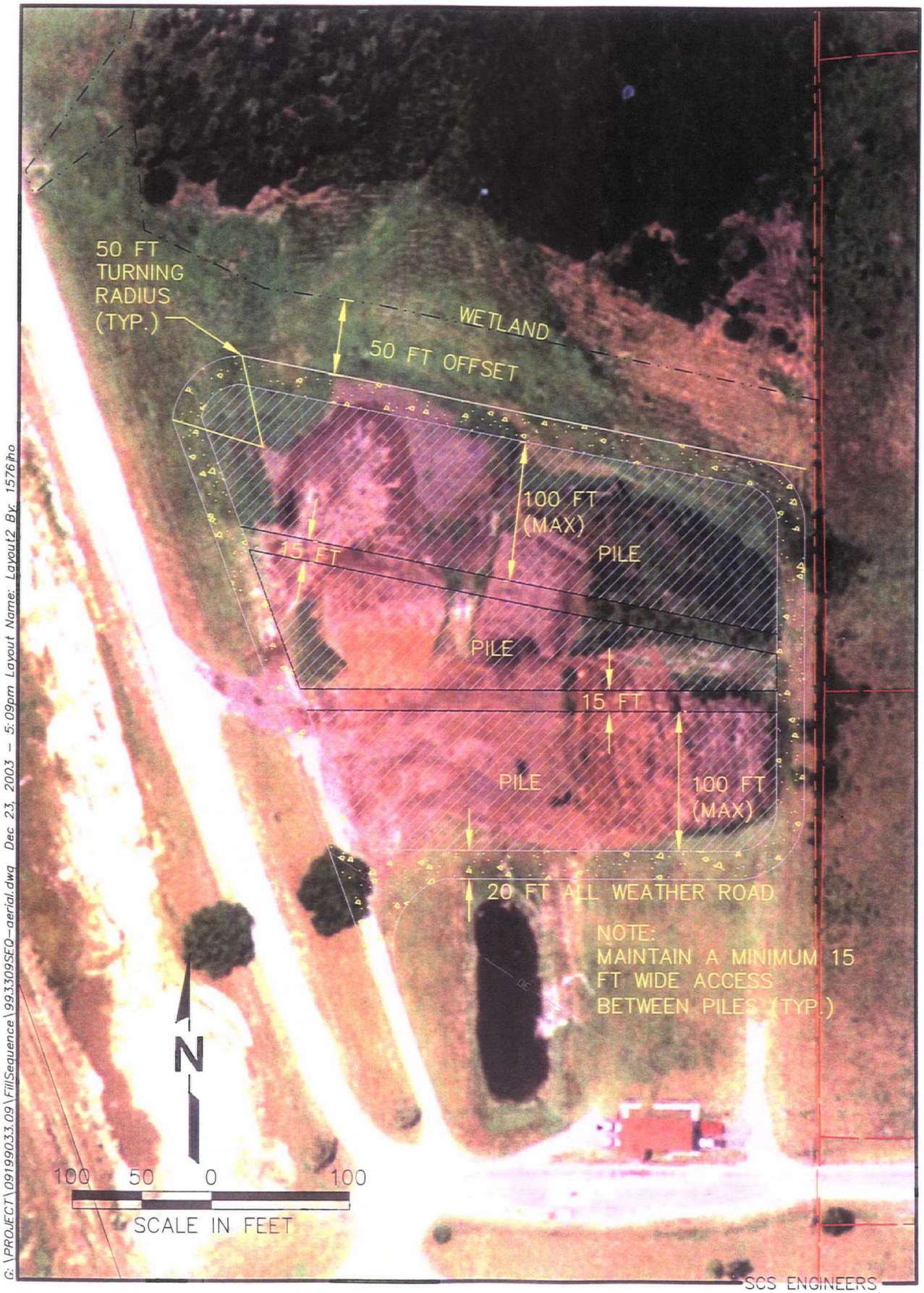
### L.13.c Annual Estimates of Remaining Life

Hardee County will maintain an annual estimate of the remaining solid waste disposal capacity (in cubic yards) and life of the existing Class I landfill. The estimate will be based on the geometry of the solid waste disposal area and the scalehouse waste records. These estimates will be reported to the FDEP annually.

### L.13.d Archiving and Record Retrieval

All records pertaining to the operation of the facility will be retained throughout the design life of the landfill. All monitoring records, calibration and maintenance records, and reports required by the operating permit will be retained for at least ten years.

# FIGURES




G:\PROJECT\09199033.09\FillSequence\99.1309SEQ-aerial.dwg Dec 23, 2003 - 5:09pm Layout Name: Layout2 By: 1576ho

Figure 1. Yard Trash Processing Area Layout

# APPENDIX A

# OPERATIONS DRAWINGS (REDUCED SIZE)

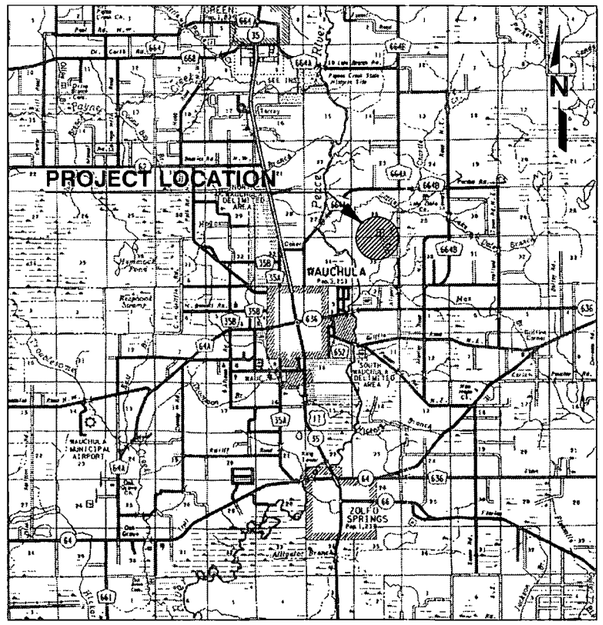
# HARDEE COUNTY LANDFILL OPERATIONS PLAN

PREPARED FOR

BOARD OF COUNTY COMMISSIONERS
HARDEE COUNTY, FLORIDA

MAY 2005

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
MAY 23 2005
SOUTHWEST DISTRICT
TAMPA




LOCATION MAP
NOT TO SCALE

## DRAWING INDEX

| DRAWING NO. | | DRAWING TITLE |
|---|---|---|
| 1 | - | COVER SHEET |
| 2 | - | ONE MILE RADIUS AERIAL MAP |
| 3 | - | FACILITY LAYOUT |
| 4 | - | EXISTING TOPO - NORTH ⚠2 |
| 5 | - | EXISTING TOPO - SOUTH ⚠2 |
| 6 | - | PHASE I - EXIST. LEACHATE COLLECTION SYSTEM IMPROVEMENTS ⚠1 ⚠2 |
| 7 | - | PHASE II - GROUNDWATER CONTROL SYSTEM PLAN |
| 8 | - | PHASE II - STORMWATER MANAGEMENT IMPROVEMENTS ⚠1 ⚠2 |
| 9 | - | PHASE II - SECTION I TOP OF GEOMEMBRANE PLAN ⚠2 |
| 10 | - | PHASE II - SECTION I SITE PLAN ⚠2 |
| 11 | - | PHASE I - SIDESLOPE LINING AND GAS CONTROL SYSTEM PLAN ⚠2 ⚠2 |
| 12 | - | PHASE II - SECTION II TOP OF GEOMEMBRANE PLAN ⚠2 |
| 13 | - | PHASE II - SECTION II SITE PLAN ⚠2 |
| 14 | - | PHASE I & II -FINAL BUILDOUT (INTERMEDIATE COVER) ⚠2 |
| 15 | - | EROSION AND SEDIMENTATION CONTROL RECOMMENDATIONS ⚠1 ⚠2 |
| 16 | - | SECTIONS - 1 ⚠1 |
| 17 | - | SECTIONS - 2 ⚠1 ⚠2 |
| 18 | - | SECTIONS & DETAILS ⚠1 ⚠2 |
| 19 | - | DETAILS - 1 ⚠1 ⚠2 |
| 20 | - | DETAILS - 2 ⚠1 ⚠2 |
| 21 | - | DETAILS - 3 ⚠1 ⚠2 |
| 22 | - | DETAILS - 4 |
| 23 | - | DETAILS - 5 ⚠1 |
| 24 | - | DETAILS - 6 ⚠1 ⚠2 |
| 25 | - | DETAILS - 7 ⚠2 |
| 26 | - | DETAILS - 8 ⚠1 |
| 27 | - | DETAILS - 9 ⚠1 |
| OP1 | - | PHASE II SECTION I - FILL SEQUENCE NO. 1 |
| OP2 | - | PHASE II SECTION I - FILL SEQUENCE NO. 2 |
| OP3 | - | PHASE II SECTION I - FILL SEQUENCE NO. 3 |
| OP4 | - | PHASE II SECTION I - FILL SEQUENCE NO. 4 |
| OP5 | - | PHASE II SECTION I - FILL SEQUENCE NO. 5 |
| OP6 | - | PHASE II SECTION I - FILL SEQUENCE NO. 6 |
| OP7 | - | PHASE II SECTION I - FILL SEQUENCE NO. 7 |

⚠1 - REVISED NOVEMBER 2004
⚠2 - REVISED MAY 2005

**SCS ENGINEERS**
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
3012 U.S. HWY. 301 N. SUITE 700
TAMPA, FLORIDA 33619
PH (813) 621-0080 FAX NO. (813) 623-6757
WWW.SCSENGINEERS.COM
FLORIDA CERTIFICATE OF AUTHORIZATION No. 00004892

HARDEE COUNTY 19 21 FLORIDA

E:\PROJECTS\0725522\DESIGN\Drawings\0725522DrawingIndex.dwg, May 23, 2005 - 1:52pm, By: JSTAY

# HARDEE COUNTY LANDFILL EXPANSION
# CONSTRUCTION PERMIT

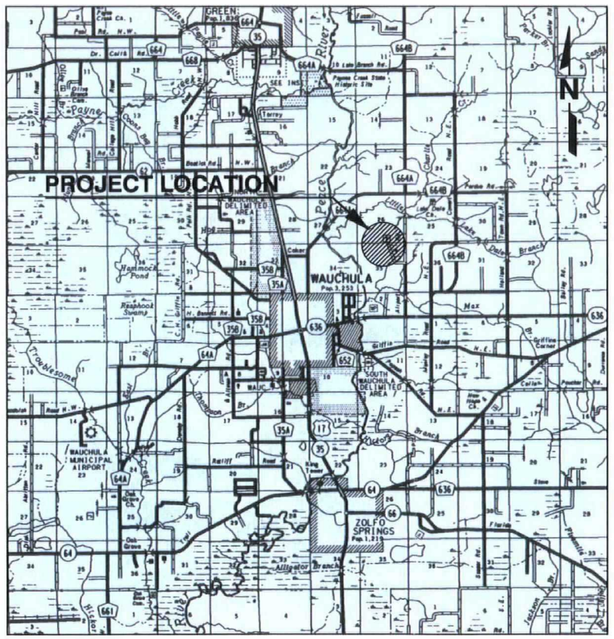
DEP
JAN 25 2006
SOUTHWEST DISTRICT

PREPARED FOR

## BOARD OF COUNTY COMMISSIONERS
## HARDEE COUNTY, FLORIDA

APRIL 2004

HARDEE COUNTY 19 21 FLORIDA




LOCATION MAP
NOT TO SCALE

**SCS ENGINEERS**
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
3012 U.S. HWY. 301 N. SUITE 700
TAMPA, FLORIDA 33619
PH (813) 621-0080 FAX NO. (813) 623-6757
WWW.SCSENGINEERS.COM
FLORIDA CERTIFICATE OF AUTHORIZATION No. 00004892

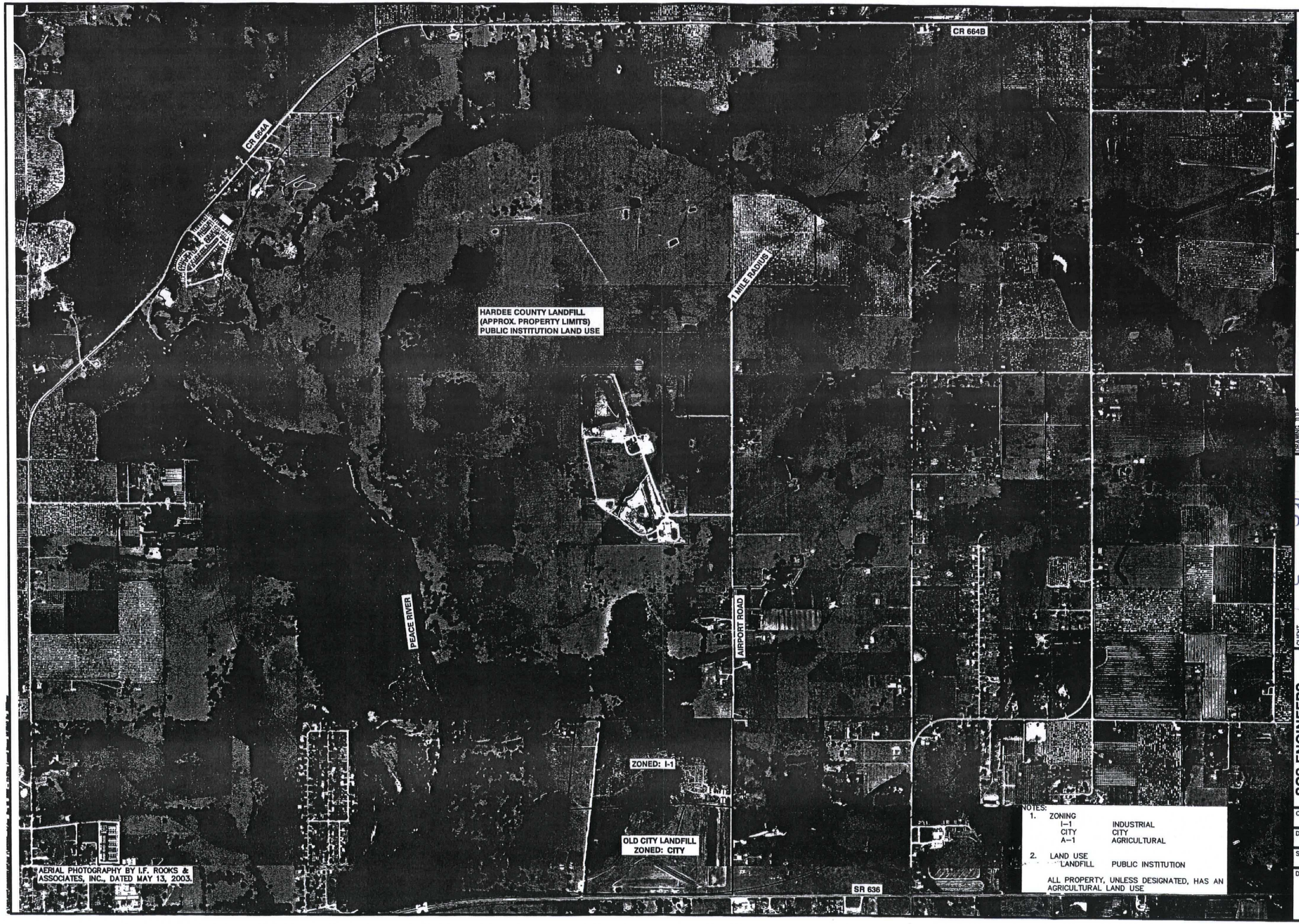
### DRAWING INDEX

| DRAWING NO. | | DRAWING TITLE |
|---|---|---|
| 1 | - | COVER SHEET |
| 2 | - | ONE MILE RADIUS AERIAL MAP |
| 3 | - | FACILITY LAYOUT |
| 4 | - | EXISTING TOPO - NORTH [2] |
| 5 | - | EXISTING TOPO - SOUTH [2] |
| 6 | - | PHASE I - EXIST. LEACHATE COLLECTION SYSTEM IMPROVEMENTS [1, 2] |
| 7 | - | PHASE II - GROUNDWATER CONTROL SYSTEM PLAN |
| 8 | - | PHASE II - STORMWATER MANAGEMENT IMPROVEMENTS [1, 2] |
| 8A | - | PHASE II - STORMWATER MANAGEMENT IMPROVEMENTS [1, 2] |
| 9 | - | PHASE II - SECTION I TOP OF GEOMEMBRANE PLAN [2] |
| 10 | - | PHASE II - SECTION I SITE PLAN [2] |
| 11 | - | PHASE I - SIDESLOPE LINING AND GAS CONTROL SYSTEM PLAN [2] |
| 12 | - | PHASE II - SECTION II TOP OF GEOMEMBRANE PLAN [2] |
| 13 | - | PHASE II - SECTION II SITE PLAN [2] |
| 14 | - | PHASE I & II -FINAL BUILDOUT (INTERMEDIATE COVER) [2] |
| 15 | - | EROSION AND SEDIMENTATION CONTROL RECOMMENDATIONS [1, 2] |
| 16 | - | SECTIONS - 1 [1] |
| 17 | - | SECTIONS - 2 [1, 2] |
| 18 | - | SECTIONS & DETAILS [1, 2] |
| 18A | - | SECTIONS & DETAILS [1, 2] |
| 19 | - | DETAILS - 1 [1, 2] |
| 20 | - | DETAILS - 2 [1, 2] |
| 21 | - | DETAILS - 3 [1, 2] |
| 22 | - | DETAILS - 4 |
| 23 | - | DETAILS - 5 [1] |
| 24 | - | DETAILS - 6 [1, 2] |
| 25 | - | DETAILS - 7 [2] |
| 26 | - | DETAILS - 8 [1] |
| 27 | - | DETAILS - 9 [1] |

[1] - REVISED NOVEMBER 2004
[2] - REVISED MAY 2005

CHARLES E. HILTON JR. LICENSE NO. 46916 STATE OF FLORIDA PROFESSIONAL ENGINEER
1/24/06

FILE




NOTES:
1. ZONING
   - I-1 INDUSTRIAL
   - CITY CITY
   - A-1 AGRICULTURAL
2. LAND USE
   - LANDFILL PUBLIC INSTITUTION

ALL PROPERTY, UNLESS DESIGNATED, HAS AN AGRICULTURAL LAND USE

DRAWING TITLE
**ONE MILE RADIUS AERIAL MAP**

PROJECT TITLE
**HARDEE COUNTY LANDFILL EXPANSION CONSTRUCTION PERMIT**

| REV | DATE | DESCRIPTION | BY |
|---|---|---|---|
| | | | |

JOSEPH H. O'NEILL, P.E.
CERTIFICATE NO. 52049

CLIENT
HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOV 0 2005
SOUTHWEST DISTRICT TAMPA

**SCS ENGINEERS**
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00000692

| PROJ. NO. | DSN. BY: | D/A WW. BY: |
|---|---|---|
| 09199033.09 | XRH | JHO/RJD |
| DWG. BY: | CHK. BY: | APP. BY: |
| JHO | JHO | RJD |

CADD FILE:
993309AERIAL

DATE:
APRIL 2004

SCALE:
AS SHOWN

DRAWING NO.
**2** of 27

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOV 30 2005
SOUTHWEST DISTRICT
TAMPA

NE CORNER, NE¼ SEC. 35–33–25

SE CORNER, SE¼ SEC. 26–33–25

FND 4"X4" CM N 1177805.9419 E 729650.9459

REC IR&C CSI

N00°23'39"W 100.00'

PROPERTY LIMIT

N00°23'19"W 2316.76'(C&F) 2317.86'(D) 2416.76'

(PARCEL 1)

FENCELINE (TYP)

N00°23'19"W.

2316.45'

MANHOLE (TYP)

MH-7 MH-6 MH-5 MH-4 MH-3 MH-2 MH-1

REC IR&C CSI

250.00' N89°32'29"E

FND 4"X4" CM

OFFSITE DISCHARGE (FLOWS OVERLAND AND EVENTUALLY INTO THE PEACE RIVER; APPROX. 1 MILE SOUTHWEST

581.11'

CLOSED C&D LANDFILL

18" METAL PIPE E. INV.=80.89 W. INV.=80.74

BURIED SPRAY FIELD IRRIGATION PIPING (INACTIVE SINCE 1999)

EXISTING CLASS I LANDFILL (PHASE I)

SET IR&C CSI N00°23'27"W 339.86'

FND 4"X4" CM

E 726500

MH-8 LIFT STATION

30" CMP N. INV.=76.85 S. INV.=76.41

18" METAL PIPE N. INV.=76.06 S. INV.=75.41

MAINTENANCE BUILDING

EXISTING LEACHATE STORAGE TANKS

BM #2

MH-9 MH-1

WATER HYDRANT (TYP OF 4)

BURIED WATERLINE

S89°50'53"W 1323.86'

BURIED FORCEMAIN

WATER SUPPLY WELL

TOP WEIR EL.=85.02 BOT. WEIR EL.=81.08 WEIR NOTCH EL.=82.29

EXISTING STORMWATER POND (SEASONAL HIGH GROUNDWATER ELEV.= 79.77)

30" CMP N. INV.=81.14 S. INV.=80.94

WETLAND AREA NO. 2

SECTION 26 SECTION 35

1980.77'

BORROW PIT SEASONAL HIGH GROUNDWATER TABLE ELEV.= 78.53

EXISTING ANIMAL CONTROL BUILDING

PUMP STATION FOR MRF

20"X30" RCP N. INV.=78.69 S. INV.=78.53

20"X30" RCP N. INV.=78.53 S. INV.=78.38

SCRAP METALS AND WHITE GOODS STORAGE AREA

WASTE TIRE FACILITY

20"X30" RCP W. INV.=82.88 E. INV.=82.56

18" METAL PIPE E. INV.=83.40

WETLAND AREA NO. 2 BOUNDARY

MATERIAL RECOVERY FACILITY (MRF)

WATER SUPPLY WELL

WETLAND AREA NO. 1 NORMAL POOL ELEV.= 80.5

WETLAND AREA NO. 1 BOUNDARY

YARD TRASH PROCESSING AREA

50 FT MIN. OFFSET

HOUSEHOLD HAZARDOUS WASTE COLLECTION CENTER (HHWCC)

LANDFILL ENTRANCE GATE

TARGET RANGE

SCALEHOUSE

BM #1

S00°17'41"E 2645.00' 2745.00

100.00' N00°17'41"W

FND 4"X4" CM

REC IR&C CSI

TO SE CORNER SEC 26–33–25

N89°55'46"E 2323.42'

(PARCEL 2)

N

100 50 0 100

SCALE IN FEET

LEGAL DESCRIPTION:

THE WEST ½ OF THE NORTHEAST ¼ OF THE NORTHEAST ¼ AND THE WEST ½ OF THE SOUTHEAST ¼ OF THE NORTHEAST ¼ AND THE EAST ½ OF THE NORTHWEST ¼ OF THE NORTHEAST ¼ AND THE EAST ½ OF THE SOUTHWEST ¼ OF THE NORTHEAST ¼ LESS AND EXCEPT THE SOUTHEAST ¼ OF THE SOUTHWEST ¼ OF THE SOUTHWEST ¼ OF THE NORTHEAST ¼ OF SECTION 35, TOWNSHIP 33 SOUTH, RANGE 25 EAST, HIGHLANDS COUNTY, FLORIDA.

TOGETHER WITH:

PARCEL 1

COMMENCE AT THE NORTHEAST CORNER OF SECTION 35, TOWNSHIP 33 SOUTH, RANGE 25 EAST, HARDEE COUNTY, FLORIDA; THENCE RUN S89°51'17"W ALONG THE NORTH LINE OF SAID SECTION 35, WHICH IS ALSO THE SOUTH LINE OF SECTION 26, TOWNSHIP 33 SOUTH, RANGE 25 EAST, A DISTANCE OF 2,323.42 FEET TO THE POINT OF BEGINNING; THENCE S00°28'8"E, A DISTANCE OF 2,316.45 FEET; THENCE S89°47'00"W, A DISTANCE OF 250.00 FEET; THENCE N00°28'08"W, A DISTANCE OF 2,317.86 FEET TO SAID NORTH LINE OF SECTION 35; THENCE S89°51'17"W ALONG SAID NORTH LINES OF SECTION 35, A DISTANCE OF 250.00 FEET TO THE POINT OF BEGINNING. CONTAINING 13.30 ACRES MORE OR LESS.

TOGETHER WITH:

PARCEL 2

COMMENCE AT THE SOUTHEAST CORNER OF SECTION 26, TOWNSHIP 33 SOUTH, RANGE 25 EAST, HARDEE COUNTY, FLORIDA; THENCE RUN S89°51'17"W ALONG THE SOUTH LINE OF SAID SECTION 26, WHICH IS ALSO THE NORTH LINE OF SECTION 35, TOWNSHIP 33 SOUTH, RANGE 25 EAST, A DISTANCE OF 663.83 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE S89°51'17"W ALONG SAID SOUTH LINE OF SECTION 26, A DISTANCE OF 1,909.59 FEET; THENCE N00°28'08"W, A DISTANCE OF 100.00 FEET; THENCE N89°51'17"E, A DISTANCE OF 1,909.77 FEET; THENCE S00°22'10"E, A DISTANCE OF 100.00 FEET TO THE POINT OF BEGINNING. CONTAINING 4.38 ACRES MORE OR LESS.

ALL CONTAINING 115.84 ACRES MORE OR LESS.

BENCHMARK BM-1
N 1175440.35
E 727746.08
EL. 84.025
(CONC. MON W/BRASS DISK)

BENCHMARK BM-2
N 1176586.54
E 727034.07
EL. 85.875
(CONC. MON W/BRASS DISK)

SITE COORDINATE SYSTEM
HORIZONTAL NAD 83 FL WEST ZONE
VERTICAL NGVD 29 GEOID99

| REV | DATE | DESCRIPTION | BY |
|---|---|---|---|
| | | | |

JOSEPH H. O'NEILL, P.E. CERTIFICATE NO. 32045

DRAWING TITLE: FACILITY LAYOUT

PROJECT TITLE: HARDEE COUNTY LANDFILL EXPANSION CONSTRUCTION PERMIT

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-0787
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

| PROJ. NO. | DWN. BY: | D/A R/W BY: |
|---|---|---|
| 09196033.09 | BLJ | JHO/RJD |
| DSGN. BY: | CHK. BY: | APP. BY: |
| JHO/LEK | JHO/LEK | RJD |

CADD FILE: 993309LAYOUT

DATE: APRIL 2004

SCALE: AS SHOWN

DRAWING NO. 3 of 27

EXISTING LAND USE

| DESCRIPTION | ACREAGE (AC) | PERCENT OF TOTAL PROJECT | FLUCCS CODE | NWI CODE | FLUCCS DESCRIPTION | NWI DESCRIPTION |
|---|---|---|---|---|---|---|
| IMPERVIOUS | 5.8 | 5.0 % | 814 | --- | ROAD/HIGHWAY | --- |
| PERVIOUS | 16.0 | 13.8 % | 835 | --- | SOLID WASTE | --- |
| STORMWATER MANAGEMENT | 20.0 | 17.2 % | 510 | --- | STREAM/ WATERWAY | --- |
| GRASSED AREA | 62.6 | 54.0 % | 212 | --- | UNIMPROVED PASTURE | --- |
| WETLAND AREA NO. 1 | 10.2 | 8.8 % | 610 | PF01 | WETLAND HARDWOOD | PALUSTRINE FORESTED |
| WETLAND AREA NO. 2 | 1.7 | 1.4 % | 617 | PSS1 | MIXED WETLAND HARDWOOD | PALUSTRINE SCRUB-SCRUB BROAD LEAF DECIDUOUS |
| TOTAL | 116.0 | 100.0 % | | | | |

NOTES:
1) TOPOGRAPHIC INFORMATION PROVIDED BY I.F. ROOKS AND ASSOCIATES, INC. DATED OF AERIAL PHOTOGRAPHY - MARCH 2003
IKE ROOKS
108 N.W. DRANE STREET
PLANT CITY, FLORIDA (813) 752-2113

2) FACILITY LEGAL DESCRIPTION, PROPERTY LIMITS, PIEZOMETERS, MONITORING WELLS, BENCHMARKS, WETLAND LIMITS, PIPES, MANHOLES DATA, EDGE OF LINER (NORTH, WEST, AND EAST SIDE OF PHASE I), DITCH ELEV, AND PSI 2003 BOREHOLE INFORMATION SUPPLIED BY CHASTAIN SKILLMAN, INC.
ROBERT SCHULER, P.L.S.
363 U.S. 27 SOUTH
SEBRING, FLORIDA (863) 382-4160

3) SCS ENGINEERS MAKES NO REPRESENTATION OR GUARANTEES PERTAINING TO EASEMENTS RIGHT-OF-WAYS, SET BACKLINES, RESERVATIONS, AGREEMENTS, AND OR SIMILIAR MATTERS.

4) ABOVE AND BELOW GROUND UTILITIES ARE IN APPROX. LOCATIONS SHOWN BASED UPON INFORMATION FROM OTHERS. CLEAR UTILITIES WITH OWNER AND CALL (800) 432-4770 PRIOR TO EXCAVATION.

LEGEND

PAVED ROAD
CURB-GUTTER
DIRT ROAD
TRAIL
DRIVEWAYS
PARK-LOTS
SIDEWALKS
RUNWAYS
RR SINGLE
RR DOUBLE
WALLS
DRAINAGE

GUARDRAIL
RETAINING WALL
FENCES
PIPELINES
LAKE
RIVER
STREAM
TREE LINE
BRUSH LINE
HEDGE
GROVE

INDEX CONTOUR
OBSCURED INDEX
DEPRESSED INDEX
OBSCURED DEP INDEX
INTERMEDIATE CONTOUR
OBSCURED INTERMEDIATE
DEPRESSED INTERMEDIATE
OBSCURED DEP INTERMEDIATE
STRUCTURES
BUILDINGS
OUTLINE

SPOT HEIGHT 143.7
OBSCURED SPOT HEIGHT 157.8
CONTROL POINT AT16 N 1515699.0000 E 520734.6370 EL 79.7970
WATER SURFACE ELEV. W/S 163.2
SWAMP
EDGE OF PAVEMENT
BUMPER
RAILROAD SIGNAL
RAILROAD SWITCH
RAILROAD CROSSING GATE

STREET LIGHT
TRAFFIC LIGHT
TOWER
UTILITY POLES
VALVE
FIRE HYDRANT
ELECTRICAL BOX
CATCH BASIN
DROP INLET
MANHOLE
MAILBOX
MISC. POST

SIGN
DOUBLE LEGGED SIGN
TELEPHONE BOOTH
ANTENNA
SATELLITE DISH
BIRD BATH
FLAG POLE
SHRUB
SINGLE TREE
PALM TREE
EVERGREEN TREE

I, THE UNDERSIGNED REGISTERED SURVEYOR & MAPPER CERTIFY THAT THIS MAP WAS COMPILED USING PHOTOGRAMMETRIC METHODS UNDER MY SUPERVISION AND THAT THE DATA SHOWN IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

THIS SURVEY MEETS THE MINIMUM TECHNICAL STANDARDS. FLORIDA CHAPTER 61G17-6(FLORIDA ADMINISTRATIVE CODE).

DATE OF PHOTOGRAPHY ISAAC F. ROOKS, JR., PSM #5418

THIS MAP IS NEITHER FULL NOR COMPLETE WITHOUT THE "SURVEY AND MAP REPORT" AND DIGITAL FILE(S) REFERENCED IN SAID REPORT. UNLESS THIS MAP OR REPORT BEARS THE SIGNATURE AND ORIGINAL RAISED SEAL OF THE ABOVE FLORIDA LICENSED SURVEYOR AND MAPPER, IT IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT VALID.
NOTE:

I.F. ROOKS & ASSOCIATES, INC.
106 N.W. DRANE ST. PHOTOGRAMMETRY
PLANT CITY, FL 33566
(813) 752-2113

IFR NO.: FILE:
SCALE: CONT. INTERVAL:
DRAWN BY: CHK. BY:
DATUM:
REVISED:

DATE:
APRIL 2004
SCALE:
AS SHOWN
DRAWING NO.
4 of 27

LEGEND

84.5 ELEV. OF GEOMEMBRANE
MW-1 MONITORING WELL
P-1 PIEZOMETER
GP-1 GAS PROBE
TB-1 PSI BORING MAR. 1997
SB-01 PSI BORING NOV 1997
B-1 ENVISORS BORING 1983
TB-1 PSI BORING SEPT. 2003
X W1-1 WETLAND AREA NO. 1 DELINEATION POINT (SEE SHEET 5 FOR COORDINATES)
X W2-1 WETLAND AREA NO. 2 DELINEATION POINT (SEE SHEET 5 FOR COORDINATES)
BURIED PIPE
OE OVERHEAD ELECTRIC
STA 1 SET NAIL IN TREE TO ESTIMATE NORMAL POOL ELEVATION
GUIDEWIRE

SCALE IN FEET 100 50 0 100

| REV | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 2 | 05/13/05 | REVISION PER FDEP RAI NO. 2 | JHO |

JOSEPH H. O'NEILL, P.E.
CERTIFICATE NO. 52049

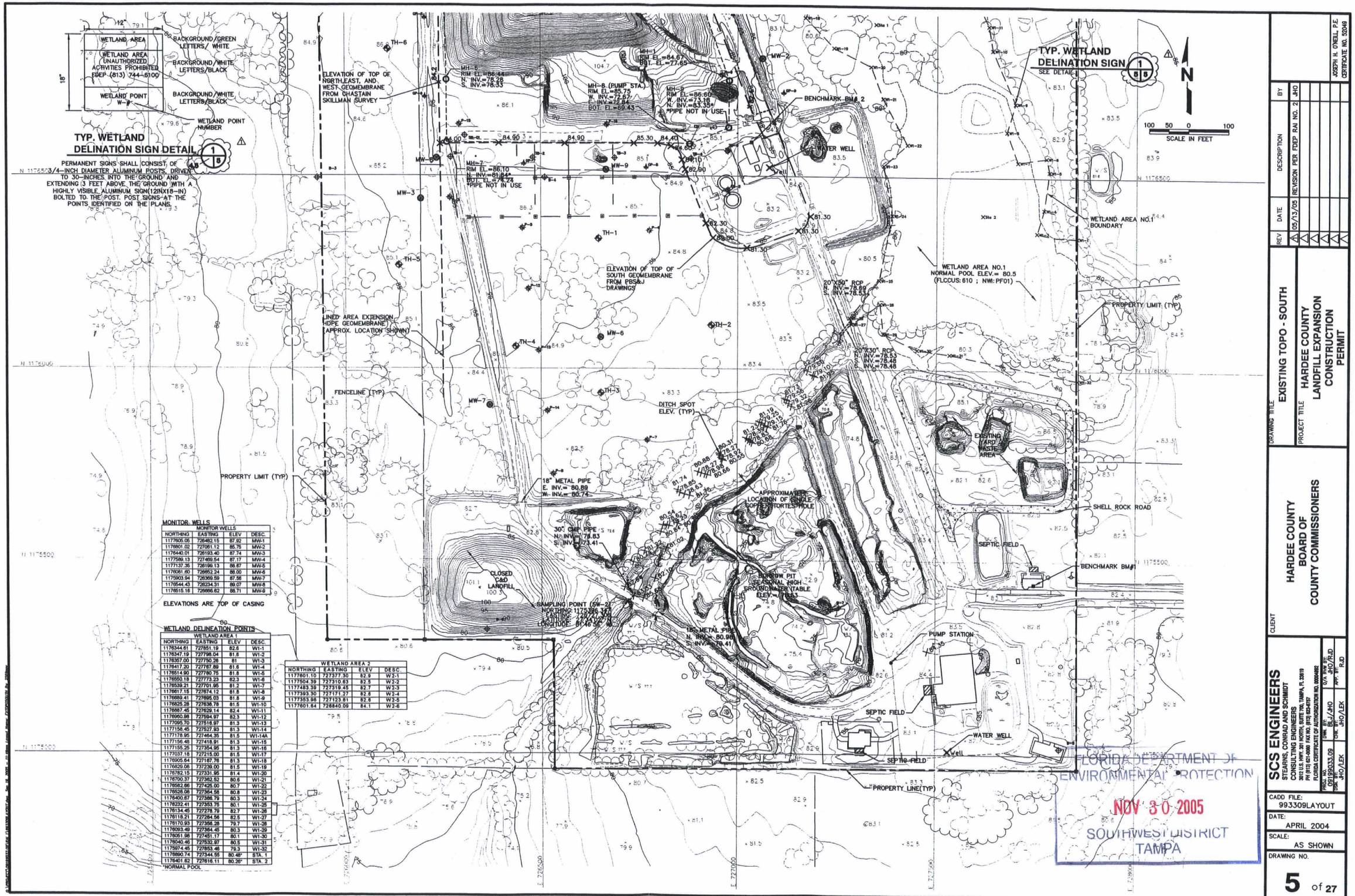
DRAWING TITLE: EXISTING TOPO - NORTH
PROJECT TITLE: HARDEE COUNTY LANDFILL EXPANSION CONSTRUCTION PERMIT

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892
PROJ. NO. 09I39033.09
DSR. BY: JHO/LEK
DWN. BY: BLJ
CHK. BY: JHO/LEK
QA/A RVW BY: JHO/RJD
APP. BY: RJD

CADD FILE: 993309LAYOUT

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOV 30 200
TAMPA




MONITOR WELLS

| MONITOR WELLS | | | |
|---|---|---|---|
| NORTHING | EASTING | ELEV | DESC. |
| 1177605.05 | 726482.15 | 87.92 | MW-1 |
| 1177601.02 | 727061.12 | 85.76 | MW-2 |
| 1176640.01 | 726193.40 | 87.74 | MW-3 |
| 1177589.13 | 727469.54 | 87.17 | MW-4 |
| 1177137.36 | 726199.13 | 88.67 | MW-5 |
| 1176561.60 | 726952.24 | 88.00 | MW-6 |
| 1175903.94 | 726369.59 | 87.96 | MW-7 |
| 1176544.43 | 726234.31 | 89.07 | MW-8 |
| 1176515.18 | 726666.62 | 86.71 | MW-9 |

ELEVATIONS ARE TOP OF CASING

WETLAND DELINEATION POINTS

| WETLAND AREA 1 | | | |
|---|---|---|---|
| NORTHING | EASTING | ELEV | DESC. |
| 1176344.61 | 727851.19 | 82.6 | W1-1 |
| 1176347.19 | 727798.04 | 81.6 | W1-2 |
| 1176357.00 | 727750.28 | 81 | W1-3 |
| 1176417.20 | 727767.89 | 81.6 | W1-4 |
| 1176514.90 | 727780.75 | 81.8 | W1-5 |
| 1176550.18 | 727773.23 | 82.3 | W1-6 |
| 1176539.21 | 727701.95 | 81.2 | W1-7 |
| 1176617.15 | 727674.12 | 81.8 | W1-8 |
| 1176689.41 | 727695.03 | 81.8 | W1-9 |
| 1176625.28 | 727636.78 | 81.5 | W1-10 |
| 1176887.45 | 727629.14 | 82.4 | W1-11 |
| 1176950.98 | 727594.97 | 82.3 | W1-12 |
| 1177095.70 | 727516.97 | 81.3 | W1-13 |
| 1177158.45 | 727527.93 | 81.3 | W1-14 |
| 1177178.95 | 727464.35 | 81.5 | W1-14A |
| 1177156.48 | 727418.91 | 81.3 | W1-15 |
| 1177155.25 | 727354.95 | 81.3 | W1-16 |
| 1177037.18 | 727215.00 | 81.5 | W1-17 |
| 1176905.64 | 727167.76 | 81.3 | W1-18 |
| 1176829.06 | 727239.00 | 81.5 | W1-19 |
| 1176782.15 | 727331.95 | 81.4 | W1-20 |
| 1176700.37 | 727362.52 | 80.6 | W1-21 |
| 1176582.66 | 727425.00 | 80.7 | W1-22 |
| 1176528.06 | 727364.58 | 80.8 | W1-23 |
| 1176400.67 | 727386.79 | 80.3 | W1-24 |
| 1176232.41 | 727353.75 | 80.1 | W1-25 |
| 1176134.45 | 727278.79 | 82.7 | W1-26 |
| 1176118.21 | 727284.56 | 82.5 | W1-27 |
| 1176170.93 | 727358.28 | 79.7 | W1-28 |
| 1176093.49 | 727364.45 | 80.3 | W1-29 |
| 1176051.98 | 727451.17 | 80.1 | W1-30 |
| 1176040.46 | 727532.97 | 80.5 | W1-31 |
| 1175974.45 | 727553.48 | 79.3 | W1-32 |
| 1176890.74 | 727344.55 | 80.46* | STA. 1 |
| 1176401.62 | 727616.11 | 80.26* | STA. 2 |

*NORMAL POOL

| WETLAND AREA 2 | | | |
|---|---|---|---|
| NORTHING | EASTING | ELEV | DESC |
| 1177601.10 | 727377.30 | 82.9 | W2-1 |
| 1177504.39 | 727310.63 | 82.5 | W2-2 |
| 1177483.39 | 727319.45 | 82.7 | W2-3 |
| 1177393.30 | 727171.27 | 82.6 | W2-4 |
| 1177353.98 | 727123.81 | 82.6 | W2-5 |
| 1177601.64 | 726840.09 | 84.1 | W2-6 |

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOV 30 2005
SOUTHWEST DISTRICT TAMPA

| REV | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 4 | 05/13/05 | REVISION PER FDEP RAI NO. 2 | JHO |

JOSEPH H. O'NEILL, P.E. CERTIFICATE NO. 52049

DRAWING TITLE: EXISTING TOPO - SOUTH

PROJECT TITLE: HARDEE COUNTY LANDFILL EXPANSION CONSTRUCTION PERMIT

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS


SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

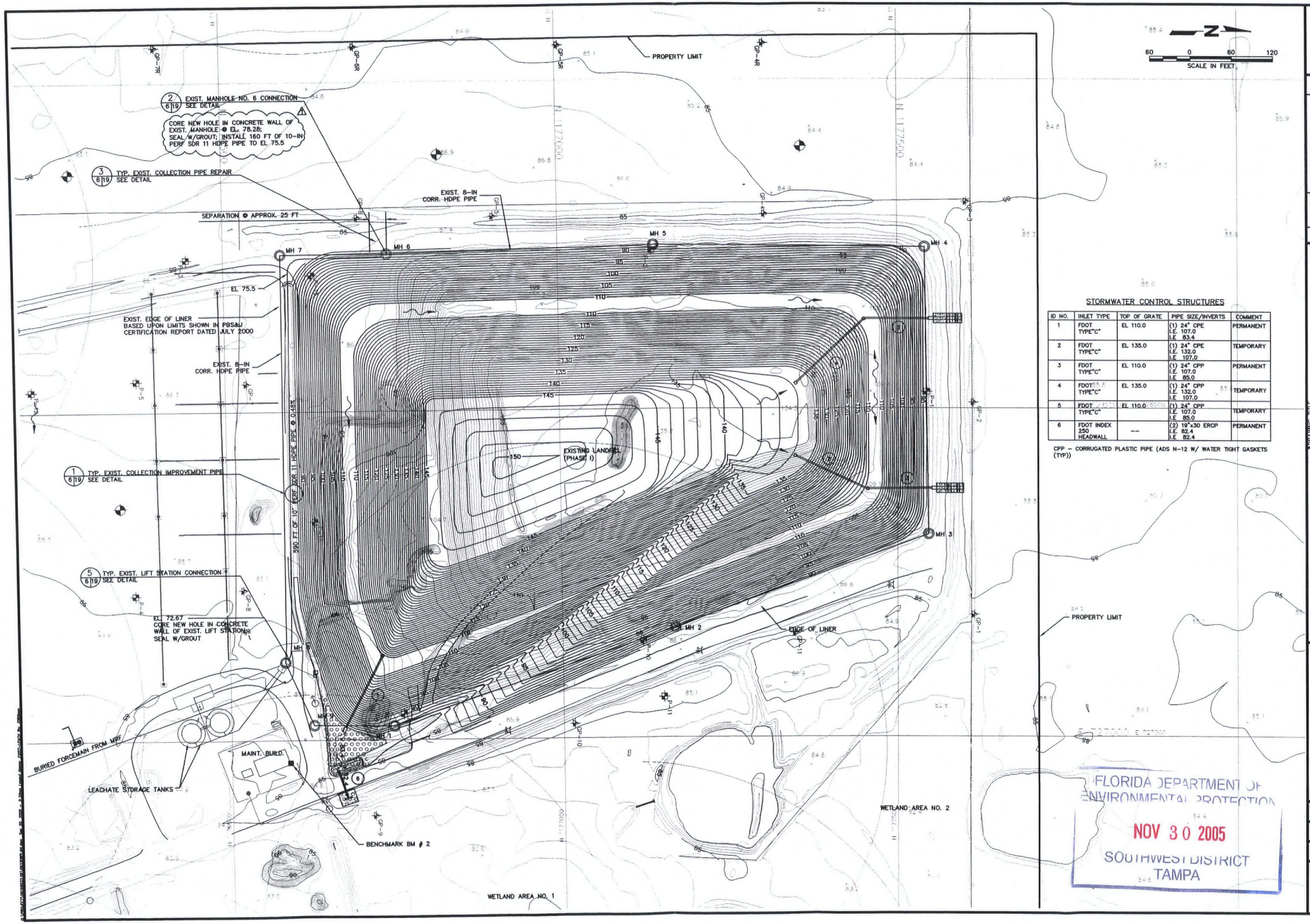

PROJ. NO. 09199033.09 | D/A. R/W BY: JHO/RJD | DRWN. BY: BLJ/JHO | APP. BY: RJD | CHK. BY: JHO/LEK | CHK. BY: JHO/LEK

CADD FILE: 993309LAYOUT

DATE: APRIL 2004

SCALE: AS SHOWN

DRAWING NO. 5 of 27




## STORMWATER CONTROL STRUCTURES

| ID NO. | INLET TYPE | TOP OF GRATE | PIPE SIZE/INVERTS | COMMENT |
|---|---|---|---|---|
| 1 | FDOT TYPE"C" | EL 110.0 | (1) 24" CPE I.E. 107.0 I.E 83.4 | PERMANENT |
| 2 | FDOT TYPE"C" | EL 135.0 | (1) 24" CPE I.E. 132.0 I.E 107.0 | TEMPORARY |
| 3 | FDOT TYPE"C" | EL 110.0 | (1) 24" CPP I.E. 107.0 I.E 85.0 | PERMANENT |
| 4 | FDOT TYPE"C" | EL 135.0 | (1) 24" CPP I.E. 132.0 I.E 107.0 | TEMPORARY |
| 5 | FDOT TYPE"C" | EL 110.0 | (1) 24" CPP I.E. 107.0 I.E 85.0 | TEMPORARY |
| 6 | FDOT INDEX 250 HEADWALL | -- | (2) 19"x30 ERCP I.E. 82.4 I.E 82.4 | PERMANENT |

CPP – CORRUGATED PLASTIC PIPE (ADS N-12 W/ WATER TIGHT GASKETS (TYP))

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOV 30 2005
SOUTHWEST DISTRICT
TAMPA

| REV | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | 05/13/05 | REVISION PER FDEP RAI NO. 2 | JHO |

JOSEPH H. O'NEILL P.E.
CERTIFICATE NO. 52049

DRAWING TITLE: PHASE I - EXISTING LEACHATE COLLECTION SYSTEM IMPROVEMENTS

PROJECT TITLE: HARDEE COUNTY LANDFILL EXPANSION CONSTRUCTION PERMIT

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

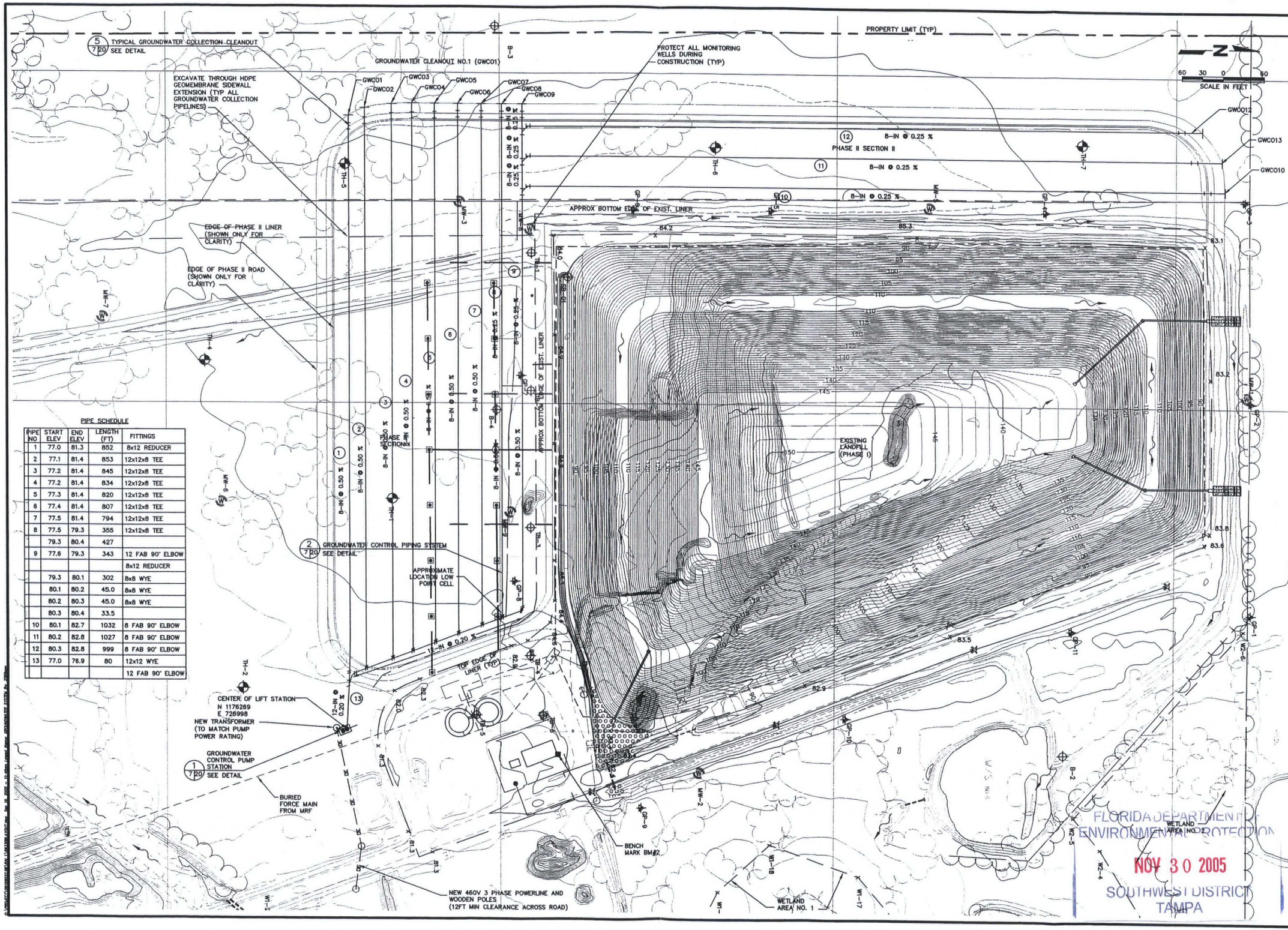
PROJ. NO. 993033.09 | DWN. BY: BLJ/JHO | CHK. BY: JHO/LEK | QA/QC BY: JHO/RJD | APP. BY: RJD
TASK NO. | TASK BY: JHO/LEK

CADD FILE: 993309PLAN

DATE: APRIL 2004

SCALE: AS SHOWN

DRAWING NO. 6 of 27




PIPE SCHEDULE

| PIPE NO | START ELEV | END ELEV | LENGTH (FT) | FITTINGS |
|---|---|---|---|---|
| 1 | 77.0 | 81.3 | 852 | 8x12 REDUCER |
| 2 | 77.1 | 81.4 | 853 | 12x12x8 TEE |
| 3 | 77.2 | 81.4 | 845 | 12x12x8 TEE |
| 4 | 77.2 | 81.4 | 834 | 12x12x8 TEE |
| 5 | 77.3 | 81.4 | 820 | 12x12x8 TEE |
| 6 | 77.4 | 81.4 | 807 | 12x12x8 TEE |
| 7 | 77.5 | 81.4 | 794 | 12x12x8 TEE |
| 8 | 77.5 | 79.3 | 355 | 12x12x8 TEE |
| | 79.3 | 80.4 | 427 | |
| 9 | 77.6 | 79.3 | 343 | 12 FAB 90° ELBOW |
| | | | | 8x12 REDUCER |
| | 79.3 | 80.1 | 302 | 8x8 WYE |
| | 80.1 | 80.2 | 45.0 | 8x8 WYE |
| | 80.2 | 80.3 | 45.0 | 8x8 WYE |
| | 80.3 | 80.4 | 33.5 | |
| 10 | 80.1 | 82.7 | 1032 | 8 FAB 90° ELBOW |
| 11 | 80.2 | 82.8 | 1027 | 8 FAB 90° ELBOW |
| 12 | 80.3 | 82.8 | 999 | 8 FAB 90° ELBOW |
| 13 | 77.0 | 76.9 | 80 | 12x12 WYE |
| | | | | 12 FAB 90° ELBOW |

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOV 30 2005
SOUTHWEST DISTRICT
TAMPA

JOSEPH H. O'NEILL, P.E.
CERTIFICATE NO. 52049

| REV | DATE | DESCRIPTION | BY |
|---|---|---|---|
| | | | |

DRAWING TITLE
PHASE II GROUNDWATER CONTROL SYSTEM PLAN

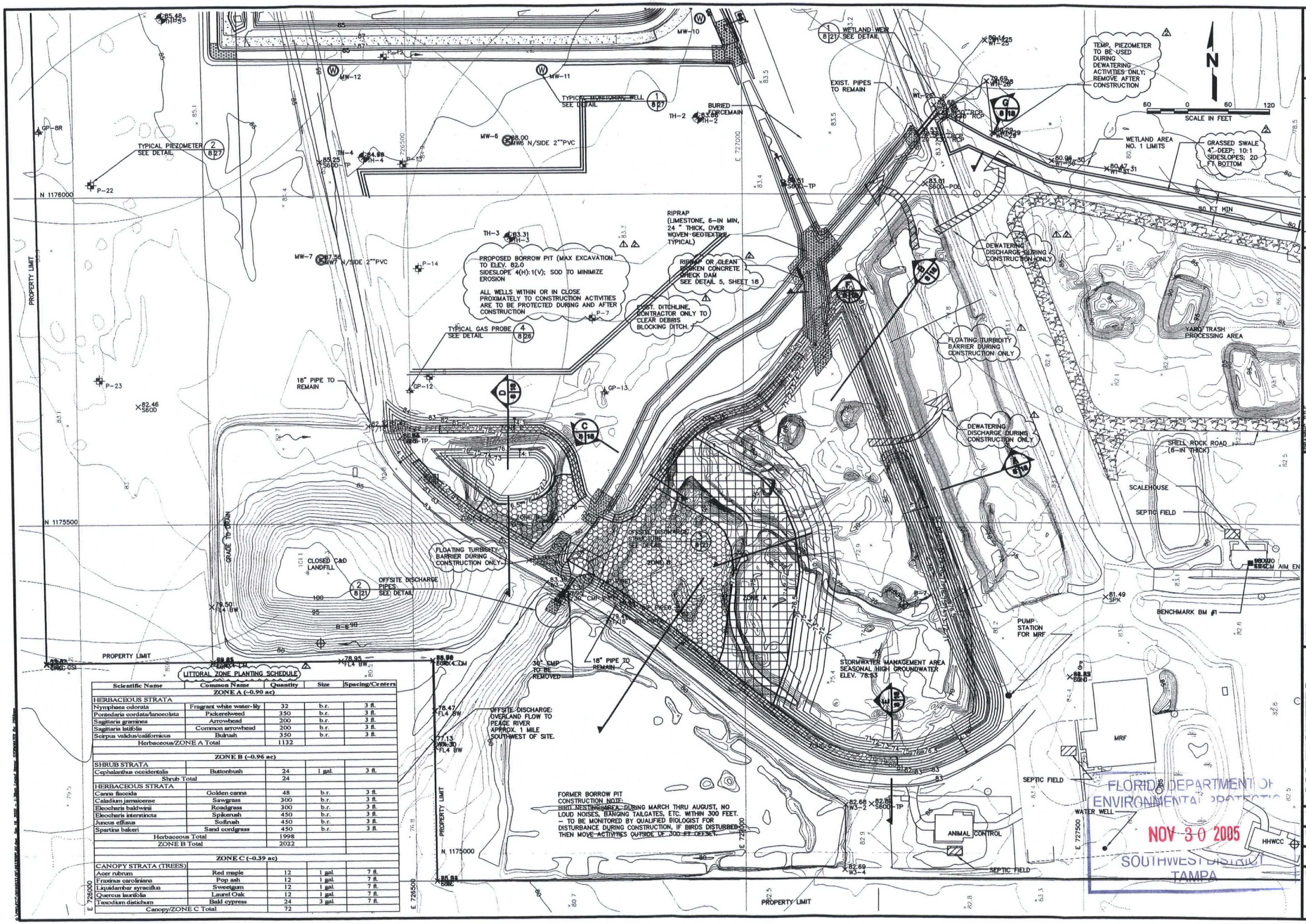
PROJECT TITLE
HARDEE COUNTY LANDFILL EXPANSION CONSTRUCTION PERMIT

CLIENT
HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO. 09199033.09
DSN. BY: JHO/LEK
DWN. BY: BLJ
CHK. BY: JHO/LEK
Q/A RVW BY: JHO/RJD
APP. BY: RJD

CADD FILE: 993309LAYOUT
DATE: APRIL 2004
SCALE: AS SHOWN
DRAWING NO. 7 of 27




LITTORAL ZONE PLANTING SCHEDULE

| Scientific Name | Common Name | Quantity | Size | Spacing/Centers |
|---|---|---|---|---|
| **ZONE A (~0.90 ac)** | | | | |
| HERBACEOUS STRATA | | | | |
| Nymphaea odorata | Fragrant white water-lily | 32 | b.r. | 3 ft. |
| Pontederia cordata/lanceolata | Pickerelweed | 350 | b.r. | 3 ft. |
| Sagittaria graminea | Arrowhead | 200 | b.r. | 3 ft. |
| Sagittaria latifolia | Common arrowhead | 200 | b.r. | 3 ft. |
| Scirpus validus/californicus | Bulrush | 350 | b.r. | 3 ft. |
| Herbaceous/ZONE A Total | | 1132 | | |
| **ZONE B (~0.96 ac)** | | | | |
| SHRUB STRATA | | | | |
| Cephalanthus occidentalis | Buttonbush | 24 | 1 gal. | 3 ft. |
| Shrub Total | | 24 | | |
| HERBACEOUS STRATA | | | | |
| Canna flaccida | Golden canna | 48 | b.r. | 3 ft. |
| Caladium jamaicense | Sawgrass | 300 | b.r. | 3 ft. |
| Eleocharis baldwinii | Roadgrass | 300 | b.r. | 3 ft. |
| Eleocharis interstincta | Spikerush | 450 | b.r. | 3 ft. |
| Juncus effusus | Softrush | 450 | b.r. | 3 ft. |
| Spartina bakeri | Sand cordgrass | 450 | b.r. | 3 ft. |
| Herbaceous Total | | 1998 | | |
| ZONE B Total | | 2022 | | |
| **ZONE C (~0.39 ac)** | | | | |
| CANOPY STRATA (TREES) | | | | |
| Acer rubrum | Red maple | 12 | 1 gal. | 7 ft. |
| Fraxinus caroliniana | Pop ash | 12 | 1 gal. | 7 ft. |
| Liquidambar syraciflua | Sweetgum | 12 | 1 gal. | 7 ft. |
| Quercus laurifolia | Laurel Oak | 12 | 1 gal. | 7 ft. |
| Taxodium distichum | Bald cypress | 24 | 3 gal. | 7 ft. |
| Canopy/ZONE C Total | | 72 | | |

| REV | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | 11/19/04 | REVISION PER FDEP RAI NO 1 | JHO |
| 2 | 05/13/05 | REVISION PER FDEP RAI NO 2 | JHO |

JOSEPH H. O'NEILL, P.E.
CERTIFICATE NO. 32049

DRAWING TITLE: PHASE II STORMWATER MANAGEMENT IMPROVEMENTS

PROJECT TITLE: HARDEE COUNTY LANDFILL EXPANSION CONSTRUCTION PERMIT

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS


SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
3920 CROSS CREEK BLVD. TAMPA, FL 33619
PH: (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892


PROJ. NO. 09199033.09 | DWN. BY: JHO | CHK'D BY: JHO | APP. BY: RJD
DISK: JHO/LEK | DISK: JHO/LEK

CADD FILE: 993309PLAN
DATE: APRIL 2004
SCALE: AS SHOWN
DRAWING NO. 8 of 27


FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOV 30 2005
SOUTHWEST DISTRICT TAMPA

TEMPORARY CONSTRUCTION DEWATERING POND WEST

MAX EXCAVATION TO ELEV. 82.0
SIDESLOPE 4(H):1(V); SOD TO MINIMIZE EROSION

ALL WELLS WITHIN OR IN CLOSE PROXIMITY TO CONSTRUCTION ACTIVITIES ARE TO BE PROTECTED DURING AND AFTER CONSTRUCTION

TEMPORARY CONSTRUCTION DEWATERING POND CENTRAL

MAX EXCAVATION TO ELEV. 82.0
SIDESLOPE 4(H):1(V); SOD TO MINIMIZE EROSION

ALL WELLS WITHIN OR IN CLOSE PROXIMITY TO CONSTRUCTION ACTIVITIES ARE TO BE PROTECTED DURING AND AFTER CONSTRUCTION

RIPRAP (LIMESTONE, 6-IN MIN, 24" THICK, OVER WOVEN GEOTEXTILE, TYPICAL)

RIPRAP OR CLEAN BROKEN CONCRETE CHECK DAM SEE DETAIL 5, SHEET 18A

EXIST. PIPES TO REMAIN

TEMP. PIEZOMETER TO BE USED DURING DEWATERING ACTIVITIES ONLY; REMOVE AFTER CONSTRUCTION

WETLAND AREA NO. 1 LIMITS

GRASSED SWALE 4" DEEP; 10:1 SIDESLOPES; 20 FT. BOTTOM

YARD TRASH PROCESSING AREA

FLOATING TURBIDITY BARRIER DURING CONSTRUCTION ONLY

EXIST. DITCHLINE, CONTRACTOR ONLY TO CLEAR DEBRIS BLOCKING DITCH.

TYPICAL GAS PROBE SEE DETAIL

18" PIPE TO REMAIN

DEWATERING DISCHARGE DURING CONSTRUCTION ONLY

DEWATERING DISCHARGE DURING CONSTRUCTION ONLY

DEWATERING DISCHARGE DURING CONSTRUCTION ONLY

SHELL ROCK ROAD (6-IN THICK)

SCALEHOUSE

SEPTIC FIELD

EAST BORROW PIT

BENCHMARK BM #1

PUMP STATION FOR MRF

FLOATING TURBIDITY BARRIER DURING CONSTRUCTION ONLY

CLOSED C&D LANDFILL

OFFSITE DISCHARGE PIPES SEE DETAIL

GRADE TO DRAIN

30" CMP TO BE REMOVED

18" PIPE TO REMAIN

OFFSITE DISCHARGE STRUCTURE SEE DETAIL

OFFSITE DISCHARGE: OVERLAND FLOW TO PEACE RIVER APPROX. 1 MILE SOUTHWEST OF SITE.

STORMWATER MANAGEMENT AREA SEASONAL HIGH GROUNDWATER ELEV. 78.53

ZONE A

ZONE B

ZONE C

SEPTIC FIELD

ANIMAL CONTROL

SEPTIC FIELD

WATER WELL

HHWCC

FORMER BORROW PIT CONSTRUCTION NOTE:
BIRD NESTING AREA. DURING MARCH THRU AUGUST, NO LOUD NOISES, BANGING TAILGATES, ETC. WITHIN 300 FEET. - TO BE MONITORED BY QUALIFIED BIOLOGIST FOR DISTURBANCE DURING CONSTRUCTION, IF BIRDS DISTURBED THEN MOVE ACTIVITIES OUTSIDE OF 300 FT OFFSET.

PROPERTY LIMIT

N 1176000

N 1175500

N 1175000

E 726000

E 725500

E 727500

SCALE IN FEET: 60 0 60 120

## LITTORAL ZONE PLANTING SCHEDULE

| Scientific Name | Common Name | Quantity | Size | Spacing/Centers |
|---|---|---|---|---|
| **ZONE A (~0.90 ac)** | | | | |
| HERBACEOUS STRATA | | | | |
| Nymphaea odorata | Fragrant white water-lily | 32 | b.r. | 3 ø. |
| Pontederia cordata/lanceolata | Pickerelweed | 350 | b.r. | 3 ø. |
| Sagitaria graminea | Arrowhead | 200 | b.r. | 3 ø. |
| Sagitaria latifolia | Common arrowhead | 200 | b.r. | 3 ø. |
| Scirpus validus/californicus | Bulrush | 350 | b.r. | 3 ø. |
| Herbaceous/ZONE A Total | | 1132 | | |
| **ZONE B (~0.96 ac)** | | | | |
| SHRUB STRATA | | | | |
| Cephalanthus occidentalis | Buttonbush | 24 | 1 gal | 3 ø. |
| Shrub Total | | 24 | | |
| HERBACEOUS STRATA | | | | |
| Canna flaccida | Golden canna | 48 | b.r. | 3 ø. |
| Caladium jamsicense | Sawgrass | 300 | b.r. | 3 ø. |
| Eleocharis baldwinii | Roadgrass | 300 | b.r. | 3 ø. |
| Eleocharis interstincta | Spikerush | 450 | b.r. | 3 ø. |
| Juncus effusus | Softrush | 450 | b.r. | 3 ø. |
| Spartina bakeri | Sand cordgrass | 450 | b.r. | 3 ø. |
| Herbaceous Total | | 1998 | | |
| ZONE B Total | | 2022 | | |
| **ZONE C (~0.39 ac)** | | | | |
| CANOPY STRATA (TREES) | | | | |
| Acer rubrum | Red maple | 12 | 1 gal | 7 ø. |
| Fraxinus caroliniana | Pop ash | 12 | 1 gal | 7 ø. |
| Liquidambar syraciflua | Sweetgum | 12 | 1 gal | 7 ø. |
| Quercus laurifolia | Laurel Oak | 12 | 1 gal | 7 ø. |
| Taxodium distichum | Bald cypress | 24 | 3 gal | 7 ø. |
| Canopy/ZONE C Total | | 72 | | |

**Construction Dewatering Sequence:**

1. The Contractor shall commence pumping the proposed stormwater pond in order to begin construction
2. All waters pumped from the proposed stormwater pond shall be kept onsite in a series of temporary construction dewatering ponds. The temporary pond locations, as shown on Sheet 8A of the drawings, shall be constructed within the delineated limits. Fill material extracted from the designated locations shall be used to create a two foot high containment berm around the temporary construction dewatering pond.
3. The filling of the temporary construction dewatering ponds will be sequenced to as follows:
   - Contractor will start filling designated pond until approximately one foot of freeboard remains.
   - Contractor will cease pumping into the respective pond in order to maintain freeboard. The temporary construction dewatering pond will be allowed to percolate the waters. The intention of the temporary construction dewatering ponds is to prevent offsite discharge due to dewatering for construction of the stormwater system.
   - Contractor will start filling the next designated pond within the sequence of filling until the specified freeboard depth is met.
   - Contractor will monitor the temporary piezometers during all dewatering activities to ensure the onsite wetlands are not being starved of water during temporary construction dewatering activities.

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOV 30 2005
SOUTHWEST DISTRICT
TAMPA

| REV | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | 11/19/04 | REVISION PER FDEP RAI NO 1 | JHO |
| 2 | 05/13/05 | REVISION PER FDEP RAI NO 2 | JHO |
| 3 | 9/23/05 | REVISION PER FDEP RAI NO 3 | LEX |

RAYMOND J. DEVEL, P.E.
CERTIFICATE NO. 43031

DRAWING TITLE: PHASE II STORMWATER MANAGEMENT IMPROVEMENTS

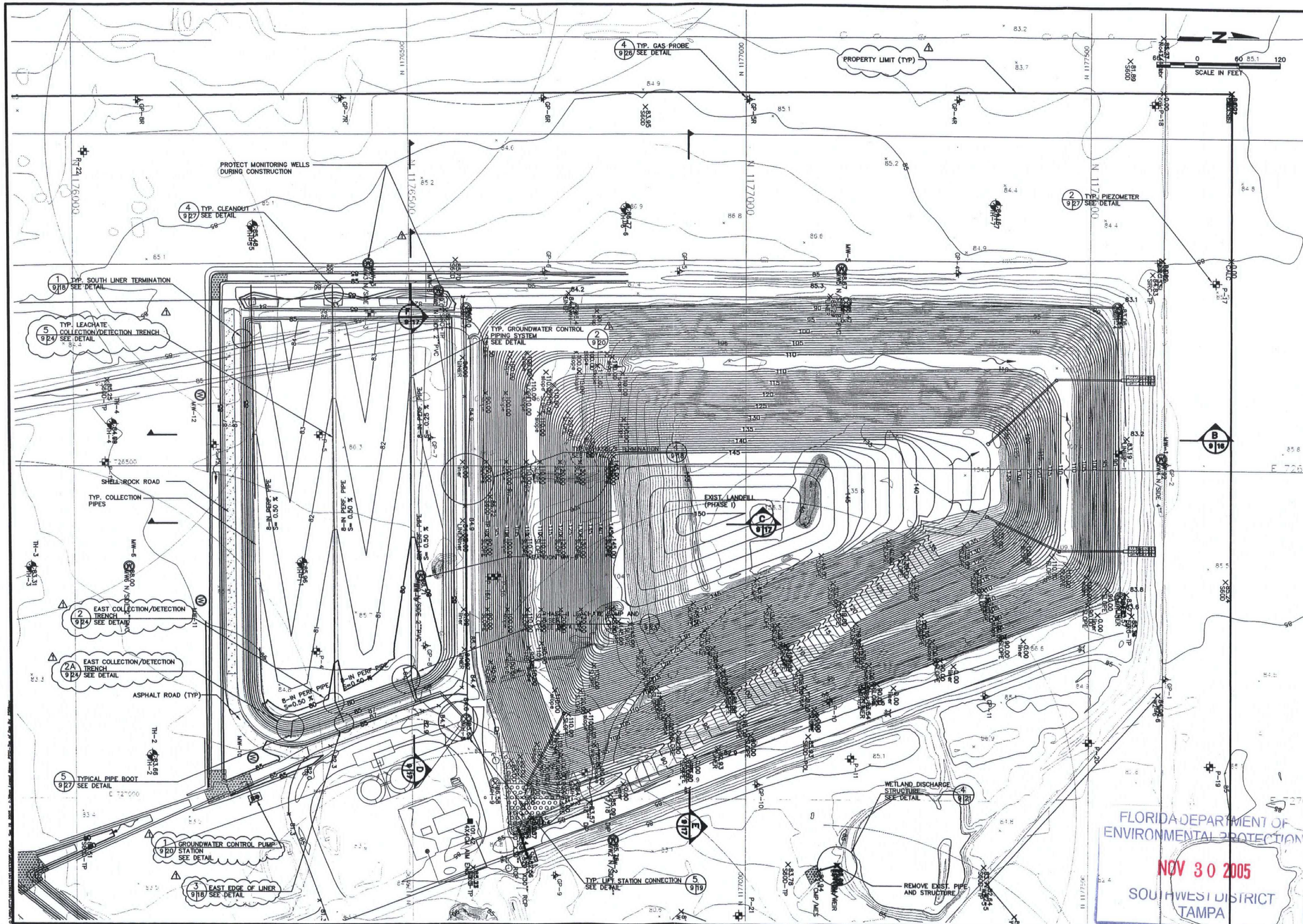
PROJECT TITLE: HARDEE COUNTY LANDFILL EXPANSION CONSTRUCTION PERMIT

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 882-4757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJECT NO. 09199033.09
DSN. BY: JHO/LEX
DRW. BY: JHO
CHK. BY: JHO/LEX
QA/QC (TECH. EDIT): JHO/RJD
APPV. BY: RJD

CADD FILE: 993309PLAN
DATE: APRIL 2004
SCALE: AS SHOWN
DRAWING NO. 8A of 27




FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOV 30 2005
SOUTHWEST DISTRICT TAMPA

| REV | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | 05/20/05 | REVISION PER FDEP RAI NO. 2 | JHO |

JOSEPH H. O'NEILL, P.E.
CERTIFICATE NO. 52049

DRAWING TITLE: PHASE II - SECTION 1 TOP OF GEOMEMBRANE PLAN

PROJECT TITLE: HARDEE COUNTY LANDFILL EXPANSION CONSTRUCTION PERMIT

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO. 09199033.09 | DSN. BY: JHO/LEK | DWN. BY: BLJ | CHK. BY: JHO/LEK | Q/A RVW BY: JHO/RJD | APP. BY: RJD

CADD FILE: 993309PLAN
DATE: APRIL 2004
SCALE: AS SHOWN
DRAWING NO. 9 of 27

PROPERTY LIMIT (TYP)

SCALE IN FEET

PROTECT MONITORING WELLS DURING CONSTRUCTION (TYP)

PHASE II SECTION II (FUTURE CONSTRUCTION)

20-MIL VFPE RAINTARP

PHASE II-SECTION I

1 / 10/18 SOUTH EDGE OF LINER SEE DETAIL

3 / 10/18 EAST EDGE OF LINER SEE DETAIL

3 FT HIGH COMPACTED RAIN SEPARATION BERM (COVER WITH RAINTARP) 3:1 SIDESLOPE, 2 FT TOP WIDTH

OPEN FILL APPROX. 2 AC (TOP OF DRAINAGE SAND ELEVATIONS SHOWN)

EXIST LANDFILL (PHASE I)

WETLAND DISCHARGE STRUCTURE SEE DETAIL 4 / 9/21

REMOVE EXIST. PIPE AND STRUCTURE

A 10/16 B 10/16 C 10/17 D 10/15 E 10/17

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOV 30 2005
SOUTHWEST DISTRICT
TAMPA

| REV | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | 05/13/05 | REVISION PER FDEP RAI NO. 2 | JHO |

JOSEPH H. O'NEILL P.E.
CERTIFICATE NO. 52049

DRAWING TITLE: PHASE II - SECTION I SITE PLAN

PROJECT TITLE: HARDEE COUNTY LANDFILL EXPANSION CONSTRUCTION PERMIT

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS


SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

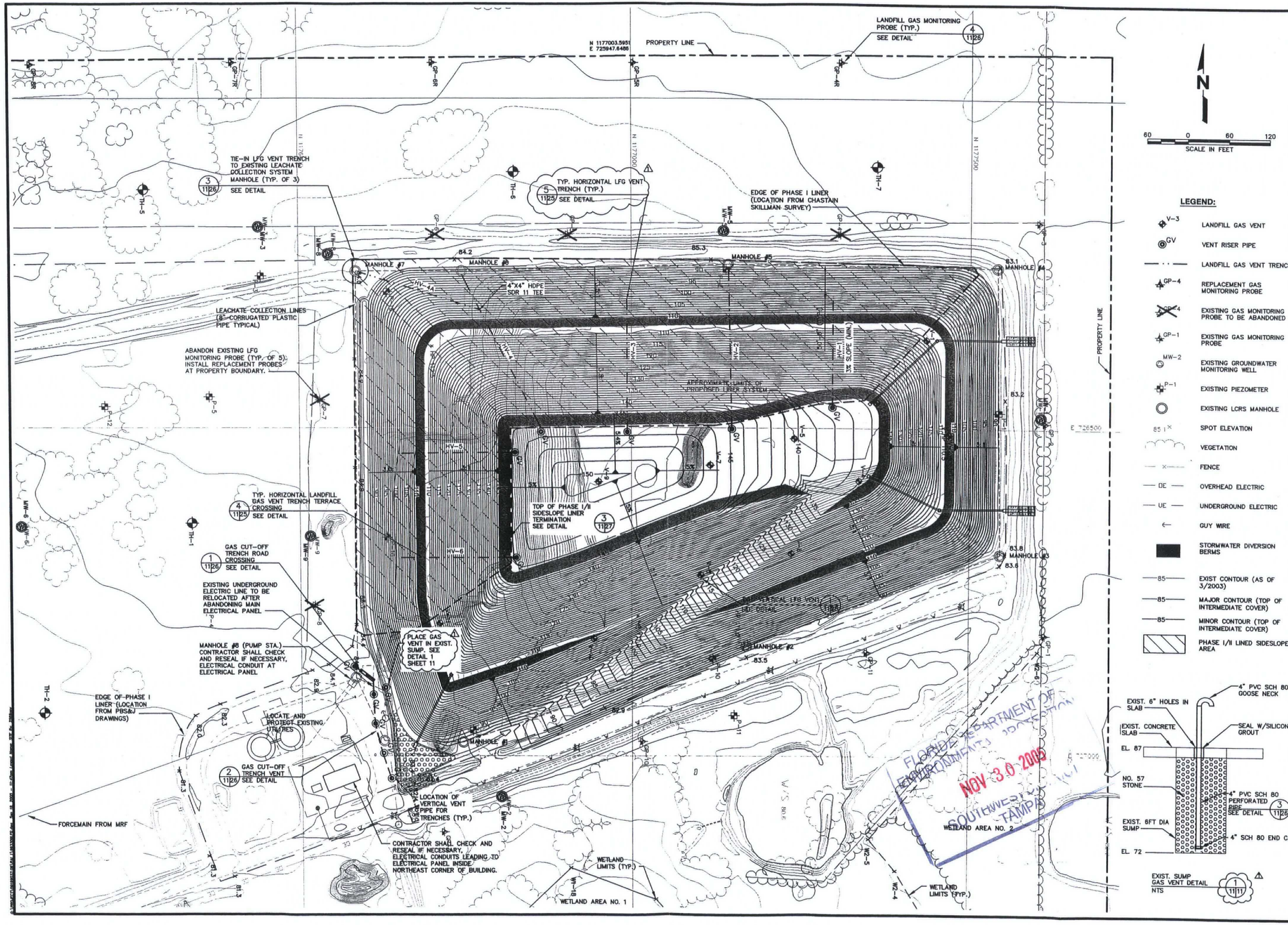

PROJECT NO.: 09199033.09
TASK NO.: JHO/ALEX
DSNR. BY: BJJ
CHK. BY: JHO/ALEX
QA/A. BY: JHO/RJD
APP. BY: RJD

CADD FILE: 993309PLAN

DATE: APRIL 2004

SCALE: AS SHOWN

DRAWING NO.: 10 of 27




| REV | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | 05/20/05 | RESPONSE TO FDEP RAI.2 | JHO |

JOSEPH H. O'NEILL, P.E.
CERTIFICATE NO. 52049

DRAWING TITLE: PHASE I - SIDESLOPE LINING AND GAS CONTROL SYSTEM PLAN

PROJECT TITLE: HARDEE COUNTY LANDFILL EXPANSION CONSTRUCTION PERMIT

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

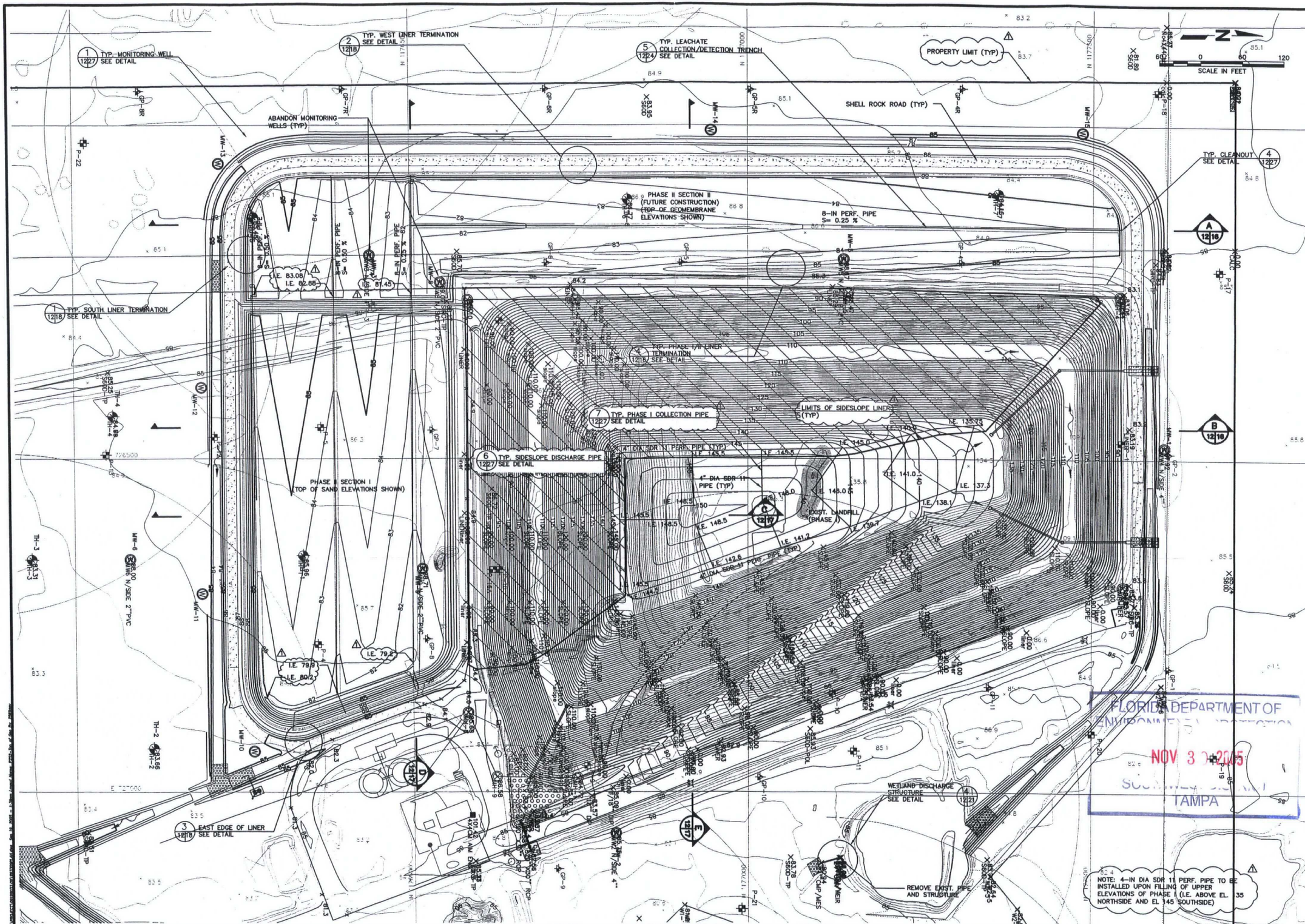
PROJ. NO. 09199033.09 | DSN. BY: DHP | DWN. BY: XRH/BLJ | CHK. BY: DHP | Q/A RVW BY: DHP/RJD | APP. BY: RJD

CADD FILE: 993309LFG

DATE: APRIL 2004

SCALE: 1" = 60'

DRAWING NO. 11 of 27




| REV | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | 05/20/05 | REVISION PER FDEP RAI NO. 2 | JHO |

JOSEPH H. O'NEILL, P.E.
CERTIFICATE NO. 52049

DRAWING TITLE: PHASE II - SECTION II TOP OF GEOMEMBRANE PLAN

PROJECT TITLE: HARDEE COUNTY LANDFILL EXPANSION CONSTRUCTION PERMIT

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

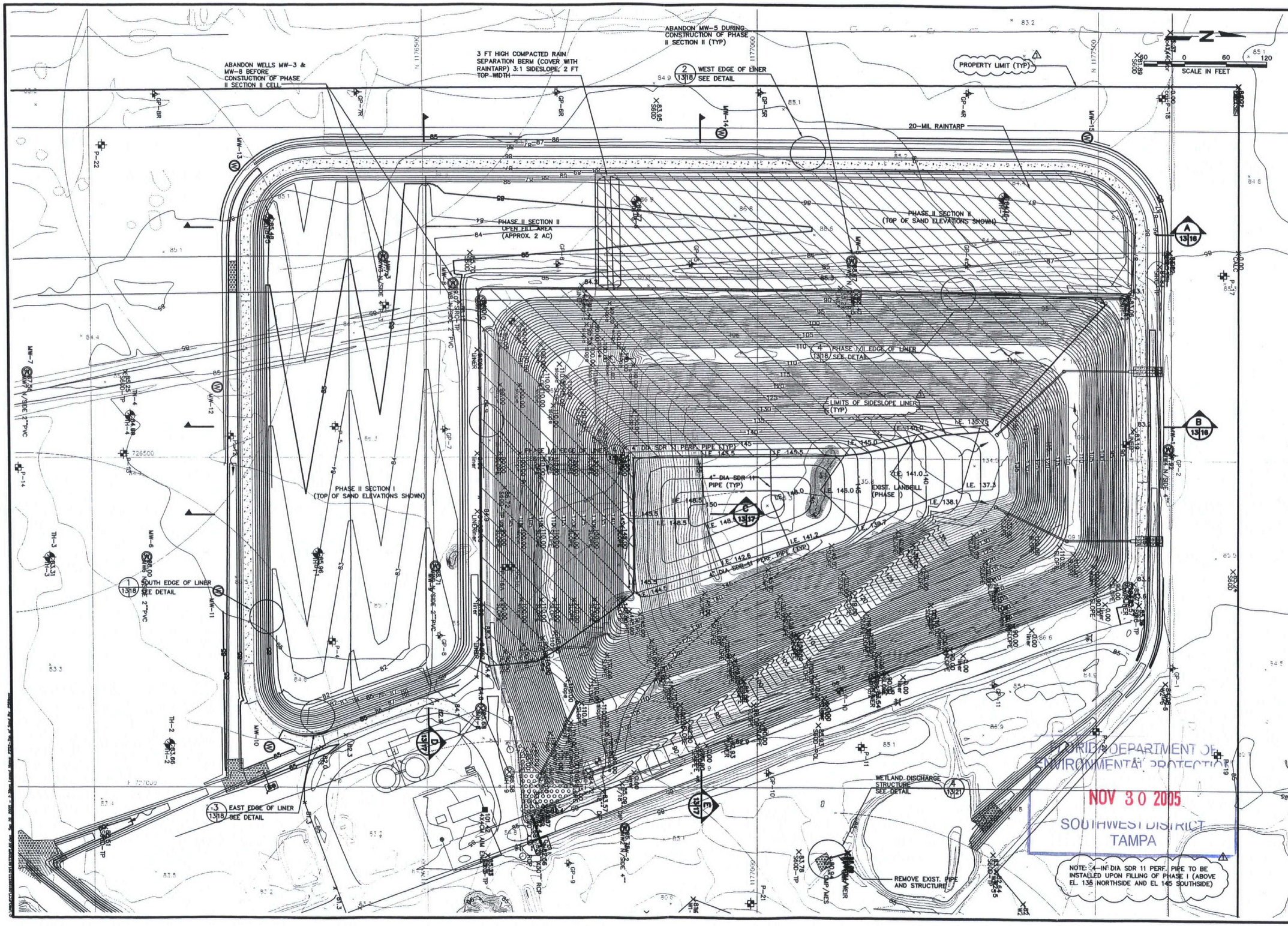
PROJ. NO. 09199033.09 | DSN. BY: JHO/LEK | DWN. BY: BLJ/JHO | CHK. BY: JHO/LEK | Q/A RVW BY: JHO/RJD | APP. BY: RJD

CADD FILE: 993309PLAN

DATE: APRIL 2004

SCALE: AS SHOWN

DRAWING NO. 12 of 27




| REV | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | 05/13/05 | REVISION PER FDEP RAI NO 2 | JHO |

DRAWING TITLE: PHASE II - SECTION II SITE PLAN

PROJECT TITLE: HARDEE COUNTY LANDFILL EXPANSION CONSTRUCTION PERMIT

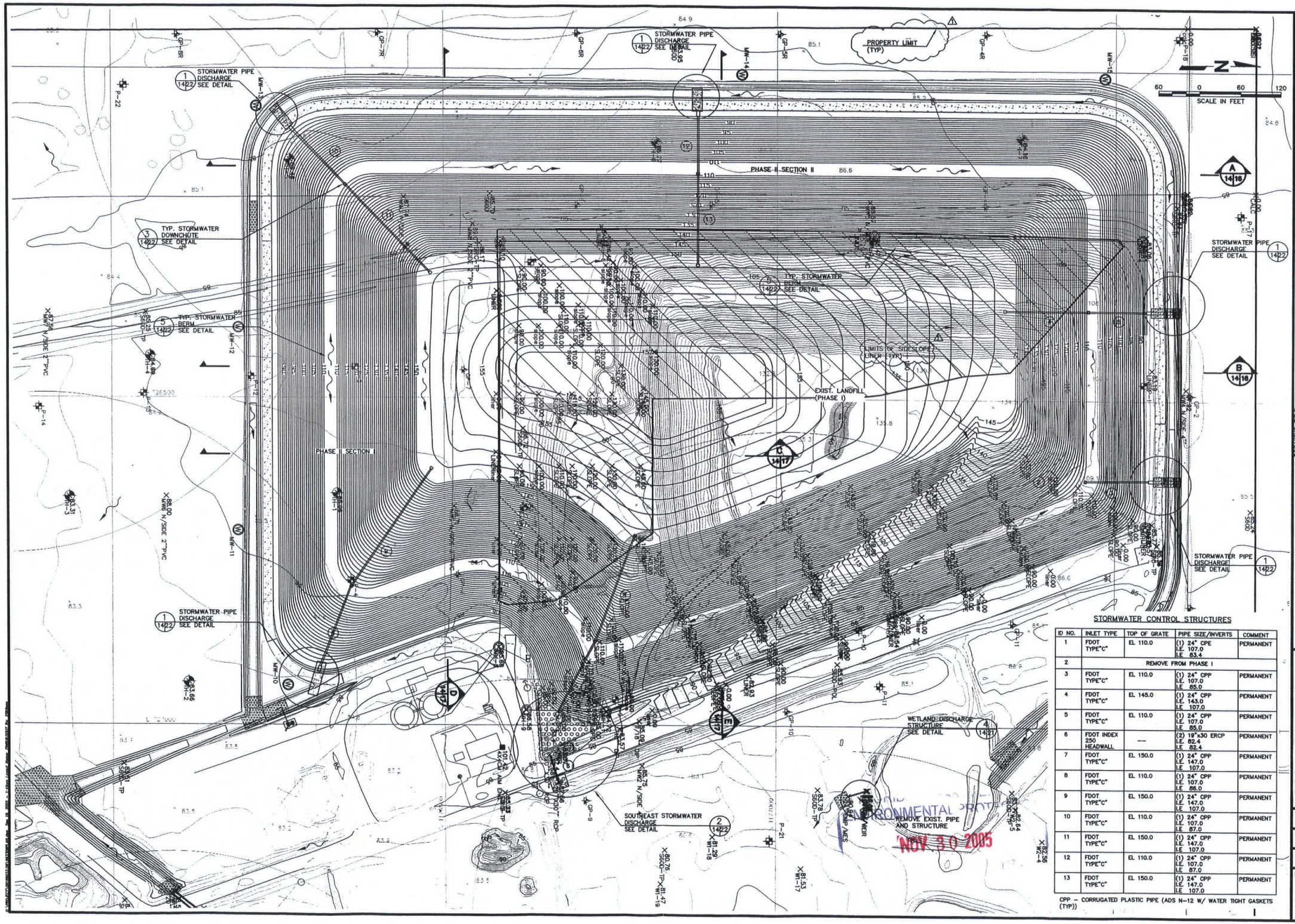
CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO. 09199033.09 | DWN. BY: BLJ | Q/A RVW BY: JHO/RJD
DSN. BY: JHO/LEK | CHK. BY: JHO/LEK | APP. BY: RJD

CADD FILE: 993309PLAN
DATE: APRIL 2004
SCALE: AS SHOWN
DRAWING NO. 13 of 27

JOSEPH H. O'NEILL, P.E.
CERTIFICATE NO. 52049




## STORMWATER CONTROL STRUCTURES

| ID NO. | INLET TYPE | TOP OF GRATE | PIPE SIZE/INVERTS | COMMENT |
|---|---|---|---|---|
| 1 | FDOT TYPE"C" | EL 110.0 | (1) 24" CPE I.E. 107.0 I.E. 83.4 | PERMANENT |
| 2 | REMOVE FROM PHASE I | | | |
| 3 | FDOT TYPE"C" | EL 110.0 | (1) 24" CPP I.E. 107.0 I.E. 85.0 | PERMANENT |
| 4 | FDOT TYPE"C" | EL 145.0 | (1) 24" CPP I.E. 143.0 I.E. 107.0 | PERMANENT |
| 5 | FDOT TYPE"C" | EL 110.0 | (1) 24" CPP I.E. 107.0 I.E. 85.0 | PERMANENT |
| 6 | FDOT INDEX 250 HEADWALL | --- | (2) 19"x30 ERCP I.E. 82.4 I.E. 82.4 | PERMANENT |
| 7 | FDOT TYPE"C" | EL 150.0 | (1) 24" CPP I.E. 147.0 I.E. 107.0 | PERMANENT |
| 8 | FDOT TYPE"C" | EL 110.0 | (1) 24" CPP I.E. 107.0 I.E. 86.0 | PERMANENT |
| 9 | FDOT TYPE"C" | EL 150.0 | (1) 24" CPP I.E. 147.0 I.E. 107.0 | PERMANENT |
| 10 | FDOT TYPE"C" | EL 110.0 | (1) 24" CPP I.E. 107.0 I.E. 87.0 | PERMANENT |
| 11 | FDOT TYPE"C" | EL 150.0 | (1) 24" CPP I.E. 147.0 I.E. 107.0 | PERMANENT |
| 12 | FDOT TYPE"C" | EL 110.0 | (1) 24" CPP I.E. 107.0 I.E. 87.0 | PERMANENT |
| 13 | FDOT TYPE"C" | EL 150.0 | (1) 24" CPP I.E. 147.0 I.E. 107.0 | PERMANENT |

CPP – CORRUGATED PLASTIC PIPE (ADS N-12 W/ WATER TIGHT GASKETS (TYP))

JOSEPH H. O'NEILL, P.E.
CERTIFICATE NO. 52049

| REV | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | 05/20/05 | REVISION PER FDEP RAI NO. 2 | JHO |

DRAWING TITLE: PHASE I/II FINAL BUILDOUT (INTERMEDIATE COVER)

PROJECT TITLE: HARDEE COUNTY LANDFILL EXPANSION CONSTRUCTION PERMIT

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS


SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

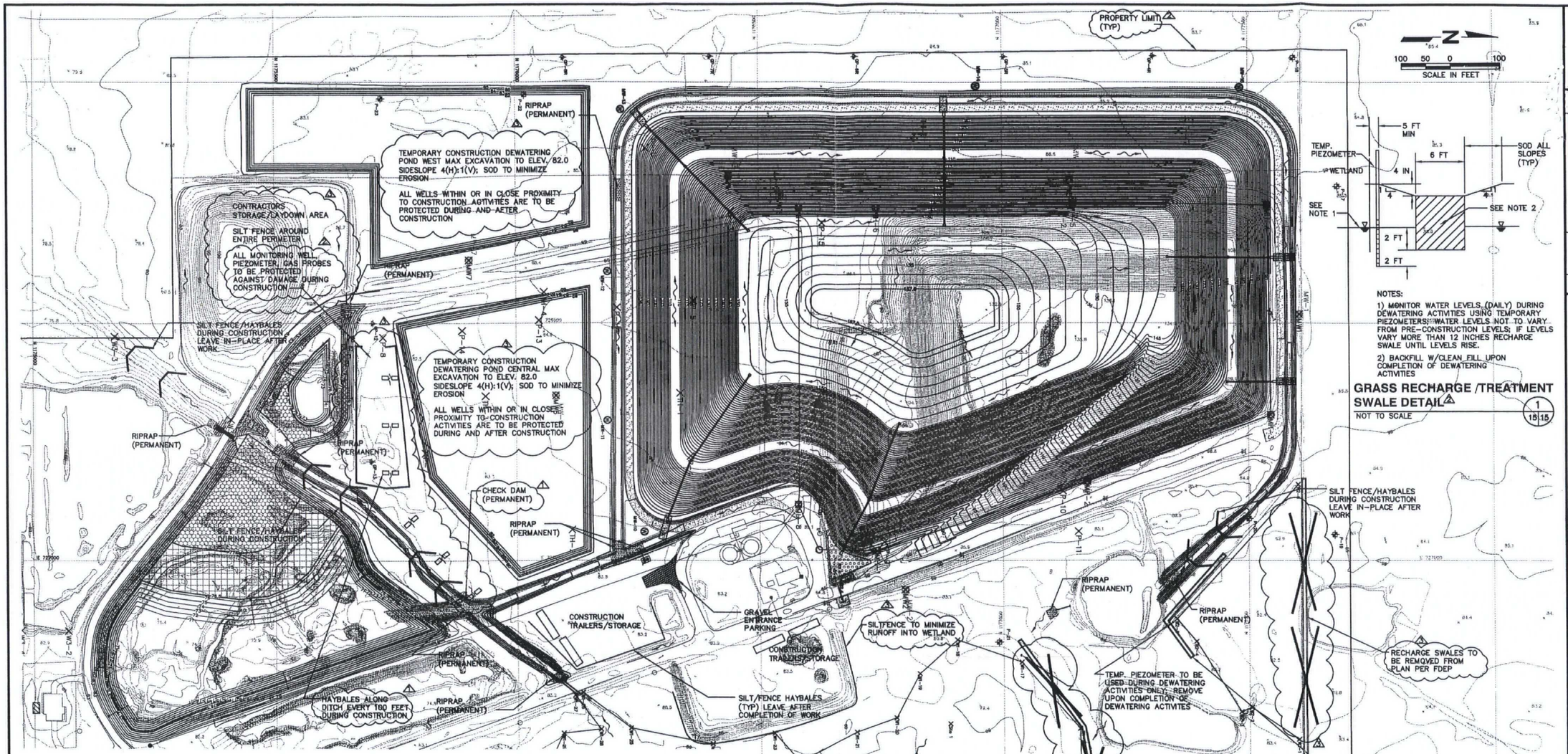

PROJ. NO. 09199033.09 | DSN. BY: JHO/LEK | DWN. BY: XRH | CHK. BY: JHO/LEK | Q/A RVW BY: JHO/RJD | APP. BY: RJD

CADD FILE: 993309PLAN

DATE: APRIL 2004

SCALE: AS SHOWN

DRAWING NO. 14 of 27




NOTES:

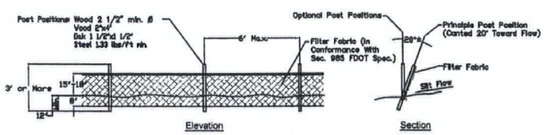
1) MONITOR WATER LEVELS (DAILY) DURING DEWATERING ACTIVITIES USING TEMPORARY PIEZOMETERS; WATER LEVELS NOT TO VARY FROM PRE-CONSTRUCTION LEVELS; IF LEVELS VARY MORE THAN 12 INCHES RECHARGE SWALE UNTIL LEVELS RISE.

2) BACKFILL W/CLEAN FILL UPON COMPLETION OF DEWATERING ACTIVITIES

## GRASS RECHARGE /TREATMENT SWALE DETAIL

NOT TO SCALE

1 | 15|15

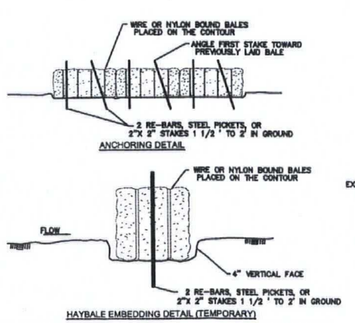



Type III Silt Fence (TEMPORARY)

REPLACE UNTIL SOD ESTABLISHED (2 MONTHS MIN AFTER WORK COMPLETED)

GENERAL NOTES:

1. POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CAN NOT BE TRENCHED IN (E.G. PAVEMENT) HEIGHT FABRIC FLAP WITH WASHED GRAVEL ON UPHILL SIDE TO PREVENT FLOW UNDER FENCE.
3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST.
5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES. THE SILT SHALL BE DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.

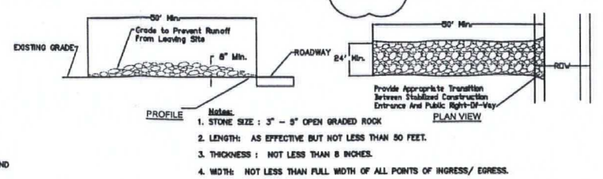



HAYBALE EMBEDDING DETAIL (TEMPORARY)

REPLACE UNTIL SOD ESTABLISHED (2 MONTHS MIN AFTER WORK COMPLETED)

GENERAL NOTES:

1. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF FOUR INCHES.
2. BALES SHALL BE SECURELY ANCHORED IN PLACE BY 3/8 INCH REBAR STAKES DRIVEN THROUGH THE BALES. THE FIRST STAKE IN EACH BALE SHALL BE ANGLED TOWARD PREVIOUSLY LAID BALE TO FORCE BALES TOGETHER.
3. INSPECTION SHALL BE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
4. WHEN SILT REACHES A DEPTH OF 6 INCHES, IT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED SITE AS TO NOT CREATE A SILTATION PROBLEM.
5. AFTER THE DEVELOPMENT SITE IS COMPLETELY STABILIZED, THE BALE AND ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF AT AN APPROVED SPOIL DISPOSAL SITE.




Notes:

1. STONE SIZE : 3" - 5" OPEN GRADED ROCK
2. LENGTH: AS EFFECTIVE BUT NOT LESS THAN 50 FEET.
3. THICKNESS : NOT LESS THAN 8 INCHES.
4. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/ EGRESS.
5. WASHING: WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLICK ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
6. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE CONDITIONS DEMAND, AND REPAIR AND CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
7. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

PROPOSED LAND USE

| DESCRIPTION | ACREAGE (AC) | PERCENT OF TOTAL PROJECT | FLUCCS CODE | NWI CODE | FLUCCS DESCRIPTION | NWI DESCRIPTION |
|---|---|---|---|---|---|---|
| IMPERVIOUS | 10.7 | 9.2 % | 814 | --- | ROAD/HIGHWAY | --- |
| PERVIOUS | 26.8 | 23.2 % | 835 | --- | SOLID WASTE | --- |
| STORMWATER MANAGEMENT | 23.9 | 20.6 % | 510 | --- | STREAM/ WATERWAY | --- |
| GRASSED AREA | 42.8 | 36.9 % | 212 | --- | UNIMPROVED PASTURE | --- |
| WETLAND AREA NO. 1 | 10.2 | 8.8 % | 610 | PF01 | WETLAND HARDWOOD | PALUSTRINE FORESTED |
| WETLAND AREA NO. 2 | 1.7 | 1.4 % | 617 | PSS1 | MIXED WETLAND HARDWOOD | PALUSTRINE SCRUB-SCRUB BROAD LEAF DECIDUOUS |
| TOTAL | 116.0 | 100.0 % | | | | |

D.E.P.
NOV 3 0 2005
Southwest District Tampa

| REV | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | 11/15/04 | RESPONSE TO FDEP RAI NO. 1 | JHO |
| 2 | 05/13/05 | RESPONSE TO FDEP RAI NO. 2 | JHO |
| 3 | 09/23/05 | RESPONSE TO FDEP RAI NO. 3 | LEK |

RAYMOND J. DEVER, P.E.
CERTIFICATE NO. 43031

DRAWING TITLE: EROSION AND SEDIMENTATION CONTROL RECOMMENDATIONS

PROJECT TITLE: HARDEE COUNTY LANDFILL EXPANSION CONSTRUCTION PERMIT

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
3920 RIGA BLVD., TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 622-0707

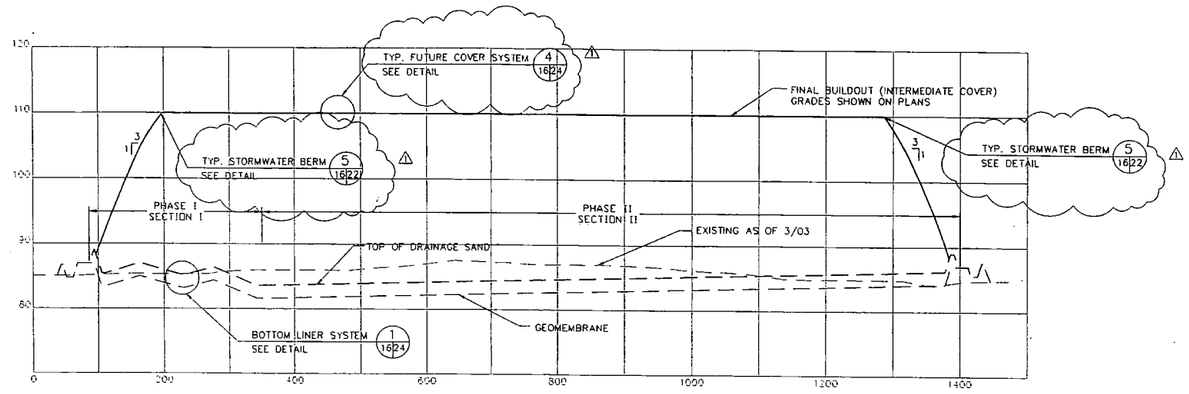
PROJ. NO. 09199033.09 | DSN. BY: XRH | CHK. BY: JHO/LEK | QA (WR) BY: JHO/RJD | APP. BY: RJD

CADD FILE: 993309PLAN

DATE: APRIL 2004

SCALE: AS SHOWN

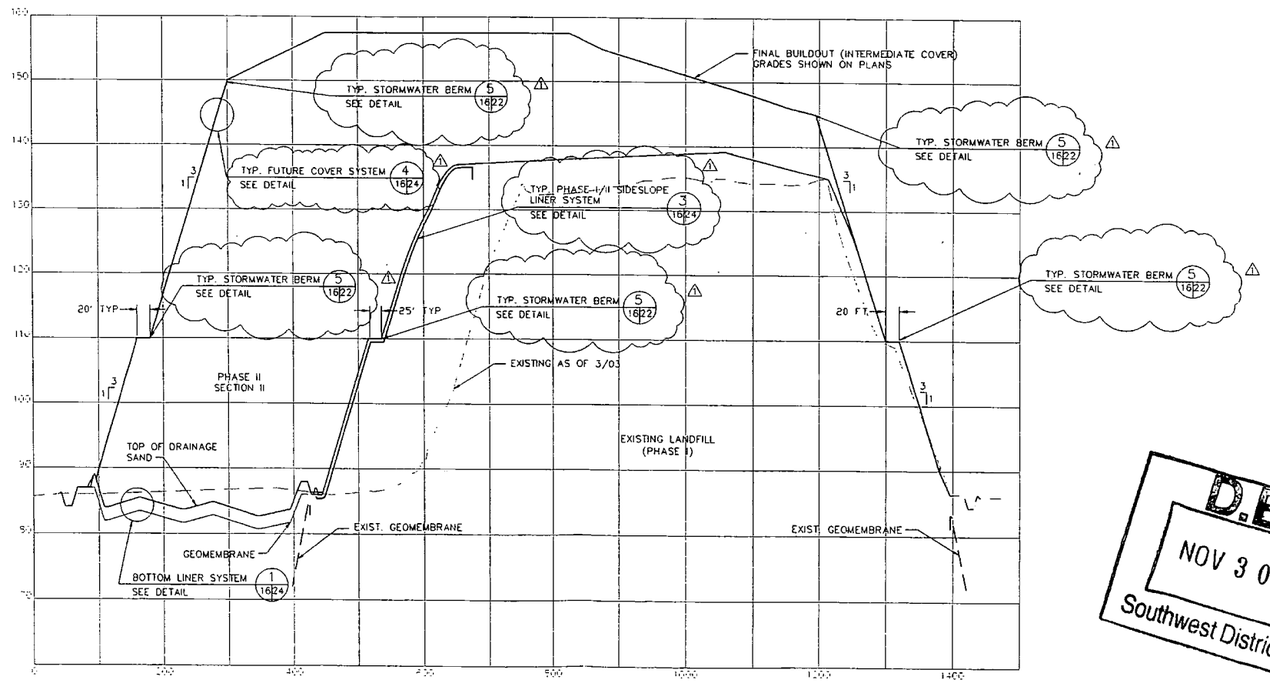
DRAWING NO. 15 of 27




SECTION A-A
SCALE: H = 1" = 100'
V = 1" = 10'

A / 16

10,12,13,14




SECTION B-B
SCALE: H = 1" = 100'
V = 1" = 10'

B / 16

9,10,12,13,14

D.E.P.
NOV 30 2005
Southwest District Tampa

| REV | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | 11/19/04 | RESPONSE TO FDEP COMMENTS | JHO |

JOSEPH H. ONEILL, P.E.
CERTIFICATE NO. 52049

DRAWING TITLE: **SECTIONS - 1**

PROJECT TITLE: **HARDEE COUNTY LANDFILL EXPANSION CONSTRUCTION PERMIT**

CLIENT: **HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS**

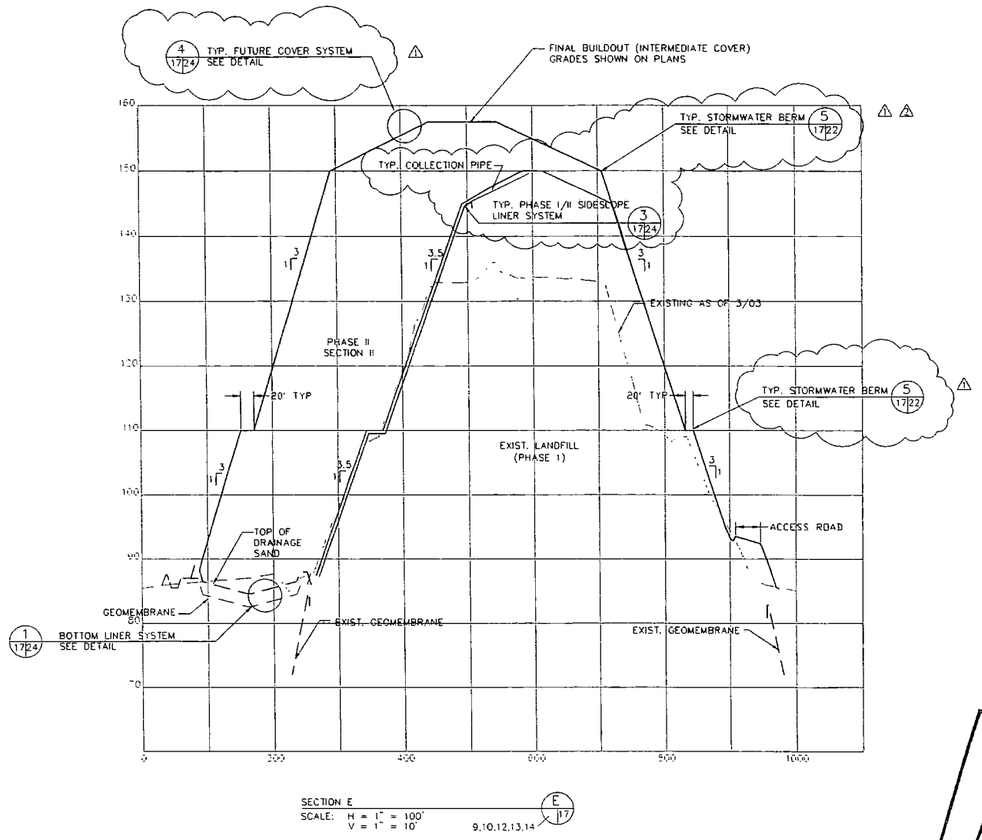
**SCS ENGINEERS**
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO. 0193033.09
DSN. BY: SSA/JHO
DRN. BY: JHO/LEK
CHK. BY: JHO/LEK
O/A RVW BY: JHO/PLD
APP. BY: RJD

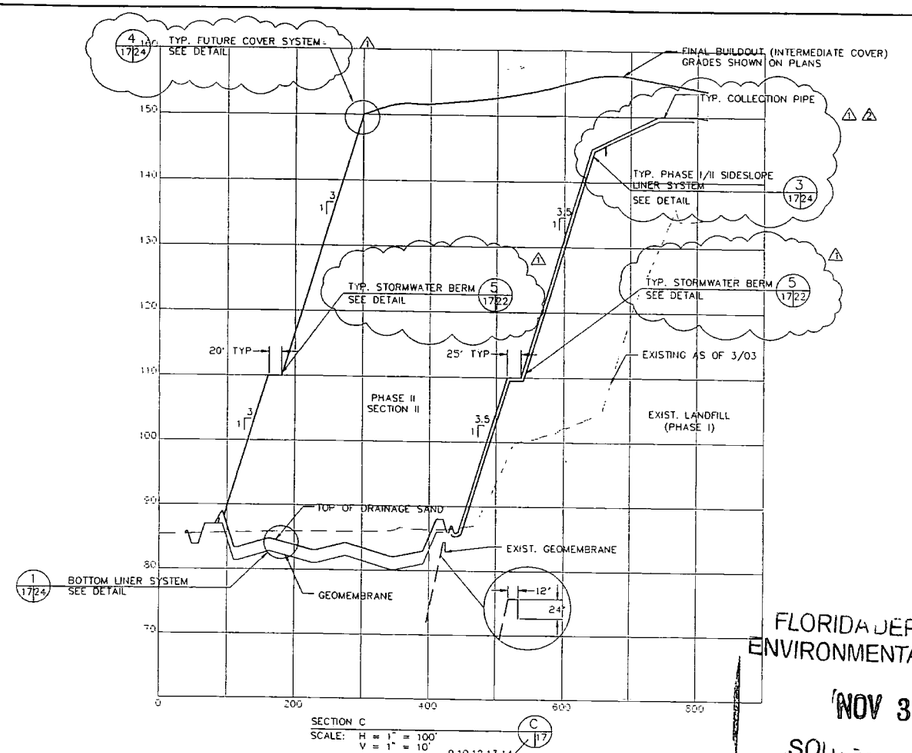
CADD FILE: 993309XSEC
DATE: APRIL 2004
SCALE: AS SHOWN
DRAWING NO.



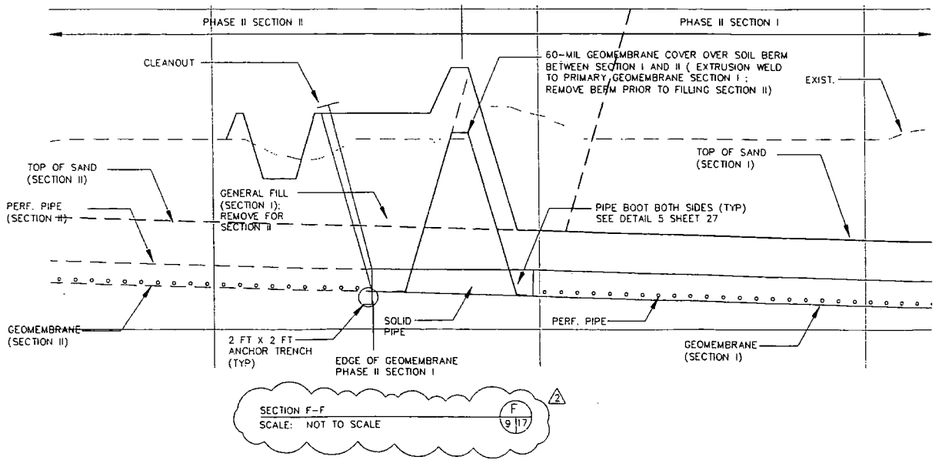
S:\PROJECTS\0193033.09\Acad_LTs\193309SEC.dwg, Tue, 18, 2005 - 11:24am, Layout: Layout1, By: JHOffen



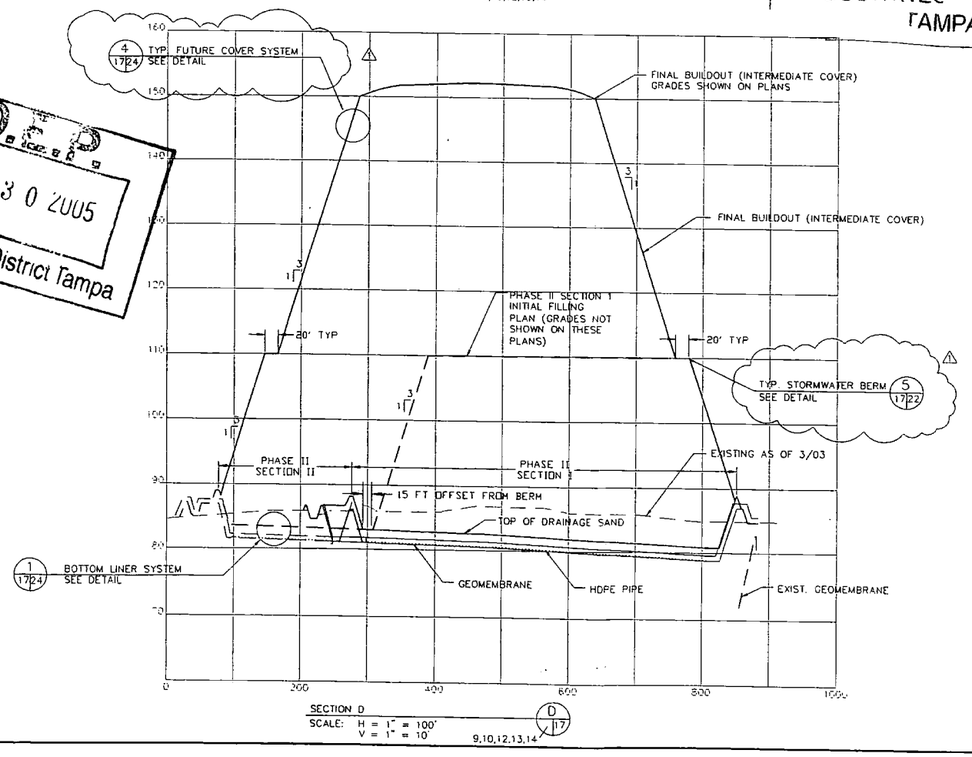

SECTION E
SCALE: H = 1" = 100'
V = 1" = 10'
E 17
9,10,12,13,14




SECTION C
SCALE: H = 1" = 100'
V = 1" = 10'
C 17
9,10,12,13,14




SECTION F-F
SCALE: NOT TO SCALE
F 17
2




SECTION D
SCALE: H = 1" = 100'
V = 1" = 10'
D 17
9,10,12,13,14

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOV 30 2005
SOUTHWEST DISTRICT
TAMPA

NOV 30 2005
Southwest District Tampa

| REV | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | 11/19/04 | REVISION PER FDEP RAI NO 1 | JHO |
| 2 | 05/20/05 | REVISION PER FDEP RAI NO 2 | JHO |

JOSEPH H. O'NEILL, P.E.
CERTIFICATE NO. 52049

DRAWING TITLE: SECTIONS - 2

PROJECT TITLE: HARDEE COUNTY LANDFILL EXPANSION CONSTRUCTION PERMIT

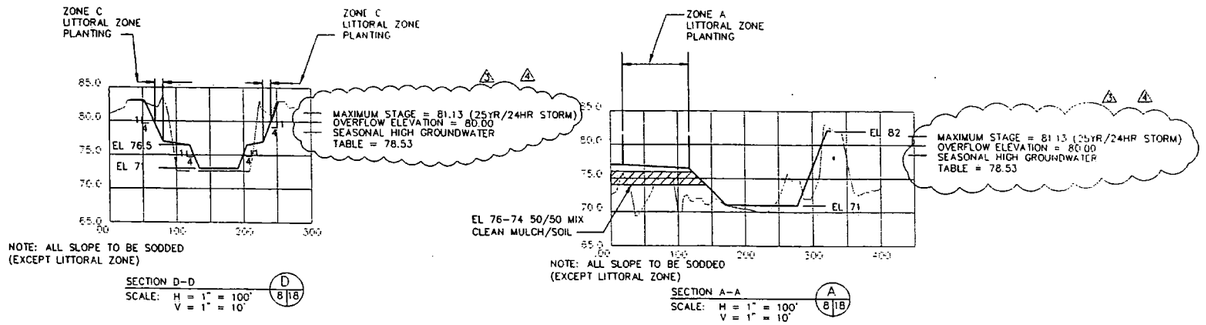
CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

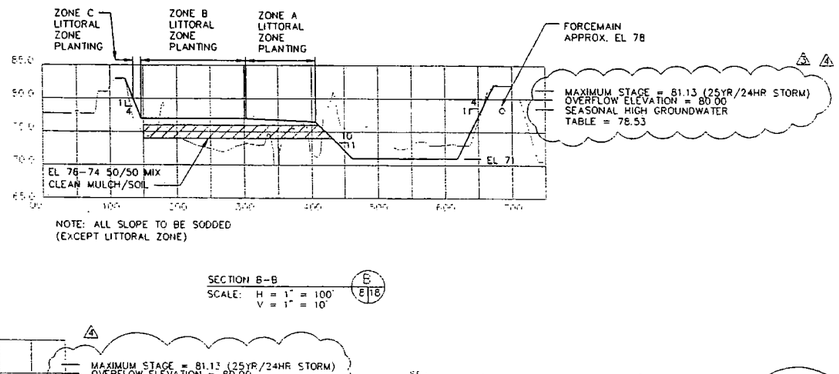
SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

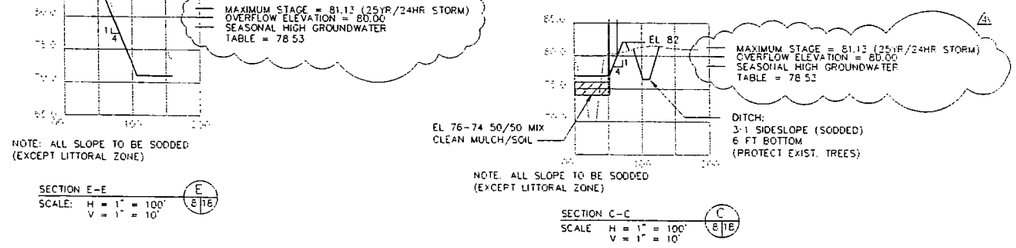
| | |
|---|---|
| DWN: STA | CHK: JHO/LEK |
| PROJ NO: 0993309.09 | DSN: BTS |
| CHK: BTS | APP: RJD |
| DSN: BTS | JHO/LEK |
| 0/4 PKW, BTS | JHO/RJD |

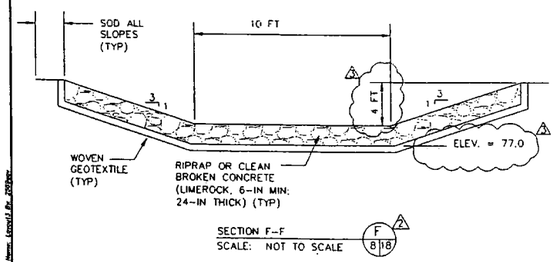
CADD FILE: 993309XSEC
DATE: MARCH 2004
SCALE: AS SHOWN
DRAWING NO. 17 of 27

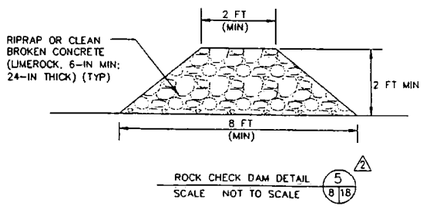
G:\PROJECTS\0993309.09\Dwg\1993309SEC.dwg Sep 16, 2005 - 11:46am Layout: Hdrdee Layout1 By: STA

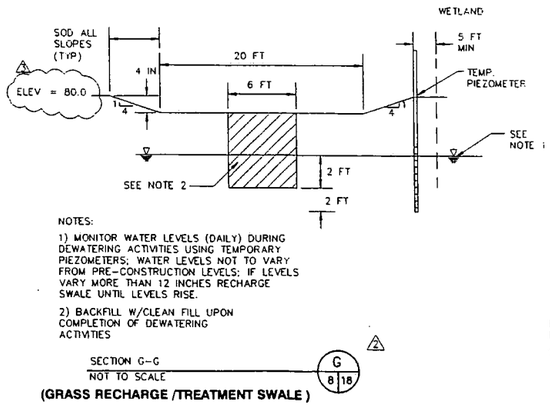


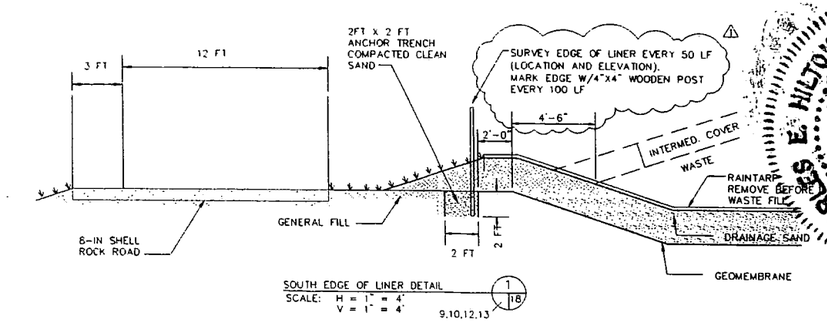



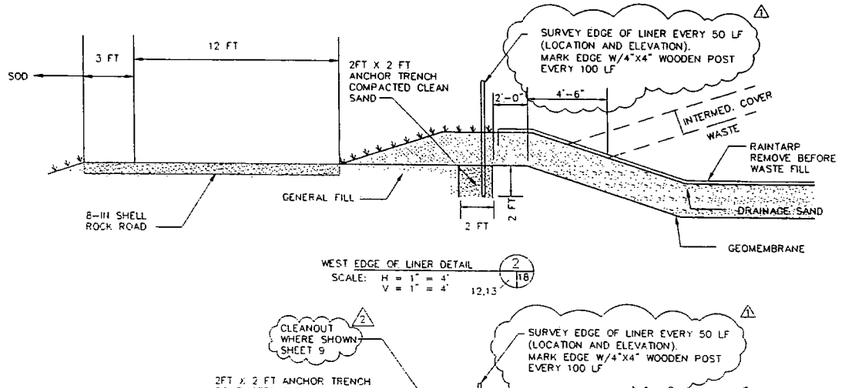



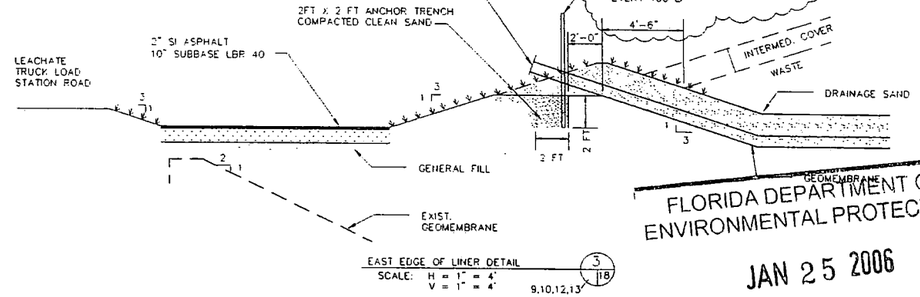



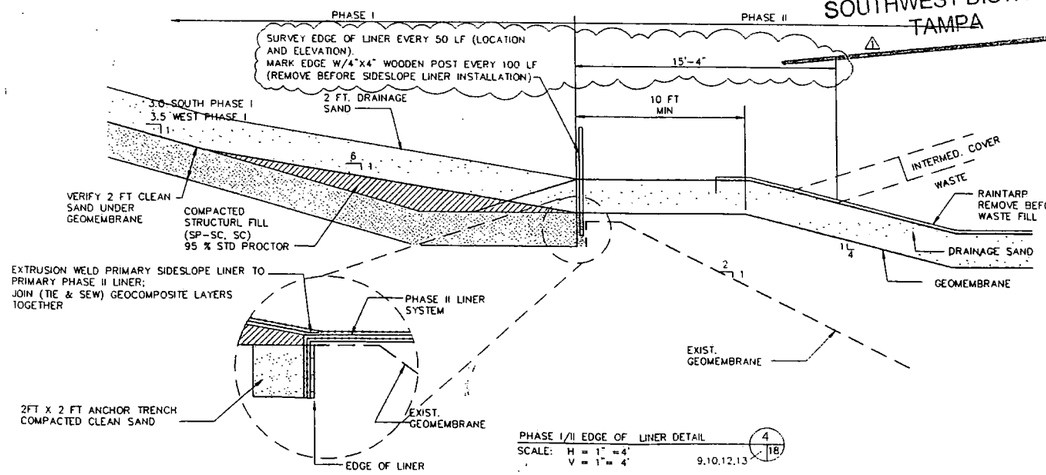




FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
JAN 25 2006
SOUTHWEST DISTRICT TAMPA

| REV | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | 11/19/04 | REVISION PER FDEP RAI NO. 1 | JHO |
| 2 | 05/13/05 | REVISION PER FDEP RAI NO. 2 | JHO |
| 3 | 9/23/05 | REVISION PER FDEP RAI NO. 3 | LEK |
| 4 | 12/2/05 | REVISION PER FDEP COMMENTS | JHO |

DRAWING TITLE: SECTIONS AND DETAILS

PROJECT TITLE: HARDEE COUNTY LANDFILL EXPANSION CONSTRUCTION PERMIT

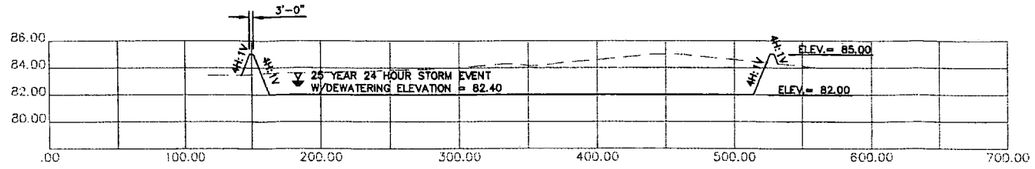
CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
3011 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO. 03199033.09
DSN. BY: SDA/JHO
DWN. BY: SDA/JHO
CHK. BY: JHO/LEK
APP. BY: R.J.D
D/A R/W BY:

CADD FILE: 993309XSEC
DATE: APRIL 2004
SCALE: AS SHOWN
DRAWING NO. 18 of 27

STATE OF FLORIDA
CHARLES E. HILTON JR.
REGISTERED PROFESSIONAL ENGINEER

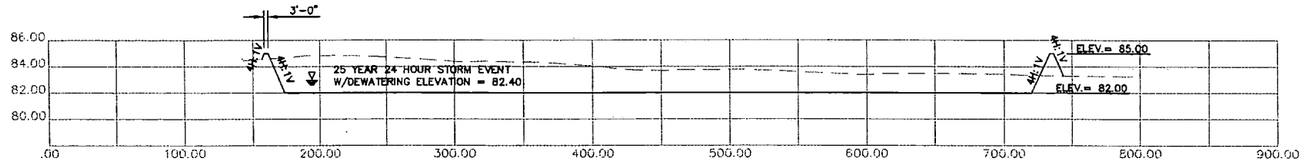



**TEMPORARY CONSTRUCTION DEWATERING POND WEST** (A / 8A|8A)

SCALE: HORIZ = 1"= 50'
VERT= 1" = 4

NOTE:

1. ALL SLOPES ARE TO BE SODDED.
2. CONTRACTOR SHALL HAVE EROSION AND SEDIMENTATION CONTROLS IN PLACE DURING ALL CONSTRUCTION AND DEWATERING ACTIVITIES TO THE SATISFACTION OF THE ENGINEER.




**TEMPORARY CONSTRUCTION DEWATERING POND CENTRAL** (B / 8A|8A)

SCALE: HORIZ = 1"= 50'
VERT= 1" = 4

NOTE:

1. ALL SLOPES ARE TO BE SODDED.
2. CONTRACTOR SHALL HAVE EROSION AND SEDIMENTATION CONTROLS IN PLACE DURING ALL CONSTRUCTION AND DEWATERING ACTIVITIES TO THE SATISFACTION OF THE ENGINEER.

DEP
NOV 3 0 2005
Southwest District Tampa

| REV | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | 11/19/04 | REVISION PER FDEP RAI NO. 1 | JHO |
| 2 | 05/13/05 | REVISION PER FDEP RAI NO. 2 | JHO |
| 3 | 09/23/05 | REVISION PER FDEP RAI NO. 3 | LEK |

RAYMOND L. DEKER, P.E.
CERTIFICATE NO. 43531

DRAWING TITLE: SECTIONS AND DETAILS

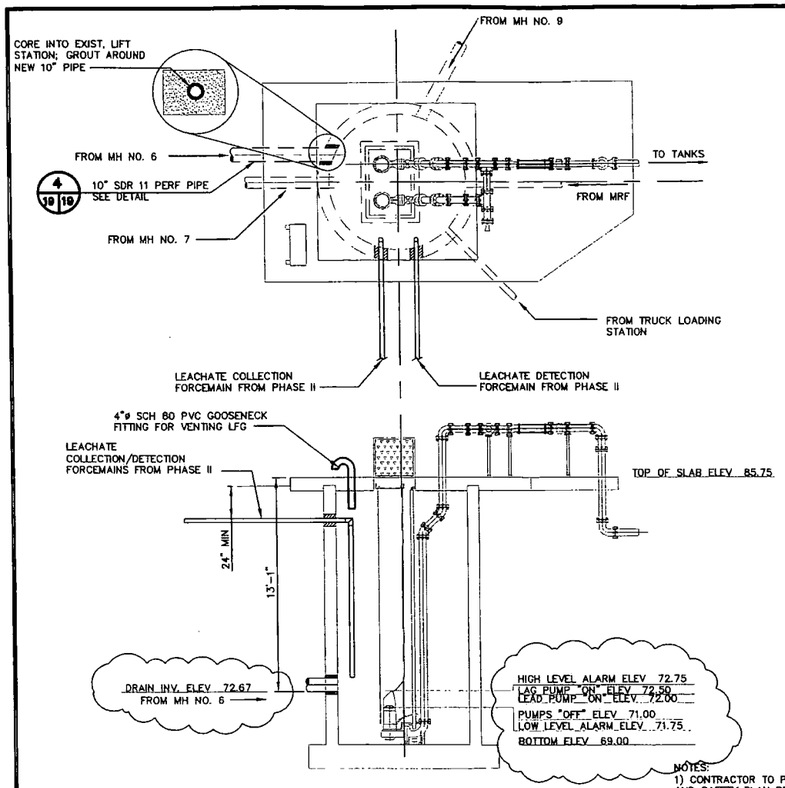
PROJECT TITLE: HARDEE COUNTY LANDFILL EXPANSION CONSTRUCTION PERMIT

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH: (813) 621-0080 FAX NO: (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 0000262

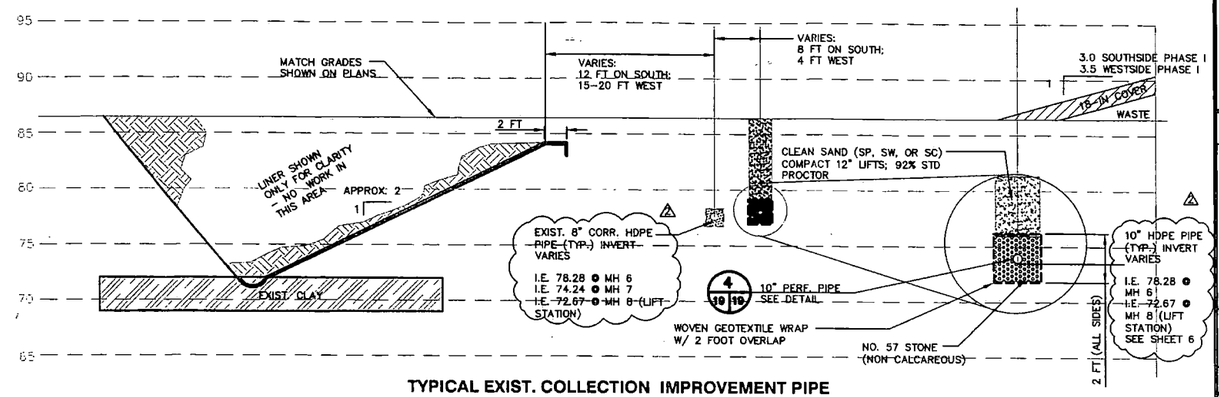
PROJ. NO.: 01193033.09
DWN.: SDA / JHO
CHK.: JHO/LEK
QA: WW
APP.: RJD

CADD FILE: 993309XSEC18A
DATE: APRIL 2004
SCALE: AS SHOWN
DRAWING NO.: 18A of 27

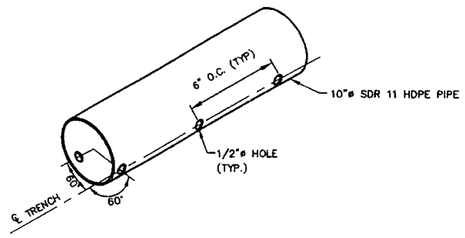



NOTES:
1) CONTRACTOR TO PROVIDE HEALTH AND SAFETY PLAN PRIOR TO WORK.
2) COMPLY WITH ALL STATE, LOCAL, FEDERAL LAWS FOR EXCAVATION AND CONFINED SPACE ENTRY.
3) LIFT STATION AND PUMP DESIGN BY OTHERS.

**TYPICAL LIFT STATION CONNECTIONS DETAIL** 5 / 6,9 | 19
SCALE: 1"=4'

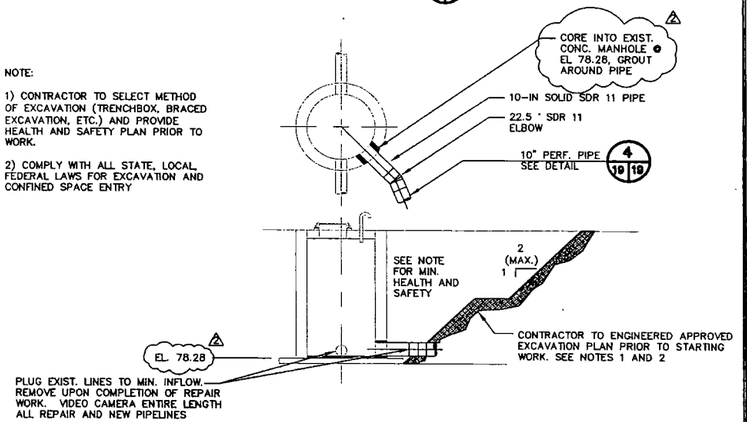



**TYPICAL EXIST. COLLECTION IMPROVEMENT PIPE INSTALLATION DETAIL** 1 / 8 | 19
SCALE: NTS

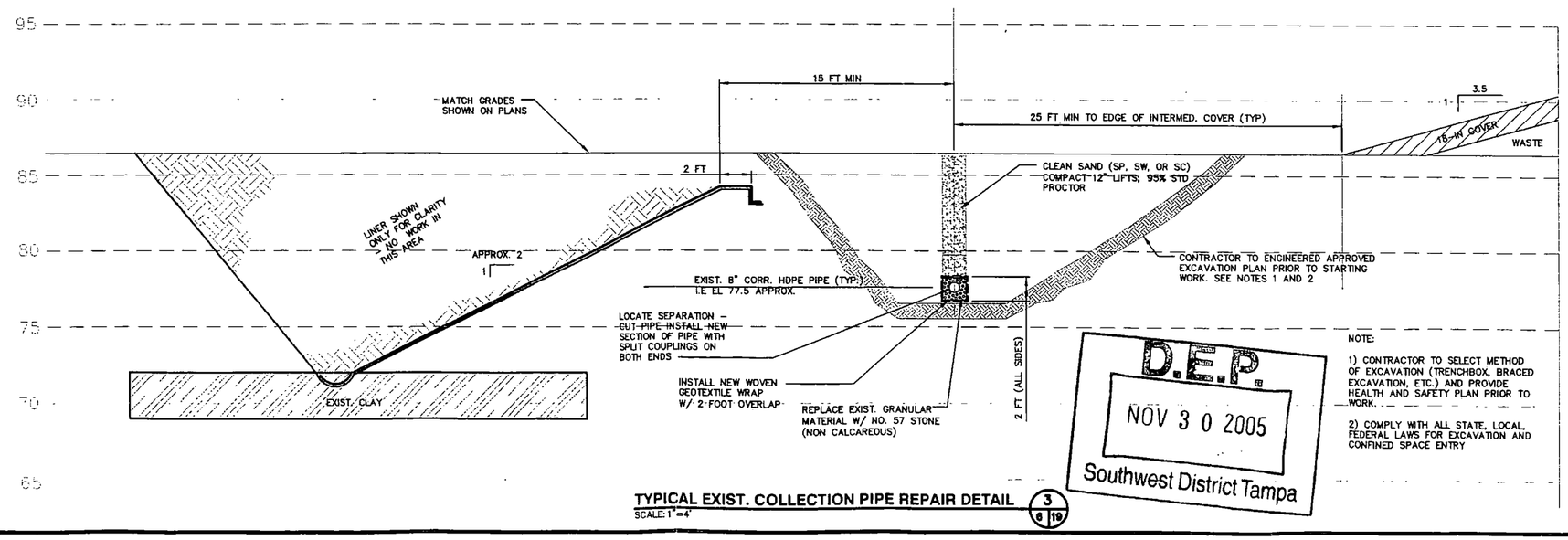



**10-IN PERFORTED PIPE DETAIL** 4 / 19 | 19
NOT TO SCALE

NOTE:
1) CONTRACTOR TO SELECT METHOD OF EXCAVATION (TRENCHBOX, BRACED EXCAVATION, ETC.) AND PROVIDE HEALTH AND SAFETY PLAN PRIOR TO WORK.
2) COMPLY WITH ALL STATE, LOCAL, FEDERAL LAWS FOR EXCAVATION AND CONFINED SPACE ENTRY




**TYPICAL EXIST. MANHOLE NO. 6 CONNECTION DETAIL** 2 / 8 | 19
SCALE: 1"=4'




NOTE:
1) CONTRACTOR TO SELECT METHOD OF EXCAVATION (TRENCHBOX, BRACED EXCAVATION, ETC.) AND PROVIDE HEALTH AND SAFETY PLAN PRIOR TO WORK.
2) COMPLY WITH ALL STATE, LOCAL, FEDERAL LAWS FOR EXCAVATION AND CONFINED SPACE ENTRY

DEP
NOV 3 0 2005
Southwest District Tampa

**TYPICAL EXIST. COLLECTION PIPE REPAIR DETAIL** 3 / 8 | 19
SCALE: 1"=4'

JOSEPH H. O'NEIL, P.E. CERTIFICATE NO. 52049

| REV | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | 11/19/04 | REVISION PER FDEP RAI NO. 1 | JHO |
| 2 | 05/20/05 | REVISION PER FDEP RAI NO. 2 | JHO |

DRAWING TITLE: DETAILS - 1

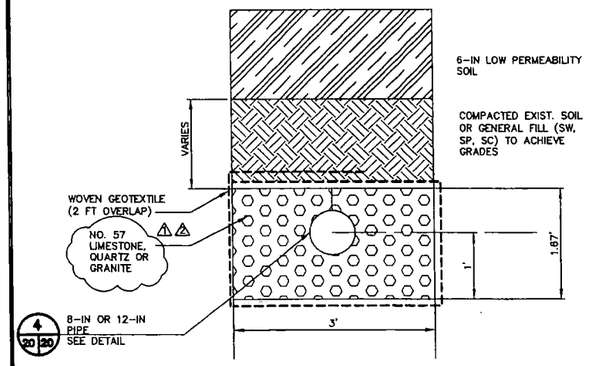
PROJECT TITLE: HARDEE COUNTY LANDFILL EXPANSION CONSTRUCTION PERMIT

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

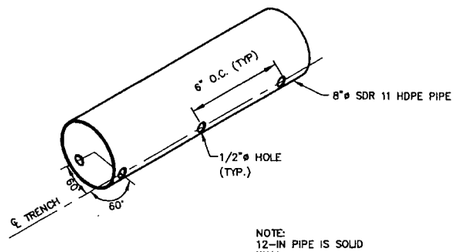
SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
3920 RIGA BLVD., TAMPA, FL 33619
PH: (813) 621-0080 FAX NO. (813) 623-6707
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

| PROJ. NO. | DWN. BY: | CK'A RVW BY: | APP. BY: |
|---|---|---|---|
| 09199033.09 | JHO | JHO/RJD | RJD |
| DSK. DIR. | CHK. BY: | | |
| LEK/JHO | JHO/LEK | | |

CADD FILE: 993309detls6
DATE: APRIL 2004
SCALE: AS SHOWN
DRAWING NO. 19 of 27

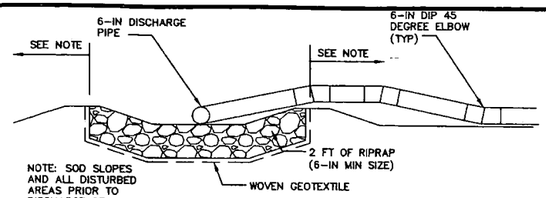


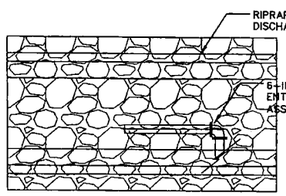

**GROUNDWATER PIPE TRENCH DETAIL** (4 20 20)
SCALE: 1"=4'

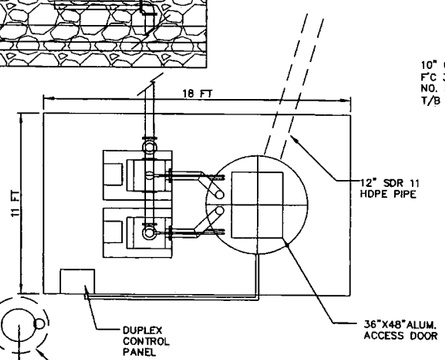


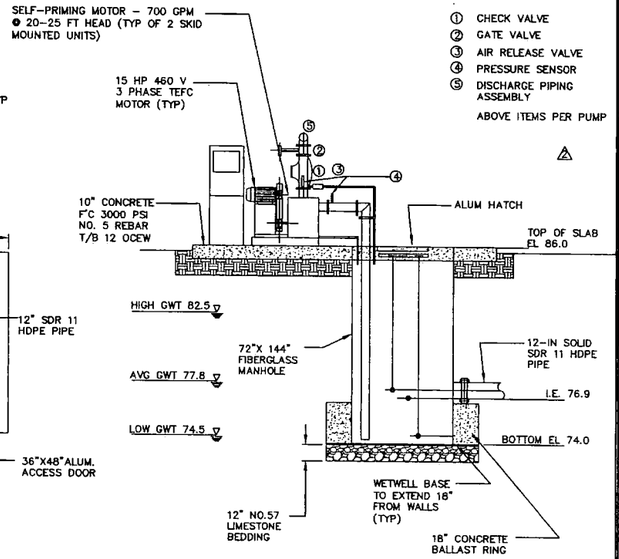

NOTE: 12-IN PIPE IS SOLID WALL

**8-IN PERFORATED GROUNDWATER PIPE DETAIL** (3 20 20)
NOT TO SCALE



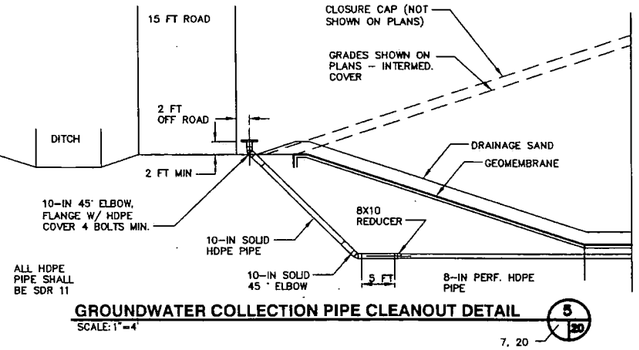



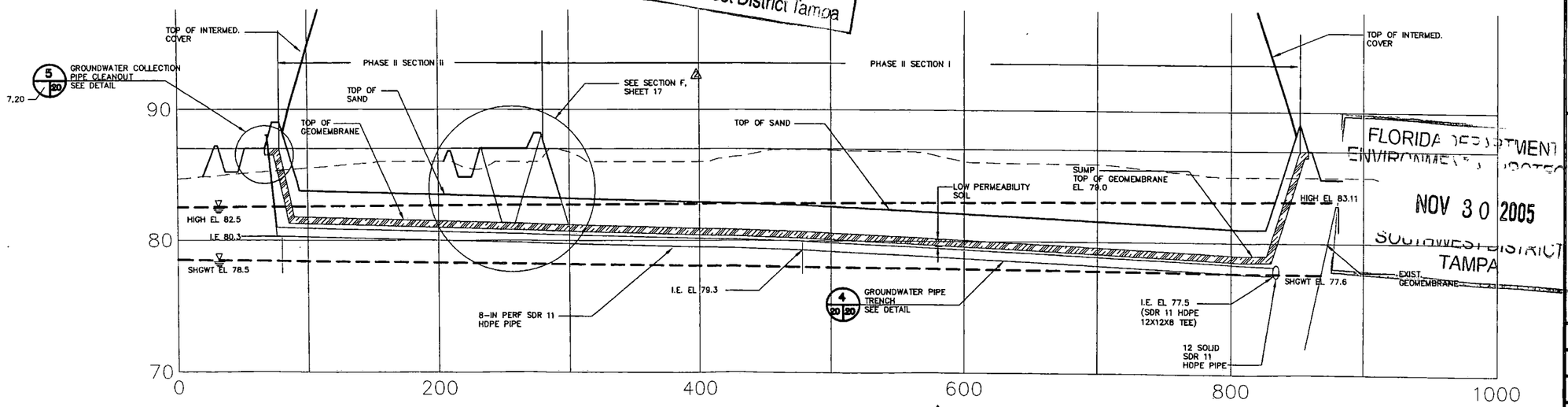

NOTE: LIFT STATION, CONTROL PANEL ,PUMPS, MOTOR, PIPING, VALVES & FITTINGS CALL POWER & PUMPS, INC. (813) 621-8071

**GROUNDWATER CONTROL PUMP STATION DETAIL** (1 20) 7,8
SCALE: 1"=4'




**GROUNDWATER COLLECTION PIPE CLEANOUT DETAIL** (5 20) 7, 20
SCALE: 1"=4'

DEP
NOV 30 2005
Southwest District Tampa




**TYPICAL GROUNDWATER CONTROL PIPING SYSTEM DETAIL** (2 20) 7,8
SCALE: 1"=40'

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOV 30 2005
SOUTHWEST DISTRICT
TAMPA

| REV | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | 11/19/04 | REVISION PER FDEP RAI NO. 1 | JHO |
| 2 | 05/09/05 | REVISION PER FDEP RAI NO. 2 | JHO |

JOSEPH H. O'NEILL, P.E.
CERTIFICATE NO. 52049

DRAWING TITLE: DETAILS - 2

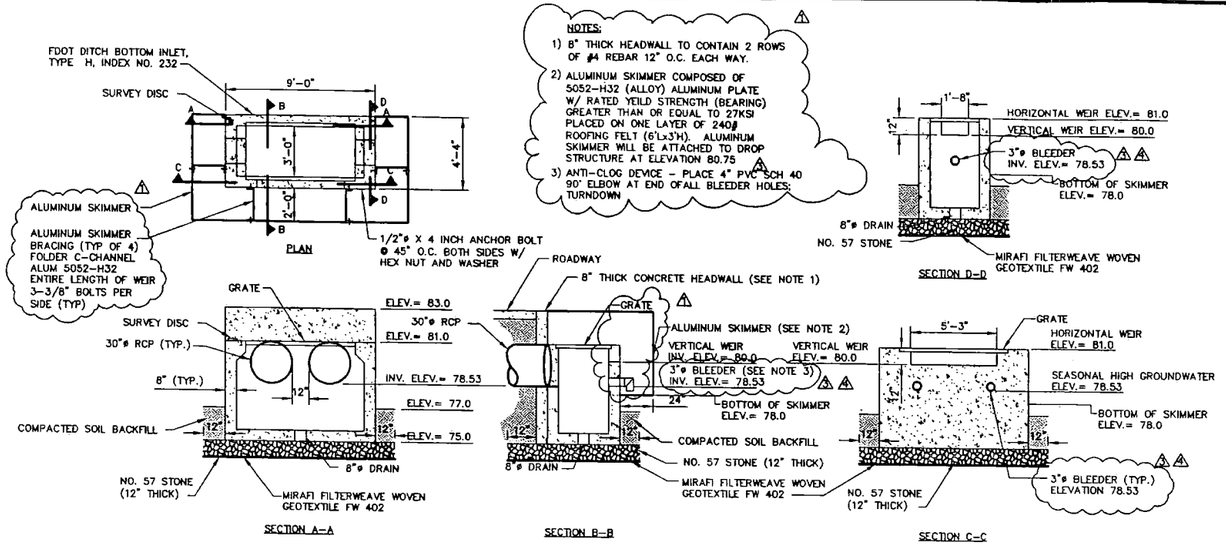
PROJECT TITLE: HARDEE COUNTY LANDFILL EXPANSION CONSTRUCTION PERMIT

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH: (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

| PROJ. NO. | DWN. BY: | D/A WAS BY: | APP. BY: |
|---|---|---|---|
| 09203.09 | JHO | JHO/RJD | RJD |
| DATE: | CHK. BY: | | |
| LEX/JHO | JHO/LEX | | |

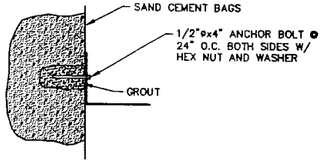
CADD FILE: 993309DETL6
DATE: APRIL 2004
SCALE: AS SHOWN
DRAWING NO.: 20 of 27



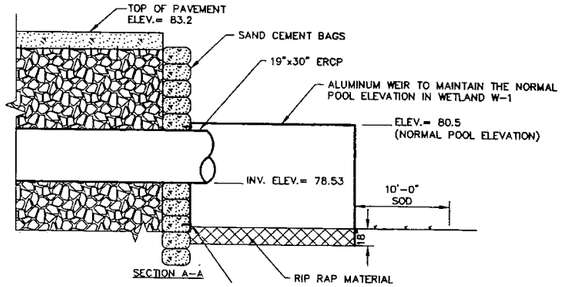

## OFF-SITE DISCHARGE STRUCTURE DETAIL

NOT TO SCALE

3 of 21



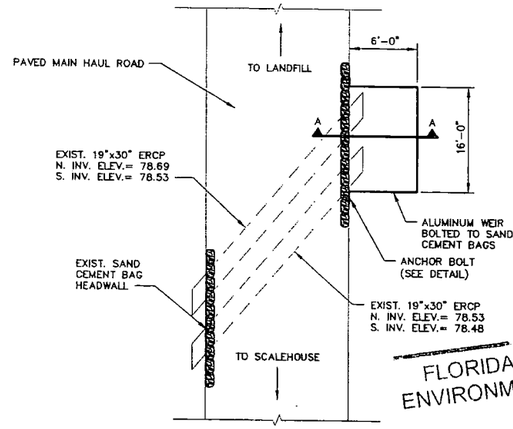

ANCHOR BOLT DETAIL




SECTION A-A

NOTES:

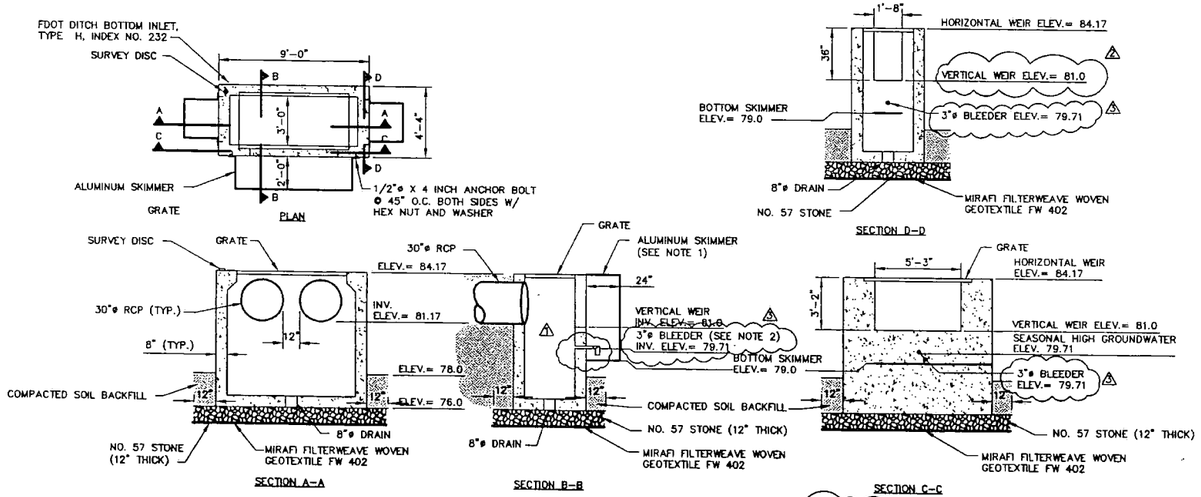
1. ALUMINUM WEIR TO BE BOLTED INTO SAND CEMENT BAGS. SEE ANCHOR BOLT DETAIL.
2. BOLT HOLES SHALL BE DRILLED TO INSURE THE SAND CEMENT STRUCTURE REMAINS INTACT.




## WETLAND WEIR

NOT TO SCALE

1 of 21




## WETLAND DISCHARGE STRUCTURE DETAIL

NOT TO SCALE

4 of 21

9,12,13,14

NOTES

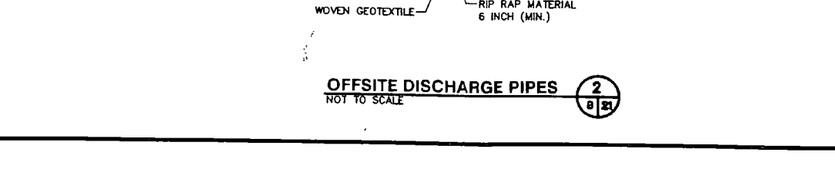
1) ALUMINUM SKIMMER COMPOSED OF 5052-H32 (ALLOY) ALUMINUM PLATE W/ RATED YEILD STRENGTH (BEARING) GREATER THAN OR EQUAL TO 27KSI PLACED ON ONE LAYER OF 240# ROOFING FELT (6'Lx3'H)
2) ANTI-CLOG DEVICE - PLACE 3" PVC SCH 40 90° ELBOW AT END OFALL BLEEDER HOLES; TURNDOWN

## DISCHARGE STRUCTURE TABLE

Drop Structure Schedule

| Location | Discharge Pipe Invert | Discharge Pipe Diameter (inches) | No. of Discharge Pipes | Horizontal Weir Invert | Horizontal Weir Dimensions | Vertical Weir Invert | Vertical Weir Dimensions | No. of Vertical Weirs | Bleeder Elevation | Bleeder Diameter (inches) | No. of Bleeders |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Primary Pond | 81.17 | 30 | 2 | 84.17 | 79" x 36" | 81 | 63" x 38" | 1 | 79.71 | 3 | 1 |
| | | | | | | 81 | 20" x 38" | 2 | | | |
| Borrow Pit | 78.53 | 30 | 2 | 81 | 79" x 36" | 80 | 63" x 12" | 1 | 78.53 | 3 | 4 |
| | | | | | | 80 | 20" x 12" | | | | |

The drop structures are FDOT Ditch Bottom Inlets, Type H, Index No. 232




## OFFSITE DISCHARGE PIPES

NOT TO SCALE

2 of 21

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
JAN 25 2006
SOUTHWEST DISTRICT TAMPA

| REV | DATE | DESCRIPTION | DSN | DWN | CHK | APP |
|---|---|---|---|---|---|---|
| 1 | 11/19/04 | REVISION PER FDEP RAI NO. 1 | LEK | LEK | JHO | RJD |
| 2 | 05/13/05 | REVISION PER FDEP RAI NO. 2 | LEK | LEK | JHO | RJD |
| 3 | 9/13/05 | REVISION PER FDEP RAI NO. 3 | LEK | LEK | JHO | RJD |
| 4 | 12/02/05 | REVISION PER FDEP RAI NO. 4 | LEK | LEK | JHO | RJD |

DRAWING TITLE: DETAILS- 3

PROJECT TITLE: HARDEE COUNTY LANDFILL EXPANSION CONSTRUCTION PERMIT

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

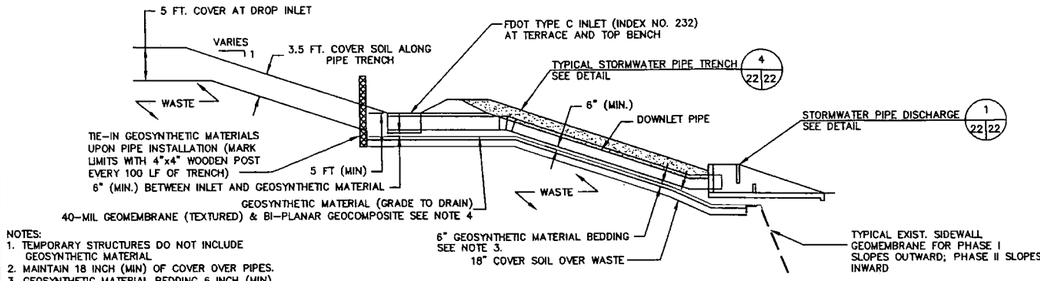
PROJ. NO. 09193033.09

CADD FILE: 993309DETL4

DATE: APRIL 2004

SCALE: NOT TO SCALE

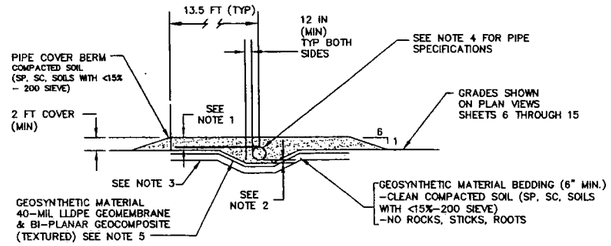
DRAWING NO. 21 of 27




NOTES:
1. TEMPORARY STRUCTURES DO NOT INCLUDE GEOSYNTHETIC MATERIAL
2. MAINTAIN 18 INCH (MIN) OF COVER OVER PIPES.
3. GEOSYNTHETIC MATERIAL BEDDING 6 INCH (MIN)
   - CLEAN COMPACTED SOIL (SP, SC, SOILS WITH <15%-200 SIEVE)
   - NO ROCKS, STICKS, ROOTS
4. PLACE ADDITIONAL PIECE OF GEOSYNTHETIC MATERIAL,40-MIL LLDPE GEOMEMBRANE (TEXTURED), OVER 40-MIL GEOMEMBRANE (TEXTURED) UNDER ALL PERMANENT STRUCTURE, INLETS, AND END TREATMENTS

## TYPICAL STORMWATER DOWNLET DETAIL 3 14 22

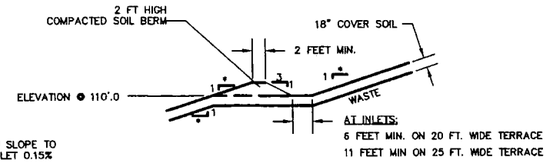
SCALE H 1" = 10'
V 1" = 10'




NOTE:
1. MAINTAIN 18 INCH (MIN) OF COMPACTED SOIL (SP, SC, SOILS WITH <15%-200 SIEVE) COVER OVER PIPES
2. MAINTAIN 6 INCH OF COMPACTED SOIL (SP, SC, SOILS WITH <15%-200 SIEVE) BETWEEN PIPE AND GEOSYNTHETIC MATERIALS
3. MAINTAIN 18 INCH COVER SOIL OVER WASTE
4. ALL STORMWATER PIPES-CORRUGATED PLASTIC PIPE SMOOTH INTERIOR ADS N-12 WITH WATERTIGHT COUPLINGS AND FITTINGS. INSTALL PIPE PER ASTM D 2321
5. PLACE ADDITIONAL PIECE OF GEOSYNTHETIC MATERIAL,40-MIL LLDPE GEOMEMBRANE (TEXTURED), OVER 40-MIL LLDPE GEOMEMBRANE (TEXTURED) UNDER ALL PERMANENT STRUCTURE, INLETS, AND END TREATMENTS

## TYPICAL STORMWATER TRENCH DETAIL 4 22 22

SCALE H 1" = 10'
V 1" = 10'

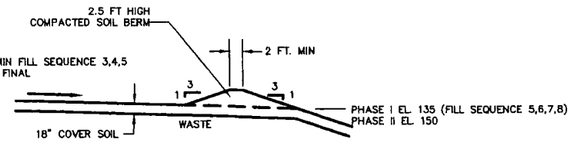



NOTE: MINIMUM SLOPE TO DROP INLET 0.15%

*3:1 NORTH EAST, & SOUTH SIDESLOPES

*3.5:1 WEST SIDESLOPES (PHASE I ONLY)

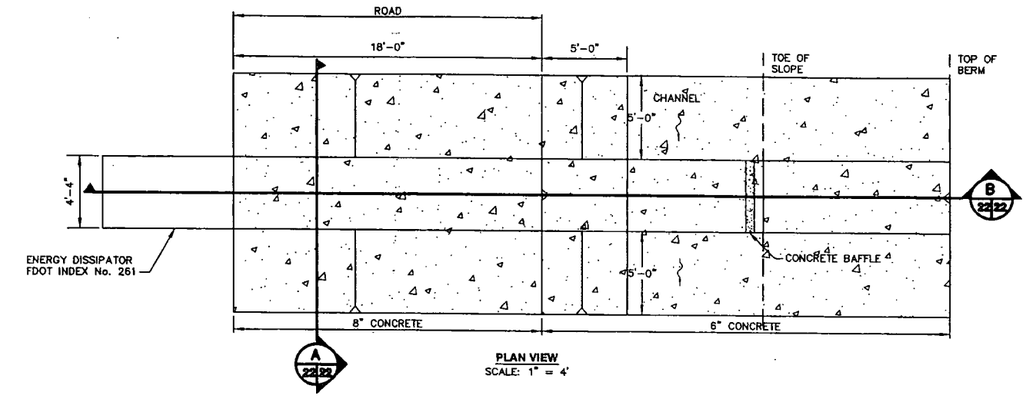
TERRACES EL 110.0




TOP EL 150.0

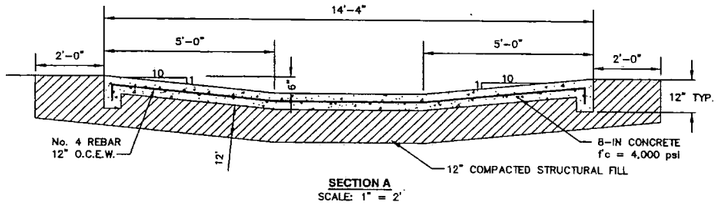
## TYPICAL STORMWATER BERM DETAILS 5 14 22

SCALE H 1" = 10'
V 1" = 10'



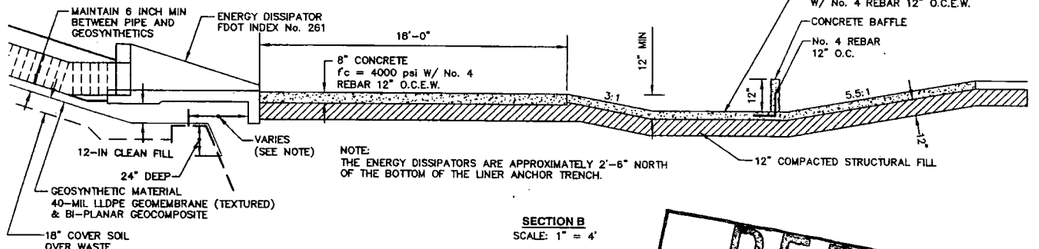

## PLAN VIEW

SCALE: 1" = 4'




## SECTION A

SCALE: 1" = 2'



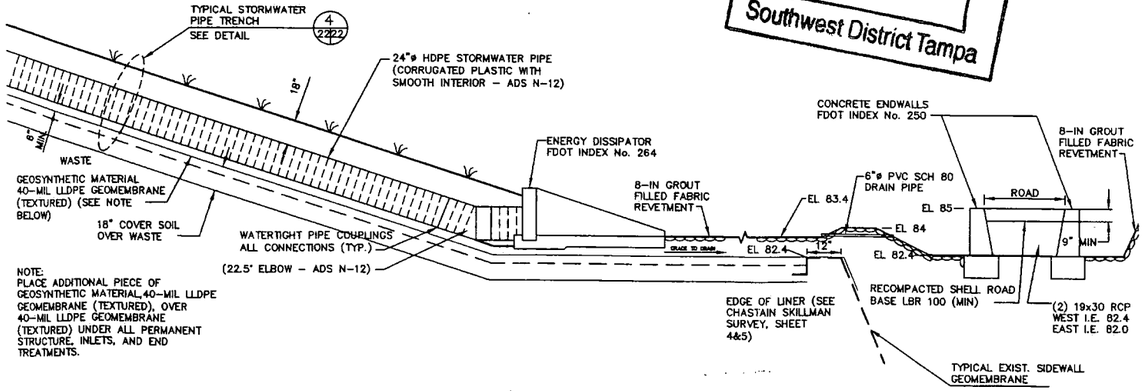

NOTE:
THE ENERGY DISSIPATORS ARE APPROXIMATELY 2'-6" NORTH OF THE BOTTOM OF THE LINER ANCHOR TRENCH.

## SECTION B

SCALE: 1" = 4'

## STORMWATER PIPE DISCHARGE DETAIL 1 22 14 22

NO SCALE




NOTE:
PLACE ADDITIONAL PIECE OF GEOSYNTHETIC MATERIAL,40-MIL LLDPE GEOMEMBRANE (TEXTURED), OVER 40-MIL LLDPE GEOMEMBRANE (TEXTURED) UNDER ALL PERMANENT STRUCTURE, INLETS, AND END TREATMENTS.

## SOUTHWEST STORMWATER DISCHARGE DETAIL 2 14 22

NO SCALE

D.E.P.
NOV 3 0 2005
Southwest District Tampa

JOSEPH H. ONDILL, P.E.
CERTIFICATE NO. 52049

| REV | DATE | DESCRIPTION | BY |
|---|---|---|---|

DRAWING TITLE: DETAILS - 4

PROJECT TITLE: HARDEE COUNTY LANDFILL EXPANSION CONSTRUCTION PERMIT

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

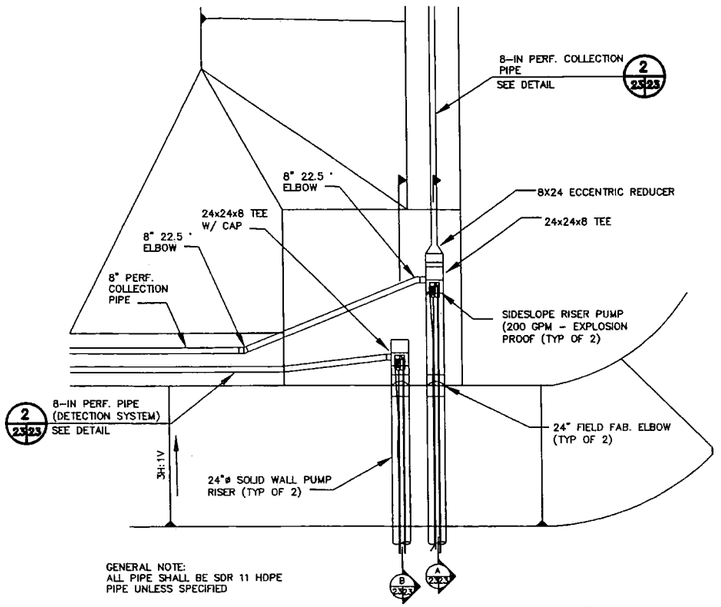
PROJ. NO. 09199033.09
DSK. DIR. JHO/LEK
O/A DWG BY: JHO/RJD
DWG. BY: SDA/JHO
DSK. JHO/LEK
APP. BY: RJD

CADD FILE: 993309DETL3

DATE: APRIL 2004

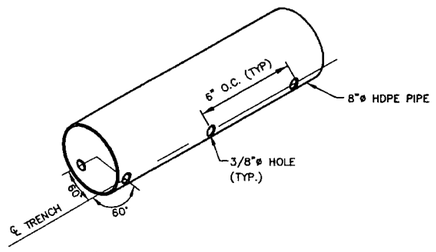
SCALE: AS SHOWN

DRAWING NO. 22 of 27




GENERAL NOTE:
ALL PIPE SHALL BE SDR 11 HDPE PIPE UNLESS SPECIFIED

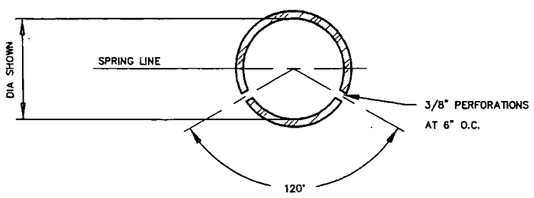
**PHASE II LEACHATE SUMP AND RISER DETAIL** 1 9/23
NOT TO SCALE




NOTES:

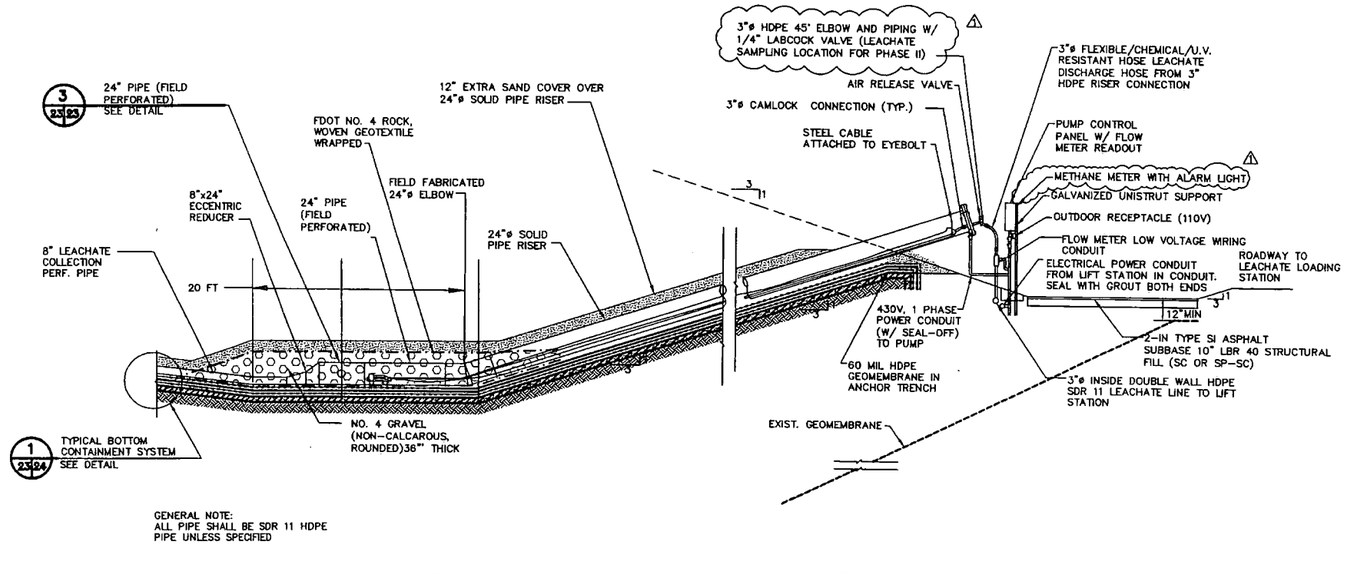
1. CONTRACTOR SHALL PLACE PERFORATED PIPE AS SHOWN (HOLES TOWARDS BOTTOM OF TRENCH).
2. PIPE SHALL HAVE SIX PERFORATIONS FOR EVERY ONE FOOT OF PIPE.

**COLLECTION/DETECTION PIPE PERFORATION DETAIL** 2 23/23
NOT TO SCALE



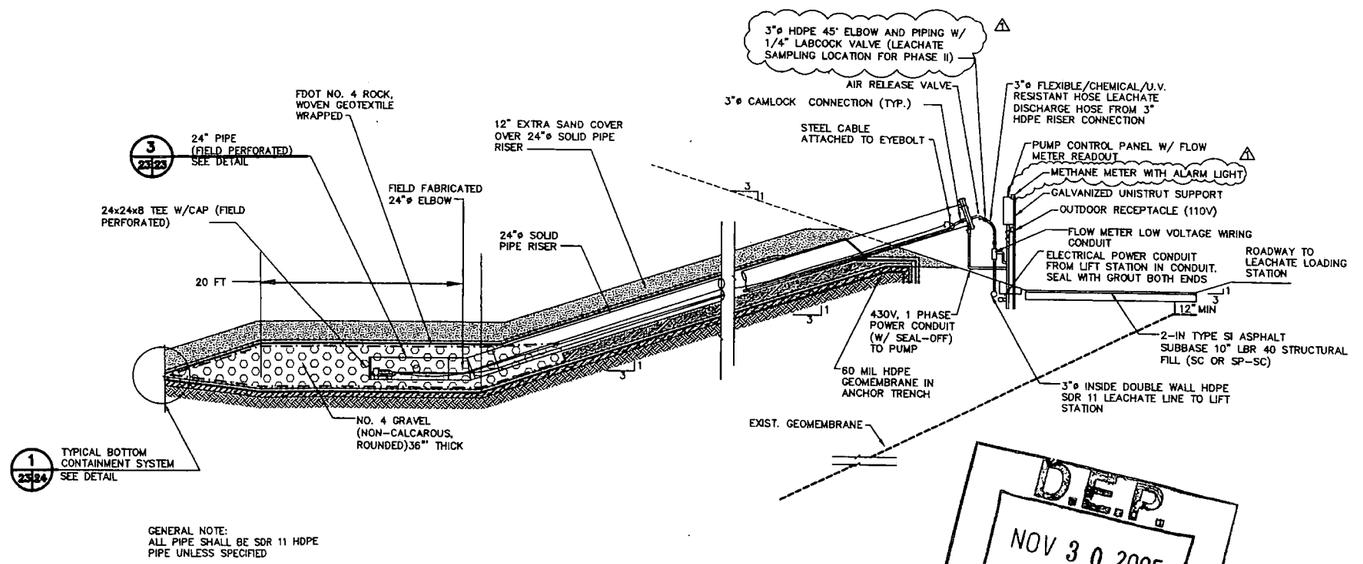

FIELD PIPE PERFORATION

**FIELD PERF. PIPE DETAIL** 3 23/23
NOT TO SCALE




GENERAL NOTE:
ALL PIPE SHALL BE SDR 11 HDPE PIPE UNLESS SPECIFIED

**LEACHATE COLLECTION PUMPING SECTION** A 23/23
NOT TO SCALE




GENERAL NOTE:
ALL PIPE SHALL BE SDR 11 HDPE PIPE UNLESS SPECIFIED

**LEACHATE DETECTION PUMPING SECTION** B 23/23
NOT TO SCALE

D.E.P.
NOV 30 2005
Southwest District Tampa

JOSEPH H. O'NEILL, P.E.
CERTIFICATE NO. 53049

| REV. | DATE | DESCRIPTION | CK. BY |
|---|---|---|---|
| 1 | 11/19/04 | REVISION PER FDEP RAI NO 1 | JHO |

DRAWING TITLE: DETAILS - 5

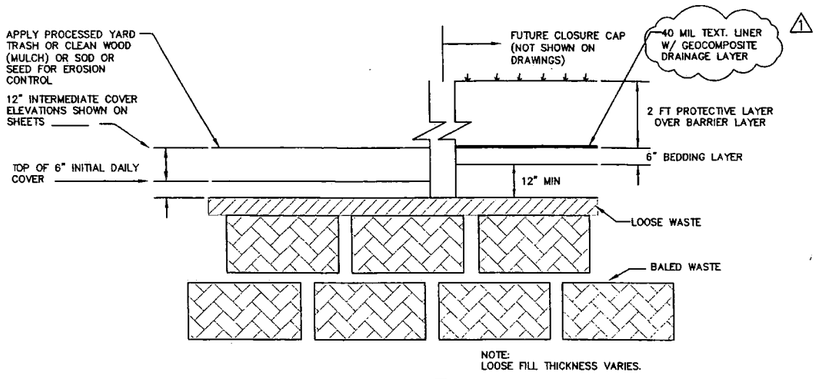
PROJECT TITLE: HARDEE COUNTY LANDFILL EXPANSION CONSTRUCTION PERMIT

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

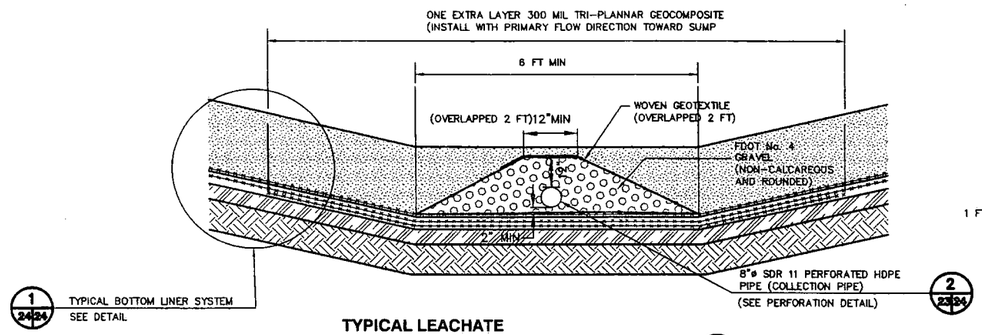
SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX (813) 623-6757
FL CERTIFICATION OF AUTHORIZATION No. 00000627

| PROJ. NO. | DWN. BY: | D/A 11/19/04 BY: JHO/RJD |
|---|---|---|
| 09I1993003.09 | SDV/JHO | APP. BY: RJD |
| DSN. BY: JHO/LEK | CHK. BY: JHO/LEK | |

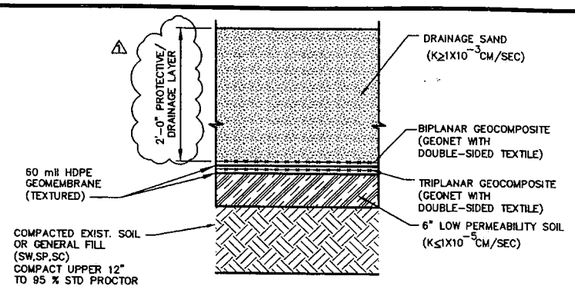
CADD FILE: 993309DETL1
DATE: APRIL 2004
SCALE: AS SHOWN
DRAWING NO.
**23** of 27



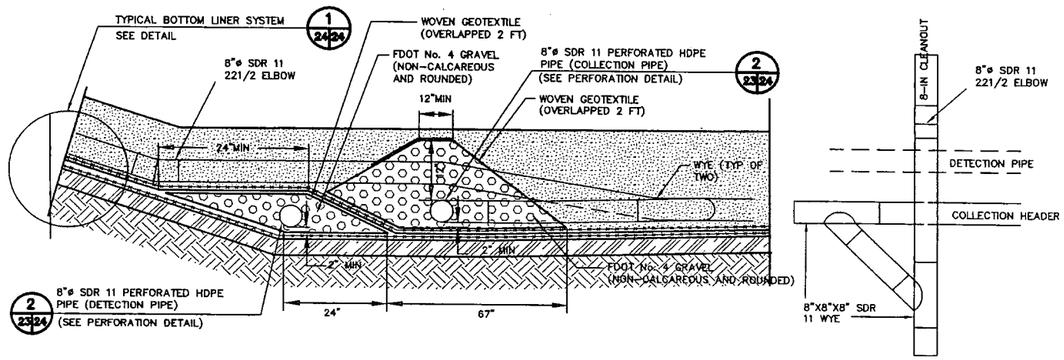

**TYPICAL COVER SYSTEM DETAIL** 4/24
NOT TO SCALE
18,17



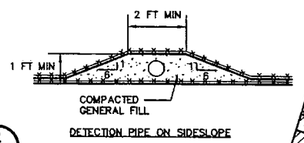

**TYPICAL LEACHATE COLLECTION/DETECTION TRENCH DETAIL** 5/24
NOT TO SCALE
9,12

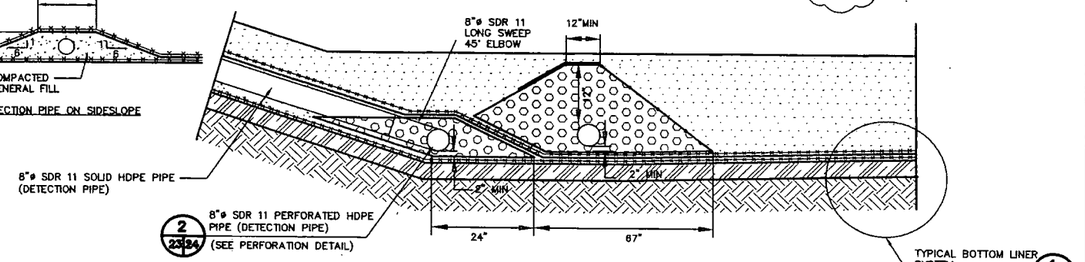



**BOTTOM LINER SYSTEM DETAIL** 1/24
NOT TO SCALE
16,17,23,24

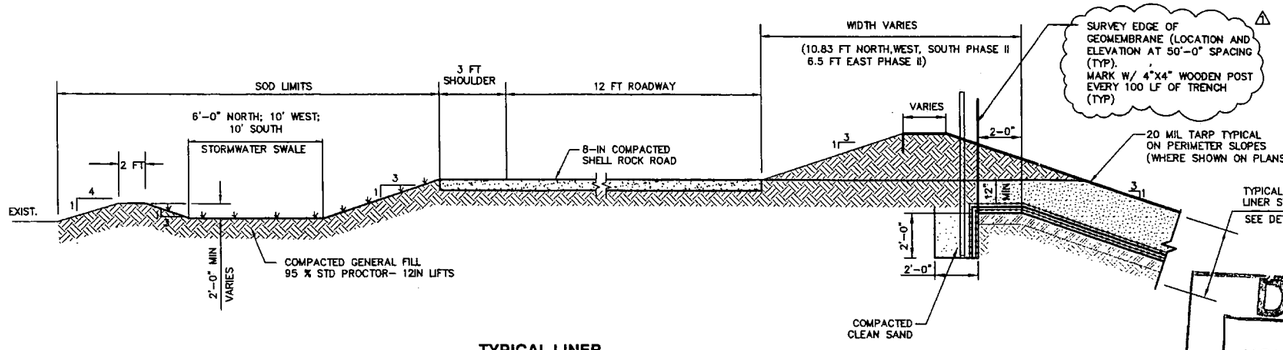



**EAST SIDESLOPE COLLECTION/DETECTION TRENCH DETAIL** 2/9,24
NOT TO SCALE

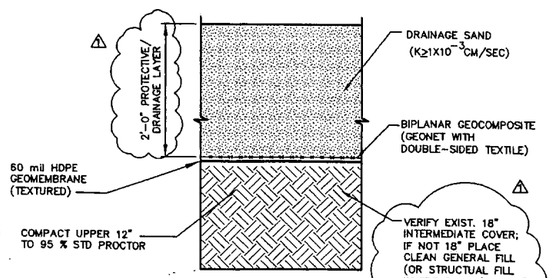



**EAST SIDESLOPE COLLECTION/DETECTION TRENCH DETAIL** 2A/9,24
NOT TO SCALE




**TYPICAL LINER TERMINATION DETAIL SIDE** 6/12,24
NOT TO SCALE




**PHASEI/PHASE II SIDESLOPE LINER SYSTEM DETAIL** 3/24
NOT TO SCALE
11,16,17,18

DEP
NOV 3 0 2005
Southwest District Tampa

| REV | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | 11/15/04 | REVISION PER FDEP RAI NO. 1 | JHO |
| 2 | 05/20/05 | REVISION PER FDEP RAI NO. 2 | JHO |

JOSEPH H. O'NEILL, P.E.
CERTIFICATE NO. 52049

DRAWING TITLE: **DETAILS - 6**

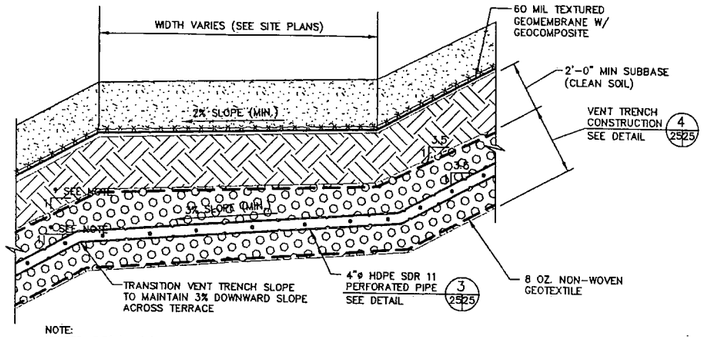
PROJECT TITLE: **HARDEE COUNTY LANDFILL EXPANSION CONSTRUCTION PERMIT**

CLIENT: **HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS**

**SCS ENGINEERS**
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO. 0233.09 | DWN. BY: JJC/JHO | CHK. BY: JHO/LEK | DES. BY: LEK/JHO | DSN. BY: LEK/JHO | D/A PWK BY: JHO/RJD | APP. BY: RJD

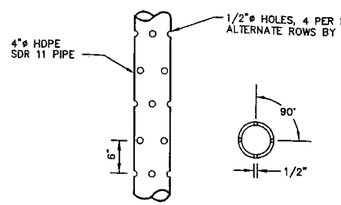
CADD FILE: 993309DETL5
DATE: APRIL 2004
SCALE: NOT TO SCALE
DRAWING NO. **24** of 27




NOTE:
SLOPES: 3.5(H): 1(V) WEST SIDE PHASE I
3.0(H): 1(V) SOUTH SIDE PHASE I

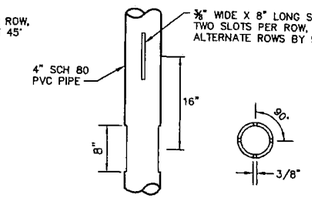
## TYP. HORIZONTAL LANDFILL GAS (LFG) VENT TRENCH TERRACE CROSSING DETAIL

NOT TO SCALE — 4/25 — 11,25




## PERFORTED PIPE DETAIL

NOT TO SCALE — 3/25 — 11,25,26




## SLOTTED PIPE DETAIL

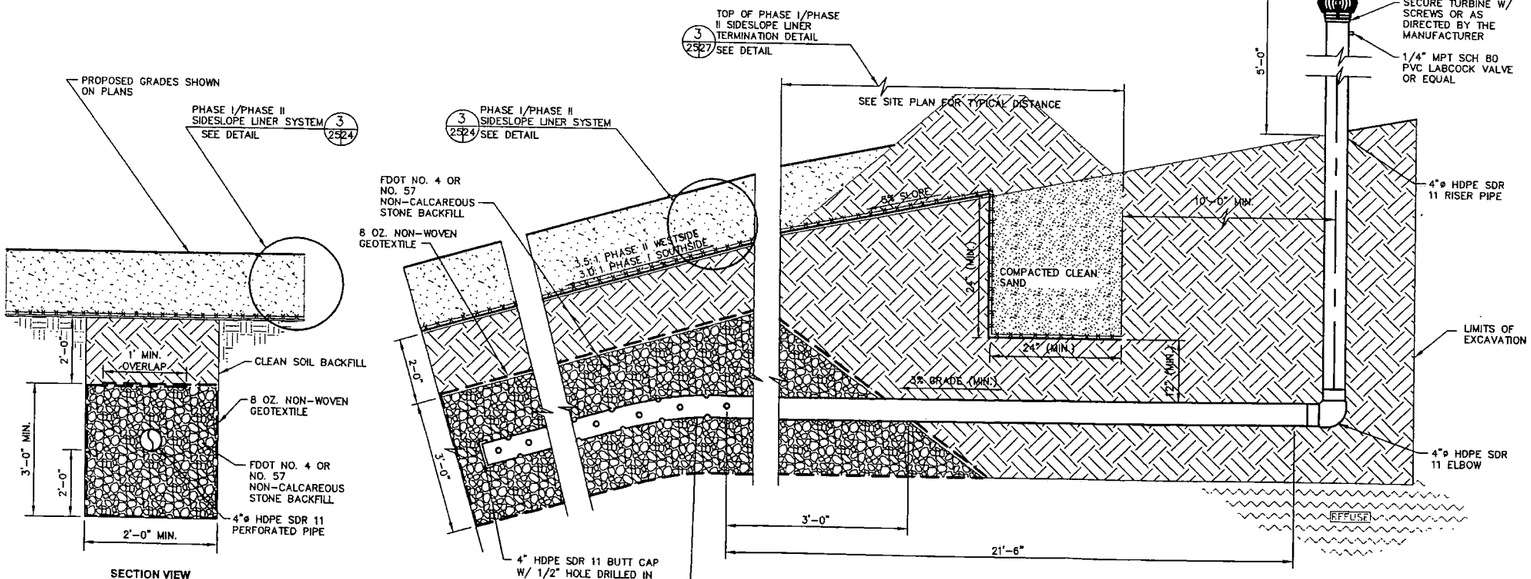
NOT TO SCALE — 2/25 — 9, 25

### HORIZONTAL LFG TRENCH VENT SCHEDULE

| HORIZ. VENT TRENCH NO. | APPROXIMATE COORDINATES, END OF VENT PIPE | | | |
|---|---|---|---|---|
| | UPSLOPE | | DOWNSLOPE | |
| | NORTHING (FT) | EASTING (FT) | NORTHING (FT) | EASTING (FT) |
| HV-1 | 1,177,298 | 726,468 | 1,177,298 | 726,305 |
| HV-2 | 1,177,150 | 726,502 | 1,177,145 | 726,257 |
| HV-3 | 1,176,993 | 726,507 | 1,176,993 | 726,304 |
| HV-4 | 1,176,863 | 726,501 | 1,176,746 | 726,268 |
| HV-4A | 1,176,772 | 726,320 | 1,176,593 | 726,263 |
| HV-5 | 1,176,824 | 726,538 | 1,176,653 | 726,540 |
| HV-6 | 1,176,825 | 726,700 | 1,176,652 | 726,700 |

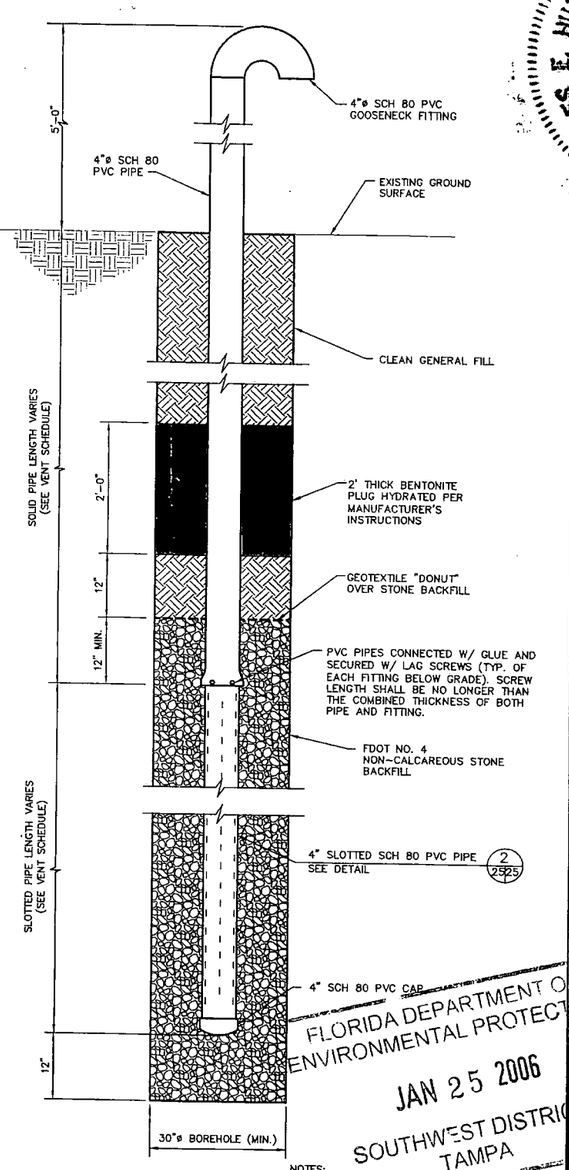
### VERTICAL LFG VENT SCHEDULE

| Well ID | Northing | Easting | Approx. Ground Surface (ft) | Approx. Depth of Refuse (ft) | Vent Depth (ft) | Slotted Pipe Length (ft) | Solid Pipe Length Below Grade (ft) | Solid Pipe Length Above Grade (ft) | Thickness of Gravel Pack (ft) |
|---|---|---|---|---|---|---|---|---|---|
| V-01 | 1,177,436 | 726,364 | 110 | 38 | 23 | 17 | 5 | 5 | 19 |
| V-02 | 1,177,469 | 726,509 | 110 | 38 | 23 | 17 | 5 | 5 | 19 |
| V-03 | 1,177,362 | 726,460 | 135 | 63 | 48 | 37 | 10 | 5 | 39 |
| V-04 | 1,177,337 | 726,580 | 136 | 64 | 49 | 38 | 10 | 5 | 40 |
| V-05 | 1,177,242 | 726,516 | 135 | 63 | 48 | 37 | 10 | 5 | 39 |
| V-06 | 1,177,238 | 726,692 | 123 | 51 | 36 | 25 | 10 | 5 | 27 |
| V-07 | 1,177,119 | 726,557 | 147 | 75 | 60 | 49 | 10 | 5 | 51 |
| V-08 | 1,177,105 | 726,726 | 117 | 45 | 30 | 19 | 10 | 5 | 21 |
| V-09 | 1,176,950 | 726,583 | 150 | 78 | 63 | 52 | 10 | 5 | 54 |
| V-10 | 1,176,941 | 726,823 | 110 | 38 | 23 | 17 | 5 | 5 | 19 |
| V-11 | 1,176,710 | 726,800 | 112 | 40 | 25 | 14 | 10 | 5 | 16 |
| Total | | | — | — | 428 | 322 | 95 | — | 344 |




## TYP. HORIZONTAL LANDFILL GAS (LFG) VENT TRENCH DETAIL

NOT TO SCALE — 5/11/25




NOTES:

1. WELL BOREHOLES SHALL TERMINATE A MINIMUM OF 15 FEET ABOVE THE BOTTOM OF REFUSE TO PROVIDE BUFFER FROM THE BOTTOM LINER SYSTEM AND LEACHATE COLLECTION SYSTEM.
2. DRILLER SHALL LOG REFUSE DESCRIPTION, TEMPERATURE, APPROX. MOISTURE CONTENT, PRESENCE OF LIQUID AND DEGREE OF DECOMPOSITION AT 10-FT. INTERVALS.
3. VERTICAL LFG VENTS DENOTED AS V-01 ON SHEET 11 (TYP)

## TYP. VERTICAL LANDFILL GAS (LFG) VENT DETAIL

NOT TO SCALE — 1/11/25

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
JAN 25 2006
SOUTHWEST DISTRICT
TAMPA

JAMES E. HILTON JR. LICENSE NO. 56555 STATE OF FLORIDA PROFESSIONAL ENGINEER

| REV | DATE | DESCRIPTION BY |
|---|---|---|
| 1 | 05/20/05 | REVISION PER FDEP RAI NO 2 JHC |

DRAWING TITLE: DETAILS- 7

PROJECT TITLE: HARDEE COUNTY LANDFILL EXPANSION CONSTRUCTION PERMIT

HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

CLIENT

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
3617 J.D.A. HWY, 301 NORTH, SUITE 700, TAMPA, FL 33619
PH: (813) 621-0080 FAX: (813) 623-0594
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00000407

| PROJ. NO. | DWG. BY | DATE | APP. BY |
|---|---|---|---|
| 09199033.09 | XRH/JHO | 3/24 ### 04 | RJD |
| DSN. BY | CHK. BY | | |
| DHP | DHP | | |

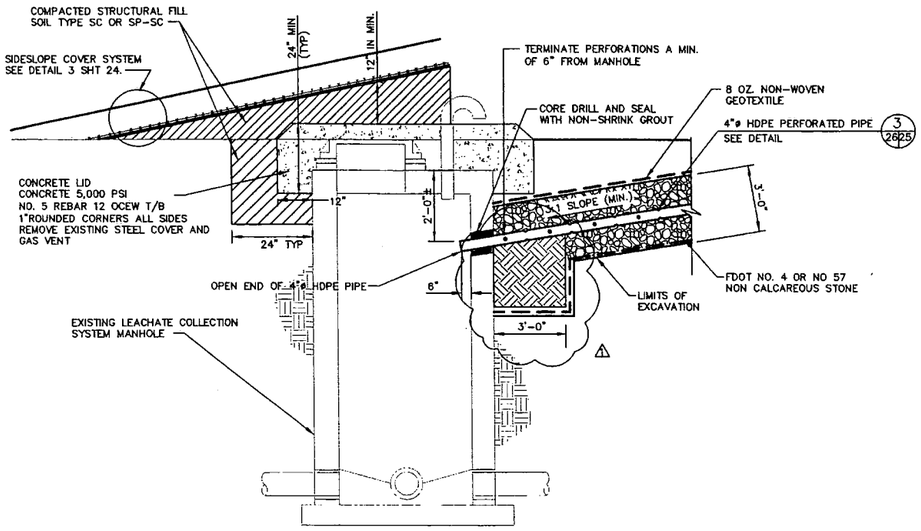
CADD FILE: 993309LFGDETL

DATE: APRIL 2004

SCALE: NOT TO SCALE

DRAWING NO. 25 of 27

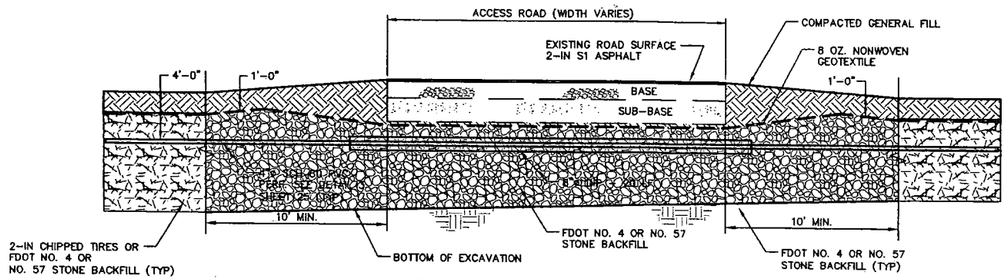
BEST AVAILABLE COPY




NOTES:

1. MAINTAIN A MIN. 3% SLOPE ON PERFORATED VENT PIPE TO ALLOW DRAINAGE OF CONDENSATE INTO THE MANHOLE.
2. AS-BUILT CONDITIONS OF EXISTING MANHOLE OBTAINED FROM DRAWING NO. 4 OF 8, RECORD DRAWINGS FOR HARDEE COUNTY SANITARY LANDFILL IMPROVEMENTS DATED 7/12/88 BY BRILEY, WILD & ASSOCIATES, INC.

**TYP. VENT TRENCH TIE-IN TO MANHOLE DETAIL**
NOT TO SCALE — 3 / 11|26




NOTES:

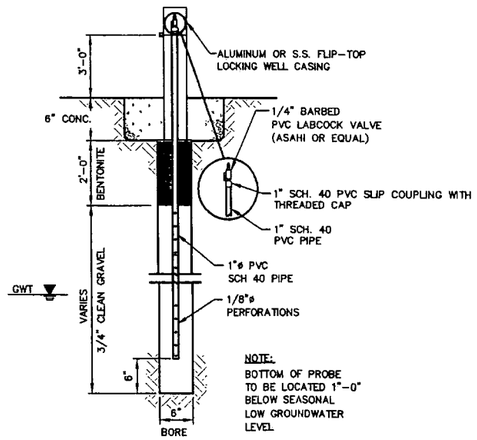
1. CUT ASPHALT WITH SAW TO MATCH TRENCH WIDTH PRIOR TO EXCAVATION.
2. CONTRACTOR SHALL RESTORE ACCESS ROAD TO MATCH ORIGINAL CONDITIONS.
3. CRUSHED STONE BACKFILL SHALL BE USED UNDER THE ROAD, AND EXTENDING A MINIMUM OF 10' TO EACH SIDE OF THE EDGE OF PAVEMENT.

**GAS CUT-OFF TRENCH ROAD CROSSING DETAIL**
NOT TO SCALE — 1 / 11|26

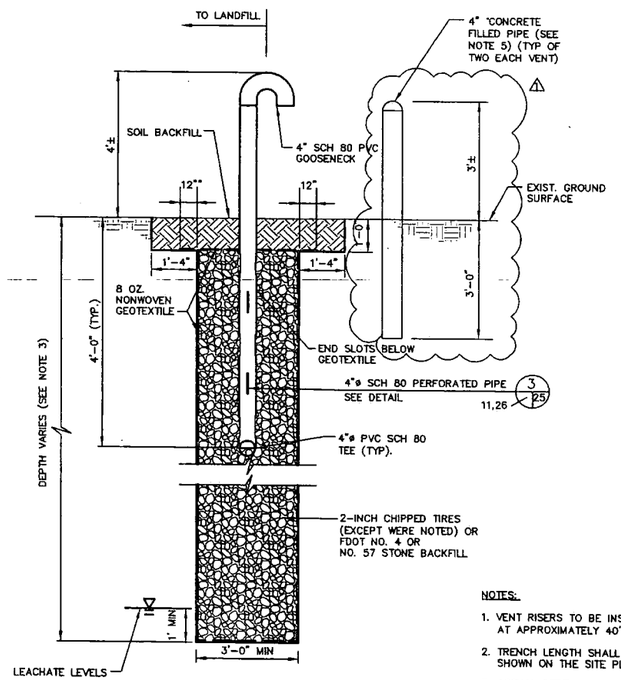
RECEIVED
NOV 30 2005
Southwest District Tampa

**LANDFILL GAS MONITORING PROBE SCHEDULE**

| Probe ID | Northing | Easting | Approx. Ground Surface | Seasonal Low Groundwater Table Elevation | Well Depth | Slotted Pipe Length | Solid Pipe Length Below Grade | Solid Pipe Length Above Grade |
|---|---|---|---|---|---|---|---|---|
| GP-4R | 1177308.198 | 725945.511 | 84.0 | 76.46 | 8.54 | 6.04 | 2.5 | 3 |
| GP-5R | 1177003.600 | 725947.650 | 85.0 | 76.46 | 9.54 | 7.04 | 2.5 | 3 |
| GP-6R | 1176702.212 | 725946.528 | 84.5 | 75.58 | 9.92 | 7.42 | 2.5 | 3 |
| GP-7R | 1176402.212 | 725946.528 | 84.0 | 75.58 | 9.42 | 6.92 | 2.5 | 3 |
| GP-8R | 1176099.873 | 725949.536 | 84.0 | 74.41 | 10.59 | 8.09 | 2.5 | 3 |
| GP-12 | 1175703.500 | 726500.252 | 83.5 | 76.04 | 8.46 | 5.96 | 2.5 | 3 |
| GP-13 | 1175699.593 | 726791.575 | 82.0 | 75.44 | 7.56 | 5.06 | 2.5 | 3 |




**LANDFILL GAS MONITORING PROBE (GP) DETAIL**
NOT TO SCALE — 4 / 8,9 | 26




NOTES:

1. VENT RISERS TO BE INSTALLED AT APPROXIMATELY 40' INTERVALS.
2. TRENCH LENGTH SHALL BE AS SHOWN ON THE SITE PLAN.
3. ACTUAL DEPTH VARIES DEPENDING ON GROUND SURFACE AND GROUNDWATER ELEVATION.
4. STONE BACKFILL FOR VENT TRENCH NEED NOT BE NONCALCAREOUS
5. VENT PIPES SHALL BE INSTALLED A MINIMUM OF 10' FROM EDGE OF ROAD AND PROTECTED WITH THREE CONCRETE FILLED BOLLARDS SPACED EQUIDISTANT FROM VENT PIPE.

**GAS CUT-OFF TRENCH VENT DETAIL**
NOT TO SCALE — 2 / 11|26

| REV | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | 11/16/04 | REVISION PER FDEP RAI NO. 1 | JHO |

JOSEPH H. ONELL, P.E. CERTIFICATE NO. 052049

DRAWING TITLE: DETAILS - 8

PROJECT TITLE: HARDEE COUNTY LANDFILL EXPANSION CONSTRUCTION PERMIT

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PHONE: 813-621-0080 FAX: 813-621-0993
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

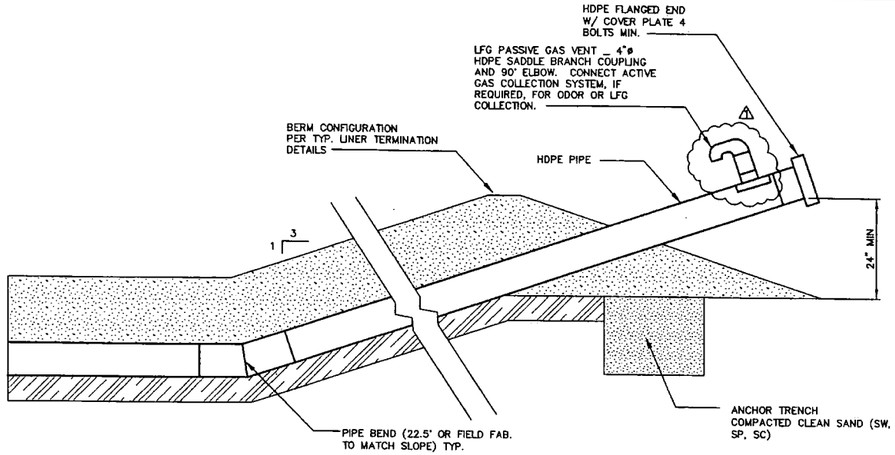
PROJ. NO. 09199033.09 | DSN. BY: JHO | D/A BY: JHO | APP. BY: RJD | DSC. BY: DMP | CHK. BY: DMP

CADD FILE: 993309LFGDETL

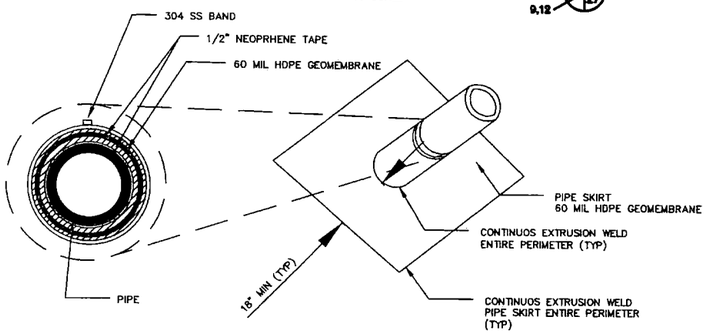
DATE: APRIL 2004

SCALE: NOT TO SCALE

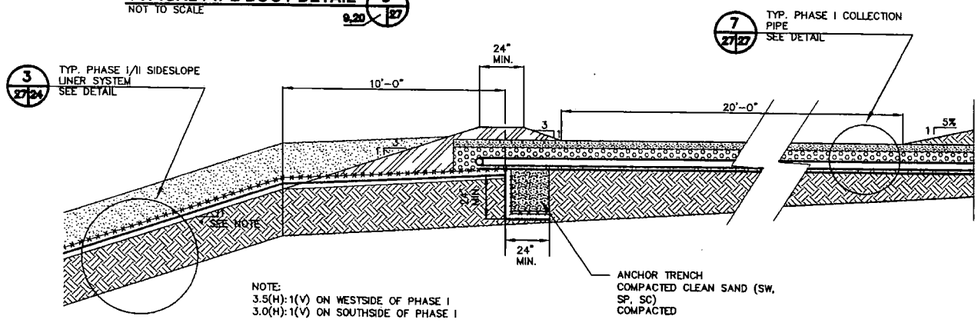
DRAWING NO. 26 of 27



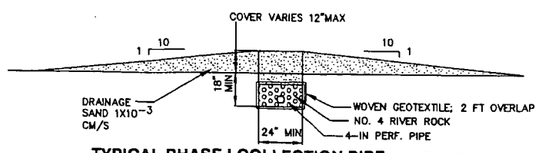

**TYPICAL CLEANOUT DETAIL** 4/27
NOT TO SCALE
9,12



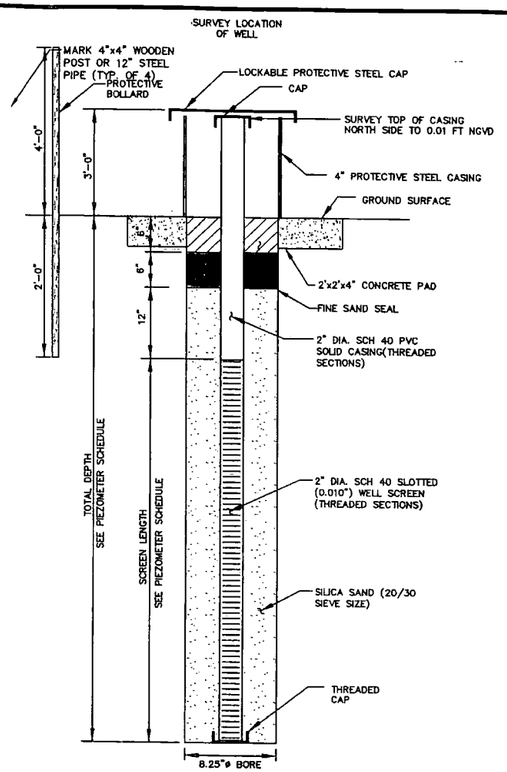

**TYPICAL PIPE BOOT DETAIL** 5/27
NOT TO SCALE
9,20




**TYPICAL SIDESLOPE DISCHARGE PIPE DETAIL** 6/12/27 ⚠
SCALE H 1"=3'
V 1"=3'




**TYPICAL PHASE I COLLECTION PIPE DETAIL** 7/27 ⚠
SCALE H 1"=3'
V 1"=3'
11, 27

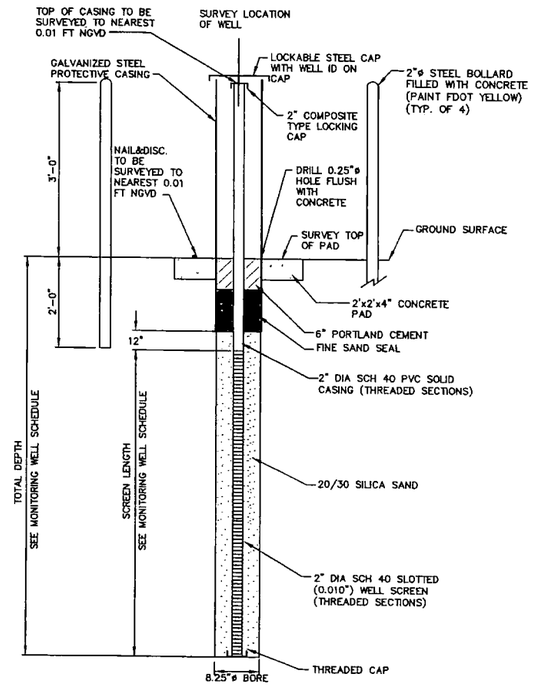



PIEZOMETER SCHEDULE

| PHASE II SECTION I | GROUND ELEV. (FT NGVD) | TOTAL DEPTH (FT BLS) | SCREEN LENGTH (FT) | PHASE II SECTION I | GROUND ELEV. (FT NGVD) | TOTAL DEPTH (FT BLS) | SCREEN LENGTH (FT) |
|---|---|---|---|---|---|---|---|
| P-16A | 92.0 | 20.0 | 18.0 | P-20 | 83.6 | 12.0 | 10.0 |
| N 1176620.26 | | | | N 1177500.25 | | | |
| E 726668.38 | | | | E 726911.81 | | | |
| P-17 | 85.2 | 12.0 | 10.0 | P-21 | 81.3 | 12.0 | 10.0 |
| N 1177684.11 | | | | N 1176990.58 | | | |
| E 726216.40 | | | | E 727172.89 | | | |
| P-18 | 84.1 | 12.0 | 10.0 | P-22 | 84.2 | 12.0 | 10.0 |
| N 1177594.04 | | | | N 1176018.54 | | | |
| E 725949.92 | | | | E 726026.06 | | | |
| P-19 | 84.7 | 12.0 | 10.0 | P-23 | 83.7 | 12.0 | 10.0 |
| N 1177677.31 | | | | N 1175721.40 | | | |
| E 726945.79 | | | | E 726034.29 | | | |

NOTE: P-16A TO BE INSTALLED IN THROUGH WASTE MATERIAL FOR RECORDING LEACHATE LEVELS

**TYPICAL PIEZOMETER DETAIL** 2/27
NOT TO SCALE
8,9

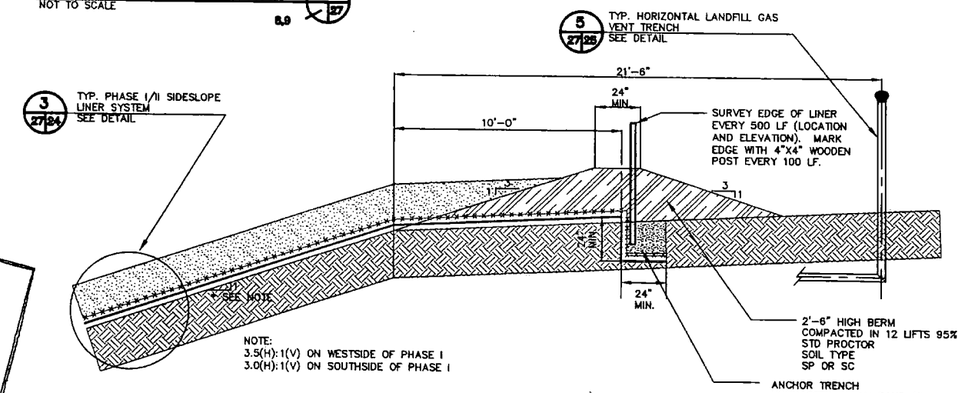



MONITORING WELL SCHEDULE

| PHASE II SECTION I | GROUND ELEV. (FT NGVD) | TOTAL DEPTH (FT BLS) | SCREEN LENGTH (FT) | PHASE II SECTION II | GROUND ELEV. (FT NGVD) | TOTAL DEPTH (FT BLS) | SCREEN LENGTH (FT) |
|---|---|---|---|---|---|---|---|
| MW-10 | 85.0 | 12.0 | 10.0 | MW-13 | 84.4 | 17.0 | 15.0 ⚠ |
| N 1176267.80 | | | | N 1176217.55 | | | |
| E 727052.20 | | | | E 726057.23 | | | |
| MW-11 | 83.1 | 12.0 | 10.0 | MW-14 | 85.5 | 12.0 | 10.0 |
| N 1176262.58 | | | | N 1176947.99 | | | |
| E 726938.94 | | | | E 726007.59 | | | |
| MW-12 | 85.3 | 17.0 | 15.0 | MW-15 | 84.0 | 12.0 | 10.0 |
| N 1176188.90 | | | | N 1177484.03 | | | |
| E 726392.62 | | | | E 726010.15 | | | |

⚠

**TYPICAL MONITORING WELL DETAIL** 1/27
NOT TO SCALE
8,12




**TYPICAL TOP OF PHASE I/II SIDESLOPE LINER TERMINATION DETAIL** 3/11/27
SCALE H 1"=3'
V 1"=3'

DEP
NOV 3 0 2005
Southwest District Tampa

JOSEPH H. O'NEIL, P.E.
CERTIFICATE NO. 52049

| REV | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | 11/19/04 | REVISION PER FDEP RAI NO. 1 | JHO |
| 2 | 05/20/05 | REVISION PER FDEP RAI NO. 2 | JHO |

DRAWING TITLE: DETAILS - 9

PROJECT TITLE: HARDEE COUNTY LANDFILL EXPANSION CONSTRUCTION PERMIT

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO. 09195033.09
DSN. BY: SDA/JHO
DWN. BY: SDA/JHO
CHK. BY: JHO/LEK
O/A RVW BY: JHO/RJD
APP. BY: RJD

CADD FILE: 993309DETL2A
DATE: APRIL 2004
SCALE: AS SHOWN
DRAWING NO. 27 of 27

PROPERTY LIMIT (TYP)

PROTECT MONITORING WELLS DURING CONSTRUCTION (TYP)

PHASE II SECTION II (FUTURE CONSTRUCTION)

TYP. STORMWATER BERMS (5/22 OP1) SEE DETAIL

TYP. STORMWATER PIPE DISCHARGE (1/22 OP1) SEE DETAIL

TOP OF DRAINAGE SAND ELEVATIONS (TYP)

PHASE I/II EDGE OF LINER (4/18 OP1) SEE DETAIL

3 FT HIGH COMPACTED RAIN SEPARATION BERM (COVER WITH RAINTARP) 3:1 SIDESLOPE, 2 FT TOP WIDTH

EXIST. LANDFILL (PHASE I)

TYP. STORMWATER DOWNLET (3/22 OP1) SEE DETAIL

SOUTH EDGE OF LINER (1/18 OP1) SEE DETAIL

PHASE II SECTION I TOTAL FILL APPROX. 2 AC

ACTIVE FILL AREA

PUMP NON-CONTACT RAINWATER INTO PERIMETER DITCHES

30 FT CRUSHED SHELL ROAD; 12-IN THICK; 3:1 SIDESLOPE

19X30 ERCP CLASS III; MES
NORTH END I.E. 85.00
SOUTH END I.E 84.60
INSTALL PER FDOT INDEX 205

TYP. WORKING FACE BERM; 3 FT HIGH; 2:1 SIDESLOPE, 2 FT TOP WIDTH; COMPACTED GENERAL FILL

EAST EDGE OF LINER (3/18 OP1) SEE DETAIL

WETLAND DISCHARGE STRUCTURE (4/21 OP1) SEE DETAIL

REMOVE EXIST. PIPE AND STRUCTURE

LEGEND
- TWO-WAY TRAFFIC FLOW
- ONE-WAY TRAFFIC FLOW
- FILL PROGRESSION DIRECTION
- SURFACE RUNOFF FLOW DIRECTION

N

60 0 60 120
SCALE IN FEET

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
MAY 23 2005
SOUTHWEST DISTRICT
TAMPA

JOSEPH H. ONEILL, P.E.
CERTIFICATE NO. 52049

| REV | DATE | DESCRIPTION |
|---|---|---|
| | | |

DRAWING TITLE: PHASE II - SECTION I FILL SEQUENCE NO. 1

PROJECT TITLE: HARDEE COUNTY LANDFILL OPERATIONS PLAN

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS


SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892


| PROJ NO. | DSN BY | DWN BY | CHK BY | QA/QC BY | APP BY |
|---|---|---|---|---|---|
| 09I9033.09 | CHO | JHO | JHO | JHO/CEH | CEH |

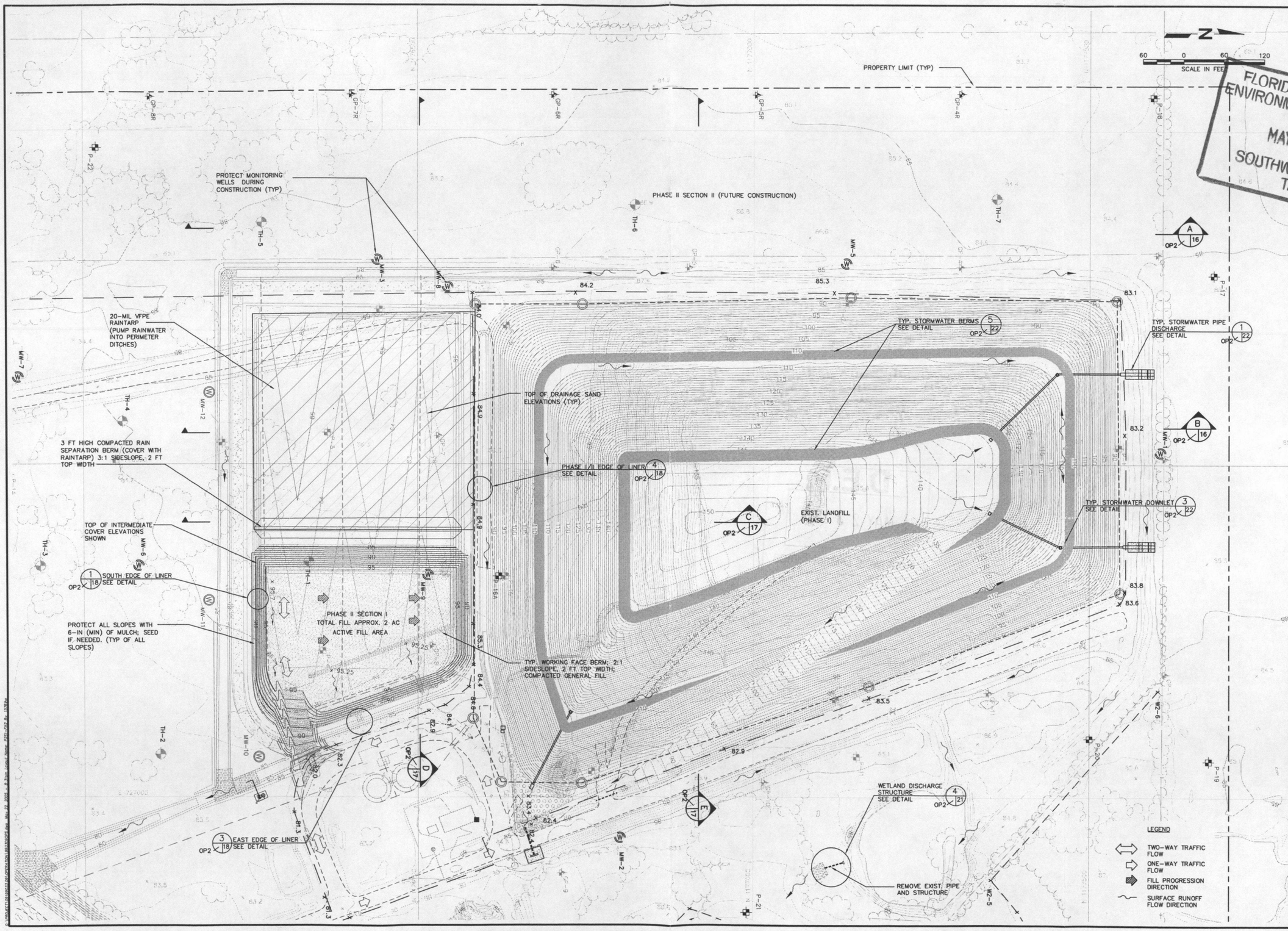
CADD FILE: 9933090PS

DATE: MAY 2005

SCALE: AS SHOWN

DRAWING NO. OP 1 of 27

D.E.P.
MAY 2 3 2005
Southwest District Tampa




FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
MAY 23 2005
SOUTHWEST DISTRICT
TAMPA

JOSEPH H. O'NEILL, P.E.
CERTIFICATE NO. 52049

| REV | DATE | DESCRIPTION |
|---|---|---|
| | | |

DRAWING TITLE: PHASE II - SECTION I FILL SEQUENCE NO. 2

PROJECT TITLE: HARDEE COUNTY LANDFILL OPERATIONS PLAN

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO. 09199033.09 | DSN. BY: JHO | DWN. BY: JHO | CHK. BY: JHO | Q/A RVW BY: JHO/CEH | APP. BY: CEH

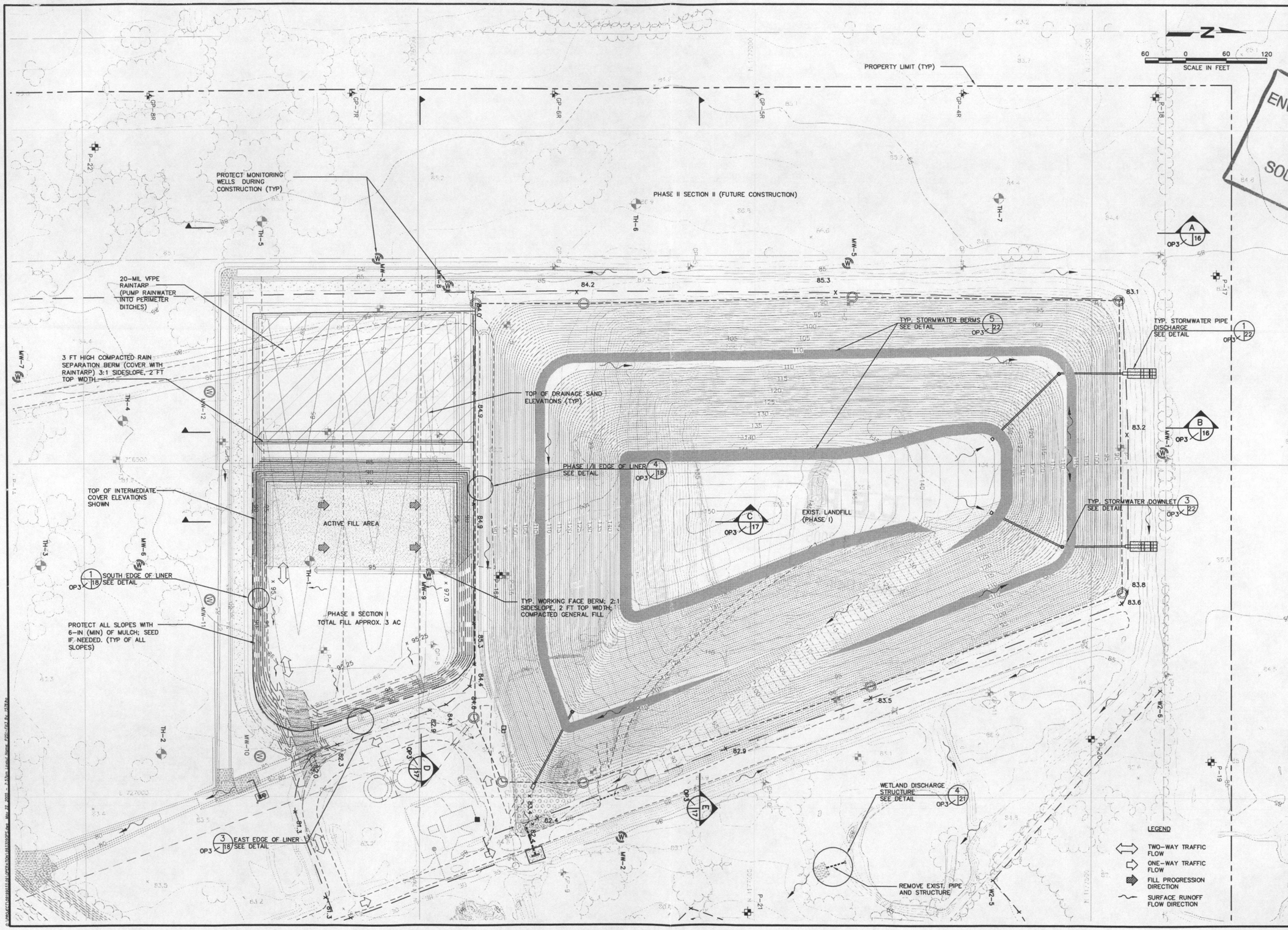
CADD FILE: 9933090PS

DATE: MAY 2005

SCALE: AS SHOWN

DRAWING NO. OP 2 of 27

D.E.P.
MAY 2 3 2005
Southwest District Tampa




FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
MAY 23 2005
SOUTHWEST DISTRICT
TAMPA

JOSEPH H. O'NEILL, P.E.
CERTIFICATE NO. 52049

| REV | DATE | DESCRIPTION |
|---|---|---|
| | | |

DRAWING TITLE: PHASE II - SECTION I FILL SEQUENCE NO. 3

PROJECT TITLE: HARDEE COUNTY LANDFILL OPERATIONS PLAN

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO. 09199033.09 | DSN. BY: JHO | DWN. BY: JHO | CHK. BY: JHO | Q/A RVW BY: JHO/CEH | APP. BY: CEH

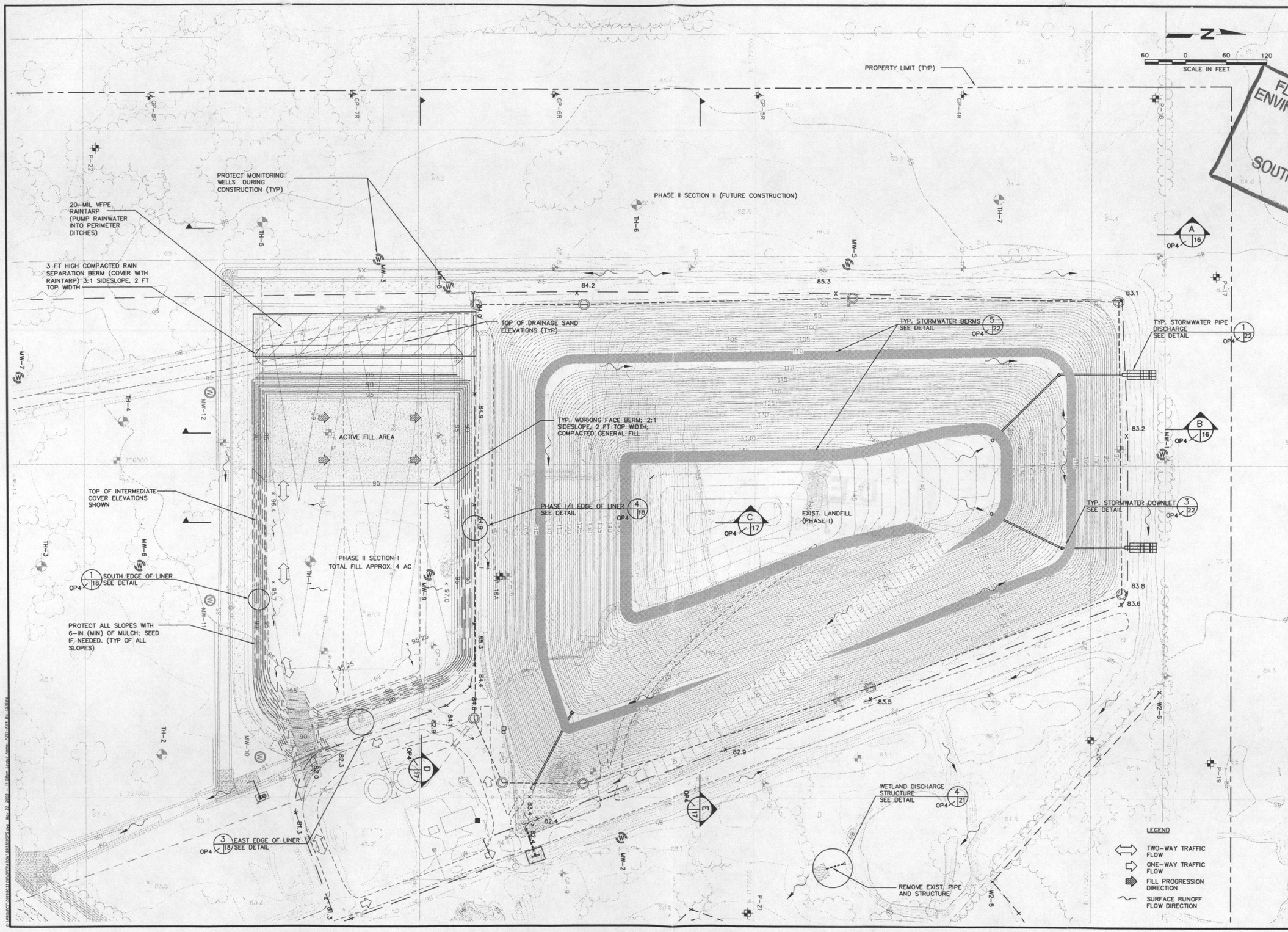
CADD FILE: 993309OPS

DATE: MAY 2005

SCALE: AS SHOWN

DRAWING NO. OP 3 of 27

D.E.P.
MAY 2 3 2005
Southwest District Tampa




FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
SOUTHWEST DISTRICT
TAMPA

JOSEPH H. O'NEILL, P.E.
CERTIFICATE NO. 52049

| REV | DATE | DESCRIPTION |
|---|---|---|

DRAWING TITLE: PHASE II - SECTION I FILL SEQUENCE NO. 4

PROJECT TITLE: HARDEE COUNTY LANDFILL OPERATIONS PLAN

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS


SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892


PROJ. NO. 09199033.09 | DSN. BY: JHO | DWN. BY: JHO | CHK. BY: JHO | Q/A RVW BY: JHO/CEH | APP. BY: CEH

CADD FILE: 9933090PS

DATE: MAY 2005

SCALE: AS SHOWN

DRAWING NO. OP 4 of 27

D.E.P.
MAY 23 2005
Southwest District Tampa

PROPERTY LIMIT (TYP)

PHASE II SECTION II (FUTURE CONSTRUCTION)

PROTECT MONITORING WELLS DURING CONSTRUCTION (TYP)

20-MIL VFPE RAINTARP (PUMP RAINWATER INTO PERIMETER DITCHES)

ACTIVE FILL AREA

TOP OF DRAINAGE SAND ELEVATIONS (TYP)

TOP OF INTERMEDIATE COVER ELEVATIONS SHOWN

PHASE II SECTION I TOTAL FILL APPROX. 4.3 AC

1 / OP5 / 18 SOUTH EDGE OF LINER SEE DETAIL

PROTECT ALL SLOPES WITH 6-IN (MIN) OF MULCH; SEED IF NEEDED. (TYP OF ALL SLOPES)

3 / OP5 / 18 EAST EDGE OF LINER SEE DETAIL

TYP. WORKING FACE BERM; 2:1 SIDESLOPE, 2 FT TOP WIDTH; COMPACTED GENERAL FILL

PHASE I/II EDGE OF LINER 4 / OP5 / 18 SEE DETAIL

EXIST. LANDFILL (PHASE I)

TYP. STORMWATER BERMS 5 / OP5 / 22 SEE DETAIL

TYP. STORMWATER PIPE DISCHARGE 1 / OP5 / 22 SEE DETAIL

TYP. STORMWATER DOWNLET 3 / OP5 / 22 SEE DETAIL

WETLAND DISCHARGE STRUCTURE 4 / OP5 / 21 SEE DETAIL

REMOVE EXIST. PIPE AND STRUCTURE

A / OP5 / 16

B / OP5 / 16

C / OP5 / 17

D / OP5 / 17

E / OP5 / 17

MW-1 MW-2 MW-3 MW-5 MW-6 MW-7 MW-9 MW-10 MW-11 MW-12

TH-1 TH-2 TH-3 TH-4 TH-5 TH-6 TH-7

GP-4R GP-5R GP-6R GP-7R GP-8R

P-17 P-18 P-18A P-19 P-20 P-21 P-22

Z

60 0 60 120
SCALE IN FEET

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
MAY 23 2005
SOUTHWEST DISTRICT
TAMPA

JOSEPH H. O'NEIL, P.E.
CERTIFICATE NO. 52049

| REV | DESCRIPTION | DATE |
|---|---|---|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

DRAWING TITLE: PHASE II - SECTION I FILL SEQUENCE NO. 5

PROJECT TITLE: HARDEE COUNTY LANDFILL OPERATIONS PLAN

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS

**SCS ENGINEERS**
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO. 09033.09 | DWN. BY: JHO | CHK. BY: JHO | QA/QC BY: CEH | APP. BY: CEH

CADD FILE: 9933090PS

DATE: MAY 2005

SCALE: AS SHOWN

DRAWING NO. **OP 5** of 27

D.E.P.
MAY 23 2005
Southwest District Tampa

N

60 0 60 120
SCALE IN FEET

PROPERTY LIMIT (TYP)

PROTECT MONITORING WELLS DURING CONSTRUCTION (TYP)

20-MIL VFPE RAINTARP (PUMP RAINWATER INTO PERIMETER DITCHES)

PHASE II SECTION II (FUTURE CONSTRUCTION)

ACTIVE FILL AREA

TYP. WORKING FACE BERM; 2:1 SIDESLOPE, 2 FT TOP WIDTH; COMPACTED GENERAL FILL

TYP. STORMWATER BERMS SEE DETAIL 5/22 OP6

TYP. STORMWATER PIPE DISCHARGE SEE DETAIL 1/22 OP6

TYP. STORMWATER DOWNLET SEE DETAIL 3/22 OP6

TOP OF DRAINAGE SAND ELEVATIONS (TYP)

TOP OF INTERMEDIATE COVER ELEVATIONS SHOWN

PHASE II SECTION I TOTAL FILL APPROX. 4.5 AC

PHASE I/II EDGE OF LINER SEE DETAIL 4/16 OP5

EXIST. LANDFILL (PHASE I)

1/18 OP6 SOUTH EDGE OF LINER SEE DETAIL

3/18 OP6 EAST EDGE OF LINER SEE DETAIL

PROTECT ALL SLOPES WITH 6-IN (MIN) OF MULCH; SEED IF NEEDED. (TYP OF ALL SLOPES)

WETLAND DISCHARGE STRUCTURE SEE DETAIL 4/21 OP6

REMOVE EXIST. PIPE AND STRUCTURE

A 16 OP6 · B 16 OP6 · C 17 OP6 · D 17 OP6 · E 17 OP6

LEGEND

- TWO-WAY TRAFFIC FLOW
- ONE-WAY TRAFFIC FLOW
- FILL PROGRESSION DIRECTION
- SURFACE RUNOFF FLOW DIRECTION

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
MAY 23 2005
SOUTHWEST DISTRICT
TAMPA

JOSEPH H. O'NEILL, P.E.
CERTIFICATE NO. 52049

| REV | DATE | DESCRIPTION |
|---|---|---|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

DRAWING TITLE: PHASE II - SECTION I FILL SEQUENCE NO. 6

PROJECT TITLE: HARDEE COUNTY LANDFILL OPERATIONS PLAN

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS


SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892


PROJ. NO. 09033.09 | DWN. BY: JHO | CHK. BY: JHO | Q/A REV. BY: CEH | APP. BY: CEH

CADD FILE: 9933090PS

DATE: MAY 2005

SCALE: AS SHOWN

DRAWING NO. OP 6 of 27

D.E.P.
MAY 23 2005
Southwest District Tampa

PROPERTY LIMIT (TYP)

PHASE II SECTION II (FUTURE CONSTRUCTION)

PROTECT MONITORING WELLS DURING CONSTRUCTION (TYP)

20-MIL VFPE RAINTARP (PUMP RAINWATER INTO PERIMETER DITCHES)

TOP OF DRAINAGE SAND ELEVATIONS (TYP)

25 FT OFFSET (TERRACE)

TYP. STORMWATER DOWNLET SEE DETAIL

TYP. STORMWATER PIPE DISCHARGE SEE DETAIL

SOUTH EDGE OF LINER SEE DETAIL

PROTECT ALL SLOPES WITH 6-IN (MIN) OF MULCH; SEED IF NEEDED. (TYP OF ALL SLOPES)

EAST EDGE OF LINER SEE DETAIL

ACTIVE FILL AREA

PHASE II SECTION I TOTAL FILL APPROX. 4.5 AC

TYP. WORKING FACE BERM; 2:1 SIDESLOPE, 2 FT TOP WIDTH; COMPACTED GENERAL FILL

EXIST. LANDFILL (PHASE I)

TOP OF INTERMEDIATE COVER ELEVATIONS SHOWN

20 FT OFFSET (TERRACE)

TYP. STORMWATER BERMS SEE DETAIL

TYP. STORMWATER PIPE DISCHARGE SEE DETAIL

TYP. STORMWATER DOWNLET SEE DETAIL

WETLAND DISCHARGE STRUCTURE SEE DETAIL

REMOVE EXIST. PIPE AND STRUCTURE

LEGEND

- TWO-WAY TRAFFIC FLOW
- ONE-WAY TRAFFIC FLOW
- FILL PROGRESSION DIRECTION
- SURFACE RUNOFF FLOW DIRECTION

SCALE IN FEET: 60 0 60 120

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
MAY 2005
SOUTHWEST DISTRICT
TAMPA

JOSEPH H. O'NEILL, P.E. CERTIFICATE NO. 52049

| REV | DESCRIPTION | BY |
|---|---|---|

DRAWING TITLE: PHASE II - SECTION I FILL SEQUENCE NO. 7

PROJECT TITLE: HARDEE COUNTY LANDFILL OPERATIONS PLAN

CLIENT: HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS


SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892


| PROJ. NO. | DSN. BY | D/A BY | APP. BY |
|---|---|---|---|
| 09190333.09 | JHO | JHO/CEH | CEH |
| DSN. DATE | CHK. BY | | |
| JHO | JHO | | |

CADD FILE: 933309OPS

DATE: MAY 2005

SCALE: AS SHOWN

DRAWING NO. OP 7 of 27

D.E.P.
MAY 23 2005
Southwest District Tampa

# APPENDIX B

# WASTE HAULER AGREEMENT

eanHarbors
NTAL SERVICES, INC.

November 21, 2002

Hardee County Solid Waste Department
Attention: Janice Williamson
685 Airport Road
Wauchulla, FL 33873-8663

Dear Janice:

Clean Harbors Florida, LLC is in agreement to extending our current contract under the same terms and conditions of our current contract for the two-year period beginning December 17, 2002. The prices in this agreement will remain in effect for the duration of the two-year contract extension.

I have enclosed copies of all of our current operational permits and certifications as outlined below:

- RCRA/HSWA permit (FDEP)
- Construction Permit for Tank Farms (FDEP)
- Air Emissions Transfer Permit (FDEP)
- Large Quantity Used Oil Handler Permit & Large Quantity Universal Waste Handler Permit (FDEP)
- Used Oil Transfer Facility and Filter Transfer Facility Permit (FDEP)
- Polychlorinated Biphenyls TSD Permit (TSCA)
- Hazardous Materials Transportation Certificate of Registration for 2002-2003 (USDOT)
- Hazardous Waste Transporter Certificate (FDEP)
- Occupational License (Polk County)

There are a couple of permits which were included in the original Safety-Kleen bid that did not carry over to the name of Clean Harbors as they no longer apply to the operation of the Bartow TSDF facility. These permits are as follows:

- NPDES Storm water permit
- Southwest Florida Water Management District Permit (SWFWMD)
- HSWA Permit (is now combined with the RCRA permit as listed above)
- Small Quantity Universal Waste Transporter Permit (replaced with Large Quantity Universal Waste Handler Permit in item 3 above)

eanHarbors
NTAL SERVICES, INC.

Clean Harbors Florida's TSCA (PCB Storage) Permit has been issued and transferred to the name of Clean Harbors, however, we have not yet received a copy of the permit. This document will be forwarded to you as soon as it is received by the Clean Harbors Florida facility.

Hardee County has been added as an additional insured under the Clean Harbors insurance policy. A copy of this policy with Hardee County listed as an additional insured is enclosed listing all of the coverage limits, which meet or in most cases exceed the coverage limits required by your contract specifications.

With respect to the remainder of the original Safety-Kleen bid submittals, there will be no changes in the plans and procedures, bid pricing, and equipment to be utilized in the scope of Clean Harbors' services to Hardee County. There are a few personnel changes in that Jeff Roetzel, Jim Malach, and Dave O'Brien are no longer with the company. There have been no changes as of yet to the logistical routing and intended disposal facilities for wastes collected throughout the performance of this contract. Any changes made in the future will be addressed on a case-by-case basis for each waste stream and only then with the full written consent and approval of the Hardee County Solid Waste Department.

Clean Harbors Florida, LLC also has no objection to the addition of a four-hour labor rate of $847.50 to the pricing terms of this contract. The 4-hour rate will be added to our system allowing you the option of either a 4-hour collection @ $847.50 or an 8-hour collection @ $1,695.00.

If you have any questions or need any additional information please feel free to contract me at (863) 519-6336 (Bartow Office); (863) 607-6575 (Home Office); or (863) 559-1611 (Mobile). Thank you for allowing Clean Harbors the opportunity to continue to manage the environmental services and hazardous waste disposal needs of Hardee County.

Sincerely,

Glenn S. Byer
TS Specialist

# APPENDIX C

# TRAINING COURSES

# Florida's Solid Waste Management Facility Operator and Spotter Approved Initial and Continuing Education Courses

Last updated 6/24/03

Initial training courses can be taken for continuing education credit if the course was not taken as the initial training course. The initial course can be retaken as continuing education credit during the second three-year training period. Courses taken prior to your initial training does not count toward continuing education.

## Class I, II, III Landfill Operators [*Initial Training*]

| No. | COURSE TITLE | PROVIDED BY | I, II, III | C&D | Transfer | MRF | Spotter |
|---|---|---|---|---|---|---|---|
| 30 | SWANA - Manager of Landfill Operations Training Course [MOLO®] | SWANA | 30 | | | | |
| 160 | SWANA - Manager of Landfill Operations [MOLO®] | SWANA-FL / UF TREEO | 30 | 30 | | | |
| 195 | 24-Hour Initial Training Course for Landfill Operators (Class I, II and III and C&D Sites) | Kohl Consulting, Inc. | 24 | | | | |

## Construction and Demolition Debris Operators [C & D] [*Initial Training*]

| No. | COURSE TITLE | PROVIDED BY | I, II, III | C&D | Transfer | MRF | Spotter |
|---|---|---|---|---|---|---|---|
| 200 | Construction and Demolition Debris Landfills - A Short Course for Operators-24 hours | SWANA-FL / UF TREEO | | 24 | | | |
| 95 | 24-Hour Initial Training Course for Landfill Operators (Class I, II and III and C&D Sites) | Kohl Consulting, Inc | 24 | 24 | | | |

## Transfer Stations [*Initial Training*]

| No. | COURSE TITLE | PROVIDED BY | I, II, III | C&D | Transfer | MRF | Spotter |
|---|---|---|---|---|---|---|---|
| 196 | 16-Hour Initial Training Course for Transfer Station Operators | Kohl Consulting, Inc | | | 16 | | |
| 225 | 19-Hour Initial Training for Transfer Station and MRF Operators | Kohl Consulting, Inc | | | 19 | 19 | |
| 42 | Transfer Station Design & Operations | SWANA | | | 16 | | |
| 222 | SWANA - Managing MSW Transfer Station Systems | Solid Waste Association of North America SWANA | | | 16 | | |

## Materials Recovery Facilities [MRF] [*Initial Training*]

| No. | COURSE TITLE | PROVIDED BY | I, II, III | C&D | Transfer | MRF | Spotter |
|---|---|---|---|---|---|---|---|
| 225 | 19-Hour Initial Training for Transfer Station and MRF Operators | Kohl Consulting, Inc | | | 19 | 19 | |
| 197 | 16-Hour Initial Training Course for Materials Recovery Facilities [MRFs] | Kohl Consulting, Inc | | | | 16 | |

## Spotters [*Initial Training*]

| No. | COURSE TITLE | PROVIDED BY | I, II, III | C&D | Transfer | MRF | Spotter |
|---|---|---|---|---|---|---|---|
| 203 | 8 Hour Initial Training for Spotters at Class I, II, III Landfills, Waste Processing Facilities, and C&D Sites | Kohl Consulting, Inc. | 8 | 8 | 8 | 8 | 8 |
| 219 | 8-Hour Initial Training for Spotters | Consolidated Resource Recovery, Inc. | 8 | 8 | 8 | 8 | 8 |
| 97 | Basic Landfill Operations | Kohl Consulting, Inc. | 8 | 8 | 8 | 8 | 8 |
| 91 | Eight Hour Spotter Training for C&D Sites | Kohl Consulting, Inc. | 8 | 8 | 8 | 8 | 8 |
| 121 | Eight-Hour Training for Personnel at C&D Materials Recovery Facilities | Kohl Consulting, Inc. | 8 | 8 | 8 | 8 | 8 |
| 111 | Landfill Operations and Waste Screening for Class I, II & III Sites | Kohl Consulting, Inc. | 8 | 8 | 8 | 8 | 8 |
| 257 | Spotter Training Course – 8 Hours Initial Training | Hewitt Contracting Company, Inc. | 8 | 8 | 8 | 8 | 8 |
| 248 | Spotter Training for Solid Waste Facilities | UF TREEO | 8 | 8 | 8 | 8 | 8 |
| 214 | Spotter Training Plan for Land Clearing Debris Site | Wetland Solutions | 8 | 8 | 8 | 8 | 8 |
| 147 | Training for Spotters at Landfills, C&D Sites and Transfer Stations | JEA/TREEO | 8 | 8 | 8 | 8 | 8 |
| 36 | Waste Screening & Identification For Landfill Operators and Spotters | TREEO | 8 | 8 | 8 | 8 | 8 |
| 122 | Waste Screening and Operation Orientation for Transfer Station Personnel | Kohl Consulting, Inc. | 8 | 8 | 8 | 8 | 8 |
| 9 | Waste Screening at MSW Management Facilities {On-site Delivery} | SWANA | 10 | 10 | 10 | 10 | 10 |

tinuing Education

| No. | COURSE TITLE | PROVIDED BY | I, II, III | C&D | Transfer | MRF | Spotter |
|---|---|---|---|---|---|---|---|
| 204 | 1-Hour Overview of Health & Safety Issues at Solid Waste Facilities | Kohl Consulting, Inc | 1 | 1 | 1 | 1 | |
| 105 | 11th Annual SE Recycling Conference & Trade Show [3/1-4/98] | SE Recycling | 8 | 8 | | | |
| 197 | 16-Hour Initial Training Course for Materials Recovery Facility (MFR) Operators | Kohl Consulting, Inc. | 10 | 10 | 8 | 8 | |
| 196 | 16-Hour Initial Training Course for Transfer Station Operators | Kohl Consulting, Inc. | 10 | 10 | 8 | 8 | |
| 52 | 17-701 & 17-703 Update [6/17/94] | SWANA - FL | 4 | | | | |
| 225 | 19-Hour Initial Training Course for Transfer Station and MRF Operators | Kohl Consulting, Inc | 10 | 10 | 8 | 8 | |
| 282 | 24-Hour HazWoper Technician Training | Safety Training & Consulting | 6 | 6 | 6 | 6 | |
| 195 | 24-Hour Initial Training Course for Landfill Operators (Class I, II, III, and C&D Sites) | Kohl Consulting, Inc. | 16 | 16 | | | |
| 169 | 40-hour Train-the-Trainer Program for Hazardous Waste Operations and Emergency Response Program | Chinn Training | 8 | 8 | 8 | 8 | |
| 283 | 8-Hour DOT HM-126 Training | Safety Training & Consulting | 4 | 4 | 4 | 4 | |
| 167 | 8-Hour HazWoper OSHA Refresher | FDEP / All Pro | 4 | 4 | 4 | 4 | |
| 144 | 8-Hour HazWoper Refresher Training | Stephen Mraz | 4 | 4 | 4 | 4 | |
| 203 | 8-Hour Initial Training Course for Spotters at Class I, II, III Facilities, Waste Processing Facilities, and C&D Facilities | Kohl Consulting, Inc. | 8 | 8 | 8 | 8 | 8 |
| 219 | 8-Hour Initial Training for Spotters | Consolidated Resource Recovery, Inc. | 8 | 8 | 8 | 8 | 8 |
| 270 | Advanced Topics in Compost Utilization | UF IFAS Extension Office | 2 | 2 | | 2 | 2 |
| 182 | Air Compliance and LGF System Operation [11/9-10/00] | SCS Engineers | 16 | | | | |
| 288 | A Little is Enough: Reducing Man-Made mercury Impacts | UF TREEO Center | 2 | 2 | 2 | 2 | 2 |
| 71 | An Overview of Solid Waste Technologies and Waste Screening Review | Kohl Consulting, Inc. | 2 | 2 | 2 | 2 | 2 |
| 71 | Asbestos Awareness Course for Landfill Operators | UF TREEO Center | 4 | 4 | 4 | 4 | 4 |
| 127 | Asbestos Awareness Refresher Course for Landfill Operators | UF TREEO Center | 2 | 2 | 2 | 2 | 2 |
| 236 | Authorized Entrant for Permit – Required Confined Spaces | UF TREEO Center | 16 | | | | |
| 145 | Avoiding OSHA Citations and Liabilities in Florida [6/29/99] | Lorman Education Services | 6 | | | | |
| 143 | Basic Confined Space [8/17/99] | North Florida Environmental Services | 8 | 8 | 8 | 8 | 8 |
| 97 | Basic Landfill Operations | Kohl Consulting, Inc. | 8 | 8 | 8 | 8 | 8 |
| 253 | Basic Math for Water and Wastewater Operations at FW&PCOA Annual or Regional Short School | Michael Switzer | 5 | 5 | 5 | 5 | |
| 72 | Bird and Wildlife Management at Solid Waste Mgmt Facilities | UF TREEO Center | 8 | 8 | 8 | | |
| 206 | Bird Management at Solid Waste Facilities | UF TREEO Center | 4 | 4 | 4 | | |
| 285 | Chemical Compatibility and Storage | UF TREEO Center | 4 | 4 | 4 | 4 | 4 |
| 233 | Chemicals That You Work With | Charlotte County | 2 | 2 | 2 | 2 | 2 |
| 12 | Chemistry for Environmental Professionals | UF TREEO Center | 8 | 8 | 8 | 8 | 8 |
| 16 | Complete Preventative Maintenance: Using New Technologies *[No longer offered]* | UF TREEO Center | 13 | | | | |
| 278 | Compost Tour and Hands-On Training [5/20/03] | UF – IFAS Extension Office | 3 | | | | |
| 35 | Confined Space Entry & Assessment | Applied Associates International | 8 | 8 | 8 | 8 | |
| 18 | Confined Space Entry & Assessment *[no longer offered]* | UF TREEO Center | 20 | | | | |
| 29 | Confined Space Entry & Rescue | South Tech Fire Academy | 40 | 40 | 40 | 40 | |
| 181 | Confined Space for Private Industry | Sarasota Co. Tech | 24 | 24 | 24 | 24 | |
| 80 | Construction and Demolition Debris Landfills - A Short Course for Operators *[no longer offered] (See #200)* | UF TREEO Center/ SWANA – FL | 20 | 20 | | | |
| 200 | Construction and Demolition Debris Landfills - A Short Course for Operators - 24 hours | UF TREEO Center/ SWANA – FL | 16 | 16 | | | |
| 103 | Construction and Demolition Waste Recycling | UF TREEO Center | 7 | 7 | | 7 | 7 |
| 114 | Debris Management G202 | FEMA/FL Div | 12 | 12 | 12 | 12 | 12 |

| ntinuing Education | | | | | | | |
|---|---|---|---|---|---|---|---|
| . | COURSE TITLE | PROVIDED BY | I, II, III | C&D | Transfer | MRF | Spotter |
| 136 | Debris Management-Advanced Course (G202-Advanced) | FDEP/FEMA | 8 | 8 | 8 | 8 | 8 |
| 161 | Design of Lateral Drainage Systems for Landfills [3/14/00] | Tenax | 5 | | | | |
| 108 | Developing a Usable Operations Plan | Kohl Consulting, Inc. | 4 | 4 | 4 | 4 | 4 |
| 130 | Eight Hour Confined Space Training Course | Charles Davis | 8 | 8 | 8 | 8 | 8 |
| 91 | Eight Hour Spotter Training for Construction & Demolition Sites | Kohl Consulting, Inc. | 8 | 8 | 8 | 8 | 8 |
| 287 | Emergency Response Operations for Incident Command | UF TREEO Center | 4 | 4 | 4 | 4 | |
| 40 | Environmental Drilling, Well Installation & Sampling | Nielson Environmental Field School, Inc. | 16 | 16 | | | |
| 271 | Environmental Management Systems - Introduction | UF TREEO Center | 2 | 2 | 2 | 2 | |
| 175 | Environmental Management Systems - Overview | UF TREEO Center | 4 | 4 | 4 | 4 | |
| 176 | Environmental Management Systems Internal Audit Procedures | UF TREEO Center | 4 | 4 | 4 | 4 | |
| 43 | Environmental Sampling Laboratory & Data Analysis [12/12-12/94] | Executive Enterprises, Inc. | 12 | | | | |
| 100 | Excavation, Trenching: Competent Person Training | UF TREEO Center | 8 | 8 | | | |
| 284 | Excavation, Trenching: Competent Person Training 16-Hour | UF TREEO Center | 16 | 16 | | | |
| 66 | Exposure to Bloodborne and Waterborne Pathogens *[No longer offered]* | UF TREEO Center | 8 | | | | |
| 167 | FDEP 8-Hour HazWoper OSHA Refresher [5/3/00] | FDEP / All Pro | 4 | 4 | 4 | 4 | |
| 199 | FDEP 8 Hour HazWoper OSHA Refresher [5/1/01] | FDEP | 4 | 4 | 4 | 4 | |
| 228 | FDEP 8 Hour HazWoper OSHA Refresher [5/22/02] | FDEP / Kenton Brown | 4 | 4 | 4 | 4 | |
| 232 | FDEP 8 Hour HazWoper OSHA Refresher [5/22/02] | FDEP [Bottcher/Knox] | 4 | 4 | 4 | 4 | |
| 266 | FDEP 8 Hour HazWoper OSHA Refresher [5/5/03, 5/9/03] | FDEP | 4 | 4 | 4 | 4 | |
| 48 | FDEP Annual SQG Assessment, Notification & Verification Program Workshop [4/30/96] | FDEP | 5 | | | | |
| 88 | FDEP Annual SQG Assessment, Notification & Verification Program Workshop [5/5-7/97] | FDEP | 5 | | | | |
| 107 | FDEP Annual SQG Assessment, Notification & Verification Program Workshop [5/4-6/98] | FDEP | 7 | 7 | 7 | 7 | |
| 134 | FDEP Annual SQG Assessment, Notification & Verification Program Workshop [5/3-5/99] | FDEP | 5 | 5 | 5 | 5 | |
| 226 | FDEP Annual SQG Assessment, Notification & Verification Program Workshop [5/20-21/02] | FDEP | 5 | 5 | 5 | 5 | |
| 264 | FDEP Annual SQG Assessment, Notification & Verification Program Workshop [5/6-7/03] | FDEP | 5 | 5 | 5 | 5 | |
| 267 | FDEP DOT 4 Hour Awareness Training [5/5/03, 5/9/03] | FDEP | 2 | 2 | 2 | 2 | 2 |
| 268 | FDEP HHW Facility Design [5/9/03] | FDEP | 4 | 4 | 4 | 4 | 4 |
| 54 | FDEP HHW & Conditionally Exempt SQG [5/3-5/95] | FDEP | 14 | | | | |
| 59 | FDEP HHW & Conditionally Exempt SQG [5/1/96] | FDEP | 5 | | | | |
| 84 | FDEP HHW & Conditionally Exempt SQG [5/5-7/97] | FDEP | 5 | | | | |
| 106 | FDEP HHW & Conditionally Exempt SQG [5/6-8/98] | FDEP | 5 | 5 | 5 | 5 | |
| 135 | FDEP HHW & Conditionally Exempt SQG [5/5-7/99] | FDEP | 5 | 5 | 5 | 5 | |
| 166 | FDEP HHW & Conditionally Exempt SQG [5/1-3/00] | FDEP | 5 | 5 | 5 | 5 | |
| 198 | FDEP HHW & Conditionally Exempt SQG [4/30-5/1/01] | FDEP | 5 | 5 | 5 | 5 | |
| 227 | FDEP HHW & Conditionally Exempt SQG [5/22-24/02] | FDEP | 5 | 5 | 5 | 5 | |
| 227 | FDEP HHW & Conditionally Exempt SQG [5/7-8/03] | FDEP | 5 | 5 | 5 | 5 | 5 |
| 32 | Field Sampling Short School [7/22-24/91] | Environmental Technology Center | 22 | | | | |
| 110 | Fires at Landfills | Kohl Consulting, Inc. | 2 | 2 | | 2 | |
| 289 | Florida Stormwater and Erosion Control and Sedimentation Inspector Training Program | METRA-North | 12 | 12 | 8 | 4 | |
| 273 | Florida Master Naturalist Program – Florida Freshwater Wetlands Systems | UF IFAS Extension Office | 4 | 4 | 4 | 4 | |
| 155 | Four Hour Spotter Orientation for Class I, II and III Supervisors | Kohl Consulting, Inc. | 4 | 4 | 4 | 4 | 4 |
| 156 | Four Hour Spotter Orientation for Class I, II, and III Landfills | Kohl Consulting, Inc. | 4 | 4 | 4 | 4 | 4 |

| ontinuing Education | | | | | | | |
|---|---|---|---|---|---|---|---|
| . COURSE TITLE | PROVIDED BY | I, II, III | C&D | Transfer | MRF | Spotter | |
| 119 | Four Hour Spotter Training Refresher for Construction & Demolition Sites | Kohl Consulting, Inc. | 4 | 4 | 4 | 4 | 4 |
| 113 | Full Cost Accounting for Municipal Solid Waste Management [2/17/98] | Terra Tech EM Inc | 6 | | | | |
| 120 | Fundamentals of Operations for MRF Facilities Personnel | Kohl Consulting, Inc. | 8 | | | 8 | |
| 274 | Fundamentals of Slope Stability | UF TREEO Center | 16 | 16 | | | |
| 271 | General Environmental Workshop [Feb-Mar 2003] | METRA | 4 | 4 | 4 | 4 | 4 |
| 154 | Geosynthetics for Advanced Solutions [11/4/99] | GSE Lining Tech | 6 | | | | |
| 152 | Groundwater Issues for Landfill Operators | UF TREEO Center | 6 | 6 | | | |
| 17 | Groundwater Monitoring, Analysis and Data Interpretation | UF TREEO Center | 12 | 12 | | | |
| 76 | Groundwater Monitoring, Requirements and Techniques for Landfills | Kohl Consulting, Inc. | 2 | 2 | | | |
| 101 | Hazard Communications Course | Escambia County Emergency Prep | 4 | 4 | 4 | 4 | 4 |
| 85 | Hazardous Material and Site Investigations | EnSafe | 6 | 6 | 6 | 6 | 6 |
| 82 | Hazardous Material Chemistry for Non-Chemist [1/18/95] | St. Petersburg Junior College | 7 | | | | |
| 286 | Hazardous Material Chemistry for Non-Chemist | UF TREEO Center | | | | | |
| 131 | Hazardous Material Recognition Awareness Level Refresher [3/1/96] | Citrus County | 4 | | | | |
| 81 | Hazardous Material Transportation *[no longer offered]* | UF TREEO Center | 4 | | | | |
| 50 | Hazardous Materials Awareness Training [1/25/94] | Citrus County | 8 | | | | |
| 102 | Hazardous Materials in Construction & Demolition Waste | UF TREEO Center | 4 | 4 | | | |
| 224 | Hazardous Materials in Construction & Demolition Waste OnLine | UF TREEO Center | 4 | 4 | | | |
| 86 | Hazardous Materials Incident Awareness Level Training [2/5/97] | Escambia County Emergency Prep | 8 | 8 | 8 | 8 | 8 |
| 70 | Hazardous Materials Management Conference [11/6-9/96] | International City & County Mgmt Associate | 12 | | | | |
| 98 | Hazardous Materials Transportation Seminar [5/7-8/97] | City Environmental Services, Inc of Florida | 5 | 5 | 5 | | |
| 34 | Hazardous Waste & Emergency Response | Applied Associates International | 8 | 8 | 8 | 8 | 8 |
| 53 | Hazardous Waste Management for Government Employees [9/95, 10/95] | UF TREEO Center | 6 | | | | |
| 60 | Hazardous Waste Mgmt 40 CFR 261-265 [4/17/96] | Occupational Safety Training, Inc. | 8 | | | | |
| 99 | Hazardous Waste Operations & Emergency Response | Sterling Fibers/ESP | 3 | 3 | 3 | | |
| 188 | Hazardous Waste Operations Emergency Response Refresher | Orange Co. Environmental Protection Division | 4 | 4 | 4 | 4 | |
| 63 | Hazardous Waste Regulations for Generators | UF TREEO Center | 4 | 4 | 4 | 4 | 4 |
| 20 | Hazardous Waste Training for Solid Waste Managers [7/16/93] | SWANA – FL | 5 | | | | |
| 217 | HazWoper 24-Hour Moderate Risk Online | UF TREEO Center | 6 | 6 | 6 | 6 | 3 |
| 216 | HazWoper 40-Hour OSHA Health & Safety Online | UF TREEO Center | 8 | 8 | 8 | 8 | |
| 218 | HazWoper 8-Hour Refresher Online | UF TREEO Center | 4 | 4 | 4 | 4 | 4 |
| 269 | HazWoper 8 Hour OSHA Refresher | Gulf Coast Industrial Services Inc. | 4 | 4 | 4 | 4 | 4 |
| 115 | HazWoper Material Control & Emergency Response | Air Safe | 8 | 8 | 8 | 8 | 4 |
| 170 | Health & Safety Issues for Solid Waste Management Facilities | Kohl Consulting, Inc. | 8 | 8 | 8 | 8 | 4 |
| 281 | Health and Safety for Solid Waste Workers | UF TREEO Center | 8 | 8 | 8 | 8 | 8 |
| 69 | Health and Safety Training for Hazardous Materials: 40-Hour OSHA Compliance Course | UF TREEO Center | 8 | 8 | 8 | 8 | |
| 62 | Health and Safety Training for Hazardous Materials: 8 hour OSHA Refresher | UF TREEO Center | 4 | 4 | 4 | 4 | 2 |
| 223 | Health and Safety Training for Landfill Operations OnLine | UF TREEO Center | 5 | 5 | 5 | 5 | 2 |
| 149 | Health and Safety Training for Landfill Operations | UF TREEO Center | 5 | 5 | 5 | 5 | 2 |
| 201 | Hiring and Retaining Good Employees | UF TREEO Center | 2 | 2 | 2 | 2 | |
| 33 | Household Hazardous Waste [6/30/94] | Care Environmental Corp. | 4 | | | | |
| 209 | Hurricane Preparedness and Post Disaster Recovery Workshop [8/10/01] | Dewberry & Davis LLC | 8 | 8 | 8 | 8 | 8 |

| ontinuing Education | | | | | | | |
|---|---|---|---|---|---|---|---|
| o. COURSE TITLE | PROVIDED BY | I, II, III | C&D | Transfer | MRF | Spotter | |
| 19 | Hydrogeology: Applications of Fundamental Concepts & Field Techniques to Florida Groundwater Investigations *[No longer offered]* | UF TREEO Center | 20 | 20 | | | |
| 11 | Inspection Procedures for Agri-chemical Containers offered for Recycling *[No longer offered]* | Dept. of Agriculture & Consumer Services | 1 | | | | |
| 44 | Inspection Procedures for Agri-chemical Containers offered for Recycling [Pesticide] *[No longer offered]* | Institute of Food & Agriculture Science [IFAS] | 1 | | | | |
| 129 | Inspector's Handbook for Construction Projects | Hillsborough County Solid Waste | 7 | | | | |
| 151 | Integrated Management Course: Hurricane Recovery and Mitigation | FEMA/EMI | 7 | 7 | 7 | 7 | |
| 37 | Introduction to Electrical Maintenance *[prior to 1/1/02]* | UF TREEO Center | 7 | | | | |
| 212 | Introduction to Electrical Maintenance *[taken after 1/1/02]* | UF TREEO Center | 16 | 16 | 16 | 16 | |
| 14 | Introduction to Groundwater: Contamination, Investigation, & Remediation Assessment | UF TREEO Center | 13 | 13 | | | |
| 124 | Landfill Compaction Training School *[prior to 1/1/02]* | Caterpillar & Ringhaver Equipment | 5 | 5 | | | |
| 229 | Landfill Compaction Training School - 8 hours *[taken after 1/1/02]* | Caterpillar & Ringhaver Equipment | 8 | 8 | | | |
| 75 | Landfill Compliance Inspections | Kohl Consulting, Inc. | 2 | 2 | | | 2 |
| 157 | Landfill Design and Construction [3/27-30/00] | UF TREEO Center | 28 | | | | |
| 4 | Landfill Design: Cell Design & Construction [3/9/92] | UF TREEO Center | 14.5 | | | | |
| 6 | Landfill Design: Closure & Long Term Care [5/19/92] | UF TREEO Center | 15 | | | | |
| 2 | Landfill Design: Conceptual Design Operations & Monitoring [1/12/92] | UF TREEO Center | 14.5 | | | | |
| 78 | Landfill Design: Landfill Design and Construction [5/5-9/97] | UF TREEO Center | 28 | | | | |
| 5 | Landfill Design: Leachate & Gas Management [3/11/92] | UF TREEO Center | 15 | | | | |
| 79 | Landfill Design: Leachate and Gas Management System Design [6/10-12/97] | UF TREEO Center | 21 | | | | |
| 3 | Landfill Design: Liner Systems Materials Installation & Quality Assurance [2/11/92] | UF TREEO Center | 14 | | | | |
| 1 | Landfill Design: Planning & Permitting [1/21/92] | UF TREEO Center | 14 | | | | |
| 77 | Landfill Design: Planning and Permitting for Solid Waste Management [4/8-9/97] | UF TREEO Center | 16 | | | | |
| 179 | Landfill Gas & Energy: Alternative Uses [9/25-27/00] | CDM, Inc. | 8 | | | | |
| 49 | Landfill Gas & Leachate Systems | UF TREEO Center / SCS Engineers | 8 | 8 | | | |
| 172 | Landfill Gas Collection and Control Systems [8/19-20/99] | CDM, Inc. | 8 | | | | |
| 276 | Landfill Gas Collection and Control Systems Operator Training [9/2002] | Waste Management. | 12 | | | | |
| 83 | Landfill Gas NSPS Workshop [7/15/96] | FDEP | 6 | | | | |
| 67 | Landfill Gas NSPS Workshop [7/9/96] | SWANA - FL | 4 | | | | |
| 57 | Landfill Gas System Design- A Practical Approach [6/14-15/94] | Landfill Control Technologies | 8 | | | | |
| 89 | Landfill Gas: How to Profit From the New Mandates [6/17/97] | FDEP | 7 | | | | |
| 194 | Landfill Operating Issues for Class I, II, III and C&D Sites | Kohl Consulting, Inc. | 8 | 8 | | | 8 |
| 260 | Landfill Operation Online | UF TREEO Center | 16 | 16 | | | |
| 261 | Landfill Operation | UF TREEO Center | 16 | 16 | | | |
| 111 | Landfill Operations and Waste Screening for Class I, II & III Sites | Kohl Consulting, Inc. | 8 | | | | 8 |
| 58 | Landfill Operator Education (Landfill Mining and Landfill Gas and Leachate Mgmt) [3/22/96] | SWANA - FL | 4 | | | | |
| 168 | Landfill Service School (Leachate Pumps and Controls School) [3/25-26/99] | EPG Companies | 7 | 7 | | | |
| 118 | Landfill Wildlife Training Course | Applied Technology & Management, Inc – ATM/UF TREEO Center | 4 | 4 | | | |
| 277 | Laws and Rules for Florida Engineers - *only for PEs | UF TREEO Center | 4 | | | | |
| 158 | Leachate and Gas Management System Design [5/9-10/00] | UF TREEO Center | 12 | | | | |

| Continuing Education | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No. | COURSE TITLE | PROVIDED BY | I, II, III | C&D | Transfer | MRF | Spotter | |
| 125 | Management of Leachate, Gas, Stormwater and Odor at Class I, II, III Landfills | Kohl Consulting, Inc. | 8 | 8 | | | | |
| 249 | Management of Special Waste for SWM Facility Operators | Kohl Consulting, Inc. | 4 | 4 | 4 | 4 | 4 | |
| 109 | Measurements and Calculations for Landfill Operators | Kohl Consulting, Inc. | 5 | 5 | | | | |
| 38 | Mechanical Maintenance (Pumps and Pumping) (prior to 1/1/02) (see #213) | UF TREEO Center | 7 | | | | | |
| 140 | Meeting the Challenges of Environmental Liability with Case Studies in Solid Waste [6/16/99] | SWANA - FL | 4 | | | | | |
| 128 | Methods of Erosion and Sedimentation Control for Construction Sites | UF TREEO Center/FDEP | 6 | 6 | | | | |
| 208 | NPDES Phase II Inspector Certification Course | University of Florida – T2 Center | 12 | 12 | 8 | 4 | | |
| 180 | NUCA Competent Person Training | Sarasota Co. Tech | 8 | 8 | | | | |
| 10 | On Site Operations Personnel [11/91] | SWANA - FL | | | | | | |
| 177 | OSHA 40-Hour Course | R. Cooey | 8 | 8 | 8 | 8 | | |
| 165 | OSHA 8-Hour HazWoper Annual Refresher [8/25/00] | University of North Florida Safety America | 4 | 4 | 4 | 4 | 2 | |
| 142 | OSHA 8-Hour Refresher for Hazardous Waste Operations and Emergency Response | FDEP/Jamson | 4 | 4 | 4 | 4 | 2 | |
| 68 | OSHA Update Seminar [8/7/96] | J.J. Keller & Associates, Inc. | 6 | | | | | |
| 183 | Overview of Class I Landfill Operations and Waste Screening | Kohl Consulting, Inc. | 3 | 3 | | | 3 | |
| 92 | Overview of Solid Waste Management Technologies | Kohl Consulting, Inc. | 3 | | | | | |
| 184 | Overview of Transfer Stations Operations and Waste Screening Review | Kohl Consulting, Inc. | | | 3 | 3 | 3 | |
| 15 | Overview Understanding the Planning & Training Requirements of Big 3:OSHA, EPA, DOT (Regulatory Overview) | UF TREEO Center | 7 | | | | | |
| 92 | Pedestrian, Vehicles and Equipment Safety at Transfer Stations | Kohl Consulting, Inc. | | | 2 | 2 | 2 | |
| 186 | Pedestrian, Vehicles and Equipment Safety in the Landfill | Kohl Consulting, Inc. | 2 | 2 | | | 2 | |
| 104 | Permit Required Confined Space Training | UF TREEO Center | 8 | 8 | 8 | 8 | | |
| 96 | Personnel Law Up-date [12/11-12/96] | Council on Education in Management | 5 | | | | | |
| 239 | Pollution Prevention and Environmental Essentials Conference | UF TREEO Center | 5 | 1 | 5 | 5 | | |
| 230 | Proper Maintenance of Heavy Equipment and Safety | Caterpillar & Ringhaver Equipment | 3 | 3 | 3 | 3 | 3 | |
| 153 | Pump Maintenance [4/13-14/00] | National Tech Transfer | 7 | | | | | |
| 213 | Pumps and Pumping *(taken after 1/2/02)* | UF TREEO Center | 16 | 16 | 16 | 16 | | |
| 237 | Recycle Organics 2002 | University of Florida - IFAS | 4 | 4 | 4 | 4 | | |
| 280 | RecycledFlorida Today 10th Annual Conference [6/3-6/03] | RecycledFlorida Today | 5 | 4 | 5 | 5 | | |
| 90 | Recycling Coordinator Training Course 1997 (Basic Recycling Training) [5/19-21/97] | UF TREEO Center | 8 | 8 | | | | |
| 137 | Recycling Coordinator Training Course 1999 | UF TREEO Center | 8 | 8 | | | | |
| 205 | Recycling Coordinators Training Course 2001 [8/2--24/01] | SWANA - FL | | | | | | |
| 146 | Recycling Disaster Debris [8/6/99] | University of Central Florida / Engineering | 6 | 6 | 6 | 6 | 6 | |
| 193 | Safe Operating Issues for Transfer Stations | Kohl Consulting, Inc. | | | 2 | 2 | | |
| 123 | School/University Advanced Recycler Training Course [10/20-21/98] | UF TREEO Center | 7 | 7 | | | | |
| 7 | Site Monitoring at Solid Waste Facilities | SWANA - FL | 10 | | | | | |
| 139 | Solid Waste Facility Operations for Construction and Demolition Operators *[No longer offered]* (See #196) | Kohl Consulting, Inc. | | 20 | | | | |
| 138 | Solid Waste Facility Operations for Landfill Operators *[No longer offered]* (See #196) | Kohl Consulting, Inc. | 20 | | | | | |
| 41 | Solid Waste in Florida's Small Counties Workshop | Florida Counties Foundation & the Florida Institute of Government | 4 | | | | | |
| 21 | Solid Waste Landfill Operators Short School *[No longer offered]* | UF TREEO Center/SWANA - FL | 20 | | | | | |
| 28 | Solid Waste Landfills Correspondence Course (course # C240-A180) | University of Wisconsin | 20 | 20 | | | | |

| tinuing Education | | | | | | | |
|---|---|---|---|---|---|---|---|
| | COURSE TITLE | PROVIDED BY | I, II, III | C&D | Transfer | MRF | Spotter |
| 22 | Solid Waste Management: Managing Special Waste [5/19/92] | UF TREEO Center | 6 | | | | |
| 55 | Solid Waste Regulatory Review Workshop [3/10/95] | SWANA - FL | 3 | | | | |
| 257 | Spotter Training Course – 8 Hours Initial Training | Hewitt Contracting Company, Inc. | 8 | 8 | 8 | 8 | 8 |
| 263 | Spotter Training for Solid Waste Facilities Refresher | UF TREEO Center | 4 | 4 | 4 | 4 | 4 |
| 248 | Spotter Training for Solid Waste Facilities | UF TREEO Center | 8 | 8 | 8 | 8 | 8 |
| 214 | Spotter Training Plan for Land Clearing Debris Site | Wetland Solutions | 8 | 8 | 8 | 8 | 8 |
| 150 | Storm Water Management Training | S2Li | 4 | | | | |
| 202 | Stormwater Inspector Certification Course | Sarasota Co. Tech | 12 | 12 | 8 | 4 | |
| 39 | Stormwater Management for Landfills *[No longer offered]* | UF TREEO Center | 8 | | | | |
| 56 | Successfully Contracting for Solid Waste Services [7/14/95] | SWANA - FL | 4 | | | | |
| 61 | Successfully Contracting Solid Waste Services | UF TREEO Center / SCS Engineers | 4 | | | | |
| 215 | SWANA - 2001 Special Waste Conference [12/3-4/01] | SWANA | 10 | 9 | 10 | 8 | |
| 258 | SWANA - 2002 Special Waste Conference [12/5-6/02] | SWANA | 10 | 9 | 9 | 9 | |
| 242 | SWANA - Business Planning, Marketing and Communications for the Solid Waste Industry | SWANA | 8 | 8 | 4 | 4 | |
| 252 | SWANA - FEMA's Debris Management | SWANA | 8 | 8 | 8 | 8 | 8 |
| 250 | SWANA - Construction and Demolition Debris Course | SWANA | 22 | 22 | 22 | 22 | 8 |
| 47 | SWANA - Financing Integrated MSW Management Systems [5/14/96] | SWANA | 8 | | | | |
| 46 | SWANA - Groundwater Monitoring/Leachate Mgmt | SWANA | 8 | 8 | | | |
| 94 | SWANA - Health & Safety at MSW Landfills | SWANA | 10 | 10 | | | |
| 38 | SWANA - Household Hazardous Waste & CESQG Facility Operations 24 hour Training | SWANA / SWANA - FL | 15 | 15 | 15 | 15 | 15 |
| 26 | SWANA - International Meeting [8/11-13/91] | SWANA | 20 | | | | |
| 245 | SWANA - Leadership Skill Development for Solid Waste Professionals | SWANA | 8 | 8 | 4 | 4 | |
| 244 | SWANA - Landfill Gas Basics | SWANA | 8 | 8 | | | |
| 27 | SWANA - Landfill Gas Management (Spring Seminar 1994) [3/4/94] | SWANA | 4 | | | | |
| 133 | SWANA - Landfill Gas Symposium 22nd Annual [3/22-25/99] | SWANA | 15 | | | | |
| 163 | SWANA - Landfill Gas Symposium 23rd Annual [3/22-30/00] | SWANA | 15 | | | | |
| 190 | SWANA - Landfill Gas Symposium 24th Annual [3/19-23/01] | SWANA | 18 | | | | |
| 262 | SWANA - Landfill Gas Symposium 26th Annual [3/25-27/03] | SWANA | 15 | | | | |
| 231 | SWANA - Landfill Gas System Operation and Maintenance | SWANA | 20 | 20 | | | |
| 93 | SWANA - Landfill Operational Issues | SWANA | 8 | 8 | | | |
| 74 | SWANA - Landfill Symposium 1st Annual [11/4-6/96] | SWANA | 17 | | | | |
| 87 | SWANA - Landfill Symposium 2nd Annual [2/4-6/97] | SWANA | 18 | | | | |
| 117 | SWANA - Landfill Symposium 3rd Annual [7/22-24/98] | SWANA | 18 | | | | |
| 159 | SWANA - Landfill Symposium 4th Annual [6/28-30/99] | SWANA | 16 | | | | |
| 211 | SWANA - Landfill Symposium 6th Annual [6/18-20/01] | SWANA | 18 | | | | |
| 275 | SWANA - Landfill Symposium 8th Annual [6/17-19/03] | SWANA | 13 | | | | |
| 245 | SWANA - Leadership Skill Development for Solid Waste Professionals | SWANA | 8 | 8 | 4 | 4 | |
| 8 | SWANA - Managing Landfill Gas at MSW Landfills | SWANA | 10 | 10 | 10 | 10 | 10 |
| 95 | SWANA - Managing Landfill Gas at MSW Landfills [1997] *Onsite Delivery* | SWANA | 5 | 5 | | | |
| 30 | SWANA - Manager of Landfill Operations | SWANA | 16 | 16 | | | 4 |
| 160 | SWANA - Manager of Landfill Operations [MOLO®] | UF TREEO Center/SWANA - FL | 16 | 16 | 8 | 8 | |
| 000 | SWANA - Manager of Landfill Operations [MOLO®] Exam Only | SWANA/ SWANA - FL | 0 | | | | |
| 243 | SWANA - Managing Composting Programs | SWANA | 10 | 10 | | | |
| 251 | SWANA - Managing MSW Collection Systems | SWANA | 8 | | 8 | 8 | |
| 246 | SWANA - Managing MSW and Recyclables Collection Efficiency Workshop | SWANA | 8 | 8 | 4 | 4 | |
| 234 | SWANA - Managing MSW Recycling Systems | SWANA / SWANA - FL | 7 | 7 | 7 | 7 | |
| 001 | SWANA - Managing MSW Recycling Systems Exam Only | SWANA/ SWANA - FL | 0 | | | | |

| ntinuing Education | | | | | | | |
|---|---|---|---|---|---|---|---|
| | COURSE TITLE | PROVIDED BY | I, II, III | C&D | Transfer | MRF | Spotter |
| 222 | SWANA - Managing Transfer Station Systems | SWANA | | | 8 | 8 | |
| 247 | SWANA - Outsourcing Decisions and Contracting Strategies: Risk and Rewards | SWANA | 8 | 8 | 4 | 4 | |
| 178 | SWANA - Paying for your MSW Management Systems-Revenue Generation & Cost Accounting [10/24/00] [10/14/01] | SWANA | 7 | | | | |
| 174 | SWANA - Principles of Managing Integrated Municipal Solid Waste Management Systems | SWANA | 7 | | | | |
| 45 | SWANA - Principles of Managing IMSWM Systems [Certified Municipal Solid Waste Manager I] | SWANA | 24 | | | | |
| 132 | SWANA - Training Sanitary Landfill Operating Personnel | SWANA | 5 | | | | |
| 216 | SWANA - Transfer Station Design & Operations [course taken after 1/1/2002] | SWANA | | | 8 | 8 | 4 |
| 42 | SWANA - Transfer Station Design & Operations [course taken prior to 1/1/2002] | SWANA | 16 | | 16 | | |
| 191 | SWANA - Waste Con 2000 [10/23-26/00] | SWANA | 13 | | 13 | | |
| 221 | SWANA - Waste Con 2001 [10/15-18/01] | SWANA | 8 | 2 | | | |
| 254 | SWANA - Waste Con 2002 [10/15-18/02 | SWANA | 6 | 6 | 6 | 6 | |
| 259 | SWANA - Waste Reduction, Recycling and Composting 14th Annual Symposium [2/24-3/1/2003] | SWANA | 7 | 7 | 15 | 15 | |
| 9 | SWANA - Waste Screening at MSW Mgmt Facilities [On-site Delivery] | SWANA | 10 | 10 | 10 | 10 | 10 |
| 141 | SWANA-Florida 1999 Summer Conference [8/3-5/99] | SWANA - FL | 4 | | | | |
| 162 | SWANA-Florida 2000 Spring Tri-State Conference [4/3-5/00] | SWANA - FL | 3 | | | | |
| 173 | SWANA-Florida 2000 Summer Conference [8/10-11/00] | SWANA - FL | 6 | 6 | | | |
| 189 | SWANA-Florida 2001 Spring Conference [3/29-31/01] | SWANA - FL | 3 | 3 | | | |
| 207 | SWANA-Florida 2001Summer Conference | SWANA - FL | 5 | 5 | 5 | 5 | 1 |
| 220 | SWANA-Florida 2002 Spring Tri-State Conference [4/7-10/02] | SWANA - FL | 6 | 6 | 6 | 6 | |
| 235 | SWANA-Florida 2002 Summer Conference [7/24-26/02] | SWANA - FL | 4 | 4 | 2 | 1 | |
| 255 | SWANA-Florida 2003 Spring Conference [4/7-12/03] | SWANA - FL | 6 | 6 | 5 | 5 | 3 |
| 116 | The Complete Ground-Water Monitoring Course | Nielson Environmental Field School, Inc. | 16 | 16 | | | |
| 241 | The Old Landfill Seminar | UF TREEO Center / SCS Engineers | 5 | 5 | | | |
| 187 | Traffic and Equipment Safety at Landfills | Kohl Consulting, Inc. | 2 | 2 | | | 2 |
| 13 | Train-The-Trainer for Environmental Occupations (Management Credit ONLY) | UF TREEO Center | 7 | | | | |
| 121 | Training for Personnel at Construction & Demolition Materials Recovery Facilities | Kohl Consulting, Inc. | 8 | | | 8 | |
| 147 | Training for Spotters at Landfills, Construction & Demolition Sites and Transfer Stations | JEA, Inc. / UF TREEO Center | 8 | 8 | 8 | 8 | 8 |
| 148 | Two-Hour Landfill Spotter Refresher Training Online | JEA, Inc. | 2 | 2 | 2 | 2 | 2 |
| 112 | US DOT Hazardous Material / Waste Transportation | UF TREEO Center | 6 | 6 | 6 | 6 | |
| 23 | Utility Management Certification: Financial Management [No longer offered] | UF TREEO Center | 7 | | | | |
| 24 | Utility Management Certification: Management & Supervision [No longer offered] | UF TREEO Center | 7 | | | | |
| 25 | Utility Management Certification: Personnel Management [No longer offered] | UF TREEO Center | 7 | | | | |
| 126 | Waste Acceptability for Spotters, Equipment Operators and Scale House Personnel | Kohl Consulting, Inc. | 2 | 2 | 2 | 2 | 2 |
| 210 | Waste Control and Spotter Safety Awareness | Kohl Consulting, Inc. | 2 | 2 | 2 | 2 | 2 |
| 31 | Waste Management of North America (Landfill University) (no longer offered) | Landfill University | 20 | | | | |
| 36 | Waste Screening & Identification For Landfill Operators and Spotters | UF TREEO Center / SCS Engineers | 8 | 8 | 8 | 8 | 8 |
| 256 | Waste Screening & Identification For Landfill Operators and Spotters Refresher | Citrus County – Hazardous Waste Section | 4 | 4 | 4 | 4 | 4 |

| Continuing Education | | | | | | | |
|---|---|---|---|---|---|---|---|
| o. | COURSE TITLE | PROVIDED BY | I, II, III | C&D | Transfer | MRF | Spotter |
| 122 | Waste Screening and Operation Orientation for Transfer Station Personnel | Kohl Consulting, Inc. | 8 | | 8 | | |
| 51 | Waste Screening at Municipal Solid Waste [5/23/94] | SWANA - FL | 6 | | | | |
| 164 | Waste Tech 2000 [3/5-8/00] | Waste Tech | 7 | | | | |
| 185 | Weighmaster Orientation and Waste Screening Review | Kohl Consulting, Inc. | 2 | 2 | 2 | 2 | 2 |
| 73 | Wet Weather Operations | Kohl Consulting, Inc. | 4 | 4 | | | |
| 65 | What Can I Accept & How Do I Keep It From Blowing Around | Kohl Consulting, Inc. | 2 | | | | |
| 64 | When it Rains, It Pours (And We Stay Open) | Kohl Consulting, Inc | 2 | 2 | | | |
| 279 | Wildlife and Wetland Training for Solid Waste Facilities | UF TREEO Center | 8 | 8 | | | |
| 240 | WMI Odor School [5/29/02] | WMI / St. Croix Sensory, Inc. | 7 | 7 | 7 | 7 | 7 |

# APPENDIX D

# CONTINGENCY EQUIPMENT

# EQUIPMENT CONTINGENCY

**D7R Cat Dozer-**

5-year maintenance agreement (Jan. 2003 – Jan. 2008) with Ringhaver Equipment covers replacement of the machine due to manufacturer's defects.

Rental – Annual agreement with Ringhaver Equipment Company, 9797 Gibsonton Drive, Riverview, FL 33569, (813) 671-3700.

**Loader-**

Rental – Annual agreement with Ringhaver Equipment company, 99797 Gibsonton Drive, Riverview, FL 33569, (813) 671-3700.

**Flatbed dump truck –**

Two spares on site or borrow from Public Works Department.

D.E.P.
MAY 2 3 2005
Southwest District Tampa

**Pick-up Truck -**

Can substitute with old Blazer on site or borrow a vehicle from Public Works.

**Water Pumps –**

Replace with new pumps or rentals available through Barney Pumps, 3907 Hwy. 98 South, Lakeland, FL 33802, (863) 665-8500.

**Generator**

Hardee County Public Works Department has small portable generators capable of running the scales and scalehouse computers.

**Leachate Pumps**

No back-up leachate pumps will be kept on site.

The leachate pumps in the main lift station (Manhole Number 8) are part of a pump exchange program where the defective pump is shipped to the manufacturer and a replacement pump is sent within 48 hours back to the site.

The Phase II leachate pumps are identical and can be switched to place the defective pump. A replacement pump will be ordered from the manufacturer or approved supplier to replace the defective pump within 48 hours.

# APPENDIX E

# FIRE CONTINGENCY OPERATION PLAN

# FIRE CONTINGENCY OPERATIONS

In the event of tire, the responding agency is the Hardee County Fire and Rescue Services, located approximately three miles west of the site, in Wauchula, FL.

The landfill site is equipped with three fire hydrants located on the East side of the Class I Landfill and one hydrant located on the west side of the scale house, used for continuous water supply for Fire and Rescue Equipment. Fire extinguishers are located in all county vehicles and equipment and at the maintenance barn (southeast corner of the site) for use in the event of small fires. There are also six fire extinguishers and five hoses bibs located at the Material Recovery Facility. Most of the Landfill employees have been trained by Hardee County Fire and Rescue in the proper use of fire extinguishers. All tire suppression equipment is checked and serviced on a biannual basis by a certified contractor.

If a vehicle enters the landfill with burning waste:

- Immediate efforts are made to protect the health, safety and life of all persons present.
- There is a fire extinguisher and two hose bibs located at the scale house (entrance of the landfill) for use in the event of small fires.
- If the fire cannot be extinguished the vehicle will be directed to open area on site away from all buildings and away from the waste and Hardee County Fire and Rescue will be contacted immediately.
- Any contaminated area will be cleaned and disposed of appropriately, immediately following authorization from the Fire and Rescue Department.

If a fire is discovered on the working face:

- Immediate efforts are made to protect the health, safety and life of all persons present.
- The site is immediately shut down and the Solid Waste Director is notified.
- Landfill Equipment is used to pull the burning waste away *from* the working area and smothered with in-stock soil materials.
- If necessary, the Hardee County Fire and Rescue Department will be contacted.
- In the event of a large scale fire at this site, Hardee County will utilize local, regional and state mutual aid agreements as prescribed under the County's Comprehensive Emergency Management Plan to obtain whatever resources deemed necessary by the Emergency Management Director.

In the event that a fire is observed or reported when the landfill is closed, Central Dispatch will be instructed to contact Hardee County Fire and Rescue, the Solid Waste Director and the Emergency Management Director.

All fires occurring at the landfill are reported to FDEP by letter, within five days, explaining the cause, remedial actions, and measures taken to prevent a recurrence.

The following phone numbers can be used to notify the appropriate individuals or agencies:

| | |
|---|---|
| Landfill Director | 863-773-5089 (office)<br>863-781-3741 (mobile) |
| Central Dispatch | 911 or<br>863-773-4144 |
| Fire and Rescue | 911 or<br>863-773-4362 |
| Emergency Management | 911 or<br>863-773-6373 |
| Public Works Director | 863-773-3272 (office)<br>863-832-1999 (mobile) |
| FDEP Tampa District | 813-744-6100 |
| Central Fire and Safety Equipment | 800-832-0265 |

On-site Heavy Equipment:

1988 CAT Excavator, Model 215C
2000 CAT Loader, Model 9500
2002 CAT Dozier, Model D7R

# APPENDIX F

# WASTE FACILITY CONTACT LIST

# NEIGHBORING LANDFILLS TO HARDEE COUNTY

| LANDFILL NAME | TYPE | COUNTY | CITY | PHONE NUMBER |
|---|---|---|---|---|
| Polk County North Central Landfill | Class I | Polk | Eaton Park | (863) 284-4319 |
| Southeast County Landfill | Class I | Hillsborough | Picnic | (813) 671-7739 |
| Sun County C&D Landfill | C&D | Hillsborough | Balm | (813) 642-9594 |
| Central County Solid Waste Disposal Complex | Class I | Sarasota | Sarasota | (941) 861-1570 |
| Highlands County Solid Waste Management Center | Class I / C&D | Highlands | Sebring | (863) 655-6483 |
| Pembroke – Fort Meade Landfill | ~~Class III~~ C&D | Polk | Fort Meade | (863) 285-8393 |
| Cedar Trail Landfill | Class III | Polk | Bartow | (863) 533-8776 |

D.E.P.
MAY 2 3 2005
Southwest District Tampa

# APPENDIX G

# POLICY FOR ASBESTOS WASTE DISPOSAL

# POLICY FOR ASBESTOS WASTE DISPOSAL

Asbestos .containing waste materials may be accepted for disposal at the Class I Landfill provided that it meets the requirements of 40 CFR Part 61 and if the Class I Landfill has an acceptable disposal area available.

A. Commercial Generated Asbestos

1. Asbestos materials being removed from any institutional, commercial, public, or industrial structures must be brought in by a licensed contractor certified to classify, remove and properly prepare for disposal all types of Asbestos.
2. Contractor must provide proof of being certified and an a written evaluation of the removal plan; noting type of asbestos, estimated quantity, plans for preparing asbestos for disposal and approval of the Florida Department of Environmental Protections.
3. Contractor must provide Waste Shipment Record.
4. Contractor must give at least a 24-hour notice.
5. Asbestos must be packaged in manageable bundles using leak-tight bagging equivalent to 6 mil in thickness plastic lined cardboard or plastic lined metal containers.
6. Liquids will not be accepted.
7. Wet material for the purpose of preventing the release of particulates is acceptable provided materials are bundled in leak-tight bagging.

B. Residential Generated Asbestos

1. Asbestos materials being removed from a single-family residential unit is not regulated.
2. Residents knowingly removing asbestos containing materials from their home are encouraged to contact the Department of Environmental Protection, or OSHA to obtain guidance on safe removal practices.
3. Residents must package materials in double trash bags and maintain manageable bundles and must give at least a 24-how notice.

C. Disposal Practices -

1. Prepare hole in 3' depth and adequate diameter to meet reported estimated quantity to be received. Hand dispose of each package.
2. Cover immediately with 1 'of soil and compact with dozer, adding more cover material with each pass, as needed. A minimum of 12 inches of soil will be placed over the asbestos.
3. Attach a site map with location and depth of each disposal site and attach in a file with the Waste Shipment Record and record weight ticket.

# WASTE SHIPMENT RECORD



**Generator**

| 1. Work site name and mailing address | Owner's name | Owner's telephone no. |
|---|---|---|
| 2. Operator's name and address | | Operator's telephone no. |
| 3. Waste disposal site (WDS) name, mailing address, and physical site location | | WDS phone no. |
| 4. Name, and address of responsible agency | | |

| 5. Description of materials | 6. Containers No. Type | 7. Total quantity $m^3$ ($yd^3$) |
|---|---|---|
| | | |
| | | |

8. Special handling instructions and additional information

9. OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.

| Printed/typed name & title | Signature | Month Day Year |
|---|---|---|
| | | |

**Transporter**

10. Transporter 1 (Acknowledgment of receipt of materials)

| Printed/typed name & title | Signature | Month Day Year |
|---|---|---|
| Address and telephone no. | | |

11. Transporter 2 (Acknowledgment of receipt of materials)

| Printed/typed name & title | Signature | Month Day Year |
|---|---|---|
| Address and telephone no. | | |

**Disposal Site**

12. Discrepancy indication space

13. Waste disposal site Owner or operator: Certification of receipt of asbestos materials covered by this manifest except as noted in Item 12.

| Printed/typed name & title | Signature | Month Day Year |
|---|---|---|
| | | |

**Source: 40CRF Part 61.149 Figure 4**

**Waste Generator Section (Items 1-9)**

1. Enter the name of the facility at which asbestos waste is generated and the address where the facility is located. In the appropriate spaces, also enter the name of the owner of the facility and the owner's phone number. If a demolition or renovation, enter the name and address of the company and authorized agent responsible for performing the asbestos removal. In the appropriate spaces, also enter the phone number of the operator.
2. If a demolition or renovation, enter the name and address of the company and authorized agent responsible for performing the asbestos removal. In the appropriate spaces, also enter the phone number of the operator.
3. Enter the name, address, and physical site location of the waste disposal site (WDS) that will be receiving the asbestos materials. In the appropriate spaces, also enter the phone number of the WDS. Enter "on-site" if the waste will be disposed of on the generator's property.
4. Provide the name and address of the local, State, or EPA regional office responsible for administering the asbestos NESHAP program.
5. Indicate the types of asbestos waste materials generated. If from a demolition or renovation, indicate the amount of asbestos that is
   - Friable asbestos material
   - Nonfriable asbestos material
6. Enter the number of containers used to transport the asbestos materials listed in Item 5. Also enter one of the following container codes used in transporting each type of asbestos material (specify any other type of container used if not listed below):

   DM – Metal drums, barrels
   DP – Plastic drums, barrels
   BA – 6 mil plastic bags or wrapping
7. Enter the quantities of each type of asbestos material removed in units of cubic meters (cubic yards).
8. Use this space to indicate special transportation, treatment, storage or disposal or Bill of Lading information. If an alternate waste disposal site is designated, note it here. Emergency response telephone numbers or similar information may be included here.
9. The authorized agent of the waste generator must read and ten sign and date this certification. The date is the date of receipt by transporter.

NOTE: The waste generator must retain a copy of this form.

**Transporter Section (Items 10 & 11)**

10 & 11. Enter name, address, and telephone number of each transporter used, if applicable. Print or type the full name and title of person accepting responsibility and acknowledging receipt of materials as listed on this waste shipment record for transport. Enter date of receipt and signature.

NOTE: The transporter must retain a copy of this form.

**Disposal Site Section (Items 12 & 13)**

12. The authorized representative of the WDS must note in this space any discrepancy between waste described on this manifest and waste actually received as well as any improperly enclosed or contained waste. Any rejected materials should be listed and destination of those materials provided. A site that converts asbestos-containing waste material to nonasbestos material is considered a WDS.
13. The signature (by hand) of the authorized WDS agent indicates acceptance and agreement with statements on this manifest except as noted in Item 12. The date is the date of signature and receipt of shipment.

NOTE: The WDS must retain a completed copy of this form. The WDS must also send a completed copy to the operator listed in Item 2.

**Source: 40CRF Part 61.149 Figure 4**

# APPENDIX H

# CONTAMINATED SOIL ACCEPTANCE CRITERIA

## CONTAMINATED SOIL ACCEPTANCE CRITERIA

Contaminated soil at Hardee County Landfill is only accepted on a case-by-case basis whereby soils must be tested for the toxicity characteristic leaching procedure (TCLP) and the paint filter test (Method 9095). Hardee County personnel evaluate results from these tests to determine whether the soil will be accepted at the landfill. In any case, contaminated soil accepted at the landfill shall be placed directly into the lined active landfill cell, within the bermed working area, and not stockpiled outside of the site unless authorized in writing by the Department.

# APPENDIX I

# HOUSEHOLD SHARPS COLLECTION PROGRAM OPERATING PROCEDURES

BEST AVAILABLE COPY

## NOTE: III

**THIS PROGRAM IS PROVIDED FOR THE HOME USER ONLY!**

*All professionals and Businesses are regulated under State and Federal Biomedical Waste Laws and* ***MAY NOT*** *participate.*

## PARTICIPATIN[illegible]CILITIES:

**HARDEE COUNTY [illegible]OLID WASTE DEPARTMENT**
685 AIRPORT ROAD
WAUCHULA, FL 33873-8663
(863) 773-5089
MON-FRI 8:00 A.M. TO 5:00 P.M.

**HARDEE COUNTY FIRE AND RESUCE DEPARTMENT**
149 K.D. REVELL ROAD
WAUCHULA, FL 33873
(863) 773-4362
MON-FRI 8:00 A.M. TO 5:00 P.M.

**HARDEE COUNTY HEALTH DEPARTMENT**
115 K.D. REVELL ROAD
WAUCHULA, FL 33873
(863) 773-4161
MON-FRI 8:00 A.M. TO 5:00 P.M.

**CENTRAL FLORIDA HEALTH CARE**
204 E. PALMETTO STREET
WAUCHULA, FL 33873
(863) 773-2111
MON-FRI 1:00 P.M. TO 4:00 P.M.

**FLORIDA HOSPITAL OF WAUCHULA**
533 W. CARLTON STREET
WAUCHULA, FL 33873
(863) 773-3101
MON-FRI 8:00 A.M. TO 5:00 P.M.

**VISITING NURSES ASSOCIATION**
107 HANCHEY ROAD
WAUCHULA, FL 33873
(863) 773-3101
MON-FRI 9:00 A.M. TO 4:00 P.M.

HARDEE COUNTY USED SHARPS DISPOSAL PROGRAM

HARDEE COUNTY 19 21 FLORIDA

BEST AVAILABLE COPY

# HARDEE COUNTY USED SHARPS DISPOSAL PROGRAM

## *DID YOU KNOW?*

Medical waste from private residences is unregulated and s an increasing problem.

"Sharps" are defined as having the potential to puncture or lacerate. These include syringes with attached needles and disposable lancets.

Based on national statistics, in Hardee County there are an estimated 300 insulin dependent residents plus seasonal visitors who use sharps. There are, additionally, others whose medical conditions require the use of injected mediation.

At a minimum of one injection per day, nearly 110,000 sharps enter the solid waste stream annually in Hardee County.

Sharps that are thrown away can cause many problems, such as:

- They clog sewer lift stations.
- They end up at recycling centers among the cans and plastic containers.
- They puncture solid waste containers and place workers at risk along collection routes and at the landfill.

Sharps can be contaminated with Hepatitis, HIV (the virus that causes AIDS) and other potentially fatal diseases.

## *WHAT C[redacted]DO?*

The Hardee County Used Sharps Disposal Program is made possible by the participation of the Disposal Sites listed in this pamphlet. **Your cooperation is essential to the success of this program. To make the program run smoothly, it is required that you follow these guidelines:**

1. Go to a designated site near you only during the hours listed.
2. Do not bring sharps to the Disposal Site in any thing but the approved sharps containers.
3. Always make sure your container is sealed and locked properly. The disposal site has the right to refuse any improperly packaged containers in order to protect the safety of their employees.
4. When returning a filed sharps container, always give the filled sharps container to authorized personnel. NEVER LEAVE THE SHARPS CONTAINER UNATTENDED.
5. Never dispose of a sharps container in household waste. Containers must be returned to a disposal site.

**Remember, the disposal sites have voluntarily accepted the burden of disposing of potentially harmful used sharps, encourage their continued support by participating responsibly.**

## [redacted]

Go to a designated disposal site. [redacted] sharps containers must be obtained from one of the listed sites.

Obtain an approved sharps container from the site. A donation of $2.00 for each container to help offset the cost would be appreciated.

Procedure:

1. Perform routine blood test or injection.
   - Do not clip the needle.
   - Do not recap the needle.
2. When you are completely through with the lancet or syringe, it is time to put them into your sharps box.
3. Once the sharps have been disposed of into the box do not attempt to retrieve them.
4. When the container is filled, close the lid securely. Whenever possible use strips of tape across the top.
5. Do not overfill the Sharps box.
6. Return the sealed container to any drop-off site, exchange it for a new one and repeat the process.
7. Store your sharps box in a safe place, away from children and pets.

# HARDEE COUNTY HOUSEHOLD SHARPS COLLECTION PROGRAM

## OPERATION AND CONTINGENCY PLAN

**THIS PROGRAM IS DESIGNED TO PROVIDE HOUSEHOLD RESIDENTS WITH AN APPROPRIATE STORAGE CONTAINER AND DISPOSAL METHOD FOR SHARPS ONLY. OTHER BIOHAZARDOUS WASTE OR BIOHAZARDOUS WASTE FROM A COMMERCIAL BUSINESS WILL NOT BE ACCEPTED.**

Upon entering the Landfill, each vehicle is required to check in through the scalehouse. Should a resident want to dispose of a full-approved sharp container, they will be directed to the Animal Control kennel. One of four the trained employees will accept the container. The container will be labeled with a sticker, which has the following information:

**Hardee County Household Sharps**
**Collection Program**
**685 Airport Road**
**Wauchula, Fl 33873**
**Date Received: _____**

The container will then be taken to the designated room at the kennel where it will be placed in a Rubbermaid container and stored in the euthanasia room. Upon receiving a full Rubbermaid container, and Animal Control officer will place the container into one of the six kennel boxes in the Animal Control truck, it will be further secured with a bungie cord and at no time do they exceed more than 15 lbs. in one transport. The containers are transported to Hardee County Fire and Rescue Department (approximately 3 miles) and placed into a 30 gallon cardboard container with a red bag liner, both of which are properly labeled, the Fire Department contracts with Stericycle for proper collection and disposal of biohazardous waste.

Operations Hours are from 8:00 a.m. to 5:00 p.m., Monday through Friday. 8:00 a.m. to 12:00 p.m. on Saturdays. The Kennel's biohazardous waste storage area is restricted during operation hours by keeping the entry door to this room locked at all times. During non-operating hours, the kennel's two roll-up doors are shut and locked and the barrier fence gate will be shut and locked. In addition the exterior fence around the landfill will be shut and locked.

Each person responsible for accepting full sharp containers or handing out replacement containers will receive annual training on how to properly label containers going out with the residents name and address and on how to label full containers coming in with our facility's program name, address and date received. Each person responsible for accepting full sharps containers will also be instructed to wear protective gloves when handling containers, each satellite facility will be responsible for the proper handling of the containers received at their facility, however, written records of containers issued and received at each satellite facility will be maintained and submitted to the e Hardee County Solid Waste Department on a quarterly basis.

Disinfectant procedures for the storage area will be done on an as needed basis but no less than weekly. Procedure will include cleaning tables, cabinets and floors with a quaternary disinfectant with a strong detergent and water.

In such cases as fire, explosions or natural disasters; Hardee County Fire and Rescue Department is located approximately 3 miles north west of the landfill. A copy of the floor plan which list the euthanasia room as a storage area for biohazardous sharps will be available at the kennel and at the Solid Waste Administrative office. In addition, the outside door will be clearly marked with the international biohazard symbol.

Because this facility will accept only sharps in approved containers and will generate only sharps, a contingency plan for spills or accidental release of biomedical waste into the environment would not apply.

**Hardee County Household Sharps Collection Program**
**Attachments:**

---

**BIOMEDICAL WASTE SHARPS COLLECTION PROGRAM**
**GENERAL PERMIT NOTIFICATION**

1. Satellite facilities participating in the household sharps collection program:

- Hardee County Solid Waste Department
- 685 Airport Road
- Wauchula, Fl 33873
- 863-773-5089
- Contact person: Janice Williamson or Teresa Carver

- Hardee County Fire/Rescue Department
- 149 K.D. Revell Road
- Wauchula, FL 33873
- Contact person: David Sloan

- Florida Hospital- Wauchula
- 533 West Carlton Street
- Wauchula, Fl 33873
- Contact person: Mark Blondin

- Wauchula Medical – Dental Center
- 204 East Palmetto Street
- Wauchula, Fl 33873
- Contact Person: Brenda Bellomy

- Hardee County Health Department
- 115 K.D Revell
- Wauchula, Fl 33873
- Contact person: Marsha Carlton or Sandy Griffin

2. Description of program:

Hardee County, in conjunction with the above-mentioned facilities, has strived to establish a household sharps disposal program. This program will focus on the proper storage and disposal of sharps generated by households by providing household users with an approved sharp storage container and easy, accessible drop-off locations for proper disposal.

On October 5, 1996, a kick-off event was held in a centralized location of Hardee County. At this time, health care staff labeled and distributed sharps containers to household residents and they explained how to properly deposit and store their sharps. They were also given and informative brochure developed to educate the public on how this program works and where the drops off locations are.

After the kick off event, was held, household residents are able to drop off their full containers for proper disposal and pick-up new containers at any of the facilities listed. There is no charge to the residents for the containers or disposal, however donations will be accepted.

Hardee County Solid Waste Department will be responsible for the purchasing of the containers and educational material. These items will be distributed among each participating agency. Each participating agency will be responsible for proper storage and disposal cost of the sharps collected at their facilities.

HARDEE COUNTY SOLID WASTE DEPARTRMENT:

Residents requesting sharps containers at the Hardee County Solid Waste Facility will be required to give their name and address which will be placed on their container with indelible ink and listed on record. The number of containers received for disposal will also be tracked. This department has four full-time employees who will handle the distribution and collection of the containers.

All other participating facilities will be required to keep the above mentioned records. The Solid Waste Staff will be responsible for collection data from each participation facility to compile a monthly or quarterly summary of this program.

3 & 4. Sharps storage and disposal method:

All participating facilities will be responsible for their own proper storage and disposal of sharps collected at their facility. As each of these facilities are in the health care business and are considered generators of biohazardous waste, they are familiar with the proper methods of storage and hold the proper permits required for their facilities.

HARDEE COUNTY SOLID WASTE DEPARTMENT

Hardee County Solid Waste Department has established and Animal Control Department. The kennel has an 8'x 7', fully enclosed, secure room to be used for the euthanasia of animals and to store the sharps collected from the kennel operation and from the household program. This room is kept locked at all times and shall be restricted from anyone accept a trained operator. In addition, the outside door will be marked with the international biohazard symbol. Maintenance and cleaning shall be maintained to the highest sanitary condition. The kennel is located at the landfill, however it is separate from any solid waste facilities or activities. The facility is constructed of concrete block and a concrete poured floor with a drain system, sealed with a liquid impermeable sealant. All satellite facilities presently have generator permits and will comply with all requirements listed in 10 D-104.

We are now purchasing sharp containers from Matrix. Each one-quart container is clearly labeled with the international biohazardous waste symbol and the words "danger, biohazardous". They appear to be leak-resistant, rigid and puncture-resistant; (a copy of the container specifications is attached). Upon receipt of full containers, they will be placed in a Rubbermaid container and stored in the euthanisa room. Upon receiving a full Rubbermaid container, an Animal Control officer will place the container into one of the six kennel boxes in the Animal Control truck it will be further secured with a bungie cord. At no time do they exceed more than 15 lbs. in one transport. The containers are transported to the Hardee County Fire and Rescue Department (approximately 3 miles) and placed into a 30-gallon cardboard container with a red bag liner, both of which are properly labeled. The Fire Department contracts with Stericycle for the proper collection and disposal of biohazardous waste.

# APPENDIX J

# WASTE QUANTITY FORM

## WASTE QUANTITY REPORT FORM
## HARDEE COUNTY LANDFILL

| | RESIDENTIAL (tons) | COMMERCIAL (tons) | C&D DEBRIS (tons) | WOOD & YARD WASTE (tons) | SCRAP METAL (tons) | TIRES (tons) | TOTAL TONNAGE |
|---|---|---|---|---|---|---|---|
| Jan-03 | | | | | | | 0.00 |
| Feb-03 | | | | | | | 0.00 |
| Mar-03 | | | | | | | 0.00 |
| Apr-03 | | | | | | | 0.00 |
| May-03 | | | | | | | 0.00 |
| Jun-03 | | | | | | | 0.00 |
| Jul-03 | | | | | | | 0.00 |
| Aug-03 | | | | | | | 0.00 |
| Sep-03 | | | | | | | 0.00 |
| Oct-03 | | | | | | | 0.00 |
| Nov-03 | | | | | | | 0.00 |
| Dec-03 | | | | | | | 0.00 |
| TOTAL | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |

| | PROCESSED THROUGH MRF (tons) | MRF BYPASS (tons) | DISPOSED IN CLASS I[1] (tons) | RECYCLED THROUGH MRF (tons) | SCRAP METAL RECYCLED (tons) | WOOD/YARD WASTE PROCESSED (tons) | WASTE TIRES REMOVED FOR RECYCLING (tons) |
|---|---|---|---|---|---|---|---|
| Jan-03 | | 0.00 | 0.00 | | | | |
| Feb-03 | | 0.00 | 0.00 | | | | |
| Mar-03 | | 0.00 | 0.00 | | | | |
| Apr-03 | | 0.00 | 0.00 | | | | |
| May-03 | | 0.00 | 0.00 | | | | |
| Jun-03 | | 0.00 | 0.00 | | | | |
| Jul-03 | | 0.00 | 0.00 | | | | |
| Aug-03 | | 0.00 | 0.00 | | | | |
| Sep-03 | | 0.00 | 0.00 | | | | |
| Oct-03 | | 0.00 | 0.00 | | | | |
| Nov-03 | | 0.00 | 0.00 | | | | 0.00 |
| Dec-03 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| TOTAL | 0.00 | | | | | | |

[1] Disposed in Class I Total = Residential + Commercial + C&D - Recycled in MRF

# APPENDIX K

# HARDEE COUNTY LANDFILL MONITORING LOCATIONS

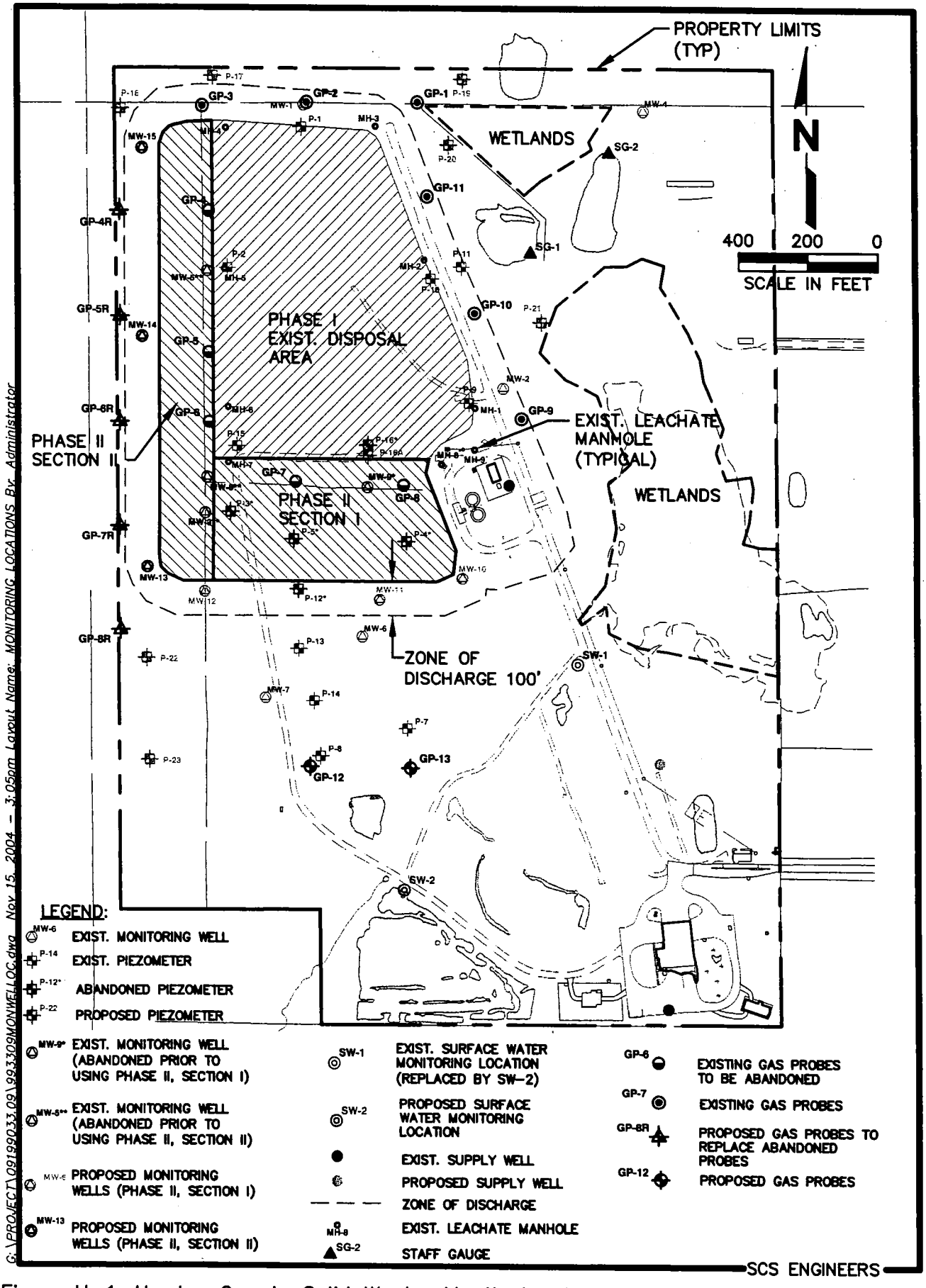



Figure H-1. Hardee County Solid Waste, Monitoring Locations, Hardee County, Florida

# APPENDIX L

# AGREEMENT BETWEEN CITY OF WAUCHULA MUNICIPAL WASTEWATER TREATMENT PLANT AND HARDEE COUNTY LANDFILL

**HARDEE COUNTY**
**BOARD OF COUNTY COMMISSIONERS**
**404 West Orange Street**
**Wauchula, Florida 33873-2867**
**(863)773-9430 * (863)773-6952 * Fax (863)773-0958**

March 12, 2003

Beverly McClellan
City of Wauchula
PO Box 818
Wauchula, FL 33873

Dear Beverly:

Enclosed for your file is a certified copy of the Interlocal Agreement between Hardee County and the City of Wauchula, Florida, for Treatment and Disposal of Leachate Water Produced by the Hardee County Sanitary Landfill. This was approved by the Board on March 06, 2003.

Thanks and please call should you have any questions.

Sincerely,

Lisa Roberts

Lisa Roberts
Executive Secretary

/ljr

Enclosure

c: Ken Evers, County Attorney
Janice Williamson, Landfill Supt.

**Clifton N. Timmerman – Walter B. Olliff, Jr.**
**Bobby R. Smith – William R. Lambert, Jr. – Gordon R. Norris**
**County Manager Lexton H. Albritton, Jr. — County Attorney Ken Evers**

**"An Equal Opportunity Employer"**

# INTERLOCAL AGREEMENT BETWEEN HARDEE COUNTY, FLORIDA AND THE CITY OF WAUCHULA, FLORIDA, FOR THE PROVISION OF TREATMENT AND DISPOSAL OF LEACHATE WATER PRODUCED BY THE HARDEE COUNTY SANITARY LANDFILL

THIS INTERLOCAL AGREEMENT, made and entered into this 06th day of March, 2007, by and between Hardee County, Florida, a political subdivision of the State of Florida, hereinafter referred to as "COUNTY", and the City of Wauchula, Florida, a municipal corporation organized and existing under the laws of the State of Florida, hereinafter referred to as "CITY".

WITNESSETH:

WHEREAS, COUNTY and CITY have the authority to enter into this Interlocal Agreement pursuant to the Florida Interlocal Cooperation Act of 1969, Section 163.01, Florida Statutes (2002); and

WHEREAS, in 1996 Hardee County, Florida, entered into an interlocal agreement with the City of Wauchula, Florida, in which City of Wauchula, Florida, agreed to provide for treatment and disposal of leachate water produced by the Hardee County Sanitary Landfill for a period of three (3) years; and

WHEREAS, in 1999 the City of Wauchula, Florida, and Hardee County, Florida, renewed the above described interlocal agreement for an additional three (3) years; and

WHEREAS, Hardee County, Florida, desires again to retain the City of Wauchula, Florida, to provide for treatment and disposal of leachate water produced by the Hardee County Sanitary Landfill; and

WHEREAS, it is to the mutual benefit of COUNTY and CITY for the CITY to provide treatment and disposal of leachate water for the COUNTY.

NOW, THEREFORE, in consideration of the premises, the mutual covenants hereinafter set forth and other good and valuable consideration, the CITY and COUNTY do hereby agree that:

1. Purpose: This Interlocal Agreement between the CITY and the COUNTY is made in accordance with Section 163.01, Florida Statutes (2002), known as the Florida Interlocal Cooperation Act of 1969. The purpose of this Interlocal Agreement is to provide for the CITY to treat and dispose of leachate water produced by the Hardee County Sanitary Landfill on an as needed basis.

2. Responsibilities of the COUNTY: As conditions precedent to CITY's obligations under this Interlocal Agreement the COUNTY shall provide for transporting the leachate water to disposal sites within the CITY's sewer service area at a regulated rate not to exceed two hundred fifty gallons per minute (250 gpm). The COUNTY shall regularly test the leachate water and provide the test results of all such tests through the term of this agreement to CITY. The COUNTY shall perform any other tests that the CITY and COUNTY agree should be performed, all at the COUNTY's expense. COUNTY shall hold CITY, its agents, servants and employees harmless from and against any and all claims, damages, and costs, including, attorney's fees, or causes of action whatsoever kind or nature caused by neglect, errors, omissions or acts undertaken in the delivery of the leachate water, provided that, the COUNTY shall not be responsible for holding the CITY, its agents, servants and employees harmless for the CITY's own negligence or the negligence of the CITY's employees or agents. Such indemnification shall not exceed the limitations set forth in Section 13, Article X, Florida Constitution, and Section 768.28., Florida Statutes (2002).

3. Responsibilities of the CITY: The CITY shall accept, treat and dispose of the leachate water produced by the COUNTY's Sanitary Landfill.

4. Rights of the CITY: The CITY shall have the right at any time to restrain or refuse the delivery of leachate water from the COUNTY or require pre-treatment thereof in the event test results indicate, or the CITY reasonably believes, the leachate water contains levels of contaminants which could prove detrimental to the operational efficiency of the CITY's wastewater treatment plant. Upon notice to the COUNTY, the CITY shall have the right to restrict or reduce the amount of gallons per minute.

5. Compensation to CITY: The CITY shall be compensated by the COUNTY for said accepted treatment and disposal of the leachate water from the COUNTY's landfill at the CITY's regular sewer rates, plus actual charges for any additional water tests agreed upon by the CITY and the COUNTY. Monthly billings shall be submitted by the CITY to the COUNTY based upon the number of gallons of leachate water delivered to the CITY by the COUNTY for treatment.

6. Impact Fee: CITY waives the Impact Fee while retaining the right to negotiate the Impact Fee in the event the COUNTY desires to extend this contract.

7. Rules and Regulations of Governing Agencies: The service to be provided by the CITY to the COUNTY and the terms of this agreement are subject to the rules and regulations of the Florida Department of Environmental Protection (FDEP) and any other state or federal governmental agency with authority over the COUNTY's sanitary landfill or the CITY's wastewater treatment plant. Any provisions hereof found to be not in compliance with such rules or regulations shall be grounds for cancellation of this agreement by either party.

8. Applicable Law: This Interlocal Agreement shall be governed by the laws of the State of Florida. The venue for any litigation resulting from this Agreement shall be in Hardee County, Florida. Should litigation be necessary to enforce any term or provision of this Agreement, or to collect any portion of the amount payable under this Agreement, then all litigation and collection expenses, witness fees, court costs and attorneys' fees shall be paid to the prevailing party.

9. Term of Agreement: The term of this agreement shall be for three (3) years commencing upon the effective date of this agreement. This Agreement may be terminated at any time by either party hereto through written notice of intent to terminate given by either party hereto to the other party at least thirty (30) days prior to the date of termination.

10. Severability: In the event that any provision of this Interlocal Agreement shall, for any reason, be determined invalid, illegal or unenforceable in any respect, the parties hereto shall negotiate in good faith and agree to such amendments, modifications or supplements of this Interlocal Agreement or such other appropriate actions as shall, to the maximum extent practicable in the light of such determination, implement and give effect to the intentions of the parties as reflected herein. The other provisions of this Interlocal Agreement, as modified, supplemented or otherwise affected by such action, shall remain in full force and effect.

11. Waiver: Unless otherwise specifically provided for by the terms of this Agreement, no delay or failure to exercise a right resulting from any breach of this Agreement shall impair such right or shall be construed to be a waiver thereof, but such right may be exercised from time to time and as often as may be deemed expedient. Any waiver shall be in writing and signed by the party granting such waiver. If any representation, warranty or covenant contained in this Agreement is breached by any party and thereafter waived by another party, such waiver shall be limited to the particular breach so waived and shall not be deemed to waive, either expressly or impliedly, any other breach under this Agreement.

12. Extent of Interlocal Agreement: This Interlocal Agreement represents the entire and integrated agreement between the COUNTY and the CITY and supersedes all prior negotiations, representations or agreement, either written or oral, pertaining to provision of treatment and disposal of leachate water produced by the Hardee County Sanitary Lanfill. This Interlocal Agreement shall supersede the January 11, 1996, Interlocal Agreement between COUNTY and CITY for the provision of leachate water services. This Interlocal Agreement may only be amended, supplemented, modified, changed or canceled by a written instrument executed in like manner as this instrument.

13. Notices: Notices required by or related to this Interlocal Agreement shall be sent by First Class United States mail, postage prepaid. Notices to the County shall be sent to: County Manager, 412 West Orange Street, Room 203A, Wauchula, Florida 33873, and notices to the CITY shall be sent to: City Clerk, P.O. Box 818, Wauchula, Florida 33873.

14. Effective Date: This Interlocal Agreement shall be effective upon the filing of a fully executed copy of this Interlocal Agreement with the Clerk of the Circuit Court of Hardee County, Florida, pursuant to Section 163.01 (11 ), Florida Statutes (2002).

IN WITNESS WHEREOF, this Interlocal Agreement has been caused to be signed by the respective governing bodies of the parties hereto.

ATTEST:

B. Hugh Bradley
B. HUGH BRADLEY, Clerk
3/10/2003

(SEAL)

HARDEE COUNTY. FLORIDA, a political subdivision of the State of Florida

By: _____
William R. Lambert, Jr., Chairman of the Board of County Commissioners

ATTEST:

James A. Braddock
JAMES A. BRADDOCK, City Clerk

(SEAL)

CITY OF WAUCHULA, FLORIDA, a municipal corporation organized and existing under the laws of the State of Florida

By: _____
DAVID B. ROYAL, Chiarman of the City Council

# APPENDIX M

# RANDOM LOAD INSPECTION FORM

# RANDOM LOAD INSPECTION FORM

REPORT TYPE: ☐ INSPECTION ☐ VIOLATION ☐ LF RANDOM INSPECTION

LOCATION: _____ DATE: _____ TIME: _____

DELIVERING COMPANY: _____

DRIVER NAME: _____ VEHICLE #: _____

VEHICLE TYPE: ☐ FEL ☐ RO ☐ RL ☐ SL ☐ SEMI ☐ DUMP

OTHER: _____

CUSTOMER/GENERATOR: _____ TRANSACTION #: _____

TYPE OF WASTE:

| | | | |
|---|---|---|---|
| ☐ YARD WASTE | ☐ INDUSTRIAL | ☐ AUTO PARTS | ☐ BY PASS WASTE |
| ☐ C&D | ☐ INSULATION | ☐ ASH RESIDUE | ☐ ANIMAL WASTE |
| ☐ FURNITURE | ☐ AG WASTE | ☐ ROOFING | ☐ SPECIAL WASTE |
| ☐ CARDBOARD | ☐ FIELD PLASTICS | ☐ METALS | ☐ BIOMEDICAL WASTE |
| ☐ COMMERCIAL WASTE | | ☐ HOUSEHOLD GARBAGE | |

☐ OTHER: _____

TYPE OF VIOLATION: ☐ FACILITY ☐ LOAD ☐ SAFETY ☐ CONTAINER

DETAILS: _____

DRIVERS COMMENTS: _____

RESULTS: ☐ ACCEPTED ☐ REJECTED ☐ RELOAD ☐ ALREADY IN LF

INSPECTOR'S SIGNATURE: _____

ADDITIONAL COMMENTS: _____

FEL : Front-End Loader
RO: Roll-Off Container
RL: Rear Loader
SL: Side Loader
SEMI: Semi Trailer
DUMP: Dump Truck

# APPENDIX N

# LEACHATE LEVELING FORM

MONTHLY LEACHATE WATER LEVELING FORM
HARDEE COUNTY LANDFILL

Date: _____
Personnel: _____
Weather
Conditions: _____

| Interior Piezometers | Top of Casing | Depth to Groundwater Table | Estimated Water Level | Exterior Piezometers | Top of Casing | Depth to Groundwater Table | Estimated Water Level | Comments |
|---|---|---|---|---|---|---|---|---|
| P-10 | 88.66 | | | P-11 | 88.25 | | | |
| P-1 | 90.14 | | | MW-1 | 87.92 | | | |
| P-2 | 90.64 | | | MW-5 | 88.67 | | | |
| P-15 | 89.23 | | | MW-8 | 89.07 | | | |
| P-16 | 88.92 | | | MW-9 | 88.71 | | | |
| P-9 | 87.17 | | | MW-2 | 85.75 | | | |

Note:
1. Estimated water level = Top of Casing - Depth to Groundwater Table.
2. Compare the estimated water level for the interior and exterior piezometers.
3. If the exterior piezometer has a greater water level, groundwater is flowing toward the landfill.
4. If the interior piezometer has a greater water level, increase leachate removal from Manhole Number 8 (Lift Station) until water level lower.
5. All top of piezometer were surveyed by Chastain Skillman, Inc. on October 3, 2003.
6. All top of Monitoring well casings surveyed by Chastain Skillman, Inc. July 2, 2003.

# APPENDIX O

# LEACHATE MANAGEMENT RECORD KEEPING FORMS

**Hardee County Landfill**
**Monthly Leachate Water Balance**

Month:

| | A | B | C | D | E | F | G | H | I | J | K | L | M |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Day | Phase II Collection (gal) | Phase II Detection (gal) | Total Phase II Leachate (gal) | Total Leachate pumped from MH-8 (gal) | Total Phase I Leachate (gal) | Leachate Added to Tanks (gal) | Rainfall (inches) | Water added to Tanks due to Rainfall (gal) | Total Liquid Added in Tanks (gal) | Previous Days Liquid Stored in Tanks (gal) | Liquid Stored in Tanks (gal) | Liquid Hauled (gal) | End of Day Balance in Tanks (gal) |
| | | | | | | | | | | 0.0 | | | |
| 1 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| 2 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| 3 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| 4 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| 5 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| 6 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| 7 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| 8 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| 9 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| 10 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| 11 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| 12 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| 13 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| 14 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| 15 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| 16 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| 17 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| 18 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| 19 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| 20 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| 21 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| 22 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| 23 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| 24 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| 25 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| 26 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| 27 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| 28 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| 29 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| 30 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| 31 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| Totals | 0.0 | 0.0 | | | 0.0 | | 0.0 | | 0.0 | | | 0.0 | |
| | | | | | | | | | | | Next Months Begining Storage | | 0.0 |

Notes:
1) Column A is daily total from Phase II collection meter
2) Column B is daily total from Phase II detection meter
3) Column D is daily total from MH-8 pump station meter
4) Column E is the estimated Phase I total entering MH-8 (Col D - Col C)
5) Column F is the total pumped from MH-8 to the tanks (Col D)
6) Column H is rainfall times one-inch of depth of tank (Col G * gallon per inch rainfall)
7) Column I is total liquid added to tank (leachate plus rainfall)
8) Column J is previous days liquid balance (Col O)
9) Column K is liquid added plus liquid stored from previous day (Col I plus Col J)
10) Column M is the end of day balance (Col K - Col L)

Leachate Tanks

| Tank No. | Diameter (ft) | Water in tank per inch depth (gal/in) |
|---|---|---|
| 1 | 29 | 411.7 |
| 2 | 29 | 411.7 |
| Total | | 823.5 gal per inch of rainfall |

Maximum Total Tank Storage

| | |
|---|---|
| 1 | 79,000 gal |
| 2 | 79,000 gal |
| Total | 158,000 gal |

Source: PBSJ Response to RAI dated 7/25/97

D.E.P.
MAY 2 3 2005
Southwest District Tampa

Sample Sheet

**Hardee County Landfill**
**Monthly Leachate Water Balance**

Month: Jun-2005

| | A | B | C | D | E | F | G | H | I | J | K | L | M |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Day | Phase II Collection (gal) | Phase II Detection (gal) | Total Phase II Leachate (gal) | Total Leachate pumped from MH-8 (gal) | Total Phase I Leachate (gal) | Leachate Added to Tanks (gal) | Rainfall (inches) | Water added to Tanks due to Rainfall (gal) | Total Liquid Added in Tanks (gal) | Previous Days Liquid Stored in Tanks (gal) | Liquid Stored in Tanks (gal) | Liquid Hauled (gal) | End of Day Balance in Tanks (gal) |
| 1 | 10,000.0 | 300.0 | 10,300.0 | 12,000.0 | 1,700.0 | 12,000.0 | 1.0 | 823.5 | 12,823.5 | 50,000.0 | 62,823.5 | 60,000.0 | 2,823.5 |
| 2 | 10,000.0 | 300.0 | 10,300.0 | 12,000.0 | 1,700.0 | 12,000.0 | 1.0 | 823.5 | 12,823.5 | 2,823.5 | 15,647.0 | 12,000.0 | 3,647.0 |
| 3 | 10,000.0 | 300.0 | 10,300.0 | 12,000.0 | 1,700.0 | 12,000.0 | 1.0 | 823.5 | 12,823.5 | 3,647.0 | 16,470.4 | 12,000.0 | 4,470.4 |
| 4 | 10,000.0 | 300.0 | 10,300.0 | 12,000.0 | 1,700.0 | 12,000.0 | 1.0 | 823.5 | 12,823.5 | 4,470.4 | 17,293.9 | 12,000.0 | 5,293.9 |
| 5 | 10,000.0 | 300.0 | 10,300.0 | 12,000.0 | 1,700.0 | 12,000.0 | 1.0 | 823.5 | 12,823.5 | 5,293.9 | 18,117.4 | 12,000.0 | 6,117.4 |
| 6 | 10,000.0 | 300.0 | 10,300.0 | 12,000.0 | 1,700.0 | 12,000.0 | 1.0 | 823.5 | 12,823.5 | 6,117.4 | 18,940.9 | 12,000.0 | 6,940.9 |
| 7 | 10,000.0 | 300.0 | 10,300.0 | 12,000.0 | 1,700.0 | 12,000.0 | 1.0 | 823.5 | 12,823.5 | 6,940.9 | 19,764.4 | 12,000.0 | 7,764.4 |
| 8 | 10,000.0 | 300.0 | 10,300.0 | 12,000.0 | 1,700.0 | 12,000.0 | 1.0 | 823.5 | 12,823.5 | 7,764.4 | 20,587.8 | 12,000.0 | 8,587.8 |
| 9 | 10,000.0 | 300.0 | 10,300.0 | 12,000.0 | 1,700.0 | 12,000.0 | 1.0 | 823.5 | 12,823.5 | 8,587.8 | 21,411.3 | 12,000.0 | 9,411.3 |
| 10 | 10,000.0 | 300.0 | 10,300.0 | 12,000.0 | 1,700.0 | 12,000.0 | 1.0 | 823.5 | 12,823.5 | 9,411.3 | 22,234.8 | 12,000.0 | 10,234.8 |
| 11 | 10,000.0 | 300.0 | 10,300.0 | 12,000.0 | 1,700.0 | 12,000.0 | 1.0 | 823.5 | 12,823.5 | 10,234.8 | 23,058.3 | 12,000.0 | 11,058.3 |
| 12 | 10,000.0 | 300.0 | 10,300.0 | 12,000.0 | 1,700.0 | 12,000.0 | 1.0 | 823.5 | 12,823.5 | 11,058.3 | 23,881.7 | 12,000.0 | 11,881.7 |
| 13 | 10,000.0 | 300.0 | 10,300.0 | 12,000.0 | 1,700.0 | 12,000.0 | 1.0 | 823.5 | 12,823.5 | 11,881.7 | 24,705.2 | 12,000.0 | 12,705.2 |
| 14 | 10,000.0 | 300.0 | 10,300.0 | 12,000.0 | 1,700.0 | 12,000.0 | 1.0 | 823.5 | 12,823.5 | 12,705.2 | 25,528.7 | 12,000.0 | 13,528.7 |
| 15 | 10,000.0 | 300.0 | 10,300.0 | 12,000.0 | 1,700.0 | 12,000.0 | 1.0 | 823.5 | 12,823.5 | 13,528.7 | 26,352.2 | 12,000.0 | 14,352.2 |
| 16 | 10,000.0 | 300.0 | 10,300.0 | 12,000.0 | 1,700.0 | 12,000.0 | 1.0 | 823.5 | 12,823.5 | 14,352.2 | 27,175.7 | 12,000.0 | 15,175.7 |
| 17 | 10,000.0 | 300.0 | 10,300.0 | 12,000.0 | 1,700.0 | 12,000.0 | 1.0 | 823.5 | 12,823.5 | 15,175.7 | 27,999.1 | 12,000.0 | 15,999.1 |
| 18 | 10,000.0 | 300.0 | 10,300.0 | 12,000.0 | 1,700.0 | 12,000.0 | 1.0 | 823.5 | 12,823.5 | 15,999.1 | 28,822.6 | 12,000.0 | 16,822.6 |
| 19 | 10,000.0 | 300.0 | 10,300.0 | 12,000.0 | 1,700.0 | 12,000.0 | 1.0 | 823.5 | 12,823.5 | 16,822.6 | 29,646.1 | 12,000.0 | 17,646.1 |
| 20 | 10,000.0 | 300.0 | 10,300.0 | 12,000.0 | 1,700.0 | 12,000.0 | 1.0 | 823.5 | 12,823.5 | 17,646.1 | 30,469.6 | 12,000.0 | 18,469.6 |
| 21 | 10,000.0 | 300.0 | 10,300.0 | 12,000.0 | 1,700.0 | 12,000.0 | 1.0 | 823.5 | 12,823.5 | 18,469.6 | 31,293.1 | 12,000.0 | 19,293.1 |
| 22 | 10,000.0 | 300.0 | 10,300.0 | 12,000.0 | 1,700.0 | 12,000.0 | 1.0 | 823.5 | 12,823.5 | 19,293.1 | 32,116.5 | 12,000.0 | 20,116.5 |
| 23 | 10,000.0 | 300.0 | 10,300.0 | 12,000.0 | 1,700.0 | 12,000.0 | 1.0 | 823.5 | 12,823.5 | 20,116.5 | 32,940.0 | 12,000.0 | 20,940.0 |
| 24 | 10,000.0 | 300.0 | 10,300.0 | 12,000.0 | 1,700.0 | 12,000.0 | 1.0 | 823.5 | 12,823.5 | 20,940.0 | 33,763.5 | 12,000.0 | 21,763.5 |
| 25 | 10,000.0 | 300.0 | 10,300.0 | 12,000.0 | 1,700.0 | 12,000.0 | 1.0 | 823.5 | 12,823.5 | 21,763.5 | 34,587.0 | 12,000.0 | 22,587.0 |
| 26 | 10,000.0 | 300.0 | 10,300.0 | 12,000.0 | 1,700.0 | 12,000.0 | 1.0 | 823.5 | 12,823.5 | 22,587.0 | 35,410.4 | 12,000.0 | 23,410.4 |
| 27 | 10,000.0 | 300.0 | 10,300.0 | 12,000.0 | 1,700.0 | 12,000.0 | 1.0 | 823.5 | 12,823.5 | 23,410.4 | 36,233.9 | 12,000.0 | 24,233.9 |
| 28 | 10,000.0 | 300.0 | 10,300.0 | 12,000.0 | 1,700.0 | 12,000.0 | 1.0 | 823.5 | 12,823.5 | 24,233.9 | 37,057.4 | 12,000.0 | 25,057.4 |
| 29 | 10,000.0 | 300.0 | 10,300.0 | 12,000.0 | 1,700.0 | 12,000.0 | 1.0 | 823.5 | 12,823.5 | 25,057.4 | 37,880.9 | 12,000.0 | 25,880.9 |
| 30 | 10,000.0 | 300.0 | 10,300.0 | 12,000.0 | 1,700.0 | 12,000.0 | 1.0 | 823.5 | 12,823.5 | 25,880.9 | 38,704.4 | 12,000.0 | 26,704.4 |
| 31 | 10,000.0 | 300.0 | 10,300.0 | 12,000.0 | 1,700.0 | 12,000.0 | 1.0 | 823.5 | 12,823.5 | 26,704.4 | 39,527.8 | 12,000.0 | 27,527.8 |
| Totals | 310,000.0 | 9,300.0 | | | 52,700.0 | | 31.0 | | 397,527.8 | | | 420,000.0 | |
| | | | | | | | | | | | Next Months Begining Storage | | 27,527.8 |

Notes:
1) Column A is daily total from Phase II collection meter
2) Column B is daily total from Phase II detection meter
3) Column D is daily total from MH-8 pump station meter
4) Column E is the estimated Phase I total entering MH-8 (Col D - Col C)
5) Column F is the total pumped from MH-8 to the tanks (Col D)
6) Column H is rainfall times one-inch of depth of tank (Col G * gallon per inch rainfall)
7) Column I is total liquid added to tank (leachate plus rainfall)
8) Column J is previous days liquid balance (Col O)
9) Column K is liquid added plus liquid stored from previous day (Col I plus Col J)
10) Column M is the end of day balance (Col K - Col L)

Leachate Tanks

| Tank No. | Diameter (ft) | Water in tank per inch depth (gal/in) |
|---|---|---|
| 1 | 29 | 411.7 |
| 2 | 29 | 411.7 |
| | Total | 823.5 gal per inch of rainfall |

Maximum Total Tank Storage

| | |
|---|---|
| 1 | 79,000 gal |
| 2 | 79,000 gal |
| Total | 158,000 gal |

Source: PBSJ Response to RAI dated 7/25/97

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
MAY 23 2005
SOUTHWEST DISTRICT
TAMPA

## LEACHATE HAUL REPORTS

| DATE | TIME | GALLONS HAULED | FROM LOCATION | TO TREATMENT | OTHER |
|---|---|---|---|---|---|
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |
| | | | | City of Wau. | |

HAULED BY: _____

# DAILY LEACHATE REPORT

| | | | | |
|---|---|---|---|---|
| DATE | | | DATE | |
| RAINFALL INCHES | | | RAINFALL INCHES | |
| TANK 1 ELEVATION | | | TANK 1 ELEVATION | |
| TANK 2 ELEVATION | | | TANK 2 ELEVATION | |
| GALLONS PUMPED INTO TANKS | | | GALLONS PUMPED INTO TANKS | |
| LOADS HAULED TO TREATMENT | | | LOADS HAULED TO TREATMENT | |
| GALLONS HAULED | | | GALLONS HAULED | |
| GALLONS STORED | | | GALLONS STORED | |

| | | | | |
|---|---|---|---|---|
| DATE | | | DATE | |
| RAINFALL INCHES | | | RAINFALL INCHES | |
| TANK 1 ELEVATION | | | TANK 1 ELEVATION | |
| TANK 2 ELEVATION | | | TANK 2 ELEVATION | |
| GALLONS PUMPED INTO TANKS | | | GALLONS PUMPED INTO TANKS | |
| LOADS HAULED TO TREATMENT | | | LOADS HAULED TO TREATMENT | |
| GALLONS HAULED | | | GALLONS HAULED | |
| GALLONS STORED | | | GALLONS STORED | |

| | | | | |
|---|---|---|---|---|
| DATE | | | DATE | |
| RAINFALL INCHES | | | RAINFALL INCHES | |
| TANK 1 ELEVATION | | | TANK 1 ELEVATION | |
| TANK 2 ELEVATION | | | TANK 2 ELEVATION | |
| GALLONS PUMPED INTO TANKS | | | GALLONS PUMPED INTO TANKS | |
| LOADS HAULED TO TREATMENT | | | LOADS HAULED TO TREATMENT | |
| GALLONS HAULED | | | GALLONS HAULED | |
| GALLONS STORED | | | GALLONS STORED | |

COMMENTS:

MONTH, YE[redacted]
LEACHATE WAT[redacted]ANCE

| DATE | LANDFILL AREA (intermediate cover) | LANDFILL AREA (open) | RAINFALL (inches) | RAINFALL IN TANKS (gallons) | LEACHATE COLLECTED (from ditch) | LEACHATE COLLECTED (from underdrains) | TOTAL LEACHATE COLLECTED | GALLONS STORED IN TANKS | LEACHATE HAULED TO TREATMENT | BALANCE |
|---|---|---|---|---|---|---|---|---|---|---|
| 31 | | | | | | | | | | |
| 1 | | | | | | | | | | |
| 2 | | | | | | | | | | |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | | | | | | | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| 11 | | | | | | | | | | |
| 12 | | | | | | | | | | |
| 13 | | | | | | | | | | |
| 14 | | | | | | | | | | |
| 15 | | | | | | | | | | |
| 16 | | | | | | | | | | |
| 17 | | | | | | | | | | |
| 18 | | | | | | | | | | |
| 19 | | | | | | | | | | |
| 20 | | | | | | | | | | |
| 21 | | | | | | | | | | |
| 22 | | | | | | | | | | |
| 23 | | | | | | | | | | |
| 24 | | | | | | | | | | |
| 25 | | | | | | | | | | |
| 26 | | | | | | | | | | |
| 27 | | | | | | | | | | |
| 28 | | | | | | | | | | |
| 29 | | | | | | | | | | |
| 30 | | | | | | | | | | |
| 31 | | | | | | | | | | |
| TOTALS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | BALANCE | |

NET DIFFERENCE

PREVIOUS GALLONS STORED
CURRENT GALLONS STORED 0
GAINED 0

TREATMENT 0 GALLON PER DAY
GAINED 0 GALLON PER ACRE
GENERATED 0

NOTES: Rainfall gallons calculated for 2-29' diameter tanks
(0.0303 acres at 27,150 gallons per acre/per inch

HARDEE COUNTY SOLID WASTE DEPARTMENT

# ANNUAL LEACHATE WATER BALANCE SUMMARY

| MONTH | RAINFALL (INCHES) | TOTAL LEACHATE COLLECTED | GALLONS SOTRED IN TANKS (NET DIFFERENCE) | TOTAL LEACHATE TREATED | BALANCE |
|---|---|---|---|---|---|
| January | | | | | |
| February | | | | | |
| March | | | | | |
| April | | | | | |
| May | | | | | |
| June | | | | | |
| July | | | | | |
| August | | | | | |
| September | | | | | |
| October | | | | | |
| November | | | | | |
| December | | | | | |
| Total for 2003 | | | | | |

TOTAL

HARDEE COUNTY SOLID WASTE DEPARTMENT

NOVEMB[redacted]2002
LEACHATE WATER BALANCE

| DATE | LANDFILL AREA (Intermediate cover) | LANDFILL AREA (open) | RAINFALL (inches) | RAINFALL IN TANKS (gallons ) | LEACHATE COLLECTED | TOTAL LEACHATE COLLECTED | GALLONS STORED IN TANKS | LEACHATE HAULED TO TREATMENT | BALANCE |
|---|---|---|---|---|---|---|---|---|---|
| 10/31/02 | | | | | | | 74,303 | | |
| 11/1/02 | 9.65 | 1.5 | 0 | - | 42,822 | 42,822 | | 34,790 | |
| 11/2/02 | 9.65 | 1.5 | 0 | - | 32,000 | 32,000 | | - | |
| 11/3/02 | 9.65 | 1.5 | 0 | - | | - | | - | |
| 11/4/02 | 9.65 | 1.5 | 0 | - | 31,000 | 31,000 | | 29,820 | |
| 11/5/02 | 9.65 | 1.5 | 0.1 | 82 | 29,800 | 29,882 | | 24,850 | |
| 11/6/02 | 9.65 | 1.5 | 0.5 | 412 | 28,420 | 28,832 | | 39,760 | |
| 11/7/02 | 9.65 | 1.5 | 0 | - | - | - | | 9,940 | |
| 11/8/02 | 9.65 | 1.5 | 0 | - | 26,413 | 26,413 | | 23,950 | |
| 11/9/02 | 9.65 | 1.5 | 0 | - | 39,302 | 39,302 | | 38,320 | |
| 11/10/02 | 9.65 | 1.5 | 0 | - | - | - | | - | |
| 11/11/02 | 9.65 | 1.5 | 0 | - | - | - | | - | |
| 11/12/02 | 9.65 | 1.5 | 0.1 | 82 | 38,663 | 38,745 | | 28,740 | |
| 11/13/02 | 9.65 | 1.5 | 0 | - | 27,922 | 27,922 | | 33,530 | |
| 11/14/02 | 9.65 | 1.5 | 0 | - | - | - | | 38,320 | |
| 11/15/02 | 9.65 | 1.5 | 1.4 | 1,154 | 47,424 | 48,578 | | 33,530 | |
| 11/16/02 | 9.65 | 1.5 | 5.0 | 4,120 | - | 4,120 | | - | |
| 11/17/02 | 9.65 | 1.5 | 0 | - | | - | | - | |
| 11/18/02 | 9.65 | 1.5 | 0 | - | 45,164 | 45,164 | | 38,320 | |
| 11/19/02 | 9.65 | 1.5 | 0 | - | 20,974 | 20,974 | | 38,320 | |
| 11/20/02 | 9.65 | 1.5 | 0 | - | 39,989 | 39,989 | | 38,320 | |
| 11/21/02 | 9.65 | 1.5 | 0.1 | 82 | 46,090 | 46,172 | | 38,320 | |
| 11/22/02 | 9.65 | 1.5 | 0 | - | - | - | | 38,320 | |
| 11/23/02 | 9.65 | 1.5 | 0 | - | 49,703 | 49,703 | | 38,320 | |
| 11/24/02 | 9.65 | 1.5 | 0 | - | - | - | | - | |
| 11/25/02 | 9.65 | 1.5 | 0 | - | - | - | | - | |
| 11/26/02 | 9.65 | 1.5 | 0 | - | - | - | | - | |
| 11/27/02 | 9.65 | 1.5 | 0 | - | - | - | | 9,580 | |
| 11/28/02 | 9.65 | 1.5 | 0 | - | - | - | | - | |
| 11/29/02 | 9.65 | 1.5 | 0 | - | - | - | | - | |
| 11/30/02 | 9.65 | 1.5 | 0 | - | 51,709 | 51,709 | 129,413 | - | |
| | | | | | | | | 575,050 | |
| TOTALS | | | 7.20 | 5,933 | 597,395 | 603,328 | | BALANCE | -26,832 |
| | | | | | NET DIFFERENCE | | 55,110 | | |

| | | | | | |
|---|---|---|---|---|---|
| PREVIOUS GALLONS STORED | 74,303 | TREATMENT | 575,050 | GAL PER DAY | 20,328 |
| CURRENT GALLONS STORED | 129,413 | GAINED | 55,110 | PER ACRE | 13,552 |
| GAINED | 55,110 | | | | |
| | | GENERATED | 630,160 | | |

HARDEE COUNTY SOLID WASTE DEPARTMENT

1994 06:04 9417733907 HARDEE COUNTY S.W. PAGE 03

# 2002 ANNUAL LEACHATE WATER BALANCE SUMMARY

| MONTH | RAINFALL (inches) | TOTAL LEACHATE COLLECTED | GALLONS STORED IN TANKS (NET DIFFERENCE) | TOTAL LEACHATE TREATED | BALANCE |
|---|---|---|---|---|---|
| JANUARY, 2002 | 2.10 | 310,335 | 72,991 | 236,385 | 959 |
| FEBRUARY, 2002 | 8.50 | 511,504 | 2,255 | 509,850 | -601 |
| MARCH, 2002 | 0.00 | 313,148 | 24,384 | 347,625 | -10,093 |
| APRIL, 2002 | 4.40 | 467,979 | 21,710 | 447,300 | -1,031 |
| MAY, 2002 | 2.80 | 653,515 | 19,874 | 665,980 | 7,409 |
| JUNE, 2002 | 12.00 | 706,041 | 19,401 | 670,950 | 15,690 |
| JULY, 2002 | 13.70 | 1,365,697 | 419 | 1,121,506 | 244,610 |
| AUGUST, 2002 | 3.60 | 721,328 | 50,548 | 795,200 | -23,324 |
| SEPTEMBER, 2002 | 10.00 | 689,937 | 37,649 | 680,890 | -28,602 |
| OCTOBER, 2002 | 5.10 | 823,118 | 54,114 | 874,720 | 2,512 |
| NOVEMBER, 2002 | 7.20 | 603,328 | 55,110 | 575,050 | -26,832 |
| DECEMBER, 2002 | 11.80 | 386,172 | 43,365 | 469,420 | -39,884 |
| TOTAL FOR 2002 | 81.20 | 7,552,102 | 401,820 | 7,394,876 | 140,814 |

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
JUN 2 0 2003
SOUTHWEST DISTRICT TAMPA

HARDEE COUNTY SOLID WASTE DEPARTMENT

# APPENDIX P

# GAS MONITORING FORM

# HARDEE COUNTY LANDFILL

## LFG MONITORING FORM

| SAMPLER'S NAME: | | PROJECT NAME: | Hardee County Landfill | | |
|---|---|---|---|---|---|
| DATE: | | PROJECT: | LFG Monitoring | LOCATION: | Wauchula |
| WEATHER CONDITIONS: | | | | | |
| SAMPLE ID | TIME SAMPLE TAKEN | METHANE CONTENT (%LEL) | COMMENTS: | | |
| GP-1 | | | | | |
| GP-2 | | | | | |
| GP-3 | | | | | |
| GP-4* | | | | | |
| GP-4R** | | | | | |
| GP-5* | | | | | |
| GP-5R** | | | | | |
| GP-6* | | | | | |
| GP-6R** | | | | | |
| GP-7* | | | | | |
| GP-7R** | | | | | |
| GP-8* | | | | | |
| GP-8R** | | | | | |
| GP-9 | | | | | |
| GP-10 | | | | | |
| GP-11 | | | | | |
| GP-12*** | | | | | |
| GP-13*** | | | | | |
| | | | | | |
| Maintenance Bldg**** | | | | | |
| Scalehouse**** | | | | | |
| MRF**** | | | | | |
| Animal Control Bldg**** | | | | | |

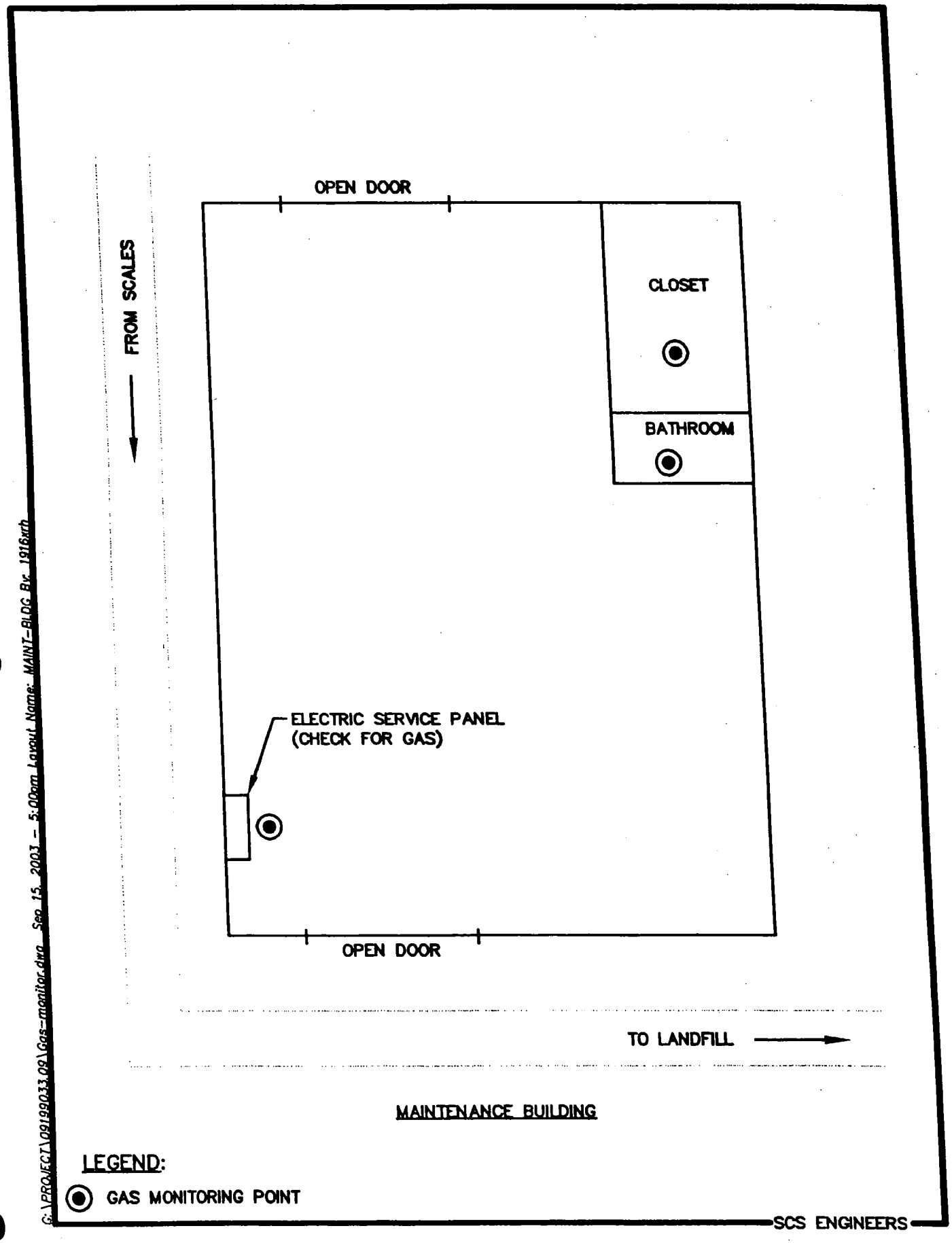
NOTES:

* Represents gas probes that will be abandoned during construction of Phase II, Section II.

** Represents gas probes that will be installed with Phase II, Section II. Upon construction of Phase II, Section II, these probes will be used to measure methane content.

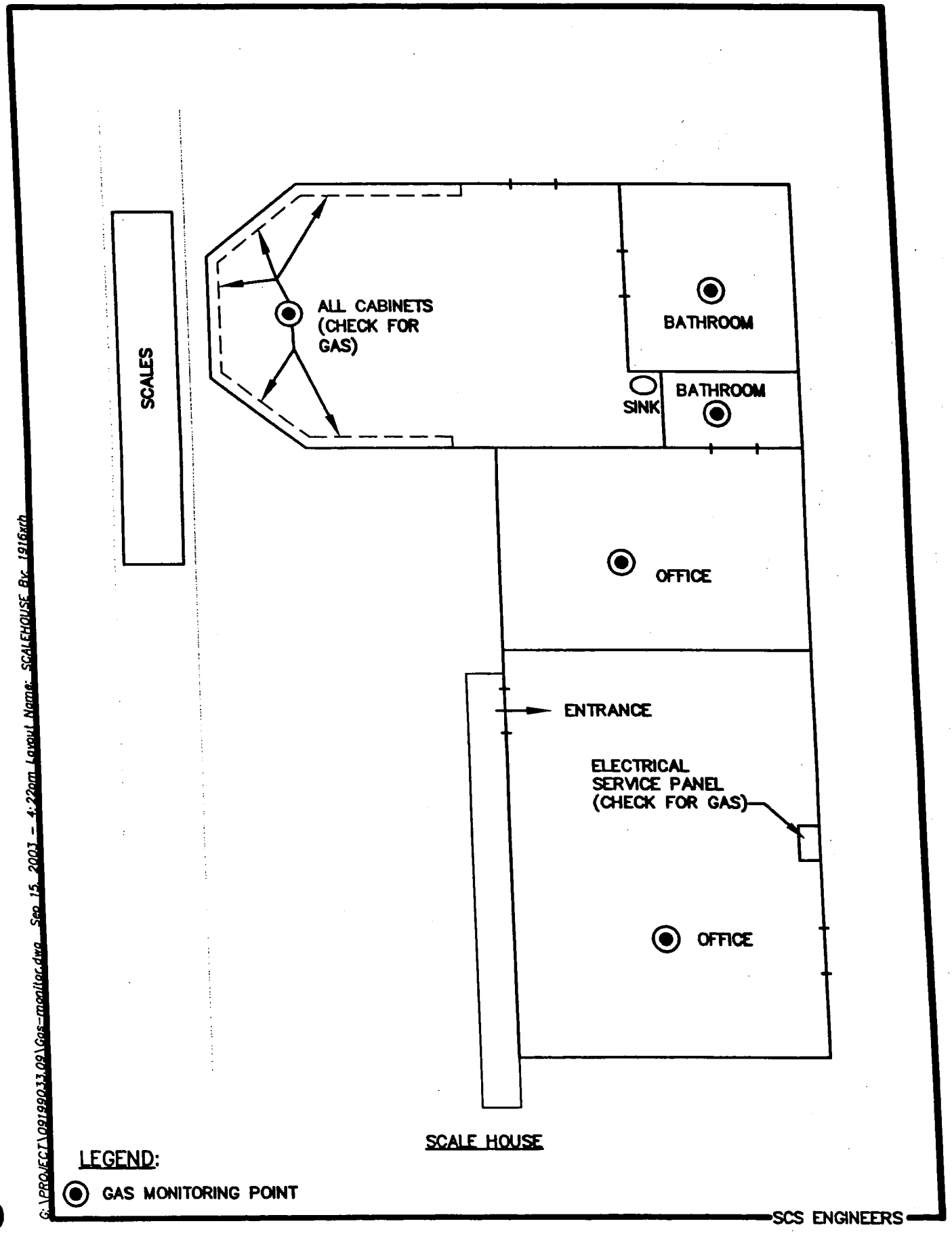
*** Probes installed during construciton of Phase II, Section I.

**** Sample locations within the buildings include any slab penetrations, enclosed spaces, or electrical conduits and as shown on the figures.




G:\PROJECT\09199033.09\Gas-monitor.dwg Sep 15, 2003 - 5:00pm Layout Name: MAINT-BLDG Bx 1916rth

Figure. Gas Monitoring Points, Maintenance Building.




G:\PROJECT\09199033.09\Gas-monitor.dwg Sep 15, 2003 - 4:22pm Layout Name: SCALEHOUSE By: 1916xh

Figure. Gas Monitoring Points, Scale House.

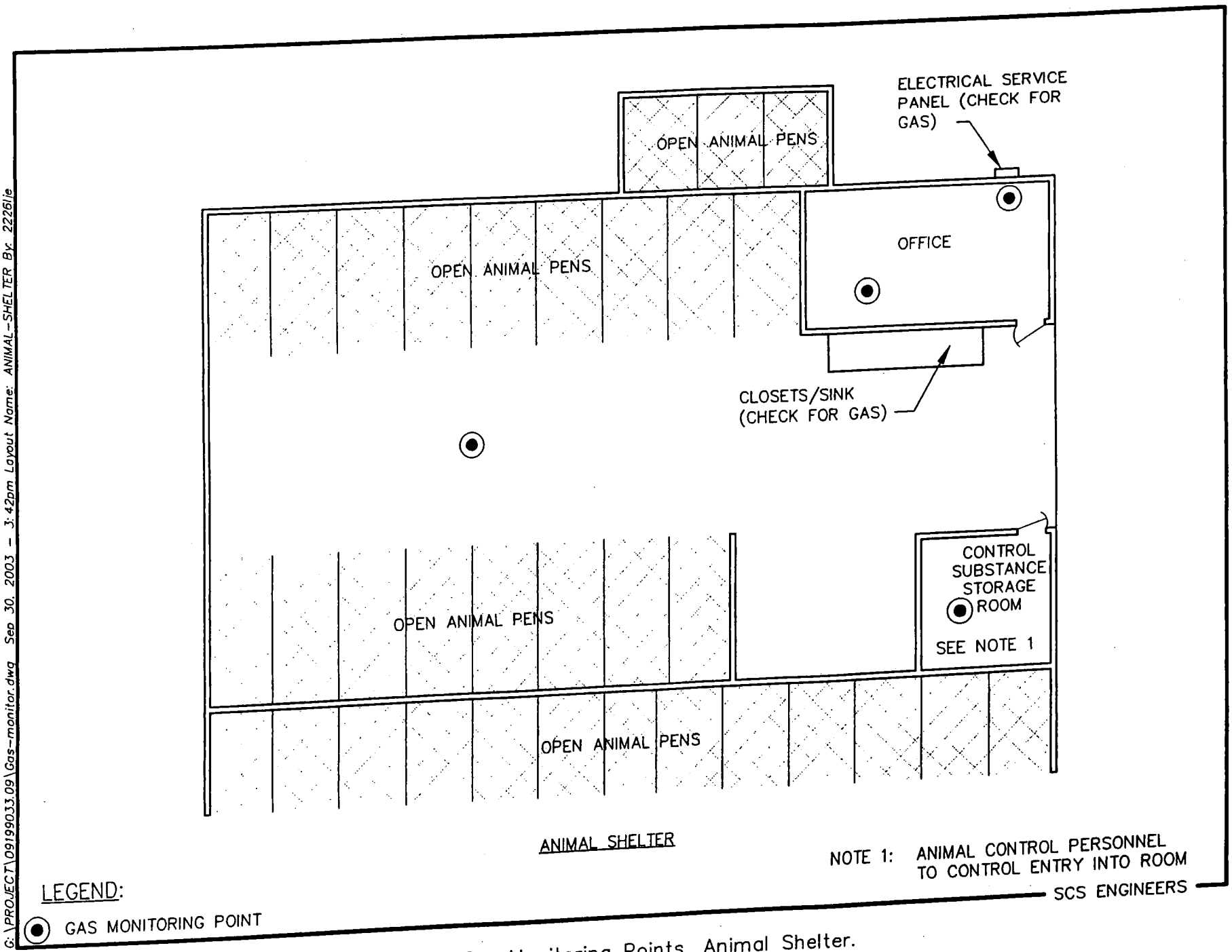



Figure. Gas Monitoring Points, Animal Shelter.

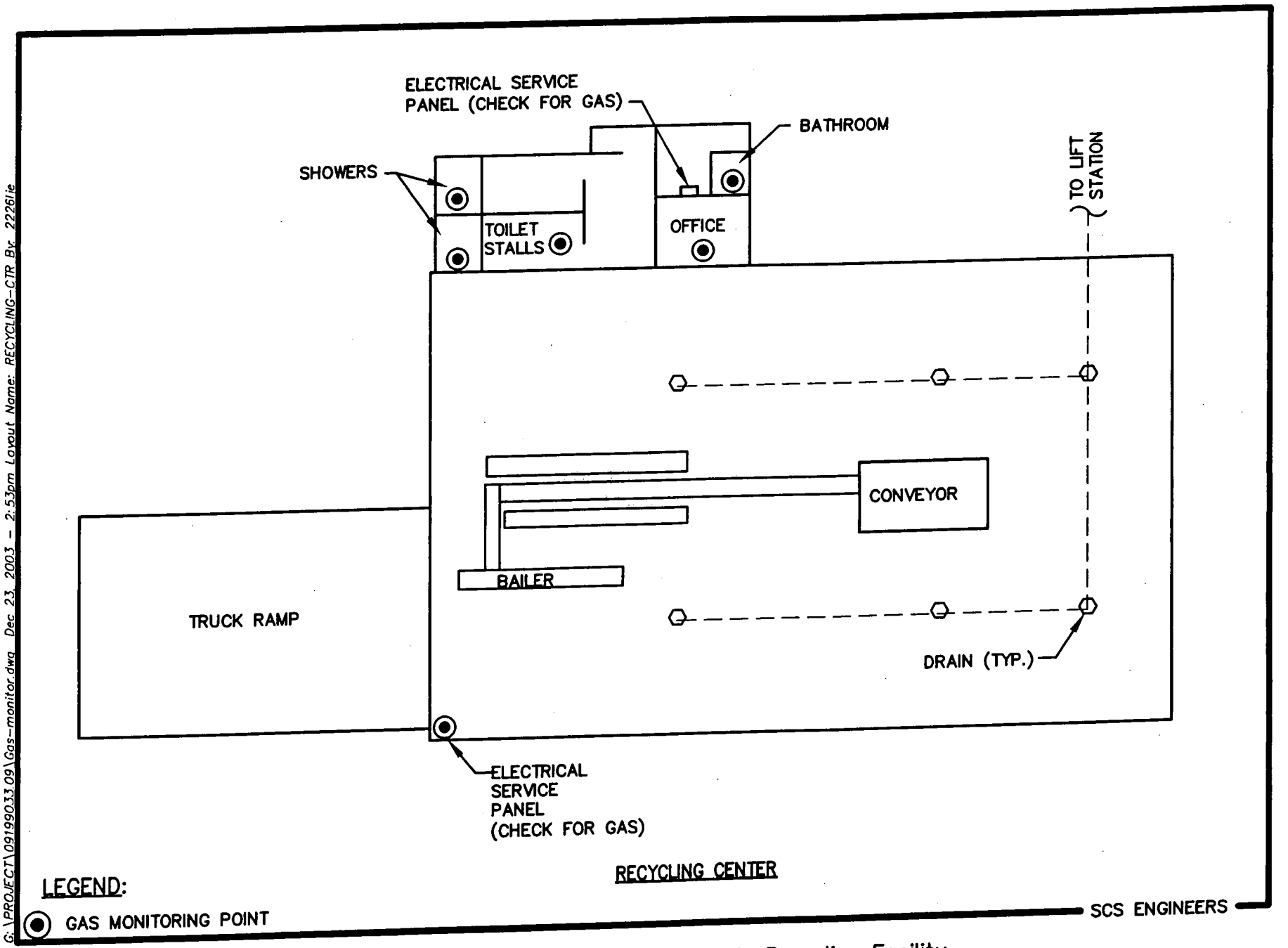
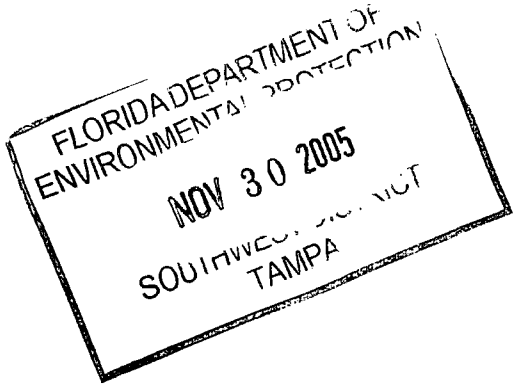



Figure. Gas Monitoring Points, Materials Recycling Facility.

# APPENDIX Q

# DISASTER PREPARATION AND RECOVERY PLAN



Hardee County Solid Waste Department
Hurricane Preparation and Recovery

In preparation for a hurricane, Hardee County Emergency Management will advise the Solid Waste Director of a possible direct hit, high winds or rains from a hurricane. Upon such notification, the Solid Waste Department will begin the following preparation:

- All diesel tanks and heavy equipment will be filled with fuel.
- The stormwater ponds will be pumped down.
- Crowder-Gulf (the debris management contractor) and SCS Engineers (the debris monitor consultant) will be contacted.
- All litter will be picked up.
- All items that may blow away will be tarped and stabilized.
- All waste in the MRF will be bailed and hauled to the Class I landfill for disposal.
- Two temporary debris staging areas will be prepared to receive waste.
- The landfill berms will be checked and stabilized to ensure all leachate is contained.
- The onsite generators will be fueled.
- Contact information for all equipment operators will be confirmed and they will be made aware of their assigned posts following the event.
- The Manatee County Wastewater Department and the emergency leachate hauler will be contacted and put on stand by.

In recovering from a hurricane, the following steps will be made:

- The on call heavy equipment operators will be contacted to report to the landfill.
- The temporary debris site at the landfill will be opened and staffed with a debris monitor.
- If required, the generators will be started to service the scalehouse and the MRF.
- If the amount of debris generated is such that the landfill cannot accept the materials or the landfill access road is unsafe, the emergency backup disposal sites will be contacted.
- Necessary repairs to the haul road will be completed.

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
NOV 30 2005
SOUTHWEST DISTRICT
TAMPA