

January 11, 2010

Mr. Steve Morgan
Florida Department of Environmental Protection
Southwest District
13051 N. Telecom Parkway
Temple Terrace, FL 33637

**Re: Central County Solid Waste Disposal Complex (CCSWDC)
Phase II Expansion
Minor Modification Permit Application
Permit Nos. 130542-006-SC/01 and 130542-007-SO/01**

Dear Steve:

On behalf of Sarasota Solid Waste Operations (SWO), HDR Engineering, Inc. (HDR) is pleased to submit a Minor Modification Permit Application for the Phase II Expansion Construction/Operation Permit Application at the Central County Solid Waste Disposal Complex (CCSWDC).

The purpose of this minor permit modification is to document the temporary gas vents that were installed within Cells 2 and 3, the rain cover that was installed within all four cells, and the proposed rain cover dewatering system for Cells 3 and 4. Enclosed are four sets of the revised Operations Plan that includes provisions for the removal of the temporary gas vents prior to the placement of waste within the affected cells and operational requirements for the rain cover and dewatering system. Technical information pertaining to this minor permit modification is included in new attachments to be appended to the Operations Plan.

In addition, as required by Rule 62-4.050(4)(s), enclosed is a check for permit fees in the amount of \$500.00 for minor modification of both the construction and operation permits.

Please do not hesitate to contact us if you have any questions during your review.

Sincerely,

HDR Engineering, Inc.

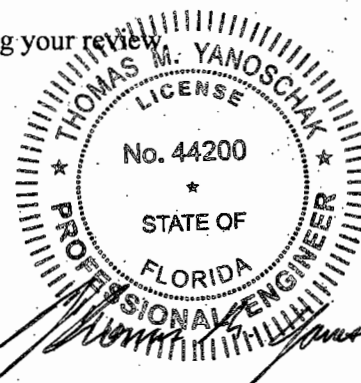
Thomas M. Yanoschak, PE, BCEE
Senior Project Manager

Enclosures as noted.

Dept. Of Environmental Protection

JAN 12 2010

Southwest District



1/11/10

cc: Frank Coggins, Sarasota County
Lois Rose, Sarasota County
Spencer Anderson, Sarasota County
Jack Gibson, Sarasota County

Rich Siemering, HDR
Joe Readling, HDR



Sarasota County
Solid Waste Operations

Central County Solid Waste Disposal Complex Operations Plan

February 2007
Revised June 2007
Revised September 2007
Revised January 2008
Revised March 2008
Revised January 2010

Dept. Of Environmental Protection

JAN 12 2010

Southwest District

Prepared by
HDR Engineering, Inc.
2202 N. West Shore Blvd, Suite 250
Tampa, Florida 33607-5755
(813) 282-2300

HDR Project No. 001916-43485-018

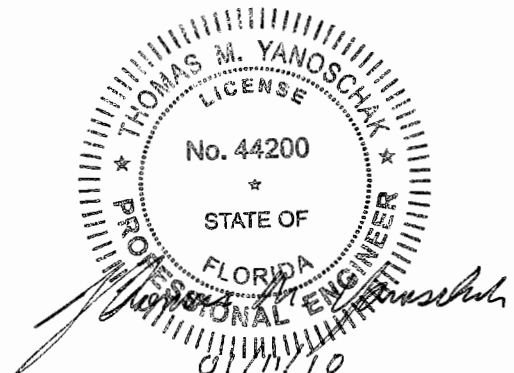


TABLE OF CONTENTS

L.1	TRAINING	1
L.2	LANDFILL OPERATIONS PLAN.....	1
L.2.a	Designation of Responsible Persons	1
L.2.b	Contingency Operations for Emergencies	2
	L.2.b.(1) Emergency Provisions	2
	L.2.b.(2) Wet Weather Operations	3
L.2.c	Controlling the Type of Waste Received at the Site	3
L.2.d	Weighing or Measuring Incoming Wastes	6
L.2.e	Vehicle Traffic Control and Unloading	7
L.2.f	Method and Sequence of Filling Waste	7
L.2.g	Waste Compaction and Application of Cover	10
L.2.h	Operations of Gas, Leachate, and Stormwater Controls	10
	L.2.h.(1) Landfill Gas System	10
	L.2.h.(2) Leachate Management System	11
	L.2.h.(3) Stormwater System	15
L.2.i	Groundwater Monitoring Plan	18
L.2.j	Maintaining Leachate Collection System	18
L.3	LANDFILL OPERATION RECORD	18
L.4	LANDFILL WASTE REPORTS.....	19
L.5	EFFECTIVE BARRIER/ACCESS CONTROL	19
L.6	LOAD CHECKING PROGRAM.....	19
L.7	PROCEDURES FOR SPREADING & COMPACTING WASTE AT THE LANDFILL....	20
L.7.a	Waste Layer Thickness and Compaction Frequencies	21
L.7.b	First Layer of Waste	21
L.7.c	Slopes, Side Grades, and Lift Height	21
L.7.d	Maximum Width of Working Face	22
L.7.e	Initial Cover	22
L.7.f	Application of Initial Cover	22
L.7.g	Intermediate Cover	23
L.7.h	Final Cover	23
L.7.i	Scavenging and Salvaging Control Devices	24
L.7.j	Litter Control Devices	24
L.7.k	Erosion Control Procedures	24

L.8	PROCEDURE FOR LEACHATE MANAGEMENT	25
L.8.a	Leachate Monitoring, Sampling, and Analysis	25
L.8.b	Leachate Collection and Removal System	26
L.8.c	If Leachate Becomes Regulated as Hazardous Waste	30
L.8.d	Off-Site Treatment of Leachate	30
L.8.e	Contingency Plan for Leachate Management	30
L.8.f	Recording Quantities of Leachate Generated	31
L.8.g	Precipitation and Leachate Generation Rates	32
L.8.h	Leachate Collection System Inspection and Cleaning	32
L.9	GAS MONITORING PROGRAM.....	32
L.10	STORMWATER MANAGEMENT SYSTEM	33
L.11	EQUIPMENT AND OPERATION FEATURE REQUIREMENTS	33
L.11.a	Adequate In-Service Equipment	33
L.11.b	Reserve Equipment	34
L.11.c	Communication Facilities	34
L.11.d	Dust Control Methods.....	34
L.11.e	Fire Protection and Fire Fighting Facilities	35
L.11.f	Litter Control Devices	35
L.11.g	Signs Indicating Name of Operating Authority, Traffic Flow, Hours of Operations, and Charges for Disposal.....	36
L.12	ALL WEATHER ACCESS ROADS.....	36
L.13	ADDITIONAL RECORD KEEPING AND REPORTING	36

ATTACHMENTS

L-1	Training Plan	L-10	Initial Cover Specifications
L-2	Contingency Plan	L-11	Leachate Report Form and LCRS Inspection Report
L-3	Figures	L-12	FDEP Approval Letter for Leachate Reuse
L-4	Contaminated Soil Acceptance Criteria	L-13	Landfill Recycling Plan
L-5	Waste Load Inspection and Reporting Form	L-14	Phase I Operation Drawings
L-6	Leachate Disposal Commitment Letter	L-15	<u>Temporary Gas Vent Information</u>
L-7	Leachate Tank Inspection Report	L-16	<u>Rain Cover Specification</u>
L-8	Leachate Pump Data Forms and Metering Manhole Data Form	L-17	<u>Cells 3 and 4 Rain Cover Dewatering System</u>
L-9	Laboratory Certification		

SECTION L OPERATIONS PLAN

L.1 TRAINING

In accordance with Rule 62-701.500(1), Florida Administrative Code (F.A.C.), key supervisory staff at the CCSWDC Landfill have received Landfill Operator Certification training. The training plan can be found in Attachment L-1. Sarasota County staff or a qualified landfill operations contractor will operate the facility. Sarasota County will require the operating entity to provide at least one trained landfill operator certified in accordance with Chapter 62-701.32(15), F.A.C. and at least one trained spotter at each working face during operation when the landfill receives waste to detect unauthorized wastes from each load.

The spotters will be responsible for guiding vehicles and promoting an efficient operation during normal operation hours. The spotters shall also be responsible for enforcing provisions for controlling the waste received. These provisions are described in Section L.2.c.

The facility will be operated in compliance with all applicable regulations governing the operation of solid waste management facilities and surface water management facilities.

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 plans and operational standards.

L.2 LANDFILL OPERATIONS PLAN

L.2.a Designation of Responsible Persons

The Central County Solid Waste Disposal Complex (CCSWDC) is owned by Sarasota County and operated under the direction of the Sarasota County Solid Waste Operations Unit. Frank Coggins, Solid Waste Operations Manager will be the designated responsible person for the operation of the CCSWDC. A list of the landfill personnel is given below as well as typical training required for each position:

VEOLIA ENVIRONMENTAL SERVICES:

- General Manager (1) (Operator)
- Lead Equipment Operator (1) (Operator)
- Equipment Operator (7)
- Laborer/Spotter (1) (Spotter)
- Laborer (1) (Spotter)
- Mechanic (1)

SARASOTA COUNTY:

- Solid Waste Operations Manager (1) (Operator)
- Engineer (1)
- Administrative Coordinator (1)
- Senior Secretary (1)
- Operations I Supervisor (1) (Operator)
- Environmental Services Inspector (2) (Operator)
- Environmental Specialist (1)
- Equipment Operator III (4)

L.2.b Contingency Operations for Emergencies

L.2.b.(1) Emergency Provisions

Emergency conditions at the landfill site may occur as a result of a natural disaster (hurricane, tornado, flooding, etc.) or fire. In the event emergency conditions will interrupt operations at the facility, the contingency plan will be implemented (see Attachment L-2). Refuse is not normally delivered to the site during emergency conditions; however, should a major storm occur, the following actions shall be taken:

- Daily cover shall be applied to all exposed refuse before a major storm arrives, if possible.
- All landfill equipment shall be parked near any natural wind screens such as earthen mounds and berms.
- All lightweight signs and equipment shall be secured.
- When operation resumes, work shall commence in dry areas only (up from the active face). Refuse shall not be deposited in standing water.
- Contract agreements with local contractors, equipment suppliers, or cooperative lending agreements with other County departments will be pursued for backup equipment, if necessary.

Small fires on the working face will be controlled by a bulldozer, landfill compactor and a water wagon and ample cover material to extinguish the fire. On-site stockpiles of soil cover material will always be available for suppressing fires. In the event an uncontrollable fire does occur at the landfill site, the Nokomis Fire Department will be contacted. The Nokomis Fire Department presently maintains a fire station at 111 Pavonia Road in Nokomis, approximately 7.5 miles from the proposed facility. This station has equipment capable of obtaining water from surface sources for fire fighting.

The large stormwater retention basins adjacent to the landfill will serve as the water source for fire fighting purposes. In the event of a fire or other emergency, the solid waste operations manager or his designee will notify the FDEP within twenty-four (24) hours by telephone and within seven (7) days a written report will be submitted describing the origins of the emergency, actions taken, result of the actions taken, and an analysis of the success or failure of the actions.

Waste will continue to be accepted and disposal operations will continue in the event of a fire. Operations will be moved a safe distance from the fire location so as not to pose a hazard to operating personnel or customers.

A hot load area will be provided within the lined disposal area in a location away from the working face to allow vehicles arriving at the landfill with a fire in their load to dump quickly in an area where the material can be spread out and quickly covered with soil. The location of the hot load area will change from time to time with the changing working face locations. Hot loads

will not be dumped on the working face until sufficiently cool to avoid combustion.

As described in Sections L.11.a. and L.11.b, the Contractor will provide adequate equipment on-site to ensure proper operation of the landfill and for excavating, spreading, compacting, and covering waste. As part of an agreement with a maintenance contractor, the Contractor will receive loaner equipment within forty-eight (48) hours of equipment breakdown, if required. These basic emergency procedures should protect the landfill and equipment, and allow reactivation of the operation in an orderly and timely manner. Two mobile electrical generators are maintained on-site to provide power during outages for the administration building, scale house, and maintenance building.

In 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 valve, turning-off switch, or taking any other necessary action). The affected area will be controlled by diverting vehicular traffic. Runoff from the affected area will be controlled by building a berm, plugging drain or ditch, or adding absorbent material. The affected area will be cleaned, and the effectiveness of the cleanup confirmed by sampling, as needed depending on the nature of the spilled material. For spill countermeasures of secondary containment at the Leachate Holding Tank refer to Section L.2.h.2, Leachate Management System.

L.2.b.(2) Wet Weather Operations

Steps to be taken for accommodating wet weather solid waste disposal include: 1) set-aside elevated tipping areas with limestone or shell approaches or other acceptable base material as needed to allow uninhibited vehicular movement; 2) set-aside elevated sandy cover material, and 3) erect containment berms around wet weather tipping areas in accordance with Section L.2.h.3.

In order to avoid an excessive accumulation of standing water in the area of the working face, a small area of daily cover will be removed by grading to allow direct percolation to the underlying refuse and leachate collection system. Pumping equipment is available on-site, if required to remove ponded leachate by pumping it to either a tanker truck for proper treatment and disposal, or to a leachate collection manhole.

L.2.c Controlling the Type of Waste Received at the Site

The automated accounting system, clerks at the scalehouse, and the site security fence discourage unauthorized entry and disposal of unauthorized waste. A sign located at the entrance states the general regulations including the types of prohibited solid waste.

A trained spotter at the working face will visually inspect the waste as it is deposited. If unauthorized special waste (i.e., lead-acid batteries, used oil, yard trash, white goods, and whole tires) is found at the working face, as part of routine operations, the waste would be segregated and removed for recycling, as described in Attachment L-13.

White goods and electronic wastes are accepted at the facility for recycling but are not allowed at the working face for disposal. Special wastes not authorized for disposal are accepted for staging at the CCSWDC until they are removed from the site for offsite recycling. These materials shall be stored in the designated white goods and recyclables storage area located near the southeast corner of Phase I as shown on Sheet G-03, Overall Site Plan and Phasing Plan, provided with the Permit Drawings.

Electronic products that are discovered at the working face will be removed and stored in a safe area within the active working area (bermed area). At the end of the day, at a minimum, these materials will be transported directly to the designated storage area. Undamaged electronic wastes recovered for recycling shall be stored in an undamaged condition and records for all quantities received by each recycler shall be kept along with the receipts with the name and address of each recycler. Recovered electronic wastes that have been damaged and will not be recycled will be removed and stored in a designated 30-foot x 45-foot covered concrete pad area adjacent to the Contractor's maintenance building located as shown on Sheet G-03, Overall Site Plan and Phasing Plan, provided with the Permit Drawings. The damaged waste shall be placed inside a watertight container.

White goods will be removed from the working face and taken to the white goods storage area located south of Phase I as shown on Sheet G-03, Overall Site Plan and Phasing Plan, provided in the Permit Drawings. White goods shall be removed from the site at least monthly. Refrigeration units will be stored in an upright position until all liquids, CFCs and Freon are removed.

Other unauthorized waste and small quantity household hazardous waste such as lead-acid batteries, fluorescent tubes, pesticides, solvents, cadmium batteries, and thermometers, which are discovered at the working face, will be removed and stored in the designated 30 foot by 45 foot covered concrete pad adjacent to the maintenance building. This facility is only for temporary storage of material removed from the working face and is not a designated public household hazardous waste disposal facility or transfer station. These wastes will be placed on a 4-drum spill pallet. These pallets will be made up of 100 percent polyethylene with UV inhibitors and have spill reservoirs which meet the uniform fire code capacity requirements. Two pallets will be placed in the designated area. These materials will be collected each month by hazardous materials disposal companies or removed for alternate disposal or recycling. Unauthorized special wastes will be removed from the site monthly. The maximum on-site storage for special wastes will be as follows:

- 1000 electronic devices on e-waste slab.
- 30 batteries in a secondary containment covered tray.
- 2 - 250 gallon containers for used oil with double containment (at the Citizen Convenience Center).
- 20 gallons of used oil placed upright in undamaged container (at the Contractor's maintenance building).
- 1250 white goods, and lawnmowers, will be placed upright until all liquids, CFCs, and Freon are removed.

Sarasota County will accept contaminated soil for the purpose of landfilling (disposal) at CCSWDC in accordance with the criteria included in Attachment L-4. Waste tires encountered during operations will be placed in a container at the working face that will be removed at the end of the working day and stored in the area designated for waste tire processing within the CCSWDC. The waste tire processing facility is located within the future Phase V landfill area as shown on Sheet G-03, Overall Site Plan and Phasing Plan, provided with the Permit Drawings.

At least one trained spotter will be at each working face when wastes are received at the landfill. Normally, one working face will be operating at the landfill. There may be occasions where two or more working faces are required such as when the first lift of waste is placed in a new cell, during high volume periods such as after a storm, or when the size of a working face is limited such as at the corner of a cell. The spotters will be trained in accordance with Rule 62-701.320(15) and in accordance with the training plan described in Attachment L-1 to recognize unauthorized waste. Each load of waste will be visually inspected at ground level by the spotter as well as by the equipment operators spreading the waste. The spotters and equipment operators will look for containers and other indicators of unauthorized waste. Upon detection of unauthorized waste, the spotters will require the hauler to remove the material for disposal at a proper facility. If the hauler has departed, the spotter will remove the material from the working face for temporary storage at the designated 30 foot by 45 foot covered concrete pad adjacent to the maintenance building and ultimate removal from the site for proper disposal or recycling.

If any hazardous waste is detected in the load, the hauler shall be informed immediately of the violation. In the event of discovery of hazardous materials, the procedures outlined in Items 3, 4, 5, and 6 of Section L.6 will be followed if any prohibited wastes are discovered.

If unauthorized waste (i.e., hazardous, PCBs, untreated biomedical, or free liquid) are found at the landfill working face, the waste will be isolated and the contractor's general manager or designee would be promptly notified. The contractor's general manager or designee is trained in the proper procedure to follow including notification to the FDEP. Similarly, if suspect waste is found the waste will be isolated, identified if possible, and the County's operation manager or designee will be notified. The County's operation manager or designee will prepare a suspect waste report and ensure that the waste is properly disposed. The waste load inspection form contained in Attachment L-5 is used for this purpose. Hazardous waste will be isolated and restricted from access until it is removed and properly disposed of from the CCSWC Landfill by a licensed hazardous waste contractor. Hazardous wastes will be removed from the site within 48 hours.

Special waste such as asbestos will be accepted and managed in accordance with the requirements of 62-701.520(3), F.A.C. The asbestos waste haulers will be required to notify the County who will notify the landfill contract operator in advance and provide information on the estimated volume and delivery date of the asbestos. All incoming asbestos material will be required to comply with all applicable permit conditions and be wet down and properly wrapped or bagged. The uncompacted asbestos material will be covered with a minimum 6-inch layer of soil upon disposal. If additional asbestos deliveries are scheduled on the same day, the asbestos may remain uncovered until the end of the work day. The disposal location

will be recorded in accordance with 40 C.F.R., Part 61.154, and a record of the asbestos location will be maintained.

Waste oil that is collected for the purpose of recycling is accepted at the CCSWDC near the main entrance. Waste oil is stored in a secure container until removed from the site for recycling purposes. Lawn mowers are accepted at the CCSWDC as long as they are drained of all fluids and are managed as white goods. After inspection for fluids, lawn mowers are stored in the white goods area until collected by the scrap metal vendor who collects white goods. Waste oil, lawn mowers, and yard trash will be managed as described in the Landfill Recycling Plan, Attachment L-13. The yard waste processing facility location is south of Phase I as shown on Sheet G-03, Overall Site Plan and Phasing Plan, provided with the Permit Drawings. The facility is permitted under a separate yard waste processing facility registration.

The Citizen's Convenience Center is located near the entrance of the landfill and consists of spaces for three 20-cubic yard roll off containers for MSW and used tires, a drop off for electronics, and a household chemical collection center. The roll off containers and electronics storage areas are located on concrete pads covered with permanent canopies that prevent the accumulation of water in the containers during inclement weather. Household chemicals are stored in a pre-manufactured hazardous waste storage unit. The Citizen's Convenience Center has a full time attendant and is in operation from 8:00 A.M. to 5:00 P.M. six days per week. The attendant meets customers at the entrance, directs them to the appropriate area of the facility, and monitors the waste for unacceptable materials. The roll-off containers are emptied daily.

The electronics drop off at the Citizen's Convenience Center is manned by a full time attendant who unloads all vehicles that come into the facility. The electronics are from residential curbside collection routes and may include, but are not limited to, televisions, computers, monitors, copiers, etc. The electronics are physically unloaded and placed on pallets or the concrete pad and wrapped in cellophane. Electronics typically will remain at the facility for less than one week but may remain for up to two weeks. Any debris from the operation is swept up and placed in a closed drum for disposal. All unacceptable materials are refused. A vendor will remove the electronics to a recycler by backing semi-trailers up to the slab and loading the pallets onto the truck with pallet jacks or fork lifts.

L.2.d Weighing or Measuring Incoming Wastes

All waste entering the landfill site will be weighed. A minimum of three (3) electronic 50-ton scales are installed at the entrance facility. An Information Management System (IMS) is linked to the scales to facilitate accurate data collection and measurement of incoming materials.

L.2.e Vehicle Traffic Control and Unloading

Directional signs will be placed to safely direct vehicles to the current waste unloading area. These signs will have large legible letters and will be cleaned when necessary. Signs will be strategically placed so that the route is clear to the drivers. Speed limit, safety, and prohibitive practice signs will be placed as necessary to encourage a safe, clean operating area. Unloading will be permitted only at the designated working face. On the fill area, temporary signs, barricades, and flagged stakes will be used to direct vehicles to the proper tipping area. Haulers will be responsible for unloading their own vehicles. Wastes requiring special handling will be coordinated with and unloaded under the direct supervision of landfill contract operation personnel.

L.2.f Method and Sequence of Filling Waste

The overall phasing plan for the facilities is depicted on Sheet G-03, Overall Site Plan and Phasing Plan, provided with the Permit Drawings. The layout for the five (5) cells (designated disposal units) constructed as part of Phase I is shown in Attachment L-14. Staging plans for the remainder of Phase I as previously approved by FDEP are also provided in Attachment L-14. The layout for the four (4) cells proposed for Phase II of the Class I landfill is shown on Sheet C-01, Basegrade Plan, provided with the Permit Drawings. A detailed staging plan for the fill sequencing within Phase II is provided on Sheets C-07, C-08, and C-09 provided with the Permit Drawings. Phase II will be constructed in stages with Cells 1 and 2 being constructed before Cells 3 and 4. Sheets C-01A, C-02A, and C-03A of the permit drawings show Phase II with only Cells 1 and 2 constructed. Sheet C-13A shows the temporary liner termination between Cells 2 and 3. The typical height for each lift is 10 feet. The temporary roads and swales for access and surface water drainage will be phased in as the Phase II area is filled. The maximum width of the working face will be 200 feet. However, the landfill operations may be conducted with a working face width of less than 200 feet.

Temporary Gas Vent Removal

Four temporary gas vents were installed within the bottom liner system during Phase II construction. These gas vents were required when naturally occurring gas within the soil beneath Phase II began to collect beneath the liner and cause the liner system to lift off of the subgrade in several locations. The vents are located near the center of Cells 2 and 3 close to the ridge line between the two cells. Attachment L-15 contains information on the construction and locations of the gas vents.

Prior to the placement of waste within either Cell 2 or Cell 3, the temporary gas vents located in the cell will need to be removed and the liner system repaired. The County will notify the FDEP Southwest District office at least two (2) weeks prior to vent removal/liner repair. Vent removal and liner repair will be performed in accordance with the following procedures:

1. Remove rain cover in vicinity of vent and excavate protective cover soil near repair area;
2. Remove protective casing from standpipe;

3. Remove clamp from primary liner boot, cut primary liner outside of boot weld, and lift boot over standpipe;
4. Remove clamp from secondary liner boot, cut secondary liner outside of boot weld, and lift boot over standpipe;
5. Remove any hydrated or damaged geosynthetic clay liner (GCL) as necessary to allow removal of vent pipe;
6. Remove vent pipe, being careful not to damage in-place liner components or subgrade;
7. Inspect subgrade, replace any soft soil with material meeting requirements of Phase II project specifications, and provide smooth surface for placement of overlying geosynthetics;
8. Patch GCL, secondary liner, secondary geocomposite, primary liner, and primary geocomposite in accordance with the requirements of Phase II project specifications and COA Plan with the exception that no laboratory or field testing beyond vacuum testing of liner welds will be required of the repair materials due to the limited extent of the repairs;
9. Replace protective cover material over repair; and,
10. Replace rain cover if needed.

All repairs shall be performed by a company approved by a liner manufacturer to perform liner installation. All repairs shall be observed by a third party inspector who will submit documentation to the FDEP Southwest District office that the repairs were performed in general accordance with the Phase II specifications and COA Plan.

Filling in New Cell

The initial lift of solid waste shall be deposited in each new Phase II cell (designated disposal unit) beginning at the south end of the landfill cell.

Waste will be placed within the designated edge of waste shown on the Engineering Drawings. The edge of waste will be located by measuring 5 feet inward from the edge of liner markers on the north and west sides of Phase II including the temporary liner termination for Cell 2. The edge of waste will be located by measuring 12 feet inward from the edge of liner markers on the south side of Phase II. Periodic inspections will be made to ensure that the markers are in place and the edge of waste is located the required distance from the edge of the liner.

The initial lift of solid waste will progress to the north across the entire width of the landfill cell. The working face will primarily move in an east/west direction across the width of the landfill cell. Selected solid waste loads consisting of solid waste containing no rigid objects will be used for at least the first 4 feet of the first lift, and it will be filled to an elevation of approximately 40 feet NGVD within the Phase II cells.

The method of waste disposal for each lift is described as follows. All incoming solid waste will be directed to the working face and placed against the side slope of the previous day's refuse. The first row of waste in a new lift will be placed against the toe of a containment berm to provide a guide for the placement of refuse for the remaining rows. A slope of not more than 3 to 1 will be maintained. The working face shall be less than 200 feet wide. A maneuvering area shall be provided for large private and commercial vehicles.

Solid waste will be placed at the working face and spread in 2-foot layers. The spreading of refuse will be a continuous operation.

In compliance with 62-701.500(10), F.A.C., the stormwater management systems will be operated and maintained as necessary to meet applicable standards of Chapters 62-701, 62-302, and 62-25, F.A.C. The stormwater management system at the CCSWDC Class I landfill is designed to avoid mixing of stormwater with leachate. Stormwater or other surface water which comes into contact with the landfilled solid waste or mixes with leachate will be considered leachate and subjected to applicable requirements.

The filling of the remaining disposal capacity within Phase I will generally follow the FDEP approved staging plans provided in Attachment L-14. The filling of each lined cell within the Phase II area will follow the sequence outlined below: (Refer to Sheets C-07 through C-09, Landfill Staging Plans, provided with the Permit Drawings).

The cell area initially will be filled with a 4 to 16 foot lift to bring the daily cover grade to an elevation of approximately 40 feet NGVD which is higher than the cell's lined external containment berms in order to promote stormwater runoff. The lower lift thickness will be placed in the high end (south) of the cells and the greater lift thickness will be placed on the low end (north).

Filling of each cell will generally progress from the south end of the cell to the north end while providing a slope on the cover to allow storm water drainage as shown on the Staging Plans, Sheets C-07 through C-09, Landfill Staging Plans, provided with the Permit Drawings. Only select waste containing no rigid materials will be used within the first 4 feet of the initial lift in a cell.

Subsequent waste lifts will be added to a cell in accordance with the landfill staging plans before opening new cells to waste disposal.

The surface runoff from unused portions of cells will be directed away from solid waste by grading and using temporary diversion berms.

Areas on the top and sides of each lift will be adequately covered and stabilized to maximize surface runoff away from the bermed, sloped working area and towards the stormwater drainage areas to minimize leachate generation, as shown on Sheets C-07 through C-09, Landfill Staging Plans, provided with the Permit Drawings. Intermediate cover will be applied to internal top and side slopes and completed external slopes within seven (7) days if the area will not receive more waste within 180 days. The top of lifts will be sloped to promote storm water drainage. Intermediate covered areas that will not

be landfilled or covered with final cover within 6 months will be sodded (external slopes) or seeded and mulched (internal and top slopes) to avoid slope erosion. Storm water collected within the bermed working area will be considered leachate and will be collected and disposed as such. Efficient use of these techniques will decrease leachate volumes.

L.2.g Waste Compaction and Application of Cover

Cover material for daily operations of the landfill will be obtained from the designated stockpile area and compost generated from yard waste recycling. Compost used with soil for cover material shall be free of waste. Cover material will be deposited in the stockpile area location shown on Sheet G-03, Overall Site Plan and Phasing Plan, provided with the permit drawings. The designated stockpile area will have stockpiles no higher than 25 feet with 3:1 side slopes in order to minimize erosion. Additional soil obtained from offsite borrow areas will be placed within the stockpile area during the operational life of the facility. A silt fence will be installed around the stockpile area and side slopes will be grassed to further reduce and control erosion.

Waste will be spread in layers approximately two feet thick on the working face and compacted to approximately one foot in thickness before application of the next layer. The solid waste will be compacted with a minimum of three to five passes of a compactor. Initial, intermediate and final cover will be applied as detailed in Sections L.2.f, L.7.f, L.7.g, and L.7.h., of this Operations Plan.

L.2.h Operations of Gas, Leachate, and Stormwater Controls

L.2.h.(1) Landfill Gas System

THE CCSWDC is located near the center of a 6,000 acre site. The minimum distance from the Class I landfill to the nearest property line is 1,800 feet. This distance represents a substantial buffer to allow for dispersion of odors normally associated with MSW landfill operations. Therefore, it is not anticipated that collection of landfill gas will be necessary for odor control. The landfill gas monitoring plan is described in Section L.9, Gas Monitoring Program.

In order to comply with air quality requirements, a Non-Methane Organic Compound (NMOC) emission report will be submitted to the implementing authority on an annual basis following the requirements of New Source Performance Standards (NSPS). Within twelve (12) months after reporting NMOC emissions greater than or equal to 50 Mg/year (megagram per year), a detailed landfill gas collection and controls system design plan submittal shall be made to the NSPS implementing agency. Within eighteen (18) months after this submittal, the installation of the landfill gas collection and control system shall be completed. Based on Tier 2 sampling and model projections (see Attachment H.5 of the Engineering Report), the CCSWDC Class I landfill is not expected to exceed the threshold until 2009. At a minimum, a landfill gas management system design will be developed to coincide with the initial closure construction for Phase I of the landfill.

Separate from the requirements of the NSPS, passive flares may be used on-site to combust landfill gas from leachate collection and removal system cleanouts and pump stations, or passive vents installed within the waste mass. Currently, the passive flares are only permitted for use in Phase I. A permit will be obtained from the FDEP Division of Air Resource Management prior to their use in Phase II. The flares will include a solar-powered ignition system that provides a spark at regular intervals. The flares shall be Landfill Service Corporation (formerly Landfill Technologies, Inc.) model CF-5, or similar. The flares are intended to minimize the potential for odors by combusting landfill gas that may accumulate in leachate collection and removal system pipes or discharge from passive vents. Figure L-1 included in Attachment L-3 provides a typical detail for installation of a passive flare connected to a leachate collection system cleanout.

L.2.h.(2) Leachate Management System

Phase I Collection System

The existing Phase I Class I landfill leachate collection system consists of a geonet drainage layer and perforated collection pipe above the composite liner system to collect and convey leachate. The leachate that is conveyed to sumps will be pumped to an existing 1,800,000 gallon on-site leachate holding tank. A typical detail for the Phase I sumps is provided in Figure 2 of Attachment L-3. The leachate collection piping system consists of 8-inch diameter perforated HDPE pipe sloped in such a manner that leachate flowing through the solid waste of the landfill will be collected and transported by gravity to a sump and leachate pump. The discharge line from the sump pump connects to a HDPE header line via a valve vault. Provisions for sampling the leachate as well as monitoring flows and pressure are provided in the valve boxes (locations shown in Attachment L-14).

Phase II Collection System

The proposed Phase II Class I landfill leachate collection system consists of a geonet composite drainage layer and perforated collection pipe above the double synthetic liner system to collect and convey leachate. The leachate that is collected within the Phase II cells will be pumped to the on-site leachate holding tank. The leachate collection piping system consists of 8-inch diameter perforated HDPE pipe sloped in such a manner that leachate flowing through the solid waste of the landfill will be collected and transported by gravity to a metering manhole located on the north perimeter berm of each cell. At the metering manhole, leachate flows from each cell are measured using a Parshall flume and an ultrasonic water level sensor. Each metering manhole drains by gravity to a duplex leachate pump station located adjacent to Cell No. 2. The discharge from the leachate pump station will be directed through a new HDPE leachate forcemain that will be installed along the north and west sides of Phase II, the west and south sides of future Phase III and the south side of future Phase IV. Provisions for sampling the Phase II leachate as well as monitoring flows and pressure are provided in the valve vault located adjacent to the leachate pump station as shown on the details provided on Sheet C-17, Leachate Collection System

Details, of the Permit Drawings. Any stormwater accumulated in an unused cell will be pumped out from the cell using portable pumps and discharged to the stormwater system. Prior to waste disposal within a cell, the valve connecting the leachate collection pipe within the cell to the manhole will be in the closed position to prevent stormwater from draining to the leachate pump station. Immediately prior to solid waste being deposited into a new landfill cell, the valve at the manhole will be opened to allow the free flow of leachate to the pump station.

Leachate collected within the geocomposite drainage layer of the leak detection system of Phase II will be drained by gravity to a leak detection manhole located on the north perimeter berm of each cell. The discharge valve at the leak detection manhole will normally be closed to allow the quantity of leakage to be measured. An ultrasonic water level sensor calibrated to the storage volume within the manhole at a given level will be used to measure leakage rate. After the leakage rate has been determined, the leachate within the leak detection manholes will subsequently be drained by gravity to the leachate pump station and the valve closed for another measurement. The leak detection system has been designed such that a leak developing within the most remote part of a cell will flow to the leak detection manhole within twelve hours. A Leakage Action Rate (LAR) of 100 gallons/acre/day has been established for the Phase II cells, which corresponds to the EPA Guidance and FDEP experience with facilities with similar liner systems. At this rate, the 470 gallon storage volume within the leak detection manhole will be exhausted within 8.75 hours. For leakage rates greater than 100 gallons/acre/day, measures should be initiated to find and repair or minimize leaks within the primary liner system.

The following procedures will be initiated if the LAR of 100 gallons/acre/day is exceeded:

1. Increase monitoring of the leakage quantity from the cell(s) affected. This consists of increasing the frequency of monitoring liquid levels within the leak detection manhole(s) to determine the time required to fill the five-foot storage volume in the manholes. It is anticipated that readings will be made at least daily after the LAR is exceeded and the calculated leakage rates will be recorded.
2. Immediately notify FDEP once it is ascertained that the LAR is being exceeded and provide a plan on how the County intends to address the exceedence.
3. Attempt to locate and fix sources of leaks to the extent practical. Measures to locate leaks could include inspecting the leak detection manhole to determine whether groundwater is leaking into it, observing the surface of the cell to determine if there are indications as to where leaks may be located such as large protrusions of waste that may have penetrated the liner system, and video taping the leak detection pipe to determine where large inflows are occurring. If the location of a leak can be identified and excavation of waste is practical, then the liner will be exposed and repaired.
4. Adjust operational practices as needed to reduce the likelihood of future damage to the liner such as increasing the thickness of the initial layer of select waste on the cell

bottom.

5. If leaks can not be specifically located or if it is not practical to find them, adjust operations to try to reduce the leakage to below the LAR. This could include measures to reduce the generation of leachate such as grading the landfill to promote runoff, installing drains and berms to direct runoff away from the landfill, the installation of additional intermediate or temporary cover, installing temporary geomembrane rain covers, or accelerating the placement of final cover in areas that have reached final elevation.

Currently there are no plans to use rain cell covers to collect stormwater within unused portions of the cells in Phase II.

Phase I/Phase II Overlay Liner System

An overlay liner system will be constructed over the west sideslope of Phase I prior to the placement of waste against this slope as a result of the construction of Phase II. The purpose of the overlay liner system is to reduce the quantity of leachate entering the Phase I leachate collection system from the Phase II expansion by directing it to the Phase II leachate collection system. This will be accomplished by hydraulically separating the newer waste above it from the older waste beneath the overlay liner system.

The overlay liner system will consist of (from the top down) 2 feet of protective cover material, a geonet composite drainage layer, a textured 60-mil HDPE liner, and a minimum of 12 inches of intermediate cover placed over the waste. The protective cover may be installed in stages as required by operations in order to avoid having the material washout during storms. Alternately, the protective cover may be placed all at once if a rain cover is installed over it to prevent washouts. The rain cover would be removed prior to the placement of waste against the overlay liner system.

The rain cover on the overlay liner system, if installed, will include rain gutters to divert stormwater off the rain cover to temporary downdrains that will direct the stormwater to the perimeter drainage channel located north of Phase I. The locations of the rain gutters and temporary downdrains are shown on Sheets C-3 and C-3A of the Engineering Drawings. Details of these features are included on Sheet C-13B of the Engineering Drawings. Calculations demonstrating that the rain gutters and downdrains are capable of transmitting the flow generated from the 25-year design storm are included in Attachment H.2 of the Phase II Permit Application Engineering Report.

Leachate percolating through the newer waste located above the overlay liner system will be captured by the liner and directed to the base of the overlay liner system by means of the geonet composite drainage layer. A stone-filled trench drain with an 8-inch diameter perforated HDPE pipe located at the Phase I/Phase II divider berm will collect the leachate and direct it to the low point within Cell 1 of Phase II where it will flow out of the cell with the rest of the leachate

collected within Cell 1. From there, the leachate will flow as previously described for the Phase II collection system.

Leachate Disposal System: General Description

Leachate that is generated from the landfill cells will be pumped to the existing 1,800,000 gallon leachate storage tank. The leachate accumulated in the storage tank will be removed by a leachate pumping station that will pump through a 4-inch PVC force main to a connection to the Sarasota County wastewater collection system south of the landfill on Knights Trail Road. The Sarasota County wastewater collection system in this area flows to the City of Venice Water Reclamation Facility (WRF) for treatment.

The leachate pumping and force main system is the primary disposal method for the CCSWDC leachate. Transfer pumps that discharge to tanker trucks for hauling to the Bee Ridge WRF will serve as a secondary emergency disposal location.

The following information provides a description of the above ground leachate storage tank in accordance with the requirements of 62-701.400(6)(c).

The existing leachate storage tank has a total capacity of 1.8 million gallons. The exposed plan area of the secondary containment system surrounding the existing leachate storage tank is 5,419 square feet. This will allow 27,000 gallons of water to accumulate after an 8-inch rainfall event. All liquid accumulating in the secondary containment system will be tested for specific conductance. Specific conductance of the stormwater in the secondary containment shall not be more than 50 percent above the specific conductance of water in the nearest downstream stormwater pond (Stormwater Pond No. 6) or shall not exceed 1,275 μ mhos/cm, whichever is greater. If the specific conductance is greater than these criteria or if a visible sheen is present, then the stormwater will be pumped directly into the leachate storage tank and managed as leachate.

A log of discharges from the secondary containment system will be maintained. The date, specific conductance measurements, and visual sheen observations shall be recorded.

An electronic water level sensor will automatically determine when the storage tank reaches 90 percent capacity (1.62 million gallons) and a high water alarm will be activated. An electric actuated shutoff valve in the fill line will be activated to prevent overfilling the tank when the capacity reaches 1.8 million gallons in the tank. The electric actuated shutoff valve will be tested by inducing a false signal from the level sensor and confirming proper operation on a weekly schedule. The exposed tank exterior will be inspected weekly by visual observation. The inspection will include looking for leaks, corrosion, or other maintenance deficiencies. This will be accomplished by inspection from platforms at the top of the 20-foot high secondary containment wall, positioned 120 degrees apart around the circumference of the tank. The tank interior will be inspected annually when the tank is empty or at least once every three years. If

any failures are detected, the tank construction company shall be contacted immediately and appropriate repairs conducted based on the nature of the problem. Leachate will be managed in accordance with the Contingency Plan (Section L.8.e) when the tank is out of service. Reports of the above inspections will be maintained by the County (the most recent inspection report is included as Attachment L-7).

The leachate pumping station will have automatic controls with the following set points:

	<u>Elevation</u>
High water alarm	40
Lag pump on	28
Lead pump on	27
Pumps off	26
Tank bottom	22

The set points can be modified by adjusting the pump control system. The duplex pumps will automatically alternate operation each time the pump is stopped by the level control system. The pumping station is equipped with a data logger to record flow, pH, and conductivity on a continuous basis.

Leachate Monitoring

A detailed plan for leachate monitoring is provided in the site Water Quality Monitoring Plan. Modifications to leachate monitoring requirements for the Phase II expansion are contained in Appendix C of this Permit Application.

L.2.h.(3) Stormwater System

The stormwater management system for this project consists of a series of swales, culverts, and detention ponds. The system is designed to comply with all of the requirements of both Chapters 62-25 F.A.C. and 40 D-4 F.A.C. The stormwater management system for CCSWDC was constructed under a permit issued by the Southwest Florida Water Management District in 1993. All components of the system were installed during Phase I construction. An Environmental Resource Permit (ERP) application has been submitted to FDEP for the existing system and is currently under review.

~~Currently there are no plans to use rain cell covers to collect rainwater within unused portions of the cells in Phase II. However, a rain cover will be installed at the temporary liner termination between Cells 2 and 3 as shown on sheet C-13A of the Engineering Drawings to protect the liner system from erosion until Cell 3 is constructed. As previously described, a rain cover may also be installed over the protective cover layer of the Phase I/Phase II overlay liner system to protect it from erosion until waste is placed against the slope.~~

All cells within Phase II as well as the Phase I/Phase II overlay liner system were constructed with a rain cover to avoid erosion of the protective cover, limit plant growth, and assist with the management of stormwater until waste is deposited within the cells. The rain cover consists of a 20-mil scrim-reinforced polyethylene liner held in place with sand bags. Specifications for the rain cover installed during Phase II construction are provided in Attachment L-16.

Stormwater collected on the rain cover will flow north to the sump areas within each cell. Any collected stormwater that has not been in contact with solid waste or otherwise contaminated by leachate will be pumped out of the cells and into the perimeter channel which is part of the permitted stormwater management system. Any stormwater collected by the rain cover that has been in contact with solid waste or which has received discharges of leachate will be considered leachate and will either be allowed to enter the leachate collection system within the cell or will be pumped out of the cell into one of the leachate collection manholes located on the north perimeter berm of Phase II. The impacted stormwater will then flow by gravity to the Phase II leachate pump station where it will be pumped to the leachate storage tank. If it is not clear whether stormwater has been impacted by leachate, the County will collect samples of the stormwater for analysis to determine whether it meets the requirements for discharge into the stormwater management system as contained within the current Environmental Resource Permit (ERP).

Pumping of stormwater off of the rain cover in Cells 1 and 2 will be accomplished with portable pumps that will be positioned on the north perimeter berm as needed. The pump discharge will be directed to a portion of the perimeter drainage channel lined with riprap in order to avoid erosion of the channel. Since Cells 3 and 4 will be idle for a long period prior to receiving waste, a semi-permanent dewatering system will be installed for these cells. The system will consist of a single manually operated electric pump mounted on a concrete pad that will be located on the north perimeter berm of Cell 3. The concrete pad will be 8 inches thick, therefore its installation will not damage the geosynthetic components within the anchor trench which are protected with approximately 2 feet of soil cover. The suction and discharge piping will consist of 8-inch diameter DR-18 PVC pipe. The suction piping will be buried along the top of the berm but will emerge out of the ground after turning south opposite of the Cell 3 and Cell 4 sump areas in order to avoid damage to the liner system and anchor trenches. The suction piping will continue into the sump areas and will be raised above the surface of the rain cover by means of small concrete pads onto which the pipe will be strapped. The rain cover will be protected from the concrete pads by placing a layer of geocomposite drainage layer (GDL) between the bottom of the pad and the rain cover. The discharge piping from the pump will also be 8-inch diameter DR-18 PVC pipe. It will be buried soon after leaving the pump and discharge into the perimeter channel north of the pump on a riprap pad to prevent erosion. Preliminary drawings of the Cells 3 and 4 rain cover dewatering system are included in Attachment L-17.

The rain cover will be removed prior to the placement of waste within a cell. The rain cover within a cell may be removed either all at once or in stages depending on how long it is

anticipated it will take to place the first lift of waste within the cell. If the rain cover is removed in stages, then stormwater may be collected in the areas with remaining rain cover in accordance with the previously described procedures.

All stormwater runoff will be conveyed via perimeter drainage channels to detention facilities. Ditch blocks located in the perimeter channels at strategic locations act as sediment traps and will require periodic maintenance.

The ultimate discharge of the detention facilities will be to Old Cow Pen Slough or isolated wetlands through fixed control weirs and spreader swales.

As the filling of the waste progresses, temporary stormwater letdown structures will be installed to facilitate drainage without erosion. Temporary stormwater diversion berms will be installed around the top perimeter of each lift and connected to the temporary letdown structures. The temporary letdowns will be located, in the approximate locations as shown on Sheets C-07 through C-09, Landfill Staging Plans, provided with the Permit Drawings. Stormwater will be directed to these temporary letdown structures by sloping the top of each lift to promote drainage as shown on the staging plans.

Sediment collection provided by perimeter ditches and ditch blocks will minimize siltation of the main retention areas. In addition, the active fill area(s) will be surrounded by berms to capture stormwater that comes in contact with waste and to prevent run-on and mixing with the stormwater from outside the active fill area. Stormwater collected within the berms surrounding the active fill area(s) is considered to be leachate and will be allowed to percolate into the landfill for collection by the leachate collection system. This leachate may also be pumped to a leachate cleanout pipe or leachate manhole as a means of discharging it to the leachate collection system. This water will be filtered through a screen on the pump intake prior to discharge to a cleanout pipe or manhole.

Operation and Maintenance Procedures

The stormwater management system for the CCSWDC consists of a variety of treatment and conveyance methods. The treatment system for the main solid waste handling and disposal areas includes seven wet detention basins. Conveyance to these ponds is through a series of letdown structures, perimeter channels and swales, and culverts. Stormwater collection along the entrance road is provided by the roadside swales. All portions of the stormwater system will be visually inspected by the County weekly and immediately following a storm event of 0.5 inch or greater. The inspections will identify buildup of debris, surface sheen, erosion and sedimentation, and overgrown or exotic vegetation, and structural problems. Any problems identified by these inspections will be corrected within three (3) days. The wet detention basins will be inspected to estimate quantities of sediment within each pond. If the sediment occupies 30 percent of the volume below the normal pool elevation, the sediment will be removed and disposed of in the landfill. Vegetation in all portions of the conveyance systems will be removed on an as needed

basis to prevent blockage.

L.2.i Groundwater Monitoring Plan

Revisions to the existing groundwater monitoring network required for the Phase II expansion are discussed in the Water Quality Monitoring Plan Addendum contained in Appendix C of this application. This plan complies with Chapter 62-701 F.A.C. Monitoring well locations are shown on Figure 1 in Appendix C.

L.2.j Maintaining Leachate Collection System

Leachate collection system maintenance will include daily inspection of all leachate pump stations, metering manholes and leak detection manholes. All pump running data as well as leachate level and flow data will be recorded and checked for irregularities. Pumps are pulled and checked for operational parameters at least once every two years. An example leachate pump data form is provided in Attachment L-8. The leachate collection system will be cleaned and inspected as described in part L.8.h of this Operations Plan.

L.3 LANDFILL OPERATION RECORD

The Administrative office located adjacent to the scale facilities at the entrance of the CCSWDC is shown on Sheet G-03, Overall Site Plan and Phasing Plan of the permit drawings. The office provides facilities for employees including a training/meeting room, sanitary facilities, and first aid equipment. Similar additional facilities are located at the Equipment Maintenance building. Files are located in the Administrative office to contain the operating record for the facilities as required by regulatory agencies/permits. Items that will be stored in the operation record include:

- This Operations Plan.
- All permits for the facility.
- All records and drawings used for developing permit applications.
- All monitoring information, calibration and maintenance records, and copies of reports required by permit (maintained for at least 10 years).
- Background water quality records.
- Annual estimates of the remaining life of the constructed landfill and other permitted landfill areas.
- All monthly waste records which shall include tonnages received for Class I, C&D, yard waste and recyclables.
- Asbestos location records.
- All monitoring reports for groundwater, stormwater, leachate and landfill gas.
- Waste tire processing records.
- Copies of all notifications required by 62-701 F.A.C.

- On-site precipitation record.
- DEP inspection reports.
- Load checking reports.
- Leachate storage tank inspection reports.
- All training verifications.
- All other reports related to the design, operation, monitoring and permitting for the facilities.

L.4 LANDFILL WASTE REPORTS

Each month, a summary report of waste tonnage received for Class I waste, C&D debris, yard waste, and recyclables will be compiled. Copies of the monthly report will be submitted to FDEP quarterly or upon request.

L.5 EFFECTIVE BARRIER/ACCESS CONTROL

Access control at CCSWDC includes a perimeter fence with a locking access gate at the scalehouse, which is the only entrance/exit for the facility. The access gate normally will be kept open during hours of operations and an attendant will be at the scalehouse during those times. When CCSWDC is not in operation, this access gate normally will be kept closed and locked.

L.6 LOAD CHECKING PROGRAM

At least three random loads of Class I Municipal Solid Waste (MSW) delivered to the landfill each week will be examined in accordance with the following procedure:

Mechanism For Inspections

- (1) Specific locations within the active landfill cell are to be dedicated to load examination. The areas should be relatively free from extraneous debris and capable of maintaining isolation of the material for one calendar week.

- (2) The inspection of the load shall be controlled by a Contracting Operator employee. Training of contract personnel shall continue on an ongoing basis. In accordance with Rule 62-701.500(6)(a), FAC, a minimum of three random loads will be checked at the active working face(s) each week. The selected driver will be directed to discharge his/her load at a designated location adjacent to the working face. If any unauthorized special waste (i.e., lead-acid batteries, used oil, yard trash, white goods, and whole tires) is found by the random inspection, or as part of routine operations, the waste will be segregated and removed from the site for recycling as described in Section L.2.c. These special wastes will be stored as described in Section L.2.c. and removed from the site within 30 days.
- (3) The inspection form (see Attachment L-5) shall be filled out and signed off by the inspector. The inspector will identify and note all unauthorized waste found during random load inspection, estimated quantity, and the action taken. The inspector will sign the inspection form that will be retained at the CCSWDC. It shall be the County's responsibility to file/store/distribute the reports.
- (4) The Sarasota County Solid Waste Operations Unit or the Solid Waste's Hazardous Waste Section will investigate violations found during the inspection process. The Contract Operator will remove or clean-up the disposed materials.
- (5) Violations involving hazardous waste dumping will be handled by the Sarasota County Solid Waste's Hazardous Waste Section. Every attempt will be exhausted to place responsibility on the generator relative to having the hazardous waste in question removed from the landfill at the expense of the generator. In the event that generator responsibility cannot be determined and that the waste appears to be from a commercial source, it will be the Contract Operator's responsibility to segregate and secure the waste and pay all costs relative to safely disposing of said waste.
- (6) A list of offenders will be compiled by the Solid Waste's Hazardous Waste Section and the list will be provided to the County with updates on a periodic basis.

L.7 PROCEDURES FOR SPREADING & COMPACTING WASTE AT THE LANDFILL

The following guidelines will provide an efficient and environmentally sound method of operation for the CCSWDC.

- Portable litter fencing will be placed at the working face where needed to reduce windblown litter.
- Cracks or eroded sections in the surface of any filled and covered area will be repaired and a regular maintenance program will be followed to eliminate pockets or depressions that may develop as waste settles.

- If 12 inches of intermediate cover (free of waste) has been placed over a partially filled area, it will be removed and either reused or stockpiled for later use prior to the placement of a new lift.
- Tire chips, tarps, soil, or a mixture of soil/mulch may be used for initial cover. Stormwater runoff will not be allowed from waste filled areas covered with tire chips or tarp. Runoff from outside of the bermed working face area will be considered stormwater only if the flow passes over areas that have no exposed waste and have been adequately covered with at least 6 inches of compacted soil (or a mixture of soil/mulch), free of waste and stabilized to control erosion.
- Sufficient cover material will be stockpiled near the working face to provide an adequate supply for initial cover operations. In some areas, daily stockpiling near the working face may not be necessary because of the proximity of the on-site soil stockpile area.

L.7.a Waste Layer Thickness and Compaction Frequencies

Waste will be spread in layers of approximately two feet thick on the working face and compacted to approximately one foot in thickness before application of the next layer. The solid waste will be compacted with a minimum of three to five passes of a compactor.

L.7.b First Layer of Waste

Selected solid waste loads consisting of solid waste containing no large rigid objects will be used for at least the first four feet of the first lift of a new cell in order to protect the liner and leachate collection system. The first lift will be 4 to 16 feet in height to bring the daily cover grade to an elevation of approximately 40 feet NGVD which is higher than the cell's lined external containment berms in order to promote shedding of stormwater. Waste will be deposited at the inside toe of the cell's lined external containment berm on the south end of the cell and spread to the north. No solid waste will be placed beyond the litter fences. For the initial lift, hauling vehicles will reach the working face by traveling on top of the previously deposited waste and depositing the loads at the top of the working face. The fill will be spread and compacted "down slope" to prevent vehicles from traveling on the protective sand layer. Also see Section L.2.f. in this Operations Plan.

L.7.c Slopes, Side Grades, and Lift Height

The typical height for each lift is 10 feet. All incoming solid waste will be directed to the working face and placed against the toe of the side slope of the previous day's refuse. The first row of waste in a new lift will be placed against the toe of the containment berm to provide a guide for the placement of refuse for the remaining rows. A maximum slope of 3 to 1 will be maintained on the working face. All top slope areas will be sloped to drain stormwater off of the landfill.

Waste will be placed within the designated edge of waste shown on the Engineering Drawings. The edge of waste will be located by measuring 7 feet inward from the edge of liner markers on the north and west sides of Phase II including the temporary liner termination for Cell 2. The edge of waste will be located by measuring 14 feet inward from the edge of liner markers on the south side of Phase II. Periodic inspections will be made to ensure that the markers are in place and the edge of waste is located the required distance from the edge of the liner.

L.7.d Maximum Width of Working Face

Maximum width of the working face will be 200 feet. This will provide a sufficient area for maneuvering large private and commercial vehicles as well as minimize the exposed area and the unnecessary use of cover material.

L.7.e Initial Cover

For the Class I landfill, a minimum of six inches of compacted initial cover consisting of native sandy soils, top soil, soil-yard waste compost mixture, shredded tires, or other FDEP approved initial cover will be applied to the top of the lift and to the working face at the end of each day. Attachment L-10 provides a description and specification for initial cover materials previously approved for this facility. A 2-inch layer of shredded yard waste may be applied when needed to the initial cover to minimize erosion during rainy weather. The application of initial cover over the landfilled waste will assure control of disease vector breeding/animal attraction, odors, waste combustion (fire), blowing litter, and moisture infiltration.

The initial cover material will be spread over the exposed waste and, with the exception of tarps, compacted by the equipment used to spread the cover (likely a bulldozer or scraper). The initial cover material will not be removed prior to placement of successive lifts of waste, with the exception of tarps, which would be removed prior to placement of successive lifts. To enhance the infiltration of leachate through the waste, the initial cover material may be broken up in place by a dozer blade or equipment traffic immediately prior to the placement of the subsequent lift of waste. Any remaining litter and cleanings from equipment will be placed at the bottom of the completed cell and covered.

Before moving the working face, the area that will remain inactive will be covered with compacted cover soil (free of waste) or a mixture of 50 percent unscreened wood mulch and 50 percent soil, with sufficient thickness (minimum 6-inches) to prevent erosion and the mixing of leachate with stormwater.

L.7.f Application of Initial Cover

Initial cover will be applied at the end of each working day, except when solid waste will be placed on the working face within 18 hours or when a temporary cover such as a tarpaulin is used to cover the working face.

L.7.g Intermediate Cover

Intermediate cover consisting of at least 1 foot of compacted native sandy soils or composted yard trash screened through ½-inch mesh mixed with 25 percent soil, by volume, will be applied within 7 days if final cover or an additional lift is not to be applied within 180 days. Intermediate covered areas that will not be landfilled or covered with final cover within 6 months will be sodded (external slopes) or seeded and mulched (internal and top slopes) to avoid slope erosion. Also see Section L.2.f. in this Operation Plan.

To conserve the intermediate cover material, a portion of the intermediate cover will be removed immediately before placement of additional solid waste on top of the lift or before placement of additional waste. The intermediate cover material (free of waste) will be stripped and reused as intermediate cover material. The stripped intermediate cover will be pushed ahead as needed for the perimeter containment berms constructed around the active working face area. The intermediate cover areas will be graded to promote drainage and seeded to prevent erosion.

Components of the landfill gas collection system may be installed in areas that receive intermediate cover. The locations of all underground piping associated with these systems will be marked to avoid damage to them during landfill operation and intermediate cover maintenance activities. Above ground structures such as well heads, and valves, will be kept readily visible by such measures as clearing vegetation, painting components bright colors, and installing protective posts and flagging. These measures should protect the above ground structures from damage during routine intermediate cover maintenance activities such as mowing, grass repair, and washout repair.

L.7.h Final Cover

Following the receipt of a closure permit, final cover will be applied to the Class I landfill on the completed portions of Phase I or Phase II of the landfill operation. The perimeter sideslopes of all completed cells will have a slope of 3:1.

The cap and final cover will consist of a minimum of 12 inches of intermediate cover soil, a geomembrane layer that complies with Department rules, a geocomposite drainage layer, and 24 inches of local common soil of which upper 6 inches will be capable of supporting vegetative cover. Specifications for the local common soil will be provided with the closure permit application.

Components of the landfill gas collection system may be installed in areas that receive final cover. The locations of all underground piping associated with these systems will be marked to avoid damage to them during landfill operation and final cover maintenance activities. Above ground structures such as well heads, and valves, will be kept readily visible by such measures as clearing vegetation, painting components bright colors, and installing protective posts and flagging. Protective posts shall be installed such that they do not damage the final cover system. These measures should protect the above ground structures from damage during routine final cover maintenance activities such as mowing, grass repair, and washout repair.

L.7.i Scavenging and Salvaging Control Devices

Scavenging and salvaging is not allowed on the working face at CCSWDC. In the event spotters working in this area observe scavenging or salvaging activities on the working face, the landfill manager will be notified.

L.7.j Litter Control Devices

Litter will be controlled by requiring covered loads, efficient unloading and cover operations, litter fences, perimeter fencing, and by routine clean-up. Litter outside the working area will be picked up within twenty-four (24) hours.

A small litter fence will be placed at the limit of each landfill cell area for the full length of the active working area of the cell.

L.7.k Erosion Control Procedures

Erosion control procedures at CCSWDC mainly consist of stormwater management for active cell areas and in areas surrounding the landfill cells. Stormwater management for used portions of active cells where initial or intermediate cover over the waste has been placed in accordance with FDEP requirements, is achieved by:

- Grading the waste-in-place with an adequate slope and adequately covering the waste to divert stormwater away from the working face.
- Use of terraces and letdown pipes (see Figures L-2 through L-8 in Attachment L-3 for proposed Phase I locations and Sheets C-07 through C-09, Landfill Staging Plans, in the permit drawings for proposed Phase II locations).
- Maintaining internal and external berms.

Of critical importance will be maintaining the stormwater management system during the filling sequence. As each lift is constructed, temporary stormwater diversion berms will be constructed.

A containment berm will isolate the working face from the remaining covered areas. Stormwater which accumulates behind the containment berm in the area of the working face is leachate and will be retained and allowed to percolate into the landfill where it will eventually be collected in the leachate collection system.

Other berms will divert stormwater from top slopes to let down structures and will serve as erosion control to protect recently covered side slopes. These external berms will be sodded to minimize erosion and will be directly connected to the temporary letdown structures to facilitate proper management of stormwater runoff.

Sediments that reach the perimeter channels will collect behind the ditch blocks and will require periodic removal. Within 30 days after applying intermediate cover to side slopes that have reached designed dimensions, sod shall be applied. As filling progresses above the proposed first drainage terrace, the first set of temporary letdown structures will be constructed. This operating procedure will minimize the amount of erosion and sediment accumulation that must periodically be removed from the perimeter ditches.

Areas provided with intermediate cover, or other areas that discharge to the stormwater management system that 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 or liner is exposed, then the area will be repaired by the end of the next working day.

L.8 PROCEDURE FOR LEACHATE MANAGEMENT

L.8.a Leachate Monitoring, Sampling, and Analysis

The sump pumps located in Cells 1 through 5 of Phase I will operate in an automatic mode based on the liquid level in the sump. Figure L-2 in Attachment L-3 shows the operation levels for the sump pumps. The pressure transducer located at the end of the pump housing accurately measures the level of liquid in the sump and provides a digital readout of this level at the control panel mounted on the valve box at the top of each cell's lined external containment berm. As shown on Figure L-2, the high water alarm will result if leachate levels rise to cause 12 inches of head on the liner system adjacent to the sump area.

Two additional pump units will be provided for backup of the Phase I sump pumps. This allows for removal of each pump on a regular scheduled basis to perform preventative maintenance. When a sump pump is removed for schedule maintenance, a spare pump will be reinstalled immediately while the maintenance is being performed. Each pump will receive preventive maintenance in accordance with the manufacturer's recommendations at a frequency based on run time.

Cells 1 through 4 of Phase II will drain by gravity to a duplex leachate pump station located north of Cell 2. The pump station will operate in an automatic mode based on the liquid level within the wet well. Sheet C-17, Leachate Collection System Details, of the Permit Drawings shows the operation levels for the pumps. The pressure transducers located at the end of the pump housing accurately measure the level of liquid within the wet well and provide a digital readout of this level at the control panel mounted adjacent to the pump station. As shown on Sheet C-17, Leachate Collection System Details, the duplex pumps will operate on a lead/lag basis.

Additional details on leachate sampling locations, sampling and analysis schedule, and data submission is provided in the Water Quality Monitoring Plan Addendum provided in Appendix C of the permit application.

L.8.b Leachate Collection and Removal System

Phase I Collection System

The existing Phase I Class I landfill leachate collection system consists of a geonet drainage layer and perforated collection pipe above the composite liner system to collect and convey leachate. The leachate that is conveyed to sumps will be pumped to an on-site leachate holding tank. A typical detail for the Phase I sumps is provided in Figure L-2 of Attachment L-3. The leachate collection piping system consists of 8-inch diameter perforated HDPE pipe sloped in such a manner that leachate flowing through the solid waste of the landfill will be collected and transported by gravity to a sump and leachate pump. The discharge line from the sump pump connects to a HDPE header line via a valve vault. Provisions for sampling the leachate as well as monitoring flows and pressure are provided in the valve boxes.

Phase II Collection System

The proposed Phase II Class I landfill leachate collection system consists of a geonet composite drainage layer and perforated collection pipe above the double synthetic liner system to collect and convey leachate. The leachate that is collected within the Phase II cells will be pumped to an on-site leachate holding tank. The leachate collection piping system consists of 8-inch diameter perforated HDPE pipe sloped in such a manner that leachate flowing through the solid waste of the landfill will be collected and transported by gravity to a metering manhole located on the north perimeter berm of each cell. At the metering manhole, leachate flows from each cell are measured using a Parshall flume and an ultrasonic water level sensor. Each metering manhole drains by gravity to a duplex leachate pump station located adjacent to Cell No. 2. The discharge from the leachate pump station will be directed through a new HDPE leachate forcemain that will be installed along the north and west sides of Phase II, the west and south sides of future Phase III and the south side of future Phase IV. Provisions for sampling the Phase II leachate as well as monitoring flows and pressure are provided in the valve vault located adjacent to the leachate pump station as shown on the details provided on Sheet C-17 of the Permit Drawings. Any stormwater accumulated in an unused cell will be pumped out from the cell using portable pumps and discharged to the stormwater system. Prior to waste disposal within a cell, the valve connecting the leachate collection pipe within the cell to the manhole will be in the closed position to prevent stormwater from draining to the leachate pump station. Immediately prior to solid waste being deposited into a new landfill cell, the valve at the manhole will be opened to allow the free flow of leachate to the pump station.

Leachate collected within the geocomposite drainage layer of the leak detection system of Phase II is drained by gravity to a leak detection manhole located on the north perimeter berm of each cell. The discharge valve at the leak detection manhole will normally be closed to allow the quantity of leakage to be measured. An ultrasonic water level sensor calibrated to the storage volume within the manhole will be used to measure leakage rate. The leachate within the leak detection manholes is subsequently drained by gravity to the leachate pump station after leakage

rates are determined. The leak detection system has been designed such that a leak developing within the most remote part of a cell will flow to the leak detection manhole within twelve hours. A Leakage Action Rate (LAR) of 100 gallons/acre/day has been established for the Phase II cells which corresponds to the estimated peak daily discharge to the leak detection system as determined by the HELP model analyses. At this rate, the storage volume within the leak detection manhole will be exhausted within 8.75 hours. For leakage rates greater than 100 gallons/acre/day, measures should be initiated to find and repair or minimize leaks within the primary liner system.

The following procedures will be initiated if the LAR of 100 gallons/acre/day is exceeded:

1. Increase monitoring of the leakage quantity from the cell(s) affected. This consists of increasing the frequency of monitoring liquid levels within the leak detection manhole(s) to determine the time required to fill the five-foot storage volume in the manholes. It is anticipated that readings will be made at least daily after the LAR is exceeded and the calculated leakage rates will be recorded.
2. Immediately notify FDEP once it is ascertained that the LAR is being exceeded and provide a plan on how the County intends to address the exceedence.
3. Attempt to locate and fix sources of leaks to the extent practical. Measures to locate leaks could include inspecting the leak detection manhole to determine whether groundwater is leaking into it, observing the surface of the cell to determine if there are indications as to where leaks may be located such as large protrusions of waste that may have penetrated the liner system, and video taping the leak detection pipe to determine where large inflows are occurring. If the location of a leak can be identified and excavation of waste is practical, then the liner will be exposed and repaired.
4. Adjust operational practices as needed to reduce the likelihood of future damage to the liner such as increasing the thickness of the initial layer of select waste on the cell bottom.

If leaks can not be specifically located or if it is not practical to find them, adjust operations to try to reduce the leakage to below the LAR. This could include measures to reduce the generation of leachate such as grading the landfill to promote runoff, installing drains and berms to direct runoff away from the landfill, the installation of additional intermediate or temporary cover, installing temporary geomembrane rain covers, or accelerating the placement of final cover in areas that have reached final elevation.

Currently there are no plans to use rain cell covers to collect rainwater within the unused portions of the cells in Phase II.

Phase I/Phase II Overlay Liner System

An overlay liner system will be constructed over the west sideslope of Phase I prior to the placement of waste against this slope as a result of the construction of Phase II. The purpose of the overlay liner system is to reduce the quantity of leachate entering the Phase I leachate collection system from the Phase II expansion by directing it to the Phase II leachate collection system. This will be accomplished by hydraulically separating the newer waste above it from the older waste beneath the overlay liner system.

The overlay liner system will consist of (from the top down) 2 feet of protective cover material, a geonet composite drainage layer, a textured 60-mil HDPE liner, and a minimum of 12 inches of intermediate cover placed over the waste. The protective cover may be installed in stages as required by operations in order to avoid having the material washout during storms. Alternately, the protective cover may be placed all at once if a rain cover is installed over it to prevent washouts. The rain cover would be removed prior to the placement of waste against the overlay liner system.

The rain cover on the overlay liner system, if installed, will include rain gutters to divert stormwater off the rain cover to temporary downdrains that will direct the stormwater to the perimeter drainage channel located north of Phase I. The locations of the rain gutters and temporary downdrains are shown on Sheets C-3 and C-3A of the Engineering Drawings. Details of these features are included on Sheet C-13B of the Engineering Drawings. Calculations demonstrating that the rain gutters and downdrains are capable of transmitting the flow generated from the 25-year design storm are included in Attachment H.2 of the Phase II Permit Application Engineering Report.

Leachate percolating through the newer waste located above the overlay liner system will be captured by the liner and directed to the base of the overlay liner system by means of the geonet composite drainage layer. A stone-filled trench drain with an 8-inch diameter perforated HDPE pipe located at the Phase I/Phase II divider berm will collect the leachate and direct it to the low point within Cell 1 of Phase II where it will flow out of the cell with the rest of the leachate collected within Cell 1. From there, the leachate will flow as previously described for the Phase II collection system.

Leachate Disposal System: General Description

Leachate that is generated from the landfill cells will be pumped to an existing 1,800,000 gallon storage tank. The leachate accumulated in the storage tank will be removed by a leachate pumping station that will pump through a 4-inch PVC force main to a connection to the Sarasota County wastewater collection system south of the landfill on Knights Trail Road. The Sarasota County wastewater collection system in this area flows to the City of Venice Water Reclamation Facility (WRF) for treatment.

The leachate pumping and force main system is the primary disposal method for the CCSWDC leachate. Transfer pumps that discharge to tanker trucks for hauling to the Bee Ridge WRF will

serve as a secondary emergency disposal location.

The following information provides a description of the above ground leachate storage tank in accordance with the requirements of 62-701.400(6)(c).

The on-site leachate storage tank has a total capacity of 1.8 million gallons. The exposed plan area of the secondary containment system surrounding the leachate storage tank is 5,419 square feet. This will allow 27,000 gallons of water to accumulate after an 8-inch rainfall event. All liquid accumulating in the secondary containment system will be tested for specific conductance. Specific conductance of the stormwater in the secondary containment shall not be more than 50 percent above the specific conductance of water in the nearest downstream stormwater pond (Stormwater Pond No. 6) or shall not exceed 1,275 umhos/cm, whichever is greater. If the specific conductance is greater than these criteria or if a visible sheen is present, then the stormwater will be pumped directly into the leachate storage tank and managed as leachate.

A log of discharges from the secondary containment system will be maintained. The date, specific conductance measurements, and visual sheen observations shall be recorded.

An electronic water level sensor will automatically determine when the storage tank reaches 90 percent capacity (1.62 million gallons) and a high water alarm will be activated. An electric actuated shutoff valve in the fill line will be activated to prevent overfilling the tank when the capacity reaches 1.8 million gallons in the tank. The electric actuated shutoff valve will be tested by inducing a false signal from the level sensor and confirming proper operation on a weekly schedule. The exposed tank exterior will be inspected weekly by visual observation. The inspection will include looking for leaks, corrosion, or other maintenance deficiencies. This will be accomplished by inspection from platforms at the top of the 20-foot high secondary containment wall, positioned 120 degrees apart around the circumference of the tank. The tank interior will be inspected annually when the tank is empty or at least once every three years. If any failures are detected, the tank construction company shall be contacted immediately and appropriate repairs conducted based on the nature of the problem. Leachate will be managed in accordance with the Contingency Plan (Section L.8.e) when the tank is out of service.

Reports of the above inspections will be maintained by the County (the most recent inspection report is included as Attachment L-7).

The leachate pumping station will have automatic controls with the following set points:

	<u>Elevation</u>
High water alarm	40
Lag pump on	28
Lead pump on	27
Pumps off	26
Tank bottom	22

The set points can be modified by adjusting the pump control system. The duplex pumps will automatically alternate operation each time the pump is stopped by the level control system. The pumping station is equipped with a data logger to record flow, pH, and conductivity on a continuous basis.

L.8.c If Leachate Becomes Regulated as Hazardous Waste

Sarasota County will evaluate options for pretreating the leachate and alternate disposal if it becomes regulated as a hazardous waste.

L.8.d Off-Site Treatment of Leachate

The primary disposal location for CCSWDC leachate and alternate disposal is the City of Venice WWTP. Facility commitment letters are provided in Attachment L-6. A secondary disposal location is the Bee Ridge Water Reclamation facility. CCSWDC may use other secondary facilities for the offsite treatment or disposal of leachate; however, the County will notify FDEP of the change prior to use.

The CCSWDC will dispose of leachate at the primary treatment location provided the leachate meets the disposal quality requirements. Should leachate quality change such that it is no longer acceptable at the primary treatment location, the CCSWDC will dispose of leachate at the secondary facility.

L.8.e Contingency Plan for Leachate Management

Should one of the following events occur, the leachate contingency management plan shall be implemented.

- Any mechanical failure of the leachate management system that would prevent operation of the landfill leachate collection system pumps or the leachate transfer pumps for more than three (3) consecutive days.
- Liquid accumulation in the holding tank leak detection system in amounts greater than expected from rainfall.
- Rise of leachate levels inside the holding tank greater than 52.6 (high water alarm elevation represented by 31 foot mark on the external tank gauge).

Implementation of the contingency plan includes the following actions.

- (1) The landfill manager shall notify the FDEP (within twenty-four (24) hours) and leachate disposal facilities of the emergency event.
- (2) If the problem is excess leachate in the detection system of the holding tank, remedial measures shall be taken immediately to eliminate the leak. The detection system of the concrete holding tank consists of a layer of gravel located between the bottom of the holding tank and the top of the secondary containment slab that enables the detection of leaks at the bottom of the holding tank. Additional tractor trailer tanker units and

operators shall be called to the site to expedite transport of leachate to the receiving wastewater treatment plant or additional quantities shall be pumped through the forcemain to the City of Venice lift station. The holding tank shall be emptied completely, if required, to facilitate repairs. Leachate will be pumped to mobile tanks during periods the repairs.

- (3) If the problem is excessive levels of leachate in the holding tank (elevation exceeds the high water alarm level), the maximum amount of leachate shall be diverted from the tank by increasing the number of frequency or tanker trucks hauling leachate to the primary or secondary WWTPs, pumping additional quantities of leachate through the forcemain to the City of Venice lift station, or storing leachate in mobile tanks.
- (4) Once the problem causing the implementation of the contingency plan has been resolved to an acceptable degree, the landfill manager shall notify FDEP (within three (3) day) that the facility is ready to return to normal operating conditions.
- (5) Inspections and repairs to the leachate tank will be scheduled during winter months to the extent possible in order to minimize the quantity of leachate that must be removed. While the tank is out of service, leachate will be pumped directly to either tanker trucks or temporary storage tanks. If the tank will be out of service for an extended period, the temporary tanks will be plumbed to the leachate transfer station to allow direct pumping of the leachate to the WWTP.

L.8.f Recording Quantities of Leachate Generated

A control panel for each sump pump in Cell Nos. 1 through 5 of Phase I is mounted on the valve box at the top of each cell's lined external containment berm. Each control panel will be equipped with a pump hour meter.

A control panel for the Phase II duplex leachate pump station will be mounted adjacent to the pump station. The control panel will be equipped with a flow meter, water level indicator, and a pump hour meter.

The following information will be recorded once per operating day from each pump location.

Cell No. or Phase	_____
Flow Meter Reading	_____
Hour Meter Reading	_____
Sump or Wet Well Liquid Level	_____

The above information is recorded on the form provided as Attachment L-8.

A control panel for the Phase II metering manholes will be mounted adjacent to the manhole. The panel will be equipped with a water level indicator, instantaneous flow meter, and a flow totalizer.

The following information will be recorded once per operating day from each metering manhole location.

Cell No.	_____
Instantaneous Flow	_____
Totalized Flow	_____
Liquid Level	_____

The above information is recorded on the form provided as Attachment L-8.

L.8.g Precipitation and Leachate Generation Rates

Rainfall for each 24-hour period measured at an official gauge located on-site will be recorded and entered onto a spreadsheet (format included in Attachment L-11) to compare precipitation to leachate generation.

L.8.h Leachate Collection System Inspection and Cleaning

CCSWDC will conduct a video inspection of the leachate collection system at least once every five years in accordance with Rule 62-701.500 F.A.C. requirements, and cleaned as necessary. The most recent inspection of the leachate collection system at CCSWDC was completed on February 3, 2006. Leachate pumps, metering manholes, and leak detection manholes at CCSWDC will be inspected for operation failures at least daily. Control panels will be inspected and operational data recorded as described in L.8.f.

L.9 GAS MONITORING PROGRAM

A gas monitoring program will be implemented to prevent explosions and fires and to minimize off-site odors and damage to vegetation. The landfill gas monitoring program for CCSWDC will include monitoring of the landfill perimeter and enclosed on-site structures at the monitoring locations shown on Figure 1 provided in the Water Quality Monitoring Plan Addendum (Appendix C of this permit application). Monitoring will be conducted on a quarterly basis. The outside monitoring locations (gas monitoring probes) will consist of a monitor probe as shown on Figure L-3 in Attachment L-3.

The initial gas monitoring locations for Phase II when Cells 1 and 2 are constructed shall include four (4) gas monitoring probes as described above and numbered GP-2, GP-3, GP-4, and GP-8 and six (6) gas monitoring locations GM-1, GM-2, GM-3, GM-4, GM-5, and GM-7 in structures as shown on Figure 1 provided in the Water Quality Monitoring Plan Addendum. Monitoring probe GP-8 will be abandoned and replaced by GP-9 when Cells 3 and 4 of Phase II are constructed. Low areas, base boards, floor drains, and floor mounted cabinets shall be monitored inside the structures. Other structures on the site are not monitored because their great distance from the landfill (over 3,400 feet) and the shallow groundwater table (5 to 7 feet below surface) at the site would cause any migrating gas, if it existed, to purge to the atmosphere before it would travel to these structures through the ground. Also, there are no connections via conduit pipes, etc. between these structures and the landfill area.

The monitoring will be conducted for the Lower Explosive Limit (LEL) of methane. A Gasman II CEA Instruments or an equivalent unit will be used. No purging of the probe will be allowed. Once the meter is connected to the sampling port, the valve will be opened and the meter pump will be engaged and meter reading observed. The highest value observed is recorded as well as the steady state value observed.

If the LEL is greater than 25 percent inside any monitor location probe, a temporary monitor probe shall be established 50 feet from the monitor location in the opposite direction from the landfill. The temporary monitor probe shall be of the design shown in Figure L-12 of Attachment L-3. The temporary monitor probe will be monitored on a monthly basis for at least one quarter and until the temporary monitor station records zero percent LEL and the monitor location probe records less than 25 percent LEL. If the LEL is greater than 25 percent inside the structures, or equal to, or greater than 100 percent at any monitor probe, the landfill operator will submit to the FDEP within seven (7) days a remediation plan detailing the nature and extent of the problem and the proposed remedy. The remedy will be completed/implemented within sixty (60) days of the detection unless otherwise approved by the FDEP.

L.10 STORMWATER MANAGEMENT SYSTEM

The landfill stormwater management system for CCSWDC is discussed in Section L.2.h.(3) – Stormwater System.

L.11 EQUIPMENT AND OPERATION FEATURE REQUIREMENTS

L.11.a Adequate In-Service Equipment

Equipment proposed for the CCSWDC will include the equipment listed in Table L-1. The exact equipment complement may vary from time to time and additional equipment will be acquired if needed. One roll-off container will be placed at the Class I landfill area.

TABLE L-1. EQUIPMENT USED AT THE CCSWDC

NUMBER	EQUIPMENT
1	Bulldozer
2	Compactors
1	Dump Truck
1	Front-end Loader
1	Grader
1	Hydraulic Excavator
1	Water Truck
1	Fuel Truck
2	Pick-up Trucks
2	UD Gators

NUMBER	EQUIPMENT
1	Roll-off Container
1	Compressor
1	Pressure Washer
1	Welder

Emergency Electrical Generation Equipment is of adequate size to assure complete operation of the Leachate Disposal and Collection Systems.

L.11.b Reserve Equipment

Cooperative lending agreements with the Contract Operator's company and standing agreements with local equipment suppliers will provide a means for procuring additional back-up equipment within 24 hours of a need being identified.

L.11.c Communication Facilities

A telephone will be available at the scalehouse and the maintenance/administration building. Radios and other communication devices will be in select landfill equipment to provide safe conditions for landfill personnel.

L.11.d Dust Control Methods

Dust from unpaved haul roads and construction areas within the Class I landfill area will be controlled through the use of a water spray truck. An alternate dust control measure that may be used in active cells of the Class I landfill area is leachate reuse (see Attachment L-12 for FDEP approval letter). The reuse of leachate involves spraying small quantities of leachate from a spray bar mounted on the rear of a tank truck onto active fill areas of the landfill. The landfill operation crew will monitor the rate of leachate application, soil moisture conditions, and the specific landfill areas used to prevent the generation of leachate runoff. Leachate will only be applied under the following conditions.

- Leachate may only be sprayed on active, bermed fill areas, including the working face, and areas with the required six (6) inches of initial cover.
- Leachate may not be sprayed on areas with intermediate or final cover.
- The maximum grade leachate will be sprayed on is a 10H:1V slope. Areas within 150 feet of a 4H:1V or steeper side slope will not be sprayed on. At all times areas receiving leachate must be controlled to prevent run-off from entering the stormwater system
- Leachate will not be sprayed during a rainfall event, and when the application area is in a saturated condition.
- The application rate of leachate should be such that leachate does not accumulate on the landfill surface, and infiltrates quickly into the covered refuse.

- Leachate will not be sprayed at the end of the day on the initial cover of the working face or other areas. Spraying should be done early in the morning after any dew evaporates and continue until early afternoon or until all available areas have been used.

The Site Manager will record daily the gallons of leachate sprayed per this method.

If needed, dust masks will be available to personnel working in excessively dusty areas.

L.11.e Fire Protection and Fire Fighting Facilities

Small fires on the working face will be controlled using dump trucks, a landfill compactor, and a bulldozer to move earth cover material over hot areas. Additionally, the water truck will be available to apply water to any fires. In the event that an uncontrollable fire does occur at the CCSWDC site, the Nokomis Fire Department will be contacted immediately. The Nokomis Fire Department is equipped with pumper trucks capable of obtaining water from surface sources. In the event of a fire, the landfill operator will notify the FDEP within twenty-four (24) hours. Within seven (7) days, a full written report on the fire will be submitted to FDEP describing the origins of the fire, the actions that were taken to deal with it, the results of the actions taken and an analysis of the success or failure of the actions.

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

No chemicals will be accepted at the landfill. All waste coming through the scale house will be observed to eliminate unwanted chemicals capable of starting a fire. In the event a chemical accident does occur, the following steps will be taken:

- Call local Fire Department (911).
- Contain fire in small area until Fire Department arrives. To eliminate inhalation of potentially toxic fumes, fight fire from upwind side.
- Stay with fire until out and covered with sand.

L.11.f Litter Control Devices

See Section L.7.j. in this Operations Plan.

L.11.g Signs Indicating Name of Operating Authority, Traffic Flow, Hours of Operations, and Charges for Disposal

There is a permanent sign at the south property line along the access road to the facility identifying the Sarasota County Central County Solid Waste Disposal Facility and indicating hours of operation and charges for different types of loads. The sign indicates materials that are not accepted for disposal in the landfill. Signs indicating approach and exit routes and one-way roads are strategically placed so traffic at the landfill will move smoothly and efficiently to and from the working face area.

L.12 ALL WEATHER ACCESS ROADS

A paved entrance from Knights Trail Road terminates at the landfill perimeter roadway. In addition, paved perimeter roads around the landfill areas are shown on Sheet G-03, Overall Site Plan and Phasing Plan of the permit drawings. All weather access roads will be constructed within the Class I area to route traffic to the active working face. The all weather access roads will be constructed of earth, ground shingles, crushed rock, shell or any other stabilizing material, as appropriate.

L.13 ADDITIONAL RECORD KEEPING AND REPORTING

See Section L.3 of this Operations Plan.

Records that are more than five years old may be archived at an off-site storage location. The archived records will be stored in a secure place where they will be protected from damage. Provisions will be made to retrieve records from storage as required.

ATTACHMENT L-15
TEMPORARY GAS VENT INFORMATION

September 16, 2009

Mr. Steve Morgan
Florida Department of Environmental Protection
Southwest District
13051 N. Telecom Parkway
Temple Terrace, FL 33637

**Re: Central County Solid Waste Disposal Complex (CCSWDC)
Phase II Expansion
Permit No.: 130542-006-SC/01
Bottom Liner Temporary Gas Vent Installation**

Dear Steve:

As requested during our phone conversation earlier today, this letter discusses the proposed installation of temporary gas vents within a portion of the Phase II landfill expansion area. Areas near the Cell 2/Cell 3 interface of Phase II have exhibited gas bubbles accumulating beneath the recently installed bottom liner system. The gas pressure has led to visible lifting of portions of the protective cover over the liner system. Several of the locations have been already been vented and repaired, however, the gas generally accumulates again after the repairs are made. Analysis of the gas indicates it is naturally occurring methane and not landfill gas.

The attached sketch illustrates the proposed temporary vent design and installation instructions. The vents consist of short lengths of perforated 4-inch diameter polyethylene pipe inserted beneath the liner system and connected to a riser pipe with a tee. The riser pipe will extend 2 feet above the protective cover soil and will be perforated above the protective cover soil to allow the gas to escape. An 18-inch diameter section of open-ended polyethylene pipe will be centered over the vent to protect it. Currently we estimate a maximum of approximately 6 vents will be installed although we hope this number can be reduced based on field observations after the initial vents are installed.

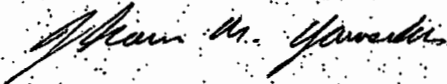
The vents will be removed prior to the placement of waste in the area. CQA will be provided during vent removal to verify that all pipes are removed, all geosynthetic layers are properly patched, and that a minimum of 2-feet of protective cover soil is placed over the patched area.

We understand that you will require a minor modification for the temporary gas vent installation. Since the geosynthetics installer is going to be demobilizing from the site very soon, we would appreciate your expedited review of this proposal so the County can install the vents without incurring a remobilization charge.

Please do not hesitate to contact us if you have any questions during your review.

Sincerely,

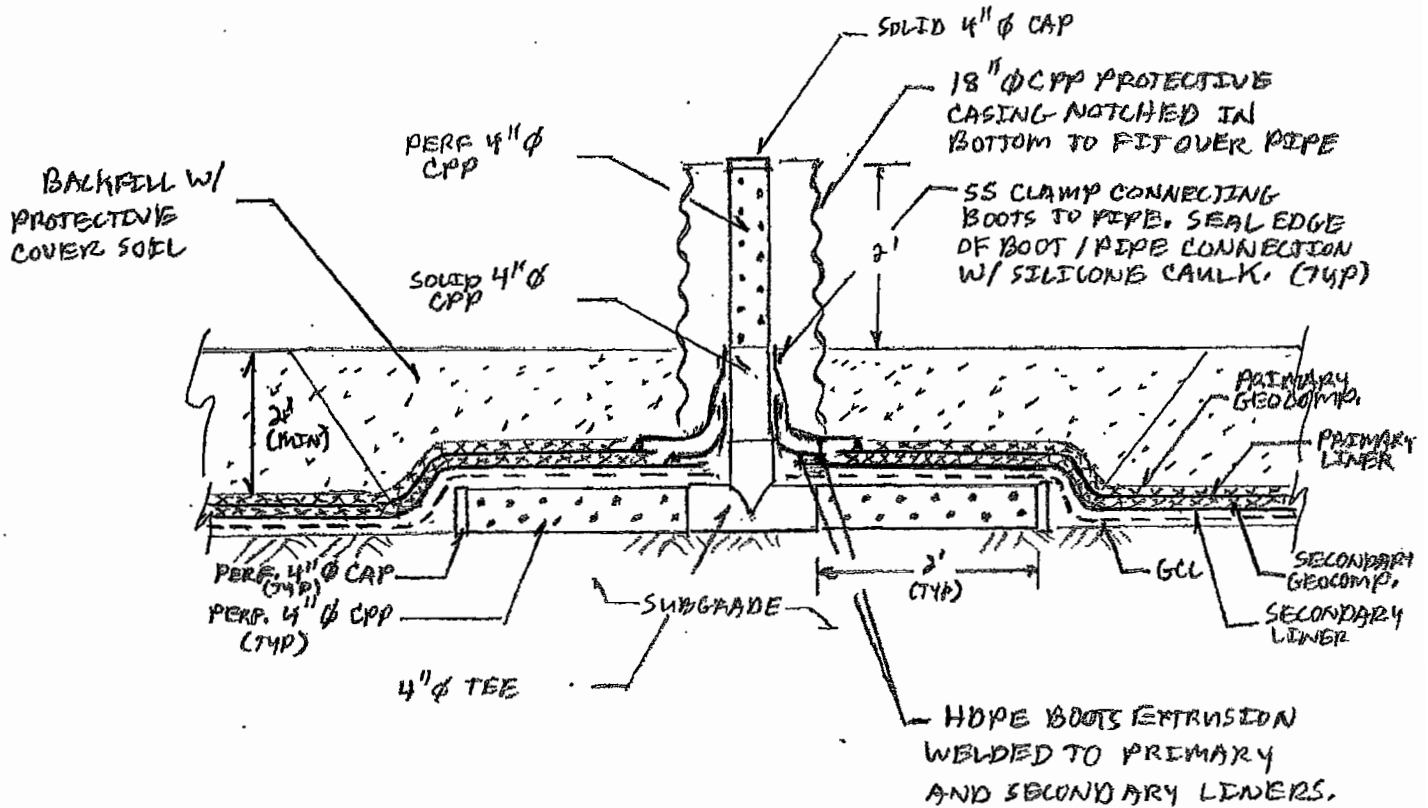
HDR Engineering, Inc.



Thomas M. Yanoschak, PE, BCEE
Senior Project Manager

Enclosures as noted.

cc: Gary Bennett, Sarasota County
Frank Coggins, Sarasota County
Spencer Anderson, Sarasota County
Jack Gibson, Sarasota County
Rich Siemering, HDR
Joe Readling, HDR



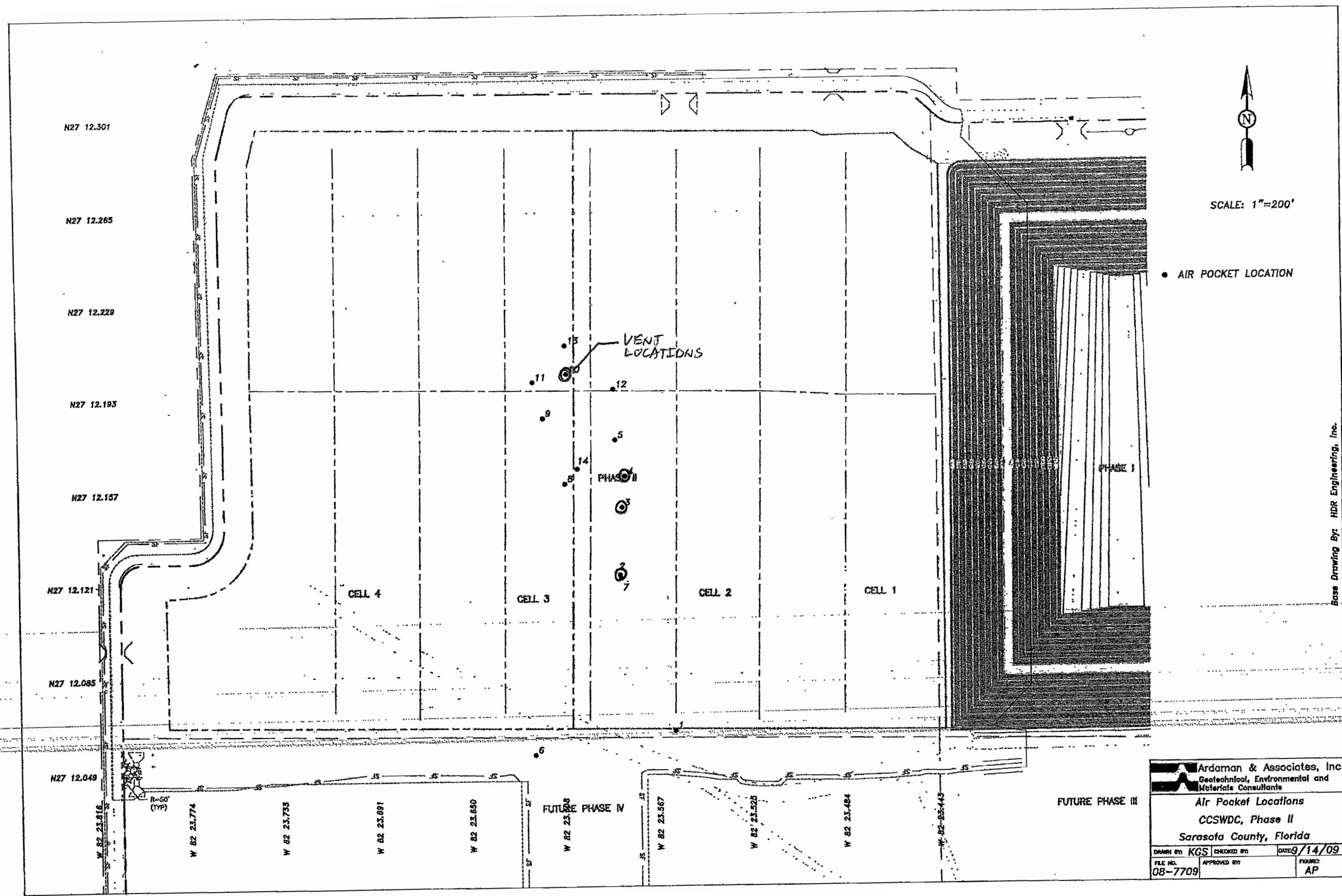
TEMPORARY GAS VENT DETAIL
NTS.

NOTE: ALL PIPE AND BOOTS TO BE REMOVED, GEOSYNTHETICS REPAIRED, AND MIN. 2' PROTECTIVE COVER SOIL REPLACED PRIOR TO THE PLACEMENT OF WASTE WITHIN OR NEAR THE VENT AREA.

Project:	Computed:	Date:
Subject:	Checked:	Date:
Task:	Page: 2	of: 2
Job #:	No:	

TEMPORARY GAS VENT CONSTRUCTION SEQUENCE

- ①. EXCAVATE PROTECTIVE COVER SOIL TO EXPOSE MIN. 2' X 5' OF PRIMARY GEOCOMPOSITE OVER GAS BUBBLE.
- ②. CUT APPROX. 12" Ø HOLE THROUGH EACH LAYER OF GEOSYNTHETICS AT CENTER OF EXPOSED AREA.
- ③. INSERT 2-2' LENGTHS OF PERFORATED 4" Ø CPP W/ CAPS ON FAR ENDS BETWEEN GCL AND SUBGRADE PER DETAIL.
- ④. INSERT 4" Ø CPP TEE THROUGH HOLE IN GEOSYNTHETICS AND CONNECT PERFORATED PIPE TO TEE PER DETAIL. ORIENT SIDE-OUT OF TEE VERTICAL.
- ⑤. CONNECT APPROX. 1.5' LENGTH OF SOLID 4" Ø CPP TO SIDE-OUT OF TEE.
- ⑥. FABRICATE BOOT EXTRUSION WELDED TO SECONDARY HDPE LINER AND CONNECTED TO VERTICAL PIPE W/ SS CLAMP AND SEALED W/ SILICONE CAULK.
- ⑦. FABRICATE BOOT EXTRUSION WELDED TO PRIMARY HDPE LINER AND CONNECTED TO VERTICAL PIPE SAME AS ABOVE.
- ⑧. CONNECT PERF. 4" Ø CPP TO VERTICAL SOLID PIPE TO EXTEND APPROX. 2' ABOVE PROTECTIVE COVER SOIL. ATTACH SOLID CAP TO END OF PIPE.
- ⑨. CENTER 18" Ø CPP PROTECTIVE CASING OVER VERTICAL PIPE. NOTCH OUT BOTTOM OF CASING TO FIT OVER BOOTS / PIPE.
- ⑩. BACKFILL OVER PIPE AND AROUND PROTECTIVE CASING W/ MIN. 2' OF PROTECTIVE COVER SOIL.



Base Drawing By: HDR Engineering, Inc.

ATTACHMENT L-16
RAIN COVER SPECIFICATION

SECTION 02780
GEOSYNTHETIC RAIN COVER

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Furnish all labor, materials, tools, and equipment, and perform all work and services necessary for or incidental to the furnishing and installation, complete, of an impermeable, geosynthetic rain cover as shown on Drawings and specified in accordance with provisions of the Contract Documents.
- B. Related Sections include but are not necessarily limited to:
1. Section 02220 - Earthwork.
 2. Section 02221 - Trenching, Backfilling, and Compacting for Utilities.

1.2 QUALITY ASSURANCE

- A. Refer to the following standard references or specifications as applicable to this section of technical specifications:
1. American Society for Testing and Materials (ASTM).
 - a. ASTM D751 - Standard Test Method for Coated Fabrics.
 - b. ASTM D4533 - Standard Test Method for Trapezoid Tearing Strength of Geotextiles
 - c. ASTM D5199 - Test Method for Measuring Nominal Thickness of Geotextiles and Geomembranes.
 - d. ASTM D7003 - Standard Test Method for Strip Tensile Properties of Reinforced Geomembranes.
 - e. ASTM D7004 - Standard Test Method for Grab Tensile Properties of Reinforced Geomembranes.
 - f. ASTM E96 - Standard Test Methods for Water Vapor Transmission of Materials.

1.3 SUBMITTALS

- A. The Contractor must provide installation instructions.
- B. The Contractor must certify that the rain cover resin is first use; top grade quality only.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. 20-mil Scrim Reinforced Polyethylene Rain Cover
1. The 20-mil scrim reinforced polyethylene rain cover shall consist of two sheets of high-strength polyethylene film laminated together with a third layer of molten polyethylene. A heavy scrim reinforcement shall be placed between these plies to enhance tear resistance and increase service life.
 2. Contractor must supply (in the Bid price) a high strength adhesive tape or equal for waterproofing and sealing the field seams and for performing repair work to the rain cover. Contractor shall minimize field seams.
 3. The scrim reinforced rain cover must meet the following specifications or approved equal, as determined by the Engineer.

<u>PROPERTY</u>	<u>TEST METHOD</u>	<u>SCRIM-REINFORCED TEST VALUE</u>
a. Thickness, nominal	ASTM D5199	20 mil
b. Weight		11.2 oz/yd ²
c. 1" Tensile Strength	ASTM D7003	75 lbf
d. Elongation at Break	ASTM D7003	750%
e. Grab Tensile Strength	ASTM D7004	102.9 lbf
f. Trapezoidal Tear Strength	ASTM D4533	102 lbf
g. Hydrostatic Resistance	ASTM D751	136 psi
h. Perm Rating	ASTM E96 Method A	0.053 U.S.Perms
i. Water Vapor Transmission	ASTM E96 Method A	0.052 U.S. Perms

B. General Requirements

1. The rain cover must perform as specified for at least 3 years and a warranty must be supplied for at least 3 years.
2. The material must be able to be moved by site personnel as needed. The material must be resilient to damage when moved and/or relocated by site personnel. If necessary, the material may be cut for removal/relocation; however, in this case, must be able to be easily resealed by site personnel.
3. Factory seams must utilize methods that will eliminate excess overlap.
4. The rain cover must be impermeable, capable of repelling water with no absorption.
5. The material must be anchored, when installed, through a system so as to preclude wind damage, traffic damage, and weather.

PART 3 - EXECUTION

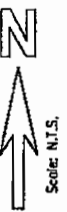
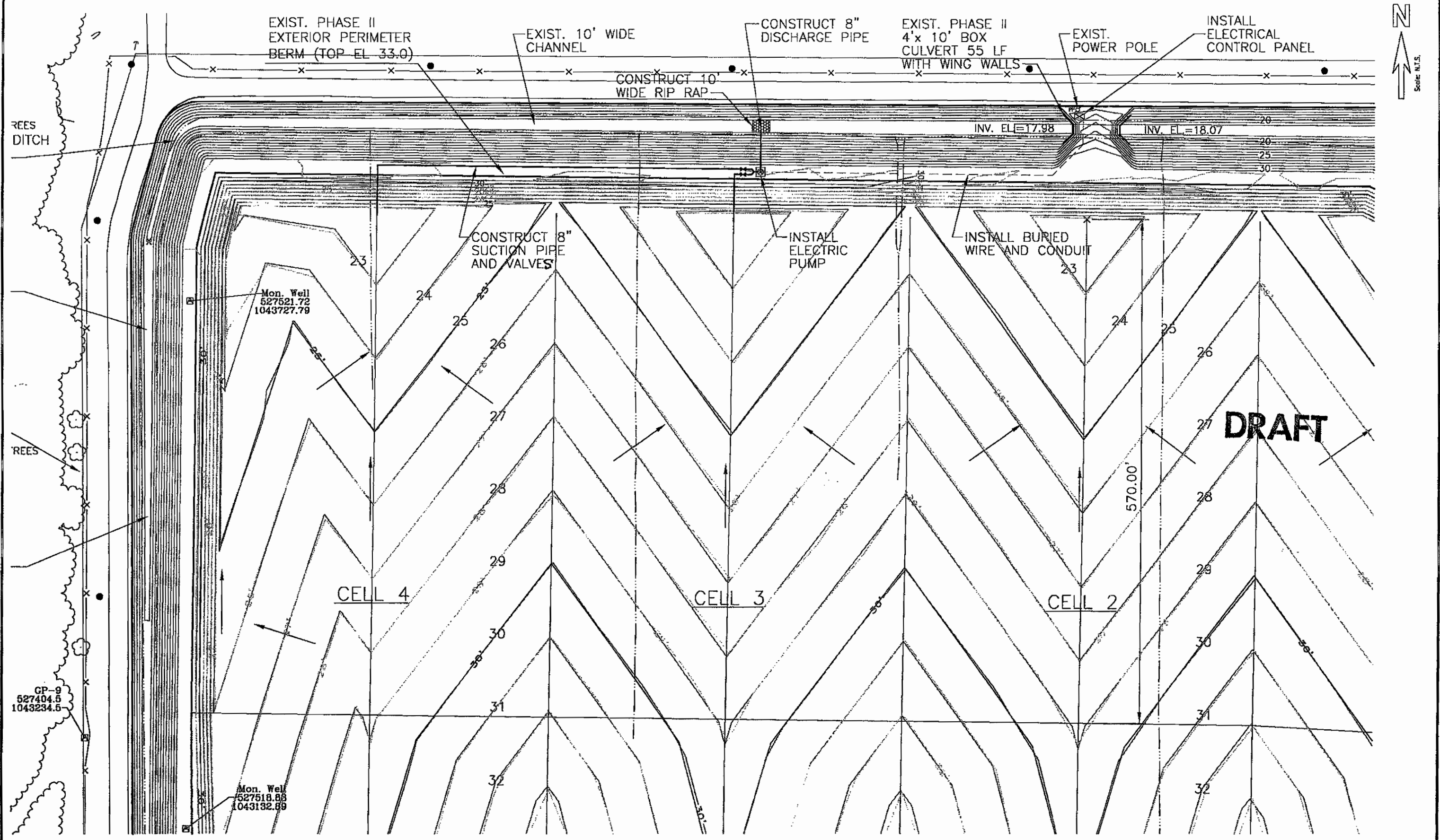
3.1 METHODS

- A. The Contractor shall deploy the GRC in a manner consistent with the manufacturer's specifications.
- B. Anchoring methods shall be as per the manufacturer's specifications or as approved otherwise by the Engineer.
- C. Any damage to the GRC during installation will be the Contractor's responsibility to repair/replace at no cost to the Owner.
- D. Field seams shall be of the strongest available method for the approved material except as required for patches or similar limited area applications.

END OF SECTION

ATTACHMENT L-17

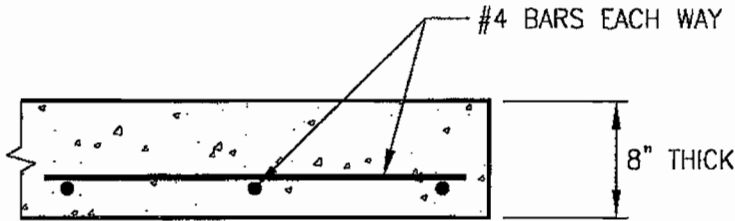
CELLS 3 and 4 RAIN COVER DEWATERING SYSTEM



DRAFT

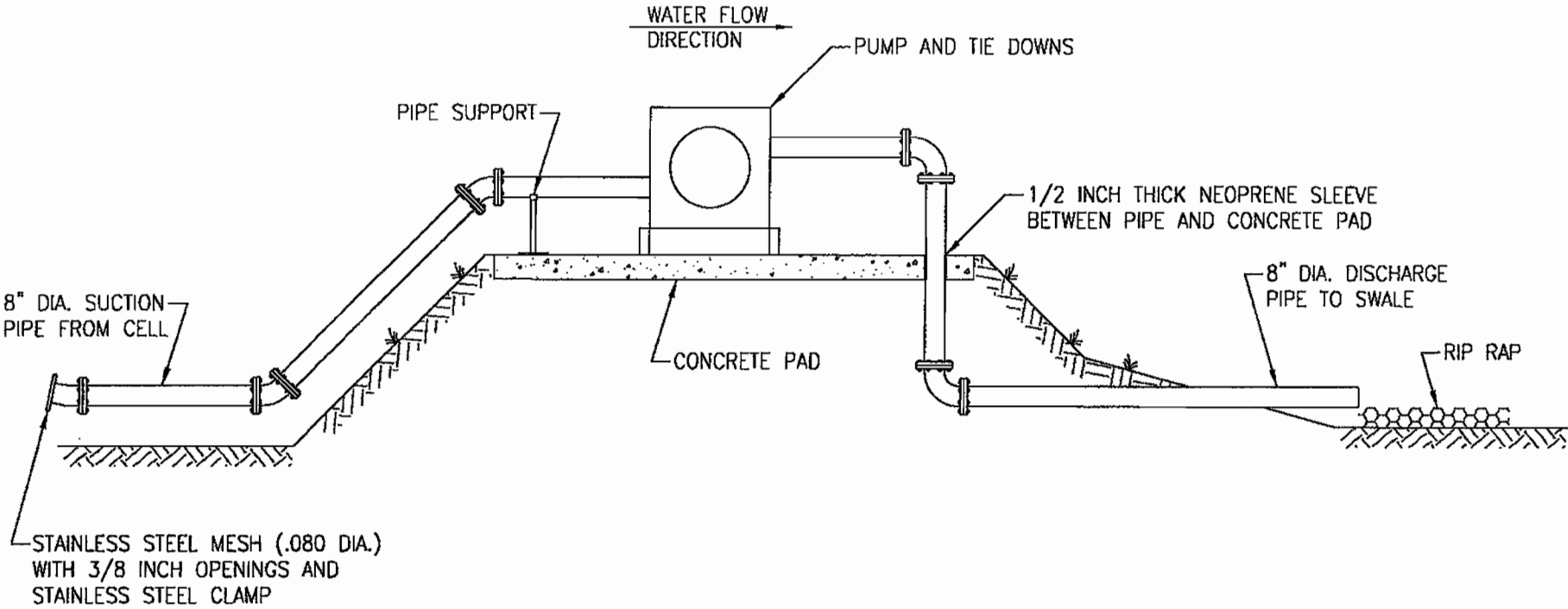
REVISIONS		NOTES:		DRAWN BY: GC DESIGNED BY: JG CHECKED BY: JG DESIGN ENGINEER: JG		SCALE: N.T.S. DATE: DECEMBER 2009 ACCT.# 95222		SARASOTA COUNTY GOVERNMENT ENVIRONMENTAL SERVICES, UTILITIES 1001 SARASOTA CENTER BLVD. SARASOTA, FLORIDA 34240		CENTRAL COUNTY SOLID WASTE DISPOSAL COMPLEX PHASE II		CELLS 3 & 4 RAIN COVER DEWATERING SYSTEM		PROJECT NO. 95222 C-01B SHEET	
-----------	--	--------	--	--	--	--	--	--	--	--	--	--	--	---	--

- NOTES:
1. #4 REBARS @ 12" O.C. EACH WAY
 2. 3,000 PSI CONCRETE @28 DAYS
 3. WIDTH AND LENGTH DIMENSIONS TO BE DETERMINED IN FIELD TO ACCOMODATE PUMP TRAILER ACTUAL SIZE.



CONCRETE PUMP PAD
N.T.S.

DRAFT



SUCTION PUMP DETAIL
N.T.S.

<div>REVISIONS</div>	NOTES:	DRAWN BY: GC	SCALE: N.T.S.	SARASOTA COUNTY GOVERNMENT ENVIRONMENTAL SERVICES, UTILITIES 1001 SARASOTA CENTER BLVD. SARASOTA, FLORIDA 34240	CENTRAL COUNTY SOLID WASTE DISPOSAL COMPLEX PHASE II	CELLS 3 & 4 RAIN COVER DEWATERING SYSTEM	PROJECT NO. 95222
		DESIGNED BY: JG	DATE: MAY 2009				
		CHECKED BY: JG					
		DESIGN ENGINEER: JG	ACCT.# 95222				
							C-01C SHEET

CCSWDC-01C.DWG 12/21/09