Calusa Green, LLC
Application for Planned Development Rezoning

Operation Plan – Class I Facility

SECTION 1

INTRODUCTION

1.1 Terms of Reference

This Operation Plan has been prepared by Southwest Engineering & Design, Inc (SED) on behalf of Calusa Green, LC for a Class I Landfill Facility which shall be referenced in this document as (CG-CIF) who will own and operate the facility. The location of the CG-CIF is shown in Figure 1. The Operation Plan for CG-CIF has been prepared to comply with the requirements of Section 1-12-109 of the Charlotte County Code of Laws and Regulations (County Code) and Chapter 62-701 of the Florida Administrative Code (FAC).

Figure 1 - CG-CIF

1.2 Purpose and Scope of the Operation Plan

The Operation Plan provides a detailed plan for the performance of the daily operations for the CG-CIF, including contingency operations, as required by, SEC. 1-12-109(a)(6) of the County Code and Section 62-701.320(7)(e)(1),(2) and 62-701.500 of the FAC. The primary purpose of the Operation Plan is to describe the framework to operate and manage the CG-CIF so that it is operated and maintained in a condition that protects the public health and the environment. All activities at the facility shall be performed in accordance with this plan and 62-701.730 (7) (a) F.A.C.. The plan shall be updated as operations change but no less frequently than upon renewal of the permit. The Department shall be notified of changes to the plan other than those required for routine maintenance.

1.3 Description of Operations

CG-CIF will be operated with its primary focus on waste stream reduction thru recycling, mulching, composting, and disposal of construction and demolition debris to the appropriate approved areas located at the facility in an environmentally sound manner. CG-CIF's operation will keep recyclables and C&D materials out of the waste stream which uses valuable and diminishing the Class I landfill space. CG-CIF's recycling efforts will continue to help the area's governmental bodies reach and expand their recycling goals.

Only Class I materials which meet the Florida Department of Environmental Protection (FDEP) criteria for approved landfill material will be disposed of at this location. The CG-CIF will not accept processed or ground unidentified material from MRF's unless previous authorization from the South District Branch Office of the FDEP. CG-CIF will only accept clean Class I material all other materials will be refused access to the CG-CIF or it will be directed to approved areas on site or properly disposed of at another FDEP approved facility location.

The facility's operating hours will be from 6:00A.M. to 6:00P.M. Monday thru Friday and 6:00A.M. to 5:00P.M. Saturday. Customers entering the facility will be directed to the facility's check in office for their debris.

1.4 Monitoring of Waste

Upon entering the site, all landfill users entering the disposal area will be required to stop at the weigh station. The scale master will record the weight and type of waste for each waste load brought to the landfill. All waste loads will be visually inspected for hazardous or other unauthorized wastes in accordance with the waste inspection plan. A load-checking program will be used at the landfill to detect and discourage attempts to dispose of unauthorized wastes at the landfill.

The load will receive a preliminary inspection with a closed circuit camera, mounted at a height which allows the gate attendant to view the load from above. If the attendant deems it necessary, he or she can view the load from a raised platform. Upon initial inspection, the driver will then sign the load ticket and proceed past the check in office and receive a line-of-sight inspection. The load can be deemed unacceptable at any point during the inspection process.

The driver will be directed to the proper staging area of the facility for unloading. Each driver will be met by a CG-CIF spotter. The spotter will check the load for a second inspection before the load hits the ground and guide the truck to the specific unloading area. When unloaded, the materials will be checked for compliance and recyclables. Any unauthorized non-hazardous materials will either be returned to the customer for proper disposal or CG-CIF will dispose of them per FDEP regulations.

On a random basis, a minimum of three (3) loads per week will be selected for inspection from the incoming loads. These loads will be selected by the facility Site Supervisor or his designee. Once a load has been selected, it will be temporarily isolated from all other incoming loads until the inspection has been completed.

The following procedures shall be followed when inspecting the load.

I. The load will be "broken apart" by both the spotter and equipment operator to allow for a thorough inspection.

II. The inspectors will be looking for any unauthorized waste contained in the load.

III. If the load contains any unauthorized materials, they shall immediately be reloaded onto the customer's vehicle for removal from the site. In the event that the transporter will not

remove the unacceptable materials, the materials will be loaded into an appropriate container and removed from the site. The customer / generator will be contacted and notified of the site policies as well as charged for the off-site disposal service.

In all cases, if unacceptable wastes are found during the inspection, the customer will be notified to provide immediate feedback to prevent future occurrences.

All inspections shall be documented on the site's "Waste Load Checking Program Inspection Log," signed by the inspector, and kept in a current log book.. Log books will be maintained at the facility for at least three (3) years. Inspections shall be performed by trained site personnel.

Loads that are beneficially recyclable will be met by CG-CIF's recycling team, which will sort the load for recyclables. To the extent feasible, Recyclable materials are separated and stored for shipment. These recyclables includes items such as non-treated lumber, aluminum, copper, steel, and reusable building items such as sinks, doors, bricks and lengths of lumber. Once the separation of recycled material is completed by the recycling team, an experienced compactor operator will compact the remaining debris into the disposal cell and grade it in accordance with CG-CIF's operation and closure plan. CG-CIF utilizes 70,000 pound steel wheel compacting machines to achieve maximum capacity and stability.

A trained operator shall be on duty at the facility at all times that the facility is operating. A sufficient number of spotters shall be on duty at the working face to inspect the incoming waste at all times waste is being accepted at the site. Waste shall be inspected after it is removed from the transport vehicle and prior to placement for final disposal. All of CG-CIF's on site staff, including the gate attendants, spotters and equipment operators, will receive FDEP required spotter training. This will ensure that all loads are viewed many times for compliance and that CG-CIF's staff knows how to react to unauthorized materials.

SECTION 2

LANDFILL PERSONNEL AND FACILITIES

2.1 Personnel Requirements

2.1.1 Numbers and Types

The position and number of personnel anticipated to be employed for each position are presented in Table 1. CG-CIF will have at least one trained operator at the landfill during active operations and at least one trained spotter at each working face. The operator and the spotter may be the same person. The staffing levels presented in Table 1 provide for absences due to vacation, illness, holidays, or other reasons. Peak solid waste receipt periods, or other emergency conditions may require additional personnel and/or staff working overtime. These staffing levels are based on the assumption that work activities will generally take place 12 hours per day, 5 days per week and an 11 hour day on Saturday.

If the daily volume at the landfill increases enough to require additional equipment, the staff will be increased as required to supply the personnel to operate and maintain the additional equipment. The minimum crew required to operate the landfill for receipt of waste is also presented in Table 1. In addition to the permanent staff, casual labor may be hired for area clean-up, ground maintenance, and other intermittent activities as required.

2.1.2 Employee Training

Employees of the landfill will receive initial training courses, approved by the Florida Department of Protection (FDEP), and on-the-job training in the safe and environmentally secure operation of the landfill. The various phases of training will be conducted by a trained landfill operator, spotter, senior equipment operator or a qualified independent third party, and will include written documentation of instruction activities. The requirements of the training program will also be documented in writing. Every employee will also receive the appropriate continuing education training every three years. CG-CIF will maintain training records for current employees at the facility. Examples of subjects to be covered in the employee training program include the following:

- Overview of the Operation Plan.
- Review of permits and regulations for operators and other key personnel.
- General landfill safety procedures pertaining to work around solid waste, landfill gases, and leachate.
- Instruction in the operation and maintenance of equipment, machinery, and systems which the employee must operate, service, or monitor during his/her daily job duties.

- Instruction in emergency response procedures for landfill fires or explosions, leachate pumping system failure or leaks, or other emergency situations.

- Instruction in emergency shutdown procedures.

- Appropriate procedures for spotters and equipment operators, scale masters and other key personnel including recognition of hazardous wastes and reporting procedures for discovery of unauthorized wastes.

A list and schedule of those classes offered to the public, which may be attended by CG-CIF operators and spotters, will be presented at a later date, as Appendix A.

2.2 Landfill Entrance Procedures

2.2.1 Hours and Days of Operation

The landfill may be open to accept and dispose of solid waste from dawn to dusk, or hours as noted below, whichever is greater. Typical landfill hours for acceptance of waste are:

Monday through Friday: 6:00am to 6:00pm
Saturday: 6:00am to 5:00pm

Construction, daily cell preparation, hauling/excavating, road building, leachate management, or all non-disposal waste acceptances can be performed both within and outside of the posted operating hours. The actual hours of operation will be posted at the main entrance to the landfill. The landfill may be closed on Sundays and holidays.

2.2.2 Processing Customers

Upon entering the site, all landfill users entering the disposal area will be required to stop at the weigh station. The scale master will record the weight and type of waste for each waste load brought to the landfill. All waste loads will be visually inspected for hazardous or other unauthorized wastes in accordance with the waste inspection plan, which is presented in Appendix B. A load-checking program will be used at the landfill to detect and discourage attempts to dispose of unauthorized wastes at the landfill. The load checking program consists of the following:

- The Landfill Site Manager is to examine at least three random loads each week. The selected waste hauling vehicles are to be directed to discharge their loads at a designated location within the landfill for a detailed inspection of the discharged material for any hazardous waste.

- If any regulated hazardous wastes are identified by the random load inspection or otherwise discovered to be improperly deposited at the landfill, the Landfill Site Manager will promptly notify the FDEP, and, if known, the person responsible for shipping the wastes to the landfill, and the generator of the wastes. The area where the hazardous

wastes are found will be immediately cordoned off from public access and properly removed from the designated location/work face. If the generator or hauler cannot be identified, the Landfill Site Manager will ensure the cleanup, transportation, and disposal of the waste at a permitted hazardous waste management facility.

- A record of information and observations gathered during each random waste load inspection will be maintained. This documentation will include: the date and time of inspection; load weight; names of the hauling firm and driver of the vehicle; vehicle license plate number; source of waste as indicated by the driver; and observations made by the inspector during the detailed inspection. The responsible inspector will sign each waste inspection record. The random waste load inspection documentation will be maintained at the landfill for a period of at least three years.

Vehicles will be directed to the appropriate disposal area by signs or other means. Verbal instructions will be given by facility personnel when necessary. The appropriate area depends on whether the waste is typical municipal solid waste, yard waste, white goods, used tires, or waste that should be placed in a particular location for special handling.

2.2.3 Public Use

Small, private vehicles will be directed to place their load in the appropriate disposal area as directed by the scale master.

2.2.4 Vehicle Inspection

A Plan will be implemented by the Landfill Site Manager to prevent the on-site disposal of unauthorized wastes. A copy of the Waste Inspection Plan prepared for the Class I landfill is presented in Appendix B. This plan will be implemented by the Landfill Site Manager or designee (Inspector) to prevent the on-site disposal of unauthorized wastes.

The Landfill Site Manager or Inspector will be in charge of inspecting waste vehicles arriving at the site. The Inspectors will receive training in unauthorized waste identification and emergency procedures. The training provides the opportunity to improve the Inspectors' knowledge and ability to effectively screen incoming waste.

2.3 Traffic Routing

2.3.1 Access Points/Signs

Access by all vehicles shall be via a single secured site entrance located on the east side of the corner of Neal Road and Chiquita Drive. The entrance will allow for safe and orderly traffic flow into and out of the facility. The site entrance gate will be locked outside of operation hours.

Signs will be posted at the site entrance indicating the name of the facility, name of the operating authority, and hours and days of operation. In addition, a sign which clearly

states "NO HAZARDOUS WASTE ACCEPTED" will be located at the entrance to the landfill. Traffic control and safety requirement signs will be located at and near the entrance to the facility as required.

2.3.2 On-Site Traffic Flow

Once vehicles delivering wastes have been weighed, they will follow directions or signs posted along the haul road(s) to the current active work areas of the landfill. Trucks will then proceed to deposit their loads at the appropriate working face. Signs or the scale master will direct small public vehicles to deposit their loads in the appropriate disposal area.

2.4 On-Site Structures

The site includes the following structures or features:

- Office Building/Ticket Office/ Weigh Station.
- Maintenance Building.
- Composting Area.
- Leachate Storage Area.
- Scales.
- Storage Area.

2.5 Communication Facilities

The following communication facilities will provide for routine communication and for use in emergencies at the site:

- Cellular and/or conventional telephone in the office building.
- On-site two-way radios.

SECTION 3

LANDFILL OPERATIONS

3.1 Basic Landfilling Procedures

This section describes the procedures that constitute the daily landfill operations, the sequence of landfilling operations, working face practices, and control of the first and subsequent lifts. The landfill will be operated in accordance with these procedures and filled in the general sequence as indicated on the Preliminary Drawings sheet C1 thru C8.

3.1.1 Method of Operations

Landfilling areas will generally progress from north to south and from west to east. When a cell is opened, waste lifts will be placed to cover all areas to a depth of 10 feet to reduce leachate generation prior to placement at higher elevations in a cell.

Controlling truck routes and properly spotting loads will facilitate the spreading, compaction, and covering of refuse. During construction of the first lift, trucks will be positioned on a lift of previously compacted waste adjacent to the first lift being placed. In subsequent lifts, unloading at the toe of the working face and pushing uphill may be the preferred method. Lateral confinement or small work faces will be maintained to avoid wasting soil cover material. Temporary barricades or flags may be used as daily width markers for guiding equipment operations and for traffic control.

Vehicles transporting refuse and cover material to the working face will be routed over previously filled areas, whenever possible, for additional compaction of refuse and soil. Vehicles will not be routed over areas of the final cover system unless on a road specifically designed for hauling waste. Disposal vehicles will not be routed over a lined area before a lift of waste has been placed, in order to prevent damage to the liner system.

Signs will also be posted in the operational areas if and when required. These signs will direct traffic, identify buildings, and specify types of material to be deposited in particular areas. Safety signs will also be posted to identify certain safety requirements such as no smoking, speed limits, and stop signs.

The refuse may consist of household and commercial wastes, construction and demolition debris, and other similar materials, as allowed by regulations for Class I landfills. These readily compactable wastes lend themselves to the typical operations described in Section 3.1.2 and 3.1.3.

3.1.2 Working Face Practices

3.1.2.1 Start-Up and First Lift

To assure protection of the landfill liner system, no disposal vehicles will be operated directly on the liner protective cover. Soil platforms or similar protective measures will be placed adjacent to the working face to keep vehicles off the liner protective cover. Landfill personnel will be positioned at the working face for the start-up of each new area to direct vehicles to the unloading points.

The first lift waste on the liner protective cover will be placed with great care, using special methods to protect the liner from damage. The first lift of waste will be a minimum of 4 feet in compacted thickness and will consist of select wastes containing no large rigid objects that may damage the liner or leachate collection system. Equipment will not be allowed on the liner protective cover and equipment will not spread waste in a manner that displaces the liner protective soil cover soil. Landfill personnel will closely monitor the placement, compaction, and covering of the first lift of waste. Landfill personnel will maintain grade control and inspect the filling techniques. Inadvertent damage or suspected damage to the liner system will be reported to the Landfill Site Manager and restored prior to filling in the damaged area.

To protect the liner system, the bulldozer will normally be used as the primary spreading and compacting machine for the first lift. The compactor will only be operated on top of the waste and not on the landfill base or on the waste side slopes. The equipment operators will also make sure that no bulky waste or other material, that could damage the liner system, is placed within the first lift.

3.1.2.2 Subsequent Lifts

After the first lift is properly in place, normal operating procedures will be used for the second lift and all subsequent lifts. Trucks and compactors are permitted to operate on these lifts. Bulky wastes delivered to the facility and any stockpiled bulky wastes received during construction of the first lift will be placed in subsequent lifts. The daily operating procedures including routing of traffic, placement spreading and compaction of refuse, and application of initial and/or intermediate cover will be followed for the subsequent lifts of waste. Soil erosion control and site maintenance tasks will be implemented throughout the development of all lifts. Once the final landfill elevations have been reached over a suitably sized area, final cover will be applied to the landfill during the next construction season and vegetated during the customary planting season.

At the end of each working day, initial cover material (e.g. soil or alternate material) will be applied. A loader and truck or a scraper can be used to load and haul soil from the stockpile area to the working face where it will be temporarily stockpiled or spread directly over the waste. Intermediate cover will be applied on areas that will be exposed for more than 180 days (i.e. outside side slopes and the top of the final lift or portions of

other lifts not soon to be covered by additional refuse.) An alternative to the soil, which is used as initial cover, may consist of foundry sand, foam, a fabric blanket, or other approved material.

Material from on-site stockpile or borrow areas will be used to supply initial and intermediate cover requirements. To conserve soils and landfill space, the initial and intermediate cover will be scraped back immediately before placement of additional solid waste on top of the lift, and then reused as cover material if appropriate, or will be incorporated into the working face. Initial and intermediate cover will be graded to drain away from the active work area.

3.1.3 Filling Procedures

After the first lift, waste materials will be placed in 2 ft thick horizontal layers when possible and compacted to approximately 1 ft thickness or as thin a layer as practical before the next lift is applied.

The refuse cell is the basic building block of a landfill. It is composed of multiple compacted layers of waste and enclosed by cover material (i.e. initial, intermediate and/or final cover). Basic instructions for constructing the refuse cell are outlined below.

3.1.3.1 Width of Working Face

The working face is the portion of the uncompleted cell on which additional waste is spread and compacted. To maintain sanitary operation, the working face will be kept as narrow as possible. By keeping the working face narrow, equipment movement, cover material requirements, and the area of exposed waste is minimized. In order to facilitate proper unloading and waste placement operations, two working faces may be required from time to time.

The optimal daily working face width will vary depending on the number of vehicles bringing waste to the site. The working face will be wide enough to prevent a large backlog of trucks. It is expected that a working face 150 to 200 ft in width will be sufficient for operation of the Class I landfill.

3.1.3.2 Unloading

When unloading waste from top of the refuse cell, the waste will be discharged as close to the edge of the active working face as safe operations permit and pushed down slope. For safety reasons, a minimum 8 to 10 ft separation will be maintained between the refuse trucks and the landfill equipment.

When unloading waste from the bottom of the refuse cell, the waste will be discharged approximately 10 ft from the toe of the working face and pushed up the slope. Truck and landfill equipment separation, as discussed above, will be maintained. In order to prevent loads of waste from being discharged too far away from the toe, refuse trucks can be

backed toward the toe, following a path created by the equipment pushing refuse into the working face.

3.1.3.3 Pushing, Spreading, and Compacting

Proper refuse cell construction involves pushing, spreading, and compacting the waste. These functions will be accomplished with a bulldozer and/or compactor.

Pushing the waste is the action of moving the waste from the discharge location into the working face. This function will be accomplished with a bulldozer and/or compactor.

Spreading of the waste can be done by either a bulldozer or compactor. The purpose of the spreading action is to distribute the waste over the working face in a thin layer (approximately 2 ft thick). High in-place compacted unit weight of the waste is achieved by compacting in thin layers (i.e. 2 ft thick).

Good compaction is achieved by operating the landfill compactor up and down the working face after the refuse has been spread into a thin layer. Proper compaction of the waste will extend landfill life, while reducing litter and vector problems. To maximize compaction of the waste, the working face and inside temporary slopes will not exceed a maximum slope of 3H:1V. The Landfill Site Manager will periodically verify compaction procedures and make corrections as necessary.

3.1.3.4 Daily Clean-Up

The area receiving wastes will be policed daily for loose waste and litter. Such waste, as well as litter along the litter fences, will be removed. The litter may be stored in trash bags until it can be deposited in the landfill.

3.1.4 Cover

3.1.4.1 Stockpiling

Cover soil stockpile locations, if needed, will change throughout the life of the landfill depending on site conditions and the location of the active working face. Landfill equipment will begin pushing or spreading the cover over the active cell area when and where it has reached its limit for the day.

A minimum of a three-week supply of acceptable initial cover will be maintained at the landfill and be available at all times from the excavation of the stormwater pond on site or from the dedicated excavation on Neal Road. All stockpiles will be graded to minimize erosion potential. Silt fences or diversion berms will be utilized to control erosion.

3.1.4.2 Application and Phasing of Covering Materials

A 6 inch thick initial earth cover will be placed on top of all exposed waste on the working face, at the end of each day's operation. Alternative materials and layer thickness may be submitted for FDEP approval. If additional waste is to be deposited on the working face within 18 hours, the initial cover may consist of a temporary cover, such as a tarpaulin, that may be removed prior to the placement of additional waste.

A 12 inch thick intermediate earth cover will be placed over the initial cover within 7 days of completion of an area if no additional solid waste will be deposited within 180 days.

Final cover will be placed over an area of the landfill once it has reached final design elevations. Final cover will be place within 180 days of reaching the final design elevations. The final cover system will be as described in Section 7 of this Operation Plan. Vegetation will be maintained over the final cover areas throughout the life of the landfill and the post closure care period. Maintenance of the final cover swales and access roads will also be performed throughout the life of the landfill and the post closure care period.

3.1.4.3 Rain Cover

Rain cover may be periodically deployed by the operator to shed rain water in order to minimize leachate generation in a new lined cell. The rain cover shall meet the technical specifications. Installation of the rain cover shall follow the manufacturer's instructions. The rain cover will primarily be utilized to cover portions of lined cells that do not have disposed wastes. An earthen berm, or equivalent drainage divide, shall be used to direct waste contact water, or leachate toward the cell sump, and away from the rain cover portion of the cell. Once the Class I waste or unfilled cell is fully covered, the rainwater can be directed to a temporary collection sump and be pumped to a stormwater control structure, upon FDEP notice and approval.

3.2 Equipment

3.2.1 Primary Equipment

Based on the available range of handling capacities and the initial projected waste receipts, the allocation of heavy, primary equipment presented in Table 2 will be sufficient to handle the wastes received at the landfill. The primary functions of heavy landfill equipment are spreading and compacting solid waste, and excavating, hauling, and spreading cover material. Equipment similarities allow different equipment to perform functions as necessary. For example, when a compactor breaks down, a bulldozer can perform the compaction operation.

3.2.2 Back-Up Equipment

The equipment selection guide indicated in Table 2 will be adequate even if one of the pieces of equipment is temporarily out of service. If a piece of equipment is out of service for an extended period or if additional equipment is required on a temporary basis, this

equipment is available for rental from several heavy equipment rental companies list in Table 3.

3.2.3 Support Equipment

In addition to the heavy equipment used for operating and maintaining the landfill, other support equipment may be used to perform work not essential to the operations. This equipment will be present at the site most of the time, but some may be off-site, temporarily out of service, or rented for a specific occasion.

One water storage tank will remain on the site at all times and will be used for dust control and fire protection. The storage tank will be truck mounted on either a tilt frame or roll off container hoist, depending on vehicle availability. The storage tank will normally be positioned close to the working face for fire protection. However, it will also be equipped with spray bars so it can be used for dust control.

A utility tractor will be used to perform site maintenance activities. It will be fitted with attachments for mowing grassed areas. A backhoe or small excavator will assist the small dozer in maintaining drainage courses and ditches and for other site maintenance activities.

Pumps will be used for filling the portable water storage tank. These pumps will also be used to dewater any pond water that forms in low areas around the site, including roads and lined landfill areas not in use. Please refer to the preliminary drawings for pumps/well locations as well as dry fire hydrant locations.

3.2.4 Equipment Care

Routine preventive maintenance will minimize equipment downtime and increase equipment service life.

Preventive maintenance varies with each piece of equipment. Therefore, the operation and maintenance (owner's) manual for each should be consulted. However, three applicable maintenance activities, which will be implemented at the site, are:

- Establish a routine equipment inspection.
- Lubricate according to manufacturer's recommendations.
- Check at least two times daily for hydraulic oil, engine oils, fuel or other liquid leakage.

3.3 Roads

3.3.1 Road Construction

The main access road from the site entrance area to the scale house will be an improved, all-weather road, constructed of either pavement, crushed asphalt, or crushed concrete. The main access road will be paved when warranted by traffic volume. Haul roads will be constructed from the all-access road to the active work area in the landfill. The haul roads will be improved all-weather, surfaced with shell, limerock or recycled concrete and will be paved when warranted by traffic volume. A perimeter maintenance road will provide all-weather access to leachate management systems, groundwater monitoring wells, landfill gas monitoring wells, and stormwater management structures. The perimeter maintenance road will be surfaced with shell, limerock or recycled crushed concrete. In the active work area, the roads will be surface with construction/demolition waste or other acceptable waste.

3.3.2 Maintenance of Roads

3.3.2.1 Filling of Potholes

Potholes will be filled with materials compatible with the road construction material. Potholes will be filled on a routine basis so that they are not allowed to remain open for extended periods. Before placing patches in holes, all loose material will be removed from the hole. New material will then be placed in the hole and compacted so that it will be approximately as dense as the materials originally used in the road.

3.3.2.2 Grading

As unpaved, all weather roads become uneven due to traffic caused rutting or displacement of stone, fresh rock or recycled crushed concrete will be applied to the surface and smoothed to an evenly sloped grade to promote drainage.

3.3.2.3 Restoring Settlement

When all-weather roads are built on fill, areas, settlement of the filled area may cause cracks to appear in a road or cause the slope of a road to change. Cracks will be filled with material that is compatible with the roadbed. Areas of a sloped road, where the slope has changed drastically, will be built up with material compatible with the roadway. The buildup will be made by placing a 6 in. thick layer of the material, compacting, then placing another 6 in. thick layer of material and compacting again. This process will be repeated until the desired elevation is achieved or the road section will be rebuilt.

3.3.2.4 Cleaning of Public Roads

Proper operation of the landfill will result in little or no debris being found on public roads. The private roads adjacent to the facility and the site entrance will be inspected daily. If debris from the wheels of vehicles departing the landfill reaches private Neal Road, that road will be cleaned to a minimum distance of 0.25 miles or as required in both directions, if necessary, form the entry point onto the road. If litter from waste hauling trucks is found on Chicquita or Neal Roads, it will be removed for a minimum distance of 5 miles in both directions from the landfill entrance roadway. Litter cleanup will be performed at least once a week.

3.3.2.5 Removal of Materials from Landfill Roadways

Any significant accumulation of dirt, brush, and other debris will be removed from the landfill roadways. Dirt left on asphalt roadbeds may cause dust problems during dry weather or mud problems during wet weather. A program of road cleaning will be implemented to prevent any buildup. Unpaved roads will be watered as needed to minimize dust.

3.3.2.6 Maintenance of Drainage Swales

Drainage swales along road beds will be kept free of obstructions. During the wet seasons, inspection of all drainage ditches and structures will be made at least once each week, or more frequently as required, and debris removed as required.

3.4 Drainage Features

- Routine Inspections: Inspections procedures are outlined in Section 4.2.3.

- Channels, Pipes, and Inlet Structures: Drainage structures will be cleaned of debris as soon as practical after problems are identified to prevent ponding. When unlined channels silt up, routine cleaning will be performed to restore the original capacity of the channels.

- Repair of Structures: Damaged structures will be permanently repaired during dry weather periods. During rainy periods, temporary repairs may be made to prevent further damage to the structure or erosion of soil.

- Sediment Barriers: Sediment barriers will be visually inspected periodically for damage, and to determine if sediment has accumulated behind them. Sediment will not be allowed to accumulate to a height exceeding half that of the barrier. Barriers will be replaced when visibly damaged. Barrier footings will also be inspected to ensure that drainage is not flowing beneath the barrier unless designed to do so.

3.5 Overview Recycling

Any significant recyclable materials found at the working face of the Class I landfill will be separated from non-recyclables and will be staged nearby in piles or roll-off containers until transported to the recycling area.

Mixed loads containing significant quantities of trees, clean wood, and yard waste brought to the Class I facility for disposal are planned to be segregated at the recycling facility or the Class I working face and moved to the Organic Processing & Recycling Facility for composting following the procedures contained in the "Wood Recycling" section of the Construction and Demolition Recycling procedure.

3.5.1 MSW Single Stream Curbside Collection Recycling

Calusa Green will include recycling/transfer capabilities related to MSW curbside recyclables. Space will be allocated in the recycling area to accept and sort single stream MSW recyclables. Once sorted this material will be transferred to other facilities for further processing or as demand allows may be compacted/bailed or ground on-site prior to transfer to a processing facility.

SECTION 4

ENVIRONMENTAL CONTROLS

This section presents the basic components of the environmental controls at CG-CIF. The major components of this section are the Facility Inspection Plan, Facility Maintenance Plan, and the Facility Monitoring Plan. In this section, a discussion of each of these components is presented, including a discussion of groundwater and surface-water protection controls, leachate collection system (LCS), and surface water controls, where appropriate. The discussion also includes general facility controls, including initial, intermediate and final cover, and access roads.

4.1 Environmental Control Systems

The purpose and function of each of the major environmental control systems are described below. Specific construction and design details are presented in the construction documents and the design report with attached plans.

4.1.1 Leachate Containment and Control

The Class I landfill will be equipped with a composite liner system, which directs liquid entering the landfill that may have contacted refuse to an LCS. The LCS drains liquid collected on the primary liner into a sump. Leachate in the sump is pumped into an on-site storage facility and trucked to a wastewater treatment plant (WWTP) periodically for appropriate treatment. Quantities of leachate collect by the LCS will be recorded in gallons per day and maintained as part of the landfill operating record. The facility will have a Contingency plan to properly handle leachate, if collection or disposal problems are encountered.

A recording rain gauge will be installed, operated, and maintained to record precipitation at the landfill. Precipitation records will be maintained as part of the landfill operating record and used to compare with leachate generations rates.

4.1.2 Surface Water Controls

The surface-water management system for CG-CIF will consist of a system of drainage swales to move stormwater to either permanent dry retention basins or interim dry retention basins, depending on the stage of landfill construction. All dry retention basins will be surrounded by an earth berm designed to contain all runoff on-site from a 100-year storm event. Where runoff must pass through a roadway, appropriately sized culverts will be installed.

4.2 Facility Inspection Plan

4.2.1 Leachate Collection System (LCS)

The LCS will be water pressure cleaned or inspected using a video camera after construction but prior to placement of any waste. The pump(s) will be tested in the sump to assure that they system operates properly. Deficiencies will be repaired prior to initial deposition of waste. Existing LCS will be water pressure cleaned, or video inspected at the time of FDEP permit renewal.

The LCS will include manholes, pumps, a leachate wet well and a force main. The LCS pumps will be removed and inspected every 2 years. This 2 year inspection will consist of pressure testing of the pump. Pumps located in active areas, or areas without final cover, will be inspected on a monthly basis to confirm normal operation. Additional inspection, preventative maintenance, and checking of the electrical components will be performed in a manner and frequency in accordance with manufacturer's recommendations. The leachate transmission manholes will be inspected weekly for accumulation of leachate in the manhole and to verify integrity of the force main.

4.2.2 Leachate Storage Facility

The exposed exterior of the polyethylene leachate storage containers or steel tanks and secondary containment will be inspected weekly for leaks, deterioration, and maintenance deficiencies. The overfill prevention controls will also be inspected weekly to ensure it is in good working order.

If inspection reveals a storage container or equipment deficiency, leak, or any other deficiency that could result in failure of the storage system to contain the leachate, remedial measures will be taken immediately to eliminate the leak or correct the deficiency. Accumulated rainwater in the tank containment area will be removed and properly disposed of when 10% of the of the storage area capacity is reached within 24 hours. Inspection reports will be maintained and made available to FDEP upon request for the lifetime of the leachate storage facility. The interior of the tanks will be inspected when drained, or at a minimum of every 3 years.

4.2.3 Surface Water Control System

Surface-water culverts may contain landfill gas. Prior to accessing piping, protective measures will be take to avoid explosion(s), fire(s), and asphyxiation(s).

Drainage swales, inlets, structures, and the surface-water management areas will be visually inspected monthly or following storm events. The frequency of dry inspections may be modified as appropriate based on progressive experience with the landfill drainage system, however, in no case will inspections be less frequent than quarterly. Regardless of the inspection frequency, the system will be inspected following each 25-year storm event or greater storm event.

Drainage swales, inlets, and structures will be cleared of obstructing debris as soon as practical after a problem is identified. If channels become filled with an accumulation of debris or soil, cleaning may be required to restore original flow capacity.

4.2.4 Landfill Cover System

Areas that have received intermediate or final cover will be visually inspected periodically for signs of erosion, cracks and depressions due to settlement, and leachate seeps. Areas where waste or geosynthetics have been exposed by erosion will be filled and regraded to minimize any subsequent erosion. Significant depressions (1 ft or more) will be filled with soil, compacted, and regraded to promote positive drainage. If leachate seeps appear in the uncapped area of the landfill, the seep area will be excavated and backfilled with highly permeable material to promote infiltration through the landfill. The intermediate cover will be reworked to seal the area.

4.2.5 Facility Inspection Schedule

Weekly	Exterior of HDPE leachate storage containers and overfill control equipment
Monthly (Visual)	Leachate collection pumps Surface-water management system Cover in completed areas Leachate force main
Quarterly	Surface-water control system (or after a 25-year, 24-hour storm event)
Annually	Surface-water control system pipes and structures Topographic survey of landfill
Bi-Annually (Every 2 years)	LCS pumps and pipelines Leachate collection and detection flow meters, valves, and risers

4.3 Facility Maintenance Plan

In conjunction with the inspection plan, a regular schedule of maintenance will be prepared and implemented. This section refers specifically to the maintenance of the environmental controls installed at the landfill. It does not include the regularly scheduled maintenance of landfill roads or equipment such as vehicles, scales, or buildings. Maintenance requirements in this section refer primarily to the mechanical equipment associated with environmental controls. In addition, each piece of equipment will be inspected and maintained in accordance with all manufactures' recommendation.

4.3.1 Leachate Collection System

The electrical controls, pumps, flow meters, valves, and couplings will be maintained on at least a bi-annual basis (i.e. every two years). In addition, parts that tend to wear out on a regular basis, including bearings on pumps, seals, and gaskets, will be replaced during regular maintenance. After replacing maintained parts, the equipment will be tested to assure proper performance.

4.3.2 Surface-Water Control System

The surface-water control system does not include mechanical systems that require regular maintenance; however, the system is to be inspected on a monthly basis or following storm events. The swales, drainage structures, inlets, and pipelines will be repaired and maintained as soon as practical following identification of any damage or deficiencies. This includes repair of lined and unlined ditches in the active landfilling areas, on intermediate and final cover and diversion ditches around the landfill.

4.3.3 Final Cover Maintenance

Maintenance of the final cover includes all the components of the cap which includes the geomembrane, drainage geocomposite, protective soil layer, and vegetation. The periodic inspections will help in assessing the final cover condition to verify the integrity of the cap (i.e. check for cracking of protective cover layer due to differential settlement or erosion and exposure of cover geomembrane/geocomposite), and the condition of the vegetation.

Areas of ponding or substantial differential settlement (1 ft or more) will be checked to determine the cause. If a significant problem with the cover, vegetation, perimeter berms, erosion, or drainage structures is identified, work orders will be issued to correct the problems. Repair work should be initiated as quickly as possible.

The timing of the repairs will be dependent on the nature of the repair. Minor filling to eliminate ponding, and the reseeding and fertilizing of disturbed or problem areas will be accomplished with little delay. Major repairs, such as extreme erosion, significant local instability of slopes, or substantial settlement, might require geotechnical evaluation and design prior to implementing final repairs. In some cases, the need for analysis and design of the severely damaged areas will delay repair activities.

If repairs are necessary to the cover system swales, inlets, or downdrains to correct the runoff containment system deficiencies, the repairs will be undertaken prior to start of the wet weather season.

Repair of damages to the cover system resulting from erosion and differential settlement may include locally removing geosynthetics and backfilling depressions beneath the geomembrane, repairing geosynthetics, backfilling soil layers, and re-vegetating disturbed areas. Additional drainage facilities may be provided to prevent future erosion.

4.4 Landfill Active Area Controls

4.4.1 Litter Control

Maintaining proper litter control is essential to the operation of a landfill. When working in areas below natural grade, litter is less likely to escape than when working above natural grade. Litter control procedures for the landfill are discussed below.

4.4.1.1 Prevention of Litter on the Working Face

Litter will be minimized as follows:

- Following proper techniques at the working face may prevent a considerable amount of potential litter by reducing the amount of refuse exposed to the wind. Where possible, the exposed face of the cell will be oriented into the wind. This will cause the wind to blow any loose litter back into the working face and help keep waste away from the undercarriages of unloading vehicles, which may track the waste along the public roadway as they exit the facility. The compacted waste already on the face helps trap litter.

- When top discharging, refuse will be placed as usual and spread downward. When possible, the exposed face of the fill will be oriented away from the wind for the same reasons bottom discharging is oriented into the wind.

- Compacted waste will be covered as soon as practical to minimize blowing litter.

4.4.1.2 Control of Litter with Litter Fences

Litter that escapes from the working face of the fill area may be controlled by litter fences. Movable/permanent fences may be positioned near the working face as wind and fill operations change. Permanent litter fences may also be placed around the perimeter of the fill areas for additional litter control.

4.4.2 Buffer Maintenance

Litter may occur even with proper litter controls. The following clean-up and maintenance procedures will be followed on a routine basis to maintain the buffer areas:

- Litter clean-up from along fences and buffer vegetation: Litter will be removed from and along litter fences and vegetation as necessary. Litter will not be allowed to accumulate in buffer vegetation.

- Clean-up along on-site roads and buffer areas: Litter occurring along on-site roads and in buffers will not be allowed to accumulate. This litter will be cleaned up as necessary.

- Clean-up at entrance area and entrance road: The site entrance and the road leading to the entrance (1/4 mile each direction) will be inspected daily. These locations will be cleared of litter as necessary.

- Vegetation will be maintained and supplemented as necessary in order to provide an adequate visual screen.

4.4.3 Dust Control

Air Quality and Dust Emissions

"The Clean Air Act requires EPA to set National Ambient Air Quality Standards for pollutants considered harmful to public health and the environment. The Clean Air Act establishes two types of national air quality standards. Primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings."(www.epa.gov/ebtpages/airairquality.html)

Air particles (dust particles) range in size. The size of contaminants and particles are described in microns where one micron is one-millionth of a meter, therefore there is approximately 25,400 microns in one inch. The human eye can see particles as low as 40 microns. The size of some contaminants and particles are indicated in the table below.

Particle	Particle Size (microns)
Ground Limestone	10 - 1000
Clay	0.1 - 50
Combustion-related Carbon Monoxide from motor vehicles, wood burning, open burning, industrial processes	up to 2.5
Typical Atmospheric Dust	0.001 to 30
Pesticides & Herbicides	0.001

Airborne particles

Airborne particles are solids suspended in the air.

Larger particles - larger then 100 μm

- terminal velocities > 0.5 m/s
- fall out quickly
- includes hail, snow, insect debris, room dust, soot aggregates, coarse sand, gravel, and sea spray

Medium-size particles - in the range 1 to 100 μm

- sedimentation velocities greater than 0.2 m/s
- settles out slowly
- includes fine ice crystals, pollen, hair, large bacteria, windblown dust, fly ash, coal dust, silt, fine sand, and small dust

Small particles - less than 1 μm

- falls slowly, take days to years to settle out of a quiet atmosphere. In a turbulent atmosphere they may never settle out
- can be washed out by water or rain
- includes viruses, small bacteria, metallurgical fumes, soot, oil smoke, tobacco smoke, clay, and fumes

Hazardous Dust Particles

Smaller dust particles can be hazardous for humans. In many jurisdictions dust fractions at specified particle sizes in working environments are required to be measured.

Inhalable Dust

Airborne particles which can enter the nose and mouth during normal breathing are particles of 100 microns diameter or less.

Thoracic Dust

Particles that will pass through the nose and throat, reaching the lungs are of 10 microns in diameter and less. Referred to as PM10 in the USA.

Respirable Dust

Particles that will penetrate into the gas exchange region of the lungs. A hazardous particulate size less than 5 microns. Particle sizes of 2.5 micron (PM2.5) are often used in USA.

http://www.epa.gov/ebtpages/airairquality.html

Dust Impact

According to Charlotte County Airport Authority the prevailing winds are from the west and southwest with speeds ranging from 3 to 9 knots (3.5 to 10.4 mph). This information was also confirmed by the following website:

http://www.sailflow.com/windandwhere.iws?regionID=114&regionProductID=30&timeoffset=0

The proposed development will have a slight impact on air quality from dust in the area surrounding the excavation and haul road up to an approximate half mile. To address this impact, the entrance into the site will be paved with pervious pavement and the haul route around the disposal cells will consist of shell and or crushed concrete.

During the dry season the exposed surface layer of earth allows medium to large size particles to be released into the atmosphere which can be carried by wind to other areas at a rate of 0.2 m/s to 0.5 m/s. To reduce dust emissions the contractor will take extra measures by watering and grading the haul road within the limits of the proposed development to prevent a nuisance.

4.4.4 Vector Control

Vectors, birds, and insects will be minimized. Maintaining the working face as narrow as possible providing initial cover on exposed areas, and eliminating ponding water are the primary safeguards against vector and insect problems. Well-compacted wastes and cover material effectively prevent vectors emerging from or burrowing into wastes. These controls also deter foraging by birds.

The operator at Calusa Green shall take adequate steps to control or prevent the propagation, harborage or attraction of flies, rodents or other vectors and to minimize bird problems.

Objectives

Identify the basic regulatory requirements for:

- Birds

- Rodents
- Flies
- Stinging Insects/Bees
- Mosquitoes
- Coyotes, feral cats, and feral hogs
- Raccoons and possums, and other critters at landfills

Bird Deterrents

- Prompt placement of cover is an important part of bird control, but not the only part
- Additional deterrents will be implemented as necessary in order to rid landfill of birds. These deterrents take many form including:
    - Noisemakers
    - Bird distress sounds
    - Reflective tape
    - Decoys, typically designed to look like an owl or other bird of prey

Rodent Control

- Good cover/ADC can eliminate food sources
- Good housekeeping practices such as organized recyclables storage and frequent removal
- Exclusion from buildings and shelters
- Rodenticides
- Traps

Fly Control

- Frequent pushing, compacting and covering
- Insecticides
- Insecticide-free traps
- Pheromone traps

- Plain sticky traps

Stinging Inspect Control

- Limited storage times for recyclables
- Removal of their nests
- Insecticides
- Professional pest control services

Mosquito Control

- Stack waste tires horizontally to minimize precipitation accumulating inside the tires
- Ensure good drainage throughout site
- Pesticides
- Biological controls such as mosquito fish, invertebrate predators, parasites, and diseases to control mosquito larvae

Controlling Coyotes, Feral Cats and Hogs

- Site fencing including hog wire (exclusion)
- Good compacted earthen cover or ADC's that they can't crawl under or rip through, such as weighted tarps, or coarse C&D may work best
- Noisemaking devices
- Repellants
- Trapping and relocation

Raccoons, Possums and other critters

- Control by eliminating food source with good cover/ADC and trapping

Inspection Report Preparation

- On the inspection report, state the standard requirements, evidence observed or vector indicators, describe the location and extent of the bird or vector problem.
- Photos for documentation
- Proposed remedy to observed vector problem

If problems with vectors, birds or insects occur, monitoring and surveys for vectors will be conducted to verify the effectiveness or identify and implement improved vector control practices. Application of insecticides/pesticides will be performed by certified technicians as required.

4.4.5 Noise Control

All equipment powered by internal combustion engines will have mufflers installed and maintained in good repair. Screening berms will also be used, when possible, to deflect sound inward and upward.

4.4.6 Odor And Gas Control

The facility shall be operated to control objectionable odors in accordance with Rule 62-296.320(2), F.A.C. Should any objectionable odors occur from decaying debris, the debris will be treated with "odor seal" as manufactured by Firefreeze Worldwide, Inc. or Odor Ban, manufactured by Clean Control Corp., or an equivalent. Persistent odors will be treated with the odor control products and covered with 4" to 6" of clean fill.

If an off-site objectionable odor occurs, CG-CIF will re-evaluate its disposal method. Additional treatment of "odor seal" shall be applied as needed to remedy the situation. After being notified by the FDEP or the County that objectionable odors have been confirmed beyond the landfill property, the facility will immediately implement and Odor Remediation Plan that may include applications of additional cover or reduced size of working face.

The plan shall describe the nature and extent of the problem and the proposed remedy. The remedy shall be initiated within 30 days of approval, in compliance with the Odor Remediation Plan pursuant to F.A.C, Rule 62-701.530(3)9(b).

The CG-C1F will have a gas management system designed to prevent combustible conditions, offsite odors, or lateral migration of gases, or damage to vegetation. An active landfill gas collection and control system will be in place to collect gas from closed areas of the landfill. Intermediate covered areas of the landfill may also be added to the active gas system. Flaring, and/or power generation will be used as a method of gas control.

A routine quarterly gas monitoring program will monitor combustible and odorous gas levels at ambient and soil monitoring probe locations surrounding the landfill. If results of the gas monitoring show that combustible gas levels exceed FDEP limits, or odor thresholds, a Gas Remediation Plan will be immediately implemented and remedied within 60 days of detection.

4.4.7 Recordkeeping

An operating record will be maintained at the site including all records, reports, analytical results, demonstrations and notifications; any construction, operation, and closure permits, including all modifications to those permits, issued by the FDEP, along with the engineering drawings and supporting information; as well as training verifications. This record will be kept with the operation plan at or near the landfill facility, or in an alternate location designated in the operating permit which is readily accessible to landfill operators. The operating record will be available for inspection at reasonable times by the FDEP and maintained for the design period of the landfill.

As part of the operating record, waste records will be maintained. These waste records will indicate the amount of each type of solid waste received each day. Waste reports, summarizing the waste records will be compiled monthly and copies will be provided to FDEP quarterly. The waste records will be kept with the operation plan at the landfill and will be available for inspection at reasonable times by the FDEP. These records will be kept for the design period of the landfill.

The operation record will also include the information and observations resulting from each random inspection of a waste load conducted as part of the load checking program as described previously in Section 2.2.2.

The operating record will also include:

- The quantities of leachate collected by the primary leachate collection and removal system, and the secondary leachate detection and removal system, in gallons per day.
- A record of the daily precipitation at the landfill based on the rain gauge installed, operated and maintained at the landfill.

This data will be used to calculate the monthly leachate generation rates expressed as a percentage of the monthly precipitation.

In addition, the operating record will also include the following:

- Records of all information used to develop or support the permit applications and any supplemental information required.
- Records of all monthly information, including calibration and maintenance records, and water quality records.
- An annual estimate of the remaining life and capacity in cubic yards of the existing, constructed landfill and remaining life and capacity of other permitted areas not yet constructed. This estimate will be reported annually to FDEP.

The operating records will be maintained at the landfill throughout the design life of the landfill. Records that are more than five years old which are required to be retained may be archived, provided that the landfill operator can retrieve them for inspection within seven days.

SECTION 5

EMERGENCY CONTINGENCY PLAN

5.1 Introduction

This section identifies a set of unplanned circumstances that may occur at the landfill. If handled correctly, the damage or impacts from these problems can be minimized. This section presents procedures to follow for dealing with problems as they occur. Operating personnel will become familiar with the procedures in order to prevent environmental contamination or damage to landfill facilities.

The entrance to the facility allows emergency vehicles immediate access to the landfill by police, fire, and ambulance.

Appendix C presents a list of individuals and emergency response agencies to contact. This list will be posted near all telephones on-site to provide "ready" access to emergency response agencies.

This plan is organized by subsection and contains specific plans to address each type of occurrence listed below:

- Fire.
- Accident or injury.
- Release of contamination to environment.
- Hazardous waste.
- Uncooperative customers.
- Inclement weather.
- Problems with the leachate collection and removal systems.

5.2 Fire Control Plan

5.2.1 When Fire Occurs

The following procedures will be followed in the event of a fire at the facility:

- Extinguish small fires with fire extinguisher or smother with soil – do not remain near large fires or explosive materials.
- Determine location, extent, type, and, if possible, cause of fire or explosion.
- Notify on-site personnel and implement safety and fire control procedures.
- Notify Landfill Site Manager if the fire cannot be immediately controlled.

- Notify fire department, if necessary, with the following information:

1. Location of landfill.
2. Location of fire or explosion in landfill.
3. Extent of fire or explosion.
4. Type of fire or explosion.
5. Actions now being taken.
6. Injuries.

- Notify rescue squad, if necessary.
- Notify health care facility, if necessary.
- Notify sheriff, if necessary.

5.2.2 "Hot Load" Procedures

In the unlikely event that a "hot load" is not identified before entrance into the facility, the following procedures will be implemented:

- The truck carrying the "hot load" will be directed to discharge the load in the landfill but away from the working face and any exposed liner.
- The load will be placed on top of intermediate cover which will provide sufficient protection between the "hot load" and the underlying waste.
- Soil will be spread over the load to smother the "hot load"
- The "hot load" will be monitored until there is no evidence of smoldering or high temperatures.

At the end of the day or when appropriate, the load will be worked into the active working face. Areas where "hot loads' are extinguished may vary depending on the location of the working face, but will always be away from the working face and any exposed liner.

5.2.3 Fire Extinguishers and First Aid Kits

Fire extinguishers and first aid kits will be installed in the following locations:

- Office Building/Ticket House/Weigh Station.
- Select on-site vehicles and equipment.

5.3 Accident or Injury

5.3.1 When an Injury Occurs

When an injury occurs, the following procedures will be implemented

- Shut down equipment in the immediate vicinity as is appropriate.
- Determine extent of injuries (location, seriousness).
- Apply pressure (compress) on wound to stop severe bleeding.
- If victim is not breathing and has a pulse, administer rescue breathing, if trained.
- If victim has no signs of circulation, administer CPR, if trained.
- DO NOT MOVE VICTIM, unless:
    i. Victim is still in danger, OR
    ii. Victim can move self without great pain.
- Have someone phone rescue squad (911) unless injuries are clearly minor, and provide the following:
    i. Clearly state the location.
    ii. Describe the injuries.
- Stay with and keep victim(s) warm.
- Notify Landfill Site Manager.
- Transport victim(s) to a nearby medical center if:

i. Injury is not serious, but requires medical attention (e.g. broke fingers, minor burns).
ii. Victim(s) can move self without great pain.

- Notify Sheriff, if necessary.

- Apply first aid, as described below:

i. Landfill Employees – Minor accidents, such as bee stings, minor cuts, and small burns may be treated on site by an employee trained to administer first aid.
ii. Customers – First aid treatment will not be given to customers who have minor accidents at the site. However, personal information about the victim and a description of the accident will be obtained. The customer will be instructed to go to his/her doctor for examination and treatment, if required.

5.3.2 Procedures after an Accident

The following procedures will be implemented in the event of an accident.

- Accident Investigation – The Landfill Site Manager will make a complete investigation of the accident and events leading up to the time of the accident. The investigation will be started as soon as possible after the accident. All witnesses to the accident and persons involved in the accident will be interviewed.

- Determined of Cause - After the facts about the accident have been gathered, the Landfill Site Manager will make a determination as to the cause(s) of the accident.

- Filing of Reports – The Landfill Site Manager will complete and file the appropriate accident report forms.

- Corrective Steps – After a thorough investigation and determination of the causes(s) of an accident, the Landfill Site Manager will take corrective steps so that the same type of accident will not recur. These corrective steps may take the form of repair of faulty equipment, installation of safety equipment, or instruction of personnel in safe operating procedures.

- Discussion with Employees – If it is determined that the cause(s) of the accident were related to employee work habits and that remedial safety instructions would be helpful, a meeting with site employees will be held. The accident and the corrective measures that will be taken will be discussed to prevent another accident. All employees will be instructed in proper safety procedures which should be followed.

- Follow-up – The Landfill Site Manager will follow-up the corrective measures to make certain that proper safety precautions are being taken. All unsafe practices will be called to the attention of the employees.

5.4 Release of Contamination to Environment (Remedial Response)

5.4.1 Response

If contamination is released to the environment, the following procedures will be implemented or comparable procedures as required by federal, state and local laws and regulations:

- Determine location, extent, type, and, if possible, cause or release (e.g. leachate, contaminated surface water, fuel spill, etc.).

- Notify Landfill Site Manager and implement safety and emergency response procedures.

- Notify fire department, and clearly provide the following information:

  i. Location of landfill.
  ii. Location of contaminant release.
  iii. Extent of release.
  iv. Type of release.
  v. Actions now being taken.

- Notify proper authorities including the Florida "Hot Line"

A list of individuals and emergency response agencies to contact in the event of a release of contamination to the environment is provided in Appendix B.

5.4.2 Follow-Up

Unless the occurrence of a contaminant release is clearly due to very unusual circumstances, the Landfill Site Manager will take corrective action to prevent recurrence of the release. The corrective action will be submitted to FDEP for approval.

A report will be filed at the landfill by the Landfill Site Manager in order to have further reference for inquiries by authorities or CG-CIF personnel. The report will state:

- Time/Date of incident or its discovery.
- Type of release and effects.
- Source.
- Response and effectiveness.
- Agencies contacted.
- Corrective action planned and scheduled.

5.5 Hazardous or Other Unauthorized Materials

In the event that a substance known to be or suspected of being hazardous is dumped from any vehicle at the waste disposal facility, the actions described below will be taken immediately.

5.5.1 The Observer

The Observer will take the following actions:

- Immediately report the incident to the Landfill Site Manager or their designee.
- Avoid exposure to the substance in question. Stay upwind.

- Observe where the material was dumped, by whom (which vehicle), how much was dumped, whether the container appears sound or is leaking, and what the substance looked and smelled like. Such observations will only be made with extreme caution and with the utmost regard for safety. DO NOT SNIFF OR TOUCH THE SUBSTANCE.

- Ask the individual who dumped the suspect load where the material was obtained.

- Isolate the approximate area of the suspected load before it is covered or mixed with wastes from other vehicles.

- Ask the driver of the vehicle to remain at the dumping point to ensure adequate vehicle identification. If the driver attempts to leave the discharge point, the observer should inform the Scale master and/or the Landfill Site Manager.

5.5.2 Landfill Site Manager

The Landfill Site Manager will take the following actions:

- Notify the FDEP.

- Record all pertinent facts regarding vehicle, including but not limited to: name of carting company, licensing plate number, where the load was obtained (if known), any visible evidence identifying the waste substance, and quantity and state of the substance (e.g. solid or liquid or if contained or loose).

- Maintain careful records of other costs incurred as a result of the dumping incident including, but not limited to, security costs in isolating the area, costs of removal (by contract or otherwise) of the suspect material, other costs of intermediate or ultimate treatment and/or disposal, and any other pertinent costs.

- Coordinate the removal of the unacceptable waste with the proper authorities.

5.5.3 Non-Discharged Load

If, before a waste load can be discharged (e.g. during inspection), it is discovered to contain, or is suspected of containing hazardous or other unauthorized materials, the same reporting procedures by the Observer and Landfill Site Manager described for the discharged loads still apply, except concerning the discharge itself. In addition:

- Inform the driver that his load is unacceptable and why.

- Do not permit the load to be discharged.

- The scale master will have a list of approved FDEP sites where the driver may take his unauthorized material.

5.6 Uncooperative Customers

The following actions will be implemented if a customer will not obey site rules or cooperate with site personnel.

- If the customer is creating a substantial problem involving their or other's safety, or significantly interfering with disposal operations, the Landfill Site Manager will decide what action should be taken.

- If the customer is creating a minor nuisance and does not respond to polite suggestions, the employee will record the vehicle description and license number, and report the incident to the Landfill Site Manager or home office management.

- In a case where a customer causes or threatens to cause harm to landfill property or personnel, or otherwise interferes with safe operation of the landfill, the Landfill Site Manager will contact the Sheriff.

5.7 Inclement Weather

5.7.1 Operation in Wet Weather

Problem	Solution
1.) Saturated Unloading Area	1.) Stockpile well-drained soil and apply as necessary
	2.) Keep compactors off area; use dozers on unloading area. Unload and push refuses perpendicular to the area.

	3.) Grade unloading area slightly to permit runoff.
2.) Mud Carried onto Access/ Public Roads Cover is Wet/Unworkable	1.) Carefully scrape mud from pavement. 2.) Provide clean rock dressing to internal access roads. If internal access roads are properly maintained, then dirt on the tires of disposal vehicles will be thrown off prior to reaching public access roads.
3.) Use Alternate cover approved by permit	1.) Maintain compacted, sloped stockpiles. 2.) Use alternate cover approved by permit

5.7.2 Preparation for Inclement Weather

The following preparations will be made for inclement weather:

- Wet weather areas will be prepared during periods of dry soil conditions. The wet weather area will be constructed close to an all weather road. Work on the wet weather area will be performed at various times when personnel and equipment are not required for other higher priority assignments.

- Access roads around the site will be maintained as necessary. These roads will be maintained as necessary. These roads will be maintained in a serviceable condition with the use of the available equipment on site, such as grader, water truck, dozer and loader. Major repairs will be scheduled, if required.

- Drainage structures, ditches, and sediment control will be checked to ensure they are in good repair and free of significant debris prior to anticipated heavy rains.

- Temporary (Operations Area) Drainage Control – cover material, rock/sand, and corrugated metal pipe, will be stockpiled for use in an emergency situation.

- When periods of high wind are predicted, litter fencing will be moved to close proximity of the working face and in the expected downwind direction. Cover may be required frequently during the day.

5.8 Problem Affecting the Leachate Collection and Removal Systems

5.8.1 Interruption of Power Service to the Landfill

The ability to switch over to the secondary power supply allows the leachate collection and removal systems to continue operating with virtually no interruption. In the event that the main power service to the landfill is interrupted for more than 24 hours, the site will be switched over to the secondary power supply system consisting of diesel generators.

5.8.2 Interruption of Flow to Leachate Storage Facility

In the event that leachate flow to the leachate storage facility is temporarily interrupted, the leachate will be stored in the active cell(s). If the system cannot be restored within a reasonably acceptable period, leachate will be pumped directly from the sump to tanker trucks for off-site treatment.

5.8.3 Primary Leachate Sump Alarm Level Switch

An alarm level switch will be installed in the primary leachate sumps to notify the operator in the event that leachate levels in the sumps reach this level. The intent of the alarm is to notify the operator of a potential problem with the leachate pumps or piping. The alarm may indicate that either one or possibly both of the primary leachate pumps may have stopped working, the pumping capacity of both pumps has been exceeded, the storage containers are full, or there is possible blockage in the leachate transmission line. The operator shall observe the leachate pumps, pump control panels and flow meter to determine if either or both of the pumps are working. If at least one of the pumps is operational and there is no blockage in the leachate transmission line the operator will open the gate valve located in the secondary leachate manhole. By opening this valve leachate from the adjacent primary sump may flow into the secondary leachate sump for pumping. The operator shall record the flow meter reading on the secondary leachate sump pump prior to opening the gate valve. The operator shall also record the date and time of the occurrence and reason why the valve was opened (i.e. primary pumps failed, excessive leachate flow, etc.). The operator shall monitor the pumping of leachate to determine if the high leachate levels were associated with pumps. The operator shall also examine the leachate transmission line manholes, piping and storage tanks assess any other potential problem. The leachate transmission line manholes, piping and storage tanks assess any other potential problem. The leachate pumping system will require troubleshooting to determine the cause of the leachate build-up in the primary sumps and malfunctioning/inoperable pumps shall be replaced or repaired as soon as practical.

5.8.4 Managing Hazardous Leachate

In the event the leachate quality monitoring indicates the leachate is a hazardous material, the leachate will be managed in accordance with Chapter 62-730 of the FAC and applicable federal laws.

SECTION 6

SAFETY PLAN

6.1 Emergency Procedures

- Posting of Procedures – All emergency procedures (Emergency Contingency Plan – Section 5 of this Operation Plan) will be updated as appropriate and after each emergency, if required. All emergency procedures will be posted in the Landfill Site Manager's office, in conspicuous places at the site, and at the gate house.

  The name, location, and telephone number of the nearest doctors, medical treatment facilities, and ambulance services (contained in Appendix B of this plan) will be posted in the Landfill Site Manager's office and all occupied buildings (i.e. maintenance building, gate house, and office).

- Instructions on Procedures – All new personnel will be instructed on the emergency procedures used at the landfill. All employees will be informed of any changes in emergency procedures.

- Responsibility of Employee – It is the responsibility of every employee to know and remember their role in each emergency procedure at the site.

6.2 General Safety Practices

- Knowledge of Procedures - All employees at the landfill will know the proper procedures for reporting accidents, injuries, and fires.

- Posting of Information – Roadway limits within the landfill footprint will be clearly posted as necessary. Site speed limits will be clearly posted on the main access road. Direction of travel and location of curves will also be posted. The location of disposal areas will be clearly indicated.

- Site User Rulers – Site user rules will be posted at the entrance to the landfill. Employees will watch for violations. Employees will explain rules to violators, stressing that the rules are for their protection. As a last resort, the Landfill Site Manager will notify the County Sheriff's Office for further action.

- Discharging Loads – For safe operations, the discharging area will be only slightly sloped (for drainage) at all times and equipment maintained in good repair.

- Safety Devices – Proper safety devices, such as roll-over protective cabs, will be installed on all equipment and kept in good repair.

- Fire Extinguishers – Fire extinguishers will be provided in buildings and on equipment. Each extinguisher will be appropriate for the types of fires likely and they should be checked or serviced as appropriate. Discharged (even partially) fire extinguishers will be removed and replaced with fully charged units.

- First Aid Kits – First aid kits will be maintained in the main office building and in select site vehicles. An inventory of the first aid supplies will be maintained in order to re-supply the first aid kits when items used.

- Safety Meetings – Safety meetings will be regularly scheduled. Situations that can cause accidents and ways to prevent them will be discussed. Also, the effectiveness of corrective actions following accidents at the site will be discussed.

- NO SMOKING will be allowed within the landfill area or near fuel storage facilities.

6.3 Safety Equipment

Certain safety equipment is specified for equipment operator protection. It is the responsibility of every employee to ensure that their safety equipment is in good condition. All employees are to use their safety equipment at appropriate times. The safety equipment recommended for equipment operators is listed in Table 4.

6.4 Site User Rules

The following set of rules will be observed at the landfill.

- NO SMOKING – Users will not be permitted to smoke on the site.

- Children and Pets in Vehicles – Individuals (children and pets) not involved in unloading refuse will remain in the vehicle.

- Persons Unloading to Remain near Vehicle – Persons unloading will remain within 10ft of their vehicle at all times.

- No one will be allowed to ride on the outside of a vehicle while on site.

- Discharge, Waste behind Vehicle – Whenever possible, waste will be discharged immediately behind the unloading vehicle.

- Unloading – No unloading by non-mechanized trucks or passenger cars is to be done using rapid acceleration or deceleration of the vehicle.

- Keep Tools in Vehicle – Tools, removable tailgates, sideboards, wheelbarrows, ladder, and tarps will be kept in, on, or under the vehicle being unloaded to prevent damage to other vehicles or site equipment.

- Speed Limit – The posted speed limit within the landfill site will be enforced. Operating personnel will direct users to further reduce their speed when justified by site conditions.

- No Scavenging – Scavenging is not permitted at the landfill site.

- No Shooting – Firearms are not permitted at the landfill site.

- No Explosives – Explosives are not permitted at the landfill site.

SECTION 7

FINAL CLOSURE

7.1 Introduction

A trained site supervisor/operator will be responsible for daily inspections of the site to insure that drainage, material disposal and soil cover placement are being properly accomplished. CG-CIF will take corrective action immediately to address any problems found during operational inspections.

CG-CIF operators will have received operating certificates and will be on site to supervise the on going construction methods.

At least 90 days prior to the date when wastes will no longer be accepted, CG-CIF will notify the FDEP of the anticipated date of closure and shall submit an updated closure plan that reflect any changes in the actual operational conditions at the facility.

The CG-CIF facility will be closed as sections of the disposal facility reach final design elevations. The final cover system components are described in Section 7.2. Seeding and planting requirements are described in Section 7.3. Erosion minimization activities are described in Section 7.4. The final cover drainage system is described in Section 7.5.

7.2 Final Cover System Components

The cross section of the final cover system on the top slopes of the landfill is shown in the permit drawings and consists of, from top to bottom:

- 0.5 ft thick vegetative layer.

- 1.5 ft thick vegetative support layer.
- 40 mil thick polyethylene (PE) geomembrane.
- 1 ft thick intermediate cover layer.

The cross section of the final cover system on the side slopes of the landfill is shown in the permit drawings and consists of, from top to bottom:

- 0.5 ft thick vegetative layer.
- 1.5 ft thick vegetative cover support layer.
- A geocomposite drainage layer.
- 40 mil thick PE geomembrane.
- 1 ft thick intermediate cover layer.

The final cover system incorporates a geomembrane, which significantly reduces infiltration into the landfill cells. The grades of the final cover system are 3H:1V on the side slopes, and 5.0 percent on the top slopes.

7.3 Seeding and Planting

The final vegetative cover shall be placed on each disposal unit with 180 days after it has reached its final design height of the disposal cell. The final vegetative cover will be compacted as necessary to eliminated ponding, promote drainage, and minimize erosion. Grass will be propagated by hydro seeding, sodding or by other equivalent method in order to promote vegetative growth on the slopes of the final cover as construction of the cover progresses.

An initial watering schedule will be developed at the time of closure, and will be dependent on whether the disposal facility is closed in the dry season or the rainy season. The grass will be watered and fertilized, as necessary, to ensure continued growth.

7.4 Erosion Minimization

Erosion of the final cover system will be minimized by final cover swales. The swales will intercept sheet flow from the final cover system. The final cover swales will direct the collected surface-water runoff to downchutes and the perimeter swale.

A vegetative cover will be placed on the final cover slopes of the landfill as described in Section 7.3. This vegetative cover will minimize erosion and reduce soil loss from the final cover system. The final cover system will be periodically inspected and erosion damage or vegetative stress will be repaired before significant erosion has a chance to develop.

7.5 Drainage

Drainage swales are proposed on the final cover system to intercept the surface water runoff from higher elevations and direct the water via downchutes to the perimeter ditches around the landfill perimeter. The surface water flow direction on top of the final cover is illustrated in the permit drawings.

As required, the swales, downchutes, culverts, and perimeter ditches will be maintained on a regular basis. Significant sediment and debris, which has accumulated in the swales, culverts, and perimeter ditches, will be removed to facilitate flow and prevent overflow. Significant sediment and debris is considered any amount that impedes flow in the swale or any buildup greater than 0.5 ft.

7.6 Certification of Closure Construction Completion

The CG-CIF shall provide a certification of closure construction completion to the Department within 30 days after closing, covering, and seeding the disposal unit and a copy will be submitted to the South District Office. CG-CIF shall also provide a final survey report done by a professional surveyor, in accordance with F.A.C. Rule 62-701.600(6)(b). Upon receipt of the certification of closure construction completion documents the Department shall within 30 days acknowledge by letter that notice of termination of operations and closing of the facility has been received. The date of this letter shall be the official date of landfill closing for the purpose of determining the long-term care period, in accordance with F.A.C Rule 62-701.600(8).

7.7 Long Term Care

CC-CIF shall continue to monitor and maintain the integrity and effectiveness of the final cover, as well as leachate and gas management systems, site security, control erosion, fill subsidences, comply with water quality monitoring plan, and maintain stormwater system, in accordance with the approved closure plan for 30 years from the official date of closing.

7.8 Financial Assurance

CC-CIF will provide proof of financial assurance issued in favor of the FDEP and the County in the amount of the closing and long – term care cost estimates for the landfill. Cost adjustments for closure costs will be updated annually by March 1st.

TABLE 1

PERSONNEL REQUIREMENTS FOR RECEIPT OF UP TO 4,000 TONS OF WASTE PER DAY CALUSA LANDFILL

Personnel Classification	Total # of Personnel Employed	Minimum # of Personnel Required for Receipt of Waste
Office Administrator	1	0
Scale Master	1	1
Landfill Equipment Operator(s)	3	1
Spotter*	1	1
Landfill Site Manager/Operator**	1	1

Note:

*Spotter/Landfill Site Manager/Equipment Operator – if trained

** Random Load Waste Inspector or Designee

TABLE 2

HEAVY EQUIPMENT REQUIREMENTS[1] FOR RECEIPT OF UP TO 4,000 TONS OF WASTE PER DAY CALUSA LANDFILL

	Equipment On-Site	Back-Up On-Site
Chevy 1500 ½ ton pick-up	1	0
Caterpillar 12G Motor Grader	1	0
255 John Deer Tractor	1	0
Water Truck	1	0
6" Water Pumps	1	0
4" Water Pumps	1	0
Caterpillar D8N Dozer	1	0
Caterpillar D7 Dozer	0	1
Volvo Articulating Hauling Truck	1	0
Caterpillar 225 Excavator	1	0
Caterpillar 963	1	0
Caterpillar 836	1	0
Caterpillar 826	0	1

Note:

(1) Equipment manufactures' names are provided to indicate the approximate size and/or capacity of the equipment. The specific manufacturer for this equipment is not required but similar size is.

TABLE 3

HEAVY EQUIPMENT RENTAL COMPANIES

Name of Rental Business	Phone Number
Creel Tractor Company	(888) 443-8046
Sunbelt Rentals	(866) 842-1035
Kelly Tractor Company	(239) 693-9233
Hertz Equipment Rental Corporation	(239) 936-2700
Southern Crane and Tractor	(941) 637-7112
ASAP Rental Equipment & Sales	(800) 940-2727

TABLE 4

OPERATOR PROTECTIVE EQUIPMENT

Equipment

Each piece of heavy equipment should be provided with:

- Safety restraint belt.
- Roll-over bars.
- Back-up warning system.
- Fire extinguisher

Personal

Equipment operators should have the following personal protective clothing and accessories:

- Ear muffs or ear plugs.
- Safety glasses or face shields.
- Rubber or leather (steel toe, shank) boots.
- Work gloves.
- Hard hats.

APPENDIX A

TRAINING PLAN

(Will Be Provided Later)

APPENDIX B

WASTE INSPECTION PLAN

WASTE INSPECTION PLAN

INTRODUCTION

This plan specifically addresses the inspection of routine, Class I waste loads for the exclusion of hazardous or otherwise unauthorized materials. The procedures in this text are intended to apply to routine Class I waste loads until a suspected hazardous or otherwise unauthorized waste is identified.

Waste Inspection Procedures

Upon arrival at the landfill property, each and every load of waste is topped at the scale house to be logged in and weighed by the scale master. Waste arriving outside of the landfill's operating hours will be turned away by a locked gate. This site is accessible only by the main gate.

Once logged in and weighed by the scale master, the truck drivers are asked to confirm that they are hauling routine Class I waste. If the driver identifies the load as routine Class I waste, then one of the following procedures are implemented:

1. Open Topped Municipal Waste Haulers

If a truck is verbally identified to the landfill employees as hauling Class I waste, the truck contents are visually inspected to confirm that the load appears to contain exclusively Class I waste. This inspection is usually performed by looking down from on top into the open topped load, once the truck is un-tarped, by means of an elevated platform or "gantry" located adjacent to the scales. The presence of very noticeable or suspicious odors may trigger further analysis.

If the waste appears to be acceptable (i.e. does not contain visible quantities of anything other than routine Class I waste), then the truck is directed to the landfill active work face where it is visually inspected again by the spotter as it is unloaded and before it is spread and compacted. Any load discovered to contain potentially hazardous or otherwise unauthorized waste at this point is completely reloaded back into the waste truck and removed from the site. The rejected waste will not be authorized to re-enter the landfill site.

2. Class I waste in Closed Containers

If a truck is verbally identified to the landfill employees as hauling Class I waste, but is not visually accessible for inspection at the gantry, the truck is forwarded to the active face of the landfill where its contents are inspected by the spotter as it is unloaded and before it is compacted or disposed. The inspection procedure at the active work face is identical to that described in the previous section. Any load discovered to contain potentially hazardous or otherwise unauthorized waste at this point is completely

reloaded back into the truck and removed from the site. The rejected waste will not be authorized to re-enter the landfill site.

Random Waste Load Examination

The Landfill Site Manager will examine at least three random loads of waste each week. The waste trucks selected for examination will be directed to the active face where the load can be visually examined upon unloading. Information and observations resulting from each random inspection shall be recorded in writing and retained at the landfill for at least three years. The recorded information, signed by the inspector, will include, at a minimum:

- The date and time of the inspection.
- The names of the hauling firm and the driver of the vehicle.
- The vehicle license plate number.
- The source of the waste as stated by the driver.
- Observations made by the inspector during the examination.

Handling Hazardous Waste

If any suspect waste or wastes which could potentially be regulated hazardous wastes are identified by random load checking, or are otherwise discovered to be improperly deposited at the landfill, the Landfill Site Manager shall promptly notify FDEP, the person responsible for shipping the wastes to the landfill, and the generator of the wastes, if known. The area where the wastes are deposited shall immediately be cordoned off from public access. If the generator or hauler cannot be identified, the Landfill Site Manager will assure the cleanup, transportation, and disposal of the waste at a permitted hazardous waste management facility.

Hazardous Waste Training

The Landfill Site Manager, and all other staff who may be required to perform a waste inspection, will receive training in hazardous waste identification, as well as an evaluation of their knowledge and ability to effectively screen incoming waste according to this "Waste Inspection Plan".

All new landfill employees will be teamed up with experienced personnel for at least one week upon commencement of work as an inspector in order to receive immediate on-the-job training.

Notification of Unacceptable Waste Loads

The rejection of waste, pursuant to this plan, will be recorded in writing and filed on site for a period of one year. The pertinent information concerning the rejection, such as truck

license number, assumed contents, volume, and other relevant data, will be recorded on a "**LOAD REJECTION FORM**". The Landfill Site Manager will contact the generator, hauler, or other party responsible for shipping the waste to the landfill to determine the identity of the waste sources. The appropriate local officials will be notified by phone when the waste load is asked to leave the site and all pertinent information made available to them upon their request.

APPENDIX C

EMERGENCY RESPONSE AGENCIES

EMERGENCY NUMBERS

FIRE 911
POLICE/SHERIFF (Charlotte County) 911
POSION CONTROL..... 911
AMBULANCE/EMS 911

FLORIDA POISON
INFORMATION CENTER 1-800-222-1222

Emergency MANAGEMENT
(Charlotte County)..... 941-505-4620

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
Fort Myers 239-334-6975
Hazardous Waste Management - State..... 850-245-8707
Petroleum Cleanup 850-245-8839

EMERGENCY RESPONSE COORDINATOR(S)

(Landfill Site Manager will be responsible at the Landfill.
Below are the names of all contacts.)

THE EMERGENCY RESPONSE COORDINATORS WITH ADDRESSES AND TELEPHONE NUMBERS WILL BE PROVIDED LATER.

Calusa Green, LLC
Application for Planned Development Rezoning

Operation Plan – C&D Facility

SECTION 1

INTRODUCTION

1.1 Terms of Reference

This Operation Plan has been prepared by Southwest Engineering & Design (SED) on behalf of Calusa Green, LLC for the construction and demolition debris (C&D) disposal facility known as the Calusa Green C&D Facility (CG-CD) who will own and operate the facility. The location of the CG-CD facility is shown in Figure 1. The Operation Plan for the CG-CD facility has been prepared to comply with the requirements of Chapter 62-701 of the Florida Administrative Code (FAC).

Figure 1

The contents of this Operation Plan and its procedures were derived from a previously accepted and permitted C&D Landfill in Charlotte County. Florida Department of Environmental Protection (FDEP) Permit #0246176-001-SO/22 and Planned Development PD-01-05

1.2 Purpose and Scope of the Operation Plan

The Operation Plan provides a detailed plan for the performance of the daily operations for the C&D disposal & recycling at the CG-CD facility, as required by Rule 72-701.730(2)(c), FAC, and in accordance with Rule 62-701-730(7), FAC. This Operation Plan includes procedures for contingency operations as required by Rule 62-701.320(7)(e)(2), FAC. The primary purpose of the Operation Plan is to describe the framework to operate and manage the C&D disposal recycling facility so that it is operated and maintained in a condition that protects the public health and the environment. All activities at the facility shall be performed in accordance with this plan and 62-701.730(7)(a) F.A.C. The plan shall be updated as operations change but no less frequently than upon renewal of the permit. The Department shall be notified of changes to the plan other than those required for routine maintenance.

1.3 Description of Operations

The CG-CD Facility will be operated with its primary focus on waste stream reduction through recycling, mulching, composting, and disposal of construction and demolition debris in an environmentally sound manner. CG-CD's operation will keep recyclables and C&D materials from using valuable and diminishing Class I landfill space. CG-CD's recycling

efforts will continue to help the area's governmental bodies reach and expand their recycling goals.

Only C&D materials which meet the Florida Department of Environmental Protection (FDEP) criteria for approved landfill and recycling will be processed or disposed of on site. The CG-CD facility will not accept processed or ground unidentified material from MRF's unless previous authorization from the South District Branch Office of the FDEP. CG-CD will only accept clean C&D debris that can be visually identified. All other materials will be refused access to the CG-CD facility or it will be properly disposed of at an approved FDEP facility location.

"Construction and Demolition debris" means discarded materials generally considered to be not water soluble and non-hazardous in nature, including but not limited to steel, glass, brick, concrete, asphalt material, pipe, gypsum wallboard, and lumber, from the construction or destruction of a structure as part of a construction or demolition project or from the renovation of a structure, including such debris from construction of structures at a site remote from the construction or demolition project site. The term includes rocks, soils, tree remains, trees, and other vegetative matter which normally results from land clearing or land development operations for a construction project; clean cardboard, paper, plastic, wood, and metal scraps from a construction project; unpainted, non-treated wood scraps from facilities manufacturing materials used for construction of structures or their components and unpainted, non-treated wood pallets provided the wood scraps are separated from other solid waste where generated and the generator of such wood scraps or pallets implements reasonable practices of the generating industry to minimize the commingling of wood scraps or pallets with other solid waste; and de minimize amounts of other non-hazardous wastes that are generated at construction or demolition projects, provided such amounts are consistent with best management practices of the construction and demolition industries.

The facility's operating hours will be from 6:00 A.M. to 6:00 P.M. Monday thru Friday and 6:00A.M.to 5:00P.M. Saturday. Customers entering the facility will be directed to the facility's check in office for their C&D debris.

The load will receive a preliminary inspection with a closed circuit camera, mounted at a height which allows the gate attendant to view the load from above. If the attendant deems it necessary, he or she can view the load from a raised platform. Upon initial inspection, the driver will then sign the load ticket and proceed past the check in office and receive a line-of-sight inspection. The load can be deemed unacceptable at any point during the inspection process.

The driver will be directed to the proper staging area of the facility for unloading. Each driver will be met by a CG-CD spotter. The spotter will check the load for a second inspection before the load hits the ground and guide the truck to the specific unloading area. When unloaded, the materials will be checked for compliance and recyclables. Any unauthorized non-hazardous materials will either be returned to the customer for proper disposal or CG-CD will dispose of them per FDEP regulations.

Loads that are beneficially recyclable will be met by CG-CD's recycling team, which will sort the load for recyclables. To the extent feasible, Recyclable materials are separated and stored for shipment. These recyclables includes items such as non-treated lumber, aluminum, copper, steel, and reusable building items such as sinks, doors, bricks and lengths of lumber. Once the separation of recycled material is completed by the recycling team, an experienced compactor operator will compact the remaining debris into the disposal cell and grade it in accordance with CG-CD's operation and closure plan. CG-CD utilizes 70,000 pound steel wheel compacting machines to achieve maximum capacity and stability.

A trained operator shall be on duty at the facility at all times that the facility is operating. A sufficient number of spotters shall be on duty at the working face to inspect the incoming waste at all times waste is being accepted at the site. Waste shall be inspected after it is removed from the transport vehicle and prior to placement for final disposal. All of CG-CD's on site staff, including the gate attendants, spotters and equipment operators, will receive FDEP required spotter training. This will ensure that all loads are viewed many times for compliance and that CG-CD's staff knows how to react to unauthorized materials.

SECTION 2

PERSONNEL AND PROCEDURES

2.1 Personnel Requirements

2.1.1 Numbers and Positions

The positions and number of personnel anticipated to be employed for each position are presented in Table 1. CG-CD will have at least one trained operator at the disposal facility during active operations and a sufficient number of spotters shall be on duty at the working face to inspect the incoming waste at all times waste is being accepted at the site. Waste shall be inspected after it is removed from the transport vehicle and prior to placement for final disposal. The operator and the spotter may be the same person. The staffing levels presented in Table 1 provide for absences due to vacation, illness, holidays, or other reasons. Peak C&D receipt periods, or other emergency conditions may require additional personnel and/or staff working overtime. These staffing levels are based on the assumption that work activities will generally take place 12 hours per day, 5 days per week and an 11 hour day on Saturday.

If the daily volume at the disposal facility increases enough to require additional equipment, the staff will be increased as required to supply the personnel to operate and maintain the additional equipment. The minimum crew required to operate the disposal facility for receipt of waste is also presented in Table 1. In addition to the permanent staff, casual labor may be hired for area clean-up, ground maintenance, and other intermittent activities as required.

2.1.2 Operation, Training and Maintenance Manual

All activities at the facility shall be performed in accordance with this plan. The plan shall be updated as operations change but no less frequently than upon renewal of the permit. The Department shall be notified of changes to the plan other than those required for routine maintenance.

2.1.3. Training plan

All operators and spotter at CG-CD facility's will be properly trained in accordance with 62-701.320 (15) F.A.C. by a public offered course accepted by the Department such as the TREEO or SWANA classes. The training shall cover identification of materials, safety, and general landfill operations. Operators will attend a minimum of at least 24 hours of initial training and are required to pass the exams on all courses taken. In addition, operators will attend an additional 16 hours of continuing training every two years. Spotters will receive 8 hours of training every year from a FDEP approved training program.

CG-CD will also offer an additional 4 hours of training every 3 years to its operators, spotters, and attendants for safety, equipment operations, and OSHA requirements. Part of CG-CD's employee training will be handled by an OSHA safety consulting firm, which will perform routine safety audits for CG-CD and provide OSHA required information.

The safety of CG-CD's employees and customers is of the utmost importance. It will be emphasized along with employee familiarity with containers and labels typically used for hazardous wastes and hazardous materials. If unauthorized non-hazardous waste is found, CG-CD's supervisor shall contact the generator, hauler, or other party responsible for shipping the waste to the facility so that CG-CD can determine the identity of the waste sources. The unauthorized non-hazardous waste shall then be transported to a properly permitted area by either the person responsible for delivery or by CG-CD facility for disposal.

Topics for additional training by CG-CD will include:

- Equipment operation.
- Identification of recyclable materials.
- Fire control.
- Dust control.
- Standard facility operating skills.

2.1.4 Training Records

The training records of all CG-CD employees shall be kept on site and contained in an employee training log. The training log will include: Date of Training, Hours of Training Received, Hours of Training Remaining, and Date of Future Training Available. The training records shall be kept at the facility at all times and be made available for inspection by FDEP.

2.2 Site Access Control

CG-CD's main entrance will be located at the corner of Neal Road and Chiquita Drive, Charlotte County Florida. The entire perimeter is fenced or barricaded and the access road has a gate that will be kept locked when the facility is unoccupied.

2.2.1 Hours and Days of Operation

The disposal facility may be open to accept and dispose C&D from dawn to dusk, or 12 hours per day, whichever is greater. Sufficient day light must be available to allow spotters to identify unauthorized waste during the winter months. Typical disposal facility hours for acceptance of C&D are:

Monday through Friday: 6:00 AM to 6:00 PM
Saturday: 6:00 AM to 5:00 PM

Hours may be extended during day light hours to accommodate specific needs or in case of emergencies.

Construction, daily cell preparation, hauling/excavating, road building, or all non-disposal waste acceptances can be performed both within and outside of the posted operating hours. The actual hours of operation will be posted at the main entrance to the CG-CD facility. The disposal facility may be closed on Sundays and holidays.

2.2.2 Processing Customers

Upon entering the site, all facility users entering the disposal area will be required to stop at the weigh station. The scale master will record the volume and type of C&D for each waste load brought to the facility. All C&D loads will be visually inspected for Class I, hazardous, or other unauthorized wastes.

Any vehicle having unacceptable waste will be directed by the scale master to the proper FDEP-approved disposal facility. All trucks delivering C&D to the disposal area will be ticketed. Load volumes, customer names, and charges to all vehicles will be recorded.

2.2.3 Public Use

Small, private vehicles will be directed to place their load in the appropriate disposal area as directed by the gate master.

2.2.4 Vehicle Inspection

The Site Manager or designee will be in charge of inspecting vehicles arriving at the site. The inspectors will receive training in unauthorized waste identification. The training provides the opportunity to improve the inspector's knowledge and ability to effectively screen incoming waste.

A plan of random inspections will be implemented by the Site Manager to prevent the on-site disposal of unauthorized wastes. The plan shall include dumping and spreading the load away from the working face. The random inspections shall be performed at a minimum of once weekly. This plan will be implemented by the Site Manager or designee to prevent the on-site disposal of unauthorized wastes.

2.3 Traffic Routing

2.3.1 Access Points/Signs

Access by all vehicles shall be via a single secured site entrance located on the east side

of the corner of Neal Road and Chiquita Drive. The entrance will allow for safe and orderly traffic flow into and out of the facility. The site entrance gate will be locked outside of operation hours.

Signs will be posted at the entrance of the CD facility indicating the name of the facility, name of the operating authority, and hours and days of operation. In addition, a sign which clearly states "NO HAZARDOUS WASTES ACCEPTED" and "NO HOUSEHOLD WASTE ACCEPTED" will be located at the entrance to the CG-CD facility. Traffic control and safety requirement signs will be located at and near the entrance to the facility, as required. A list of the signs that will be installed at the site is presented in the Appendix.

2.3.2 On-Site Traffic Flow

Once vehicles delivering wastes have been inspected & approved for dumping, they will follow directions or signs posted along the haul road(s) to the current active work areas of the disposal facility. Trucks will then proceed to deposit their loads at the appropriate working face. Signs or the scale master will direct small public vehicles to deposit their loads in the appropriate disposal area.

2.4 Communication Facilities

The following communication facilities will be provided for routine communication and for use in emergencies at the site:

- Cellular and/or conventional telephone in the office building; and
- Two-way radios.

SECTION 3

DISPOSAL FACILITY OPERATIONS

3.1 Basic Landfilling Procedures

This section describes the procedures that constitute the daily landfilling operations, the sequence of landfilling, working face practices, and control of the first and subsequent lifts. The disposal facility will be operated in accordance with these procedures, and C&D will be filled in the general sequence as indicated on the Preliminary Drawings sheet C1 thru C8.

3.1.1 Method of Operations

Landfilling areas will generally progress from approximately 24" above existing grade as shown on the Preliminary Drawings. When a cell is opened, C&D lifts of 24" will be placed to cover all areas to a depth of 10 feet as soon as possible to reduce leachate generation prior to placement to higher elevations in a cell.

Controlling truck routes and properly spotting loads will facilitate the spreading and compaction of refuse. During construction of the lift, trucks will be positioned on a lift of previously compacted C&D adjacent to the first lift being placed. Lateral confinement or small work faces will be maintained to minimize blowing C&D. Temporary barricades or flags may be used as daily width markers for guiding equipment operators and for traffic control.

Vehicles transporting C&D to the working face will be routed over previously filled areas, whenever possible, for additional compaction of C&D. Vehicles will not be routed over areas of the final cover system unless on a road specifically designed for hauling.

3.1.2 C&D inspection

3.1.2.1 Overview

A trained operator shall be on duty at the CG-CD facility at all times that the facility is operating. Waste material coming to the facility shall first be inspected at the scale station by the scale master. The scale master will question all transport vehicle drivers as to the character of their wastes. Should the scale master determine that the transport vehicle is loaded with unacceptable waste materials, the transport vehicle will be directed to an approved FDEP facility.

In addition, a sufficient number of trained spotters shall be positioned on the ground at the working face to inspect the incoming C&D at all times material is being received, unloaded, and as it is spread at the CG-CD facility. Each load of C&D shall be inspected by a trained spotter as it is removed from the transport vehicle, prior to placement for final disposal, and as it is spread and compacted. All unacceptable

material, including but not limited to: Class I Waste, Class III Waste, and Non-Conforming Special Waste detected by the spotter shall all be removed from the waste stream for disposal at an approved FDEP facility. Plastic buckets will be monitored and may not be accepted at the CG-CD facility unless they are empty when they arrive. Carpet remnants will be monitored for evidence of their origins. Only carpet remnants, which are from a construction or demolition project, may be accepted at the CG-CD facility.

Unacceptable non-hazardous waste shall be removed from the incoming C&D immediately, and no other loads shall be unloaded in the immediate vicinity until all non-C&D materials have been removed and stored in the designated waste containers near the working face. Designated containers shall be located immediately adjacent to (within 150 ft of the closest portion of) the active working face. Unacceptable non-hazardous waste shall be removed prior to compaction.

3.1.2.2 Class I Waste

Class I waste is not acceptable for disposal and shall be removed from the CG-CD facility. Class I waste may include household waste, automobile parts, electronics, and empty drums. When Class I waste is discovered in a transport vehicle prior to or during the unloading process, the process will be stopped and the load (or the unmixed Class I waste) will be reloaded and rejected and directed to an approved FDEP facility. Class I waste that is contained in a load of C&D material accepted for disposal at the CG-CD facility will be removed from the waste stream by the spotters. Depending on the size, the Class I waste will be removed either manually or mechanically. The Class I waste that is removed from the waste stream will be placed in containers allocated for the storage of Class I waste. A Class I waste container will be located adjacent to the working face. All of the Class I waste containers will be emptied every 48 hours (except for weekends and holidays). Therefore, no Class I waste will be stored on site for more than 72 hours (except for weekends and holidays). The storage area for the Class I waste containers is within the secured perimeter of the CG-CD facility. A fence with a gate is located around the perimeter of the CG-CD facility. The gate is locked at the end of each operating day. The Class I waste is removed from the site and disposed of at an approved FDEP facility.

If any hazardous wastes are detected by CG-CD's spotters before or after unloading, the facility operator shall promptly notify the Department and instructions from FDEP shall be followed. If required, the area shall immediately be cordoned off from public access. CG-CD will follow instructions from FDEP to assure the cleanup, transportation, and disposal of the waste to a permitted hazardous waste management facility.

3.1.2.3 Class III Waste

Class III waste is not acceptable for disposal and shall be removed from the CG-CD facility. Class III waste includes carpet, cardboard, paper, glass, and plastic, unless

they are part of a construction project. Class III waste also includes yard trash, asbestos, processed tires and furniture. When Class III waste is discovered in a transport vehicle prior to or during the unloading process, the process will be stopped and the load (or the unmixed Class III waste) will be reloaded and rejected and directed to an approved FDEP Class I facility. Class III waste that is contained in a load of C&D material accepted for disposal at the CG-CD facility will be removed from the waste stream by the spotters. Depending on the size, the Class III waste will be removed either manually or mechanically. The Class III waste that is removed from the waste stream will be placed in a designated container allocated for the storage of Class III waste. The containers are metal roll-off containers. A Class III waste container will be located adjacent to the working face. An additional Class III waste container will be located adjacent to the scale station. The Class III containers shall be emptied at least every 30 days. Therefore, no Class III waste will be stored onsite for more than 30 days. The storage area for the Class III waste containers is within the secured perimeter of the CG-CD facility. As previously indicated, a fence with a gate is located around the perimeter of the CG-CD facility. The gate is locked at the end of each operating day. The III waste is removed from the site and disposed of at an approved FDEP authorized disposal facility.

3.1.2.4 Non-Conforming Special Waste

Non-conforming special waste is not acceptable for disposal and shall be removed from the CG-CD facility. Non-conforming special waste includes white goods, waste tires, yard trash, used oil, lead-acid batteries, asbestos, and mercury-containing devices (such as thermostats and lamps). Waste will be monitored to ensure that wastes that have been shredded, size-reduced, screened or are otherwise unrecognizable are not accepted at the CG-CD facility. When non-conforming special waste is discovered in a transport vehicle prior to or during the unloading process, the process will be stopped and the load (or the unmixed non-conforming special waste) will be reloaded and rejected and directed to an approved FDEP disposal facility. Hazardous wastes (including suspect and unknown wastes and biological waste) will not be managed as nonconforming special waste. Non-conforming special waste, not hazardous wastes, that is contained in a load of C&D material accepted for disposal at the CG-CD facility will be removed from the waste stream by the spotters (hazardous waste will be isolated and removed).

Depending on the size, the non-conforming special waste will be removed either manually or mechanically. The non-conforming special waste (such as used oil, lead acid batteries, asbestos, and mercury-containing devices) that is removed from the waste stream will be placed in proper containers specifically designed for hazardous waste containment.

White goods will be rejected and reloaded or kept undamaged and placed upright in a secure location adjacent to the working face. Waste tires contained in a load of C&D material will be removed from the waste stream and placed in containers specifically designated for waste tires. CG-CD, the transporter/generator, or a commercial hauler

will transport the materials to an appropriate FDEP authorized disposal facility within 30 days.

The storage area for the non-conforming special waste containers is within the secured perimeter of the CG-CD facility. As previously indicated, a fence with a gate is located around the perimeter of the CG-CD facility. The gate is locked at the end of each operating day.

3.1.3 Working Face Practices

3.1.3.1 Start-Up and First Lift

The first lift of C&D will be approximately 2 ft in compacted thickness and consist of select wastes. Facility personnel will closely monitor the placement and compaction of the first layer of C&D. Facility personnel will maintain grade control and inspect the filling techniques. The lifts shall be placed and graded to avoid excessive ponding of rain water.

3.1.3.2 Subsequent Lifts

After the first lift is properly in place, normal operating procedures will be used for the second lift and all subsequent lifts. Trucks and compactors are permitted to operate on these lifts. Bulky wastes delivered to the facility and any stockpiled bulky wastes received during construction of the first lift will be placed in subsequent lifts. The daily operating procedure including routing of traffic, placement, spreading and compaction of C&D, and application of intermediate cover will be followed for the side slopes and when the top final grade is reached. Soil erosion control and site maintenance tasks will be implemented throughout the development of all lifts. Once the final disposal facility elevations have been reached over a minimum 10-acre area, final cover will be constructed during the next construction season and vegetated during the customary planting season.

3.1.4 Filling Procedures

After the first lift, C&D materials will be placed in 2 to 3-ft thick horizontal layers when possible and compacted to approximately 1 to 2-ft thickness or as thin a layer as practical before the next lift is applied.

The cell is the basic building block of a disposal facility. It is composed of multiple compacted layers of C&D and enclosed by cover material (i.e., intermediate and/or final cover). Basic instructions for constructing the cell are outlined below.

3.1.4.1 Width of Working Face

The working face is the portion of the uncompleted cell on which additional C&D is spread and compacted. To maintain sanitary operation, the working face will be kept as narrow as possible. By keeping the working face narrow and equipment moving the

area of exposed C&D will be minimized. In order to facilitate proper unloading and C&D placement operations, more than one working face may be required. During this time a sufficient number of trained spotters shall be on duty at the working face to inspect the incoming waste at all times waste is being accepted at the site. Waste shall be inspected after it is removed from the transport vehicle and prior to placement for final disposal.

The optimal daily working face width will vary depending on the number of vehicles bringing C&D to the site. The working face will be wide enough to prevent a large backlog of trucks. It is expected that a working face 150 to 200 ft in width will be sufficient for operation of the CG-CD facility.

3.1.4.2 Unloading

When C&D material is unloaded from the top of the working face, the C&D will be discharged down the working face slope. For safety reasons, a minimum 8 to 10ft separation will be maintained between the trucks and the disposal facility equipment.

When unloading C&D from the bottom of the working face, the C&D will be discharged approximately 10ft from the toe of the working face, compacted and pushed up the slope. Truck and disposal facility equipment separation, as discussed above, will be maintained. In order to prevent loads of C&D from being discharged too far away from the toe, trucks can be backed toward the toe, following a path created by the equipment pushing C&D into the working face.

3.1.4.3 Pushing, Spreading, and Compacting

Proper cell construction involves pushing, spreading, and compacting C&D material. These functions will be accomplished with a bulldozer and/or a landfill compactor. Pushing the C&D is the action of moving the C&D from the discharge location into the working face. The purpose of the spreading action is to distribute the C&D over the working face in a thin layer (approximately 2 to 4 ft thick). High in-place compacted unit weight of the C&D is achieved by compacting in thin layers (i.e., 2 to 4 ft thick). Good compaction is achieved by operating the disposal facility compactor up and down the working face after the C&D has been spread into a thin layer. Proper compaction of the C&D will extend disposal facility life, while reducing litter and other problems. To maximize compaction of the C&D, the working face and inside temporary slopes will not exceed a maximum slope of 3H: 1V. The Site Manager will periodically verify the compaction procedures and make corrections as necessary.

3.1.4.4 Daily Clean-Up

The area receiving C&D will be policed daily for loose C&D and litter. Such C&D, as well as litter along the litter fences, if used, will be removed.

3.2 Disposal Facility Cover

Final cover will be placed over the areas of the disposal facility that have reached final design elevations. A final cover system will be placed within 180 days of reaching the final design elevations. The final cover system will be as described in Section 7 of this Operation Plan. Vegetation will be maintained over the final cover areas throughout the life of the disposal facility and the post closure care period. Maintenance of the final cover swales and access roads will also be performed throughout the life of the disposal facility and the post closure care period.

3.4 Site Equipment

3.4.1 Primary Equipment

Based on the available range of handling capacities and the initial projected C&D receipts, the allocation of heavy, primary equipment presented in Table 2 will be sufficient to handle the wastes received at the disposal facility. The primary functions of heavy disposal facility equipment are spreading and compacting C&D, and excavating, hauling, and spreading' cover material. Equipment similarities allow different equipment to perform functions as necessary. For example, when a compactor breaks down, a bulldozer can perform the compaction operation.

3.4.2 Back-Up Equipment

Back-up equipment is normally located on the site. If a piece of equipment is out of service for an extended period or if additional equipment is required on a temporary basis, additional equipment is available for rental from several nearby heavy equipment rental companies. A rental company list is presented in Table 3.

3.4.3 Support Equipment

In addition to the heavy equipment used for operating and maintaining the disposal facility, other support equipment may be used to perform work not essential to the operations. This equipment will be present at the site most of the time, but some may be off-site, temporarily out of service, or rented for a specific occasion.

One water truck will remain on site at all times and will be used for dust control and fire protection. The water truck will be positioned near the working cell and available to the working face for fire protection. However, it will also be equipped with spray bars so it can be used for dust control.

A utility tractor will be used to perform site maintenance activities. It will be fitted with attachments for mowing grassed areas. A backhoe or small excavator will assist the small dozer in maintaining drainage courses and ditches and for other site maintenance activities.

3.4.4 Equipment Care

Routine preventive maintenance will minimize equipment downtime and increase equipment service life.

Preventive maintenance varies with each piece of equipment. Therefore, the operation and maintenance (owner's) manual for each should be consulted. However, three applicable maintenance activities, which will be implemented at the site, are:

- Establish a routine equipment inspection program;
- Lubricate according to manufacturer's recommendations; and
- Check at least two times daily for hydraulic oil, engine oils, fuel or other liquid leakage.

3.4.5 Maintenance Material Control

Fuels, solvents, lubricants, and other maintenance materials shall be stored in secure areas separate from the disposal or sorting areas. No materials beyond the capacity of the constructed storage area will be stored on site.

3.5 Roads

3.5.1 Road Construction

The main access road from the site entrance area to the scale house will be an improved, all-weather road, constructed of either pavement, crushed asphalt, or crushed concrete. Haul road will be constructed from the scale house to the active work area in the disposal facility. Access roads wi11 be surfaced with limerock or recycled crushed concrete, to be able to reach groundwater monitoring wells and the stormwater management systems. In the active work area, the roads will be surfaced with construction/demolition waste or other acceptable material.

3.5.2 Maintenance of Roads

3.5.2.1 Filling of Potholes

Potholes will be filled with materials compatible with the road construction material. Potholes will be filled on a routine basis so that they are not allowed to remain open for extended periods. Before placing patches in holes, all loose material will be removed from the hole. New material will then be placed in the hole and compacted so that it will be approximately as dense as the materials originally used in the road.

3.5.2.2 Grading

As unpaved, all-weather roads become uneven due to traffic-caused rutting or displacement of stone, fresh rock or recycled crushed concrete will be applied to the surface and smoothed to an evenly sloped grade to promote drainage.

3.5.2.3 Restoring Settlement

When all-weather roads are built on fill, areas, settlement of the filled area may cause cracks to appear in a road or cause the slope of a road to change. Cracks will be filled with material that is compatible with the roadbed. Areas of a sloped road, where the slope has changed drastically, will be built up with material compatible with the roadway. The buildup will be made by placing a 6 in. thick layer of the material, compacting, then placing another 6 in. thick layer of material and compacting again. This process will be repeated until the desired elevation is achieved or the road section will be rebuilt.

3.5.2.4 Cleaning of Public Access Roads

Proper operation of the landfill will result in little or no debris being found on public roads. The private roads adjacent to the facility and the site entrance will be inspected daily. If debris from the wheels of vehicles departing the landfill reaches private Neal Road, that road will be cleaned to a minimum distance of 0.25 miles or as required in both directions, if necessary, form the entry point onto the road. If litter from waste hauling trucks is found on Chicquita and Neal road, it will be removed for a minimum distance of 5 miles in both directions from the landfill entrance roadway. Litter cleanup will be performed at least once a week.

3.5.2.5 Removal of Materials from Disposal Facility Roadways

Any significant accumulation of dirt, brush, and other debris will be removed from the disposal facility roadways. Dirt left on asphalt roadbeds may cause dust problems during dry weather or mud problems during wet weather. A program of road cleaning will be implemented to prevent any buildup. Unpaved roads will be watered as needed to minimize dust.

3.5.2.6 Maintenance of Drainage Swales

Drainage swales along road beds will be kept free of obstructions. During the wet weather seasons, inspection of all drainage ditches and structures will be made at least once each week, or more frequently as required, and debris removed as required.

3.6 Drainage Features

- Routine Inspections: Inspection procedures are outlined in Section 4.3.1.
- Channels, Pipes, and Inlet Structures: Drainage structures will be cleaned of debris as

soon as practical after problems are identified to prevent ponding. When unlined channels silt up, routine cleaning will be performed to restore the original capacity of the channels.

- Repair of Structures: Damaged structures will be permanently repaired during dry weather periods. During rainy periods, temporary repairs may be made to prevent further damage to the structure or erosion of soil.

- Sediment Barriers: Sediment barriers will be visually inspected periodically for damage, and to determine if sediment has accumulated behind them. Sediment will not be allowed to accumulate to a height exceeding half that of the barrier.
  Barriers will be replaced when visibly damaged. Barrier footings will also be inspected to ensure that drainage is not flowing beneath the barrier unless designed to do so.

3.7 Preliminary Site Construction Plan

Preliminary site construction plans have been prepared to provide the construction sequence and details to ensure that the site is properly prepared for receipt of C&D debris.

1. Construction shall adhere to the guidelines set forth in this report and the development plans and specification as shown on the site plan and the stormwater plan. Refer to the Preliminary development plans sheets C1 thru C8.

2. The existing ground elevations ranged, from 54 to 58 N.G.V.D. The estimated seasonal high water table is approximately 12 to 16 inches below existing grade.

3. The excavation phase of the CG-CD facility is to provide fill material to construct the stormwater detention berms and establish a minimum clearance from the bottom of the disposal areas above the seasonal high water table.

4. The disposal areas will be divided into 5 phases as shown on the site development plans sheet C2. Each phase shall be filled and prepared as needed before receiving debris. All questions concerning the construction of the proposed landfill shall be directed to the Engineer of Record. Any construction changes that alter from the approved plans will require approval from the Engineer of Record.

5. Before Phases I through IV receive C&D debris fill will be placed and compacted to an elevation of 58 NGVD. The fill required to achieve this elevations vary from 18" to 30" with an average amount of 24" above existing grade. The initial 12" of this material will consist of clean crushed concrete and clean fill with no organics. The final 12" of fill material will consist of the soil that will be excavated from the borrow pit consists of mostly Myakka Fine Sand which is described as nearly level, poorly drained soil on broad flatwoods

areas refer to the Geotechnical Report found in the Appendix section of this Application. This final 12" of fill will be compacted to a 98% density modified proctor. The elevation of each phase shall be certified by the Engineer of Record and approved by FDEP before disposal in that phase is authorized. This construction method helps to prevent groundwater from coming into contact with disposed debris.

6. To prevent flooding during storms events, flood protection measures will be installed during construction per the stormwater plans. These measures include a perimeter berm around each disposal cell, on site retention areas, and outfall structures that will be constructed and set at specific elevations to prevent any flooding. The construction methods and berm design in items 3 and 4 of this section will prevent C&D Debris from coming into contact with groundwater. Currently the proposed site is located in zone "X" of the Federal Emergency Management Agency (FEMA) maps. Zone "X" is listed as "Areas determined to be outside the 0.2% annual chance floodplain"

7. After each phase has been prepped for construction and certified by the construction engineer and FDEP, it will be ready to receive debris. All C&D materials are crushed and placed in two foot compacted lifts.

3.7.1 Compacting and Grading

Debris will be compacted in 24" lifts with each lift completed before beginning a new lift. The debris on the sides of each disposal cell will be compacted to a three foot horizontal and one foot vertical slope and contoured to prevent erosion after final cover. All debris will be compacted and sloped as necessary to assure that the facility's closure requirements will be met.

3.8 Recycling

Recycling plays an important role in the waste industry. Not only does it save valuable landfill space but it helps to save our country's resources. CG-CD will strive to do its part and will be implementing a recycling program at this facility and working along with the city and county in the area to help them meet their recycling goals and requirements. Upon request, CG-CD will voluntarily supply quarterly reports with records of debris and recyclables received.

Customers entering the facility will be directed to the facility's check in. The load will have a preliminary inspection for FDEP compliance, the type of debris will be identified, and the driver will be directed to the appropriate staging area.

The facility shall have staging areas for roofing debris, concrete, soils, wood, mixed C&D loads, and lot clearing. At least one spotter shall be on duty at all times that waste is received at the site to inspect the load before disposal or recycling. At the staging areas, recyclables that are economically viable shall be removed, to the extent feasible. These items typically

include steel, aluminum, copper, brass, wood pallets, lumber, cardboard, asphalt roofing, PVC pipe, concrete, and clean soils.

Yard waste will not be accepted or disposed of at the C & D staging area. Yard waste will be handled through a separate permit approval through FDEP. This approval once received will adhere to the following conditions:

1. The recycling operation and the active disposal operations are located in separate areas.
2. The Yard trash recycling site and operations thereon shall not violate any of the Prohibitions listed in F.A.C. Rules 62-701.300 (1), (2), or (3)
3. Yard trash is size reduced to produce mulch, compost, fuel, or other legitimate product approved by the Department.
4. Assurance is provided to the Department, prior to the commencement of yard trash recycling operations, that the material will be size reduced on a regular basis by one of the following methods;
   - an operational wood chipper is purchased and brought onto the property, or
   - an agreement is entered into with an individual or business capable of size reducing yard trash.

   Landscaping maintenance debris shall not be accepted on site if the chipper is sold, out of commission for more than three months, or the "size reduction agreement" expires or is rescinded for any reason.
5. All yard trash accepted annually should be size reduced annually. In accordance with Section 403.706(2)(a)of the Florida Statutes (F.S.).
6. The yard trash recycling operation shall not create a sanitary nuisance or any condition adversely affecting the environment or public health.

Any yard trash remaining on site after the recycling operation has been terminated shall be properly recycled or properly disposed of within 30 days.

Calusa Green plans to take every advantage of the recyclable C&D materials which are being brought to the facility, such as metal, paper, glass, plastic, textile, rubber, asphalt, soil, yard waste, PVC, concrete, and clean wood, by applying accepted recycling processes. Recycled materials pulled from the C&D waste stream for reuse will be managed as recovered materials. These materials are temporarily stored in roll-off containers, before being moved to the C&D debris recycling area. Whole loads of recycled materials are brought directly to the recycling area for processing. Initially, one dumpster will be dedicated for each recyclable material, non-processible waste, and for unauthorized wastes. The number and size of the dedicated roll-offs will be revised in the future to accommodate needs.

The C&D debris recycling area will be located on the central portion of the property. Incoming C&D materials that have been segregated for recycling (from LEED® projects or by customer or operator request) are off-loaded onto a tipping area and inspected by a trained spotter to identify and remove any unauthorized wastes. Recyclables are sorted by material type (cardboard, wood, metal, concrete etc.) and size and then placed in individual roll-off containers. Once the containers are full, they are sent to market within 180 days. Any

residual materials that are not recyclable are collected in a separate container for disposal in the facility. Any dust generated by this process will be controlled by the landfill's dust control techniques, such as water spray.

Incoming C&D materials that have not been segregated for recycling and mixed loads will be placed at the working face of the facility after proper inspections.

Any significant recyclable materials found at the working face will be separated from non-recyclables and will be staged nearby in piles or roll-off containers until transported to the recycling area.

All prohibited materials will be removed from the waste stream and placed into appropriate containers for disposal at a permitted facility. If prohibited materials are considered to be regulated hazardous material, the site supervisor shall contact F.D.E.P. in Fort Myers at 239-332-6975 during normal business hours, other hours, at 850-413-9911 during other hours or via the toll free phone number at 1-800-320-0519.

CG-CD will have equipment on-site for the temporary storage and transport of solid waste, other than construction and demolition debris, to an authorized disposal or recycling facility. If inappropriate solid waste is accepted by the facility, it shall be segregated and disposed of in accordance with Department rules. Putrescible waste shall not be stored for longer than 48 hours (except for weekends and holidays) and non-putrescible waste shall not be stored for longer than 30 days. Refer to Table 4 for a list of equipment with the type and capacity for the temporary storage and transport of waste in accordance with F.A.C. Rule 62-701.730(6).

If any form of hazardous or bio medical waste is encountered, the operator or spotter will notify the site supervisor immediately, the site supervisor will secure the area and materials then notify Florida Department of Environmental Protection about these materials and follow the instructions from the Department.

3.8.1 CCA-Treated Wood Segregation

Calusa Green will recycle or process only clean wood. Painted, treated (preserved), or contaminated wood will not be recycled. Chromated copper arsenate (CCA) pressure treated wood will not be accepted for disposal at the Calusa Green C&D facility. CCA-treated wood is defined in 62-701.200(11) as lumber, timber, or plywood treated with chromated copper arsenate. The term does not include utility poles unless they have been ground, chipped, or shredded.

This CCA-treated Wood Management Plan is designed to minimize the amount of CCA-treated wood that is delivered, or disposed of, at the C&D facility. The criteria below will be used to identify CCA-treated wood so that it may be separated from other C&D wastes. The spotters will make reasonable efforts to separate the following common CCA-treated wood products from the waste stream:

- all C&D wastes that are wood fencing, decking, or pressure treated lumber such as 4"x4" posts);

- wood with a greenish color; and
- other known outdoor use wood products.

The facility gate attendee will reject known segregated loads of CCA-treated wood wastes and will redirect these loads to the neighboring Class I landfill. Spotters or operators that identify any CCA-treated wood by the methods above will remove the wood from the working face of the C&D facility and place it into a reject waste container for proper disposal in the Class I landfill.

Other CCA-treated wood identification methods maybe used as developed. Calusa Green will also follow best management practices recommended in the document Guidance for the Management and Disposal of CCA-Treated Wood, authored by the Florida Center for Solid and Hazardous Waste Management and FDEP.

In accordance with Rule 62-701 F.A.C., CCA-treated wood shall not be incorporated into compost or made into mulch, decorative landscape chips, or any other wood product that is applied as ground cover, soil, or soil amendment. CCA-treated wood shall not be disposed of through open burning or through combustion in an air curtain incinerator.

3.8.2 Wood Recyclable Processing

Recovered wood construction debris separated from the C&D wastes will be fed into a portable tub grinder to process into wood chips. A subcontracted wood grinding firm will be used to provide the tub grinder and trommel screen to process the wood wastes. The wood chips are then transferred to the Organic Processing & Recycling Facility for inclusion in the composting operation.

Land clearing loads (vegetative debris) are initially put through a soil screening machine to recover entrapped top soil. The recovered top soil is stockpiled to be used either as cover material or sold as topsoil. The yard trash and land clearing debris are stockpiled in the recycling area for processing by the portable tub grinder into wood chips. The wood chips are then transferred to the Organic Processing & Recycling Facility for inclusion in the composting operation.

3.8.3 Wood Material Storage

Wood wastes, land clearing debris and yard trash received at the Calusa Green facility will be processed, or removed within 18 months.

3.8.4 Wood Recycling Equipment Selection/Operation

Equipment will be subcontracted by Calusa Green to process any acceptable recyclable product for use in the composing operation. All necessary equipment will be fitted with mufflers or other devices to suppress excessive noise. The following list of equipment, or equivalent, is planned to be on site as needed in the recycling area: a large tub grinder, (Morbark 1300, or equivalent), with 50-70 tons per hour capacity will be periodically

onsite to process wood wastes; trommel screen (830 Powerscreen, or equivalent); and 950 front-end loader with rake.

Another form of recycling is to reclaim fines which can be used as soil. In order to reuse recovered fines or screened materials other than clean debris from the construction and demolition debris waste stream, CG-CD shall demonstrate that this material will be managed and reused in a manner that will pose no significant threat to public health or the environment. In making this demonstration, CG-CD may consider background levels of receiving soils, whether the material will be blended with other materials, and the likelihood that the material may have unlimited distribution or come into direct contact with the public. All fines must be tested by a certified lab per FDEP requirements unless the material which is permanently encapsulated used as initial cover or intermediate cover or subsurface construction at a permitted disposal facility, or used under at least two feet of clean cover material.
Financial assurance instruments will be provided to the Department on an annual basis.

CG-CD shall submit an annual report to the Department on Form 62-701.900(7). This report shall include a summary of the amounts and types of wastes received, the county where materials originate, the amounts and types of wastes disposed of or recycled, and the training that will be provided to operators and spotters. The report shall be submitted no later than April 1st of each year beginning in 2014 and shall cover the preceding calendar year and a copy will be submitted to the District office.

SECTION 4

ENVIRONMENTAL CONTROLS

4.1 Overview

This section presents the basic components of the environmental controls at the CG-CD facility. In this section, a discussion of each of these components is presented, including a discussion of groundwater and surface-water protection controls, and surface water controls, where appropriate. The discussion also includes general facility controls, including intermediate and final cover and access roads. The purpose and function of each of the major environmental control systems are described. Specific preliminary construction and design details are presented in the preliminary construction documents, the closure plan, post-closure plan, and the preliminary design report with attached preliminary drawings.

4.2 Environmental Control Systems

4.2.1 Storm Water

The stormwater system will be designed to have a perimeter earth berm around each of the disposal cells. The berm which will be part of the stormwater management system will be designed to retain the 100-year 72-hour storm event. The stormwater system consists of a wet detention that is hydraulically connected to the perimeter ditch around the C&D landfill. The system will be designed to retain the 100-year 72-hour storm event therefore, no additional treatment is necessary. The stormwater management system shall be maintained monthly. This includes but is not limited to mowing of berms and swales, repairing erosion and washouts areas, and keeping debris from blowing into the retention areas.

4.3 Environmental System Inspection

4.3.1 Storm- Water Control System

Drainage swales, inlets, structures, and the surface-water management areas will be visually inspected monthly or following storm events. The frequency of dry inspections may be modified as appropriate based on progressive experience with the facility drainage system, however, in no case will inspections be less frequent than quarterly. Regardless of the inspection frequency, the system will be inspected following each twenty-five year storm event or greater storm event.

Drainage swales, inlets, and structures will be cleared of obstructing debris as soon as practical after a problem is identified. If channels become filled with an accumulation of debris or soil, cleaning may be required to restore original flow capacity.

4.3.2 Disposal Facility Cover System

Areas that have received intermediate or final cover will be visually inspected periodically for signs of erosion, and depressions due to settlement. Areas where C&D or have been exposed by erosion will be filled and regraded to minimize any subsequent erosion. Significant depressions (1 ft or more) will be filled with soil, compacted, and regraded to promote positive drainage.

4.4 Environmental Maintenance System

In conjunction with the inspection plan, a regular schedule of maintenance will be prepared and implemented. This section refers specifically to the maintenance of the environmental controls installed at the disposal facility. It does not include the regularly scheduled maintenance of facility roads or equipment such as vehicles, scales, or buildings. Maintenance requirements in this section refer primarily to the mechanical equipment associated with environmental controls. In addition, each piece of equipment will be inspected and maintained in accordance with all manufacturers recommendations.

4.4.1 Storm-Water Control System

The storm-water control system does not include mechanical systems that require regular maintenance; however, the system is to be inspected on a monthly basis or following storm events. The swales, drainage structures, inlets, and pipelines will be repaired and maintained as soon as practical following identification of any damage or deficiencies. This includes repair of ditches in the active landfilling areas, on intermediate and final cover and diversion ditches around the disposal facility.

4.4.2 Final Cover Maintenance

Maintenance of the final cover includes all the components of the cap, i.e., intermediate cover and top soil. The periodic inspections will help in assessing the final cover condition to verify the integrity of the cap (e.g., check for cracking of protective cover layer due to differential settlement or erosion, and the condition of the vegetation).

Areas of ponding or substantial differential settlement (1 ft or more) will be checked to determine the cause. If a significant problem with the cover, vegetation, perimeter berms, erosion, or drainage structures is identified, work orders will be issued to correct the problems. Repair work should be initiated as quickly as possible.

The timing of the repairs will be dependent on the nature of the repair. Minor filling to eliminate ponding, and the reseeding and fertilizing disturbed or problem areas will be accomplished with little delay. Major repairs, such as extreme erosion, significant local instability of slopes, or substantial settlement, might require geotechnical evaluation and design prior to implementing final repairs. For some cases, the need for analysis and design of the severely damaged areas will delay repair activities.

If repairs are necessary to the cover system, swales and inlets will be installed to correct

the runoff containment system deficiencies, the repairs will be undertaken prior to start of the wet weather season.

Repair of damages to the cover system resulting from erosion and differential settlement may include backfilling depressions, backfilling soil layers, and re-vegetating disturbed areas. Additional drainage facilities may be provided to prevent future erosion.

4.5 Water Quality Monitoring Plan

The Water Quality Monitoring Plan for the CG-CD facility is presented in the Appendix for Environmental Safe Guards section of the Planned Development Application Package. This plan defines procedures and methods for periodic sampling and testing of groundwater and surface water.

4.6 Disposal Facility Active Area Controls

4.6.1 Fuel, Lubricant, and Solvent Storage

Permanent fuel storage tanks and oils solvents, lubricants and other maintenance materials shall be separated in a secure area from the disposal and sorting areas.

(a) Fuel Tanks

CG-CD will have one fuel tank for off road diesel fuel for its equipment. This tank shall be a DEP approved double wall lined 2,000 gallon tank and will be protected by a concrete barrier.

(b) Used Oil

When oils will be replaced in on-site equipment all used oil will be disposed of into a tank for recycling by a licensed oil recycler.

(c) Lubricants

All lubricants will be stored inside a storage building which will remain locked after normal business hours.

(d) Accidental Spill Process

In the event of a fuel, oil or lubricant spill, the affected area will be cordoned off. Oil dry will be applied and the soil will be dug up. Contaminated substances will be placed in containers for proper disposal at an approved FDEP disposal facility. Other procedures governing releases of oil and petroleum products will be followed as required under applicable federal and state laws.

4.6.2 Litter Control

Maintaining proper litter control is essential to the operation of a disposal facility. Litter control procedures for the disposal facility include:

4.6.2.1 Prevention of Litter on the Working Face

Litter will be minimized as follows:

- Following proper techniques at the working face may prevent a considerable amount of potential litter by reducing the amount of C&D exposed to the wind. Where possible, the exposed face of the cell will be oriented into the wind. This will cause the wind to blow any loose litter back into the working face and helps keep C&D away from the undercarriages of unloading vehicles, which may track the C&D along the public roadway as they exit the facility. The compacted C&D already on the face helps trap litter.

- When top discharging, refuse will be placed as usual and spread downward. When possible, the exposed face of the fill will be oriented away from the wind for the same reasons bottom discharging is oriented into the wind.

- Compacted C&D will be covered as soon as practical to minimize blowing litter.

4.6.2.2 Control of Litter with Litter Fences

Litter that escapes from the working face of the fill area may be controlled by litter fences. Movable/permanent fences may be positioned near the working face as wind and fill operations change. Permanent litter fences may also be placed around the perimeter of the fill areas for additional litter control.

4.6.3 Buffer Maintenance

Litter may occur even with proper litter controls. The following clean-up and maintenance procedures will be followed on a routine basis to maintain the buffer areas:

- Litter clean-up from along fences and buffer vegetation: Litter will be removed from and along litter fences and vegetation at least on operating days. Litter will not be allowed to accumulate in buffer vegetation in order to maintain their effectiveness as a visual screen.

- Clean-up along on-site roads and buffer areas: Litter occurring along on-site roads and in buffers will not be allowed to accumulate. This litter will be cleaned up at least daily on operating days.

- Clean-up at entrance area and entrance road: The site entrance and the road leading to the entrance (0.5 mile each direction) will be inspected daily. These locations will be cleared of litter at least daily on operating days.

- Vegetation will be maintained and supplemented as necessary in order to provide an adequate visual screen.

4.6.4 Dust Control

Air Quality and Dust Emissions

"The Clean Air Act requires EPA to set National Ambient Air Quality Standards for pollutants considered harmful to public health and the environment. The Clean Air Act establishes two types of national air quality standards. Primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings."(www.epa.gov/ebtpages/airairquality.html)

Air particles (dust particles) range in size. The size of contaminants and particles are described in microns where one micron is one-millionth of a meter, therefore there is approximately 25,400 microns in one inch. The human eye can see particles as low as 40 microns. The size of some contaminants and particles are indicated in the table below.

Particle	Particle Size (microns)
Ground Limestone	10 - 1000
Clay	0.1 - 50
Combustion-related Carbon Monoxide from motor vehicles, wood burning, open burning, industrial processes	up to 2.5
Typical Atmospheric Dust	0.001 to 30
Pesticides & Herbicides	0.001

Airborne particles

Airborne particles are solids suspended in the air.

Larger particles - larger then 100 μm

- terminal velocities > 0.5 m/s
- fall out quickly
- includes hail, snow, insect debris, room dust, soot aggregates, coarse sand, gravel, and sea spray

Medium-size particles - in the range 1 to 100 μm

- sedimentation velocities greater than 0.2 m/s
- settles out slowly
- includes fine ice crystals, pollen, hair, large bacteria, windblown dust, fly ash, coal dust, silt, fine sand, and small dust

Small particles - less than 1 μm

- falls slowly, take days to years to settle out of a quiet atmosphere. In a turbulent atmosphere they may never settle out
- can be washed out by water or rain
- includes viruses, small bacteria, metallurgical fumes, soot, oil smoke, tobacco smoke, clay, and fumes

Hazardous Dust Particles

Smaller dust particles can be hazardous for humans. In many jurisdictions dust fractions at specified particle sizes in working environments are required to be measured.

Inhalable Dust

Airborne particles which can enter the nose and mouth during normal breathing are particles of 100 microns diameter or less.

Thoracic Dust

Particles that will pass through the nose and throat, reaching the lungs are of 10 microns in diameter and less. Referred to as PM10 in the USA.

Respirable Dust

Particles that will penetrate into the gas exchange region of the lungs. A hazardous particulate size less than 5 microns. Particle sizes of 2.5 micron (PM2.5) are often used in USA.

http://www.epa.gov/ebtpages/airairquality.html

Dust Impact

According to Charlotte County Airport Authority the prevailing winds are from the west and southwest with speeds ranging from 3 to 9 knots (3.5 to 10.4 mph). This information was also confirmed by the following website:

http://www.sailflow.com/windandwhere.iws?regionID=114&regionProductID=30&timeoffset=0

The proposed development will have a slight impact on air quality from dust in the area surrounding the excavation and haul road up to an approximate half mile. To address this impact, the entrance into the site will be paved with pervious pavement and the haul route around the disposal cells will consist of shell and or crushed concrete.

During the dry season the exposed surface layer of earth allows medium to large size particles to be released into the atmosphere which can be carried by wind to other areas at a rate of 0.2 m/s to 0.5 m/s. To reduce dust emissions the contractor will take extra measures by watering and grading the haul road as needed within the limits of the proposed development to prevent a nuisance.

4.6.5 Vector Control

Maintaining the working face as narrow as possible and eliminating water ponding are the primary safeguards against vector problems.

The operator at Calusa Green shall take adequate steps to control or prevent the propagation, harborage or attraction of flies, rodents or other vectors and to minimize bird problems.

Objectives

Identify the basic regulatory requirements for:

- Birds
- Rodents
- Flies
- Stinging Insects/Bees
- Mosquitoes
- Coyotes, feral cats, and feral hogs
- Raccoons and possums, and other critters at landfills

Bird Deterrents

- Prompt placement of cover is an important part of bird control, but not the only part
- Additional deterrents will be implemented as necessary in order to rid landfill of birds. These deterrents take many form including:

- Noisemakers
- Bird distress sounds
- A grid of monofilament line
- Reflective tape
- Decoys, typically designed to look like an owl or other bird of prey

Rodent Control

- Good cover/ADC can eliminate food sources
- Good housekeeping practices such as organized recyclables storage and frequent removal
- Exclusion from buildings and shelters
- Rodenticides
- Traps

Fly Control

- Frequent pushing, compacting and covering
- Insecticides
- Insecticide-free traps
- Pheromone traps
- Plain sticky traps

Stinging Inspect Control

- Limited storage times for recyclables
- Removal of their nests
- Insecticides
- Professional pest control services

Mosquito Control

- Stack waste tires horizontally to minimize precipitation accumulating inside the tires
- Ensure good drainage throughout site
- Pesticides
- Biological controls such as mosquito fish, invertebrate predators, parasites, and diseases to control mosquito larvae

Controlling Coyotes, Feral Cats and Hogs

- Site fencing including hog wire (exclusion)
- Good compacted earthen cover or ADC's that they can't crawl under or rip through, such as weighted tarps, or coarse C&D may work best
- Noisemaking devices
- Repellants

- Trapping and relocation

Raccoons and Possums

- Control by eliminating food source with good cover/ADC and trapping

Inspection Report Preparation

- On the inspection report, state the standard requirements, evidence observed or vector indicators, describe the location and extent of the bird or vector problem.
- Photos for documentation
- Proposed remedy to observed vector problem

If problems with rodents or insects occur, monitoring and surveys for vectors will be conducted to verify the effectiveness or identify and implement improved vector control practices. Application of insecticides/pesticides will be performed by certified technicians as required.

4.6.6 Noise Control

All equipment powered by internal combustion engines will have mufflers installed and maintained in good repair. Screening berms may be used, when possible, to deflect sound upward.

4.6.7 Nuisance Control

The following nuisance control procedures are designed to ensure landfill operating personnel are familiar and trained in these procedures. They are also designed to minimize the likelihood of conditions that result in a local neighborhood nuisance and to ensure that any actual nuisance conditions are corrected as promptly as possible. The person designated as the primary facility operator will be familiar with and review these procedures at least once yearly. This person will be responsible for their implementation. Facility operations will be designed to minimize any possible nuisance impact on the neighborhood from dust, odor, bird concentrations, blowing debris, visual impacts, storm water runoff, heavy truck traffic, noise, or vermin. Any impacts from the above factors are expected to be almost nonexistent because of the composition of materials handled and the site design.

Storm water runoff is controlled in accordance with the storm water permit. The storm water plan is design to keep all runoff from the disposal area on site in the retention area. The storm water system is design for an event of a 100 year 72 hour storm event. This plan minimizes the effects of storm water runoff from the facility to neighboring properties.

The facility supervisor shall establish procedures for recording complaints about nuisance conditions. The name and address of complainant, the time and specific complaints will

be recorded and specific corrective actions, if appropriate, will also be included in the record.

4.6.8 Odor Control

C&D debris materials are generally inert, and in most cases no odor problems are expected. The facility shall be operated to control objectionable odors in accordance with Rule 62-296.320(2), F.A.C. Should any objectionable odors occur from decaying debris, the debris will be treated with "odor seal" as manufactured by Firefreeze Worldwide, Inc. or Odor Ban, manufactured by Clean Control Corp., or an equivalent. Persistent odors will be treated with the odor control products and covered with 4" clean fill.

Gypsum wallboard waste is about 12% of CG-CD total waste stream. To help reduce the chance of odor, gypsum wallboard is mixed with other construction debris throughout the disposal cell and not disposed all in one area. To further reduce the chance of odor from gypsum wallboard, wallboard is not mixed with lot clearing debris and does not come in contact with ground water. If odor does occur, the treatment procedures above will be followed.

If an off-site objectionable odor occurs, CG-CD will re-evaluate its gypsum wallboard disposal method. Additional treatment of "odor seal" shall be applied as needed to remedy the situation. If gas concentrations cause objectionable odors beyond the landfill property bounty, CG-CD shall implement a routine odor monitoring program to determine the timing and extent of any off-site odors. If the monitoring program confirms the existence of objectionable odors, CG-CD will submit to the FDEP for approval an odor remediation plan for the gas releases.

The plan shall describe the nature and extent of the problem and the proposed remedy. The remedy shall be initiated within 30 days of approval, in compliance with the Odor Remediation Plan pursuant to F.A.C, Rule 62-701.530(3)(b).

SECTION 5

EMERGENCY/CONTINGENCY PLAN

5.1 Overview

This section identifies a set of unplanned circumstances that may occur at the CG-CD facility. If handled correctly, the damage or impacts from these problems can be minimized. This section presents procedures to follow for dealing with problems as they occur. Operating personnel will become familiar with the procedures in order to prevent environmental contamination or damage to disposal facility facilities.

The entrance to the facility allows emergency vehicles immediate access to the disposal facility by police, fire, and ambulance.

The Appendix presents a list of individuals and emergency response agencies to contact. This list will be posted near all telephones on-site to provide "ready" access to emergency response agencies.

This plan is organized by subsection and contains specific plans to address each type of occurrence listed below:

- Fire.
- Accident *or* injury.
- Release of contamination to environment.
- Hazardous waste.
- Uncooperative customers.
- Inclement weather.

5.2 Fire Control

The following procedures will be followed in the event of a fire at the CG-CD facility

- Extinguish small fires with fire extinguisher or smother with soil - DO NOT remain near large fires or explosive materials.
- Determine location, extent, type, and, if possible, cause of fire or explosion.
- Notify on-site personnel and implement safety and fire control procedures.

- Notify Site Manager if the fire cannot be immediately controlled.
- Notify fire department if necessary. Clearly state:
    i. Location of disposal facility,
    ii. Location of fire or explosion in disposal facility,
    iii. Extent of fire or explosion, type of fire or explosion,
    iv. Actions now being taken, and
    v. Injuries.
- Notify rescue squad, if necessary.
- Notify health care facility, if necessary.
- Notify sheriff, if necessary.

5.2.1 "Hot Load" Procedures

In the unlikely event that a "hot load" is not identified before entrance into the facility, the following procedures are implemented:

- The truck carrying the "hot load" is to be directed to discharge the load in the disposal facility but away from the working face.
- The load is to be placed on top of intermediate cover, if available. This will provide sufficient protection between the "hot load" and the underlying C&D;
- Soil will be spread over the load to smother the "hot load".
- The "hot load" will be monitored until there is no evidence of smoldering or high temperatures.

At the end of the day, or when appropriate, the soil covering the "hot load" will be sifted to assure that nothing continues to smolder. If the formerly smoldering material cannot be identified or is suspected of being other than typical C&D waste, the formerly smoldering material and soil in its immediate vicinity will be picked up and handled as Class I waste. Otherwise, the load will be worked into the active working face. Areas where "hot loads" are extinguished may vary depending on the location of the working face, but will always be away from the working face.

5.2.2 Fire Extinguishers and First Aid Kits

Fire extinguishers and first aid kits will be installed in the following locations:

- Office building/scale house.
- Selected on-site vehicles and equipment.

5.3 Accident or Injury

5.3.1 When an Injury Occurs

When an injury occurs, the following procedures will be implemented:

- Shut down equipment in the immediate vicinity as is appropriate.
- Determine extent of injuries (location, seriousness.)
- Apply pressure (compress) on wound to stop severe bleeding.
- If victim is not breathing and has a pulse, administer rescue breathing, if trained.
- If victim has no signs of circulation, administer CPR, if trained.
- DO NOT MOVE VICTIM(S), unless:
  i. Victim is still in danger.
  ii. Victim can move self without great pain.
- Have someone phone rescue squad (911) unless injuries are clearly minor, and provide the following clearly state:
  i. Location.
  ii. Describe injuries.
- Stay with and keep victim(s) warm.
- Notify Site Manager.
- Transport victim(s) to a nearby medical center if:
  i. Injury is not serious, but requires medical attention (e.g., broken fingers, minor burns.)
  ii. Victim(s) can move self without great pain.
- Notify sheriff, if necessary.

- Apply first aid, as described below.

  i. CG-CD Employees - Minor accidents, such as bee stings, minor cuts, and small burns may be treated on site by an employee trained to administer first aid.
  ii. Customers - First aid treatment will not be given to customers who have minor accidents at the site. However, personal information about the victim and a description of the accident will be obtained. The customer will be instructed to go to his/her doctor for examination and treatment, if required.

5.3.2 Procedures after an Accident

The following procedures will be implemented in the event of an accident:

- Accident Investigation - The Site Manager will make a complete investigation of the accident and events leading up to the time of the accident. The investigation will be started as soon as possible after the accident. All witnesses to the accident and persons involved in the accident will be interviewed.

- Determination of Cause - After the facts about the accident have been gathered, the Site Manager will make a determination as to the cause(s) of the accident.

- Filing of Reports - The Site Manager will complete and file the appropriate accident report forms.

- Corrective Steps - After a thorough investigation and determination of the cause(s) of an accident, the Site Manager will take corrective steps so that the same type of accident will not recur. These corrective steps may take the form of repair of faulty equipment, installation of safety equipment, or instruction of personnel in safe operating procedures.

- Discussion with Employees – If it is determined that the cause(s) of the accident were related to employee work habits and that remedial safety instructions would be helpful, a meeting with site employees will be held. The accident and the corrective measures that will be taken will be discussed to prevent another accident. All employees will be instructed in proper safety procedures which should be followed.

- Follow-up - The Site Manager will follow-up the corrective measures to make certain that proper safety precautions are being taken. All unsafe practices will be called to the attention of the employees.

5.4 Release of Contamination to Environment

5.4.1 Response

If contamination is released to the environment, the following procedures will be implemented or comparable procedures as required by federal, state, and local laws and regulations:

- Determine location, extent, type, and, if possible, cause of release (e.g., contaminated surface water, etc.)
- Notify Site Manager and implement safety and emergency response procedures.
- Notify fire department. State clearly:
    i. Location of disposal facility.
    ii. Location of contaminant release.
    iii. Extent of release.
    iv. Type of release.
    v. Actions now being taken
- Notify proper authorities including the Florida "Hot Line".

A list of individuals and emergency response agencies to contact in the event of a release of contamination to the environment is provided in the Appendix.

5.4.2 Follow-Up

Unless the occurrence of a contaminant release is clearly due to very unusual circumstances, the Site Manager will take corrective action to prevent recurrence of the release. The corrective action will be approved by the FDEP.

A report will be filed at the CG-CD facility by the Site Manager in order to have further reference for inquiries by authorities or CG-CD personnel. The report will state:

- Time/date of incident or its discovery.
- Type of release and effects.
- Source.
- Response and effectiveness.
- Agencies contacted.
- Corrective actions planned and scheduled.

5.5 Hazardous or Other Unauthorized Materials

In the event that a substance known to be or suspected of being hazardous is dumped from any vehicle at the C&D disposal facility, the actions described below will be taken immediately.

5.5.1 The Observer

The Observer will take the following actions:

- Immediately report the incident to the Site Manager or their designee.
- Avoid exposure to the substance in question. Stay upwind.
- Observe where the material was dumped, by whom (which vehicle), how much was dumped, whether the container appears sound or is leaking, and what the substance looked and smelled like. Such observations will only be made with extreme caution and with the utmost regard for safety. DO NOT SNIFF OR TOUCH THE SUBSTANCE.
- Ask the individual who dumped the suspect load where the material was obtained.
- Isolate the approximate area of the suspected load before it is covered or mixed with wastes from other vehicles.
- Ask the driver of the vehicle to remain at the dumping point to ensure adequate vehicle identification. If the driver attempts to leave the discharge point, the observer should inform the scale master and/or the Site Manager.

5.5.2 Site Manager

The Site Manager will take the following actions:

- Notify the FDEP.
- Record all pertinent facts regarding vehicle, including but not limited to: name of carting company; license plate number; where the load was obtained, if known; any visible evidence identifying the C&D substance; and quantity and state of the substance (e.g., solid or liquid or if contained or loose.)
- Maintain careful records of other costs incurred as a result of the dumping incident including, but not limited to, security costs in isolating the area, costs of removal (by contract or otherwise) of the suspect material, other costs of intermediate or ultimate treatment and/or disposal, and any other pertinent costs
- Coordinate the removal of the unacceptable C&D with the proper authorities.

Dump trucks and dumpster/trailers will be used for storage and transportation of recyclables and solid waste other than construction and demolition debris which is inadvertently accepted by the facility.

All trucks and dumpsters will be delivered to approved recycling or disposal facilities.

Putrescible waste will not be stored for longer than 48 hours. Non-putrescible waste will not be stored for longer than 30 days.

5.5.3 Undumped Load

Before a C&D load can be discharged (e.g., during inspection), it is discovered to contain, or is suspected of containing hazardous or other unauthorized materials, the same reporting procedures by the Observer and Site Manager described for the discharged loads still apply, except concerning the discharging itself. In addition:

- Inform the driver that his load is unacceptable and why.
- Do not permit the load to be discharged.
- Suggest to the driver that he/she or they phone the FDEP to determine what he should do with the load.

5.6 Uncooperative Customers

The following actions will be implemented if a customer will not obey site rules or cooperate with site personnel.

- If the customer is creating a substantial problem involving their or other's safety, or significantly interfering with disposal operations, the Site Manager will decide what action should be taken.
- If the customer is creating a minor nuisance and does not respond to polite suggestions, the employee will record the vehicle description and license number, and report the incident to the Site Manager or home office management.
- In a case where a customer causes or threatens to cause harm to disposal facility property or personnel, or otherwise interferes with safe operation of the disposal facility, the Site Manager will contact the Sheriff.

5.7 Inclement Weather

5.7.1 Solutions/Alternatives

The following will be implemented during wet weather conditions.

Problem	Solution
1.) Saturated Unloading Area	1.) Stockpile well-drained soil and apply as necessary
	2.) Keep compactors off area; use dozers on unloading area. Unload and push refuses perpendicular to the area.
	3.) Grade unloading area slightly to permit runoff.
2.) Mud Carried onto Access/ Public Roads Cover is Wet/Unworkable	1.) Carefully scrape mud from pavement.
	2.) Provide clean rock dressing to internal access roads. If internal access roads are properly maintained, then dirt on the tires of disposal vehicles will be thrown off prior to reaching public access roads.
3.) Use Alternate cover approved by permit	1.) Maintain compacted, sloped stockpiles.
	2.) Use alternate cover approved by permit

5.7.2 Preparation for Inclement Weather

The following preparations will be made for inclement weather:

- Wet weather areas will be prepared during periods of dry soil conditions. The wet weather area will be constructed close to an all weather road. Work on the wet weather area will be performed at various times when personnel and equipment are not required for other higher priority assignments.

- Access roads around the site will be maintained as necessary. These roads will be maintained in a serviceable condition with the use of the available equipment on site, such as grader, water truck, dozer and loader. Major repairs will be scheduled, if required.

- Drainage structures, ditches, and sediment control will be checked to ensure they are in good repair and free of significant debris prior to anticipated heavy rains.

- Temporary (Operations Area) Drainage Control- road materials such as crushed concrete, roofing tiles, and/or rock/sand mixture, will be stockpiled for use in an emergency situation.

- When periods of high wind are predicted, litter fencing will be moved to close proximity of the working face and in the expected downwind direction. Cover may be required frequently during the day.

5.7.3 Preparation for Hurricane

When a warning is issued that a hurricane is predicted to strike in the vicinity of the CG-CD facility, facility personnel shall secure all objects that might become flying objects. All heavy equipment shall be filled with fuel and moved to high ground where it will be available for use during the recovery phase after the hurricane has passed. All personnel shall closely follow developments of the hurricane. The first priority shall be the security of personnel and their families.

SECTION 6

SAFETY PLAN

6.1 Emergency Procedures

- Posting Procedures - All emergency procedures will be updated as appropriate and after each emergency, as required. All emergency procedures will be posted in the Site Manager's office, in conspicuous places at the site, and at the gate house.

- The name, location, and telephone number of the nearest doctors, medical treatment facilities, and ambulance services (contained in the Appendix of this plan) will be posted in the Site Manager's office and all occupied buildings (i.e., maintenance building, scale house and office.)

- Instruction on Procedure- All new personnel will be instructed on the emergency procedures used at the CG-CD facility. All employees will be informed of any changes in emergency procedures.

- Responsibility of Employee - It is the responsibility of every employee to know and remember their role in each emergency procedure at the site.

6.2 General Safety Practices

- Knowledge of Procedures - All employees at the CG-CD facility will know the proper procedures for reporting accidents, injuries, and fires.

- Posting of Information - Roadway limits within the disposal facility footprint will be clearly posted as necessary. Site speed limits will be clearly posted on the main access road. Direction of travel and location of curves will also be posted. The location of disposal areas will be clearly indicated.

- Site User Rules - Site user rules will be posted at the entrance to the CG-CD facility. Employees will watch for violations. Employees will explain rules to violators, stressing that the rules are for their protection. As a last resort, the Site Manager will notify the County Sheriff's Office for further action.

- Discharging Loads - For safe operations, the discharging area will be only slightly sloped (for drainage) at all times and equipment maintained in good repair.

- Safety Devices - Proper safety devices, such as roll-over protective cabs, will be installed on all equipment and kept in good repair.

- Fire Extinguishers - Fire extinguishers will be provided in buildings and on equipment. Each extinguisher will be appropriate for the types of fires likely and they should be checked or serviced as appropriate. Discharged (even partially) fire extinguishers will be removed and replaced with fully charged units.

- First Aid Kits - First aid kits will be maintained in the main office building and in select site vehicles. An inventory of the first aid supplies should be maintained in order to re-supply the first aid kits when items used.

- Safety Meetings - Safety meetings will be regularly scheduled. Situations that can cause accidents and ways to prevent them will be discussed. Also, the effectiveness of corrective actions following accidents at the site will be discussed.

- NO SMOKING will be allowed within the disposal area or near fuel storage facilities.

6.3 Safety Equipment

Certain safety equipment is specified for equipment operator protection. It is the responsibility of every employee to ensure that their safety equipment is in good condition. All employees are to use their safety equipment at appropriate times. The safety equipment recommended for equipment operators is listed in Table 5.

6.4 Site User Rules

The following set of rules will be observed at the disposal facility.

- No Smoking - Users will not smoke on the site.

- Children and Pets in Vehicles - Individuals (children and pets) not involved in unloading refuse will remain in the vehicle.

- Persons Unloading to Remain near Vehicle - Persons unloading will remain within 10 ft of their vehicle at all times.

- No one will be allowed to ride on the outside of a vehicle while on site.

- Discharge Behind Vehicle - Whenever possible, C&D will be discharged immediately behind the unloading vehicle.

- Unloading - No unloading by non-mechanized trucks or passenger cars is to be done using rapid acceleration or deceleration of the vehicle.

- Keep Tools in Vehicle - Tools, removable tailgates, sideboards, wheelbarrows, ladders, and tarps will be kept in, on, or under the vehicles being unloaded to prevent damage to other vehicles or site equipment.

- Speed Limit - The posted speed limit within the CG-CD facility will be enforced. Operating personnel will direct users to further reduce their speed when justified by site conditions.

- No Scavenging - Scavenging is not permitted at the CG-CD facility site.

- No Shooting - Firearms are not permitted at the CG-CD facility site.

- No Explosives - Explosives are not permitted at the CG-CD facility site.

SECTION 7

FINAL CLOSURE

7.1 Introduction

A trained site supervisor/operator will be responsible for daily inspections of the site to insure that drainage, material disposal and soil cover placement are being properly accomplished. CG-CD will take corrective action immediately to address any problems found during operational inspections.

CG-CD operators will have received operating certificates and will be on site to supervise the on going construction methods.

At least 90 days prior to the date when wastes will no longer be accepted, CG-CD will notify the FDEP of the anticipated date of closure and shall submit an updated closure plan that reflect any changes in the actual operational conditions at the facility.

The CG-CD facility will be closed as sections of the disposal facility reach final design elevations. The final cover system components are described in Section 7.2. Seeding and planting requirements are described in Section 7.3. Erosion minimization activities are described in Section 7.4. The final cover drainage system is described in Section 7.5.

7.2 Final Cover System Components

The cross section of the final cover system on the top slopes of the disposal facility is shown the preliminary site drawings and consists of, from top to bottom:

- A 0.5-ft thick vegetative layer.
- A 1.5-ft thick vegetative support layer.

7.3 Seeding and Planting

The final vegetative cover shall be placed on each disposal unit with 180 days after it has reached its final design height of the disposal cell. The final vegetative cover will be compacted as necessary to eliminated ponding, promote drainage, and minimize erosion. Grass will be propagated by hydro seeding, sodding or by other equivalent method in order to promote vegetative growth on the slopes of the final cover as construction of the cover progresses.

An initial watering schedule will be developed at the time of closure, and will be dependent on whether the disposal facility is closed in the dry season or the rainy season. The grass will be watered and fertilized, as necessary, to ensure continued growth.

7.4 Erosion Minimization

The sided slopes of all above-grade disposal units shall be no greater than three feet horizontal to one foot vertical rise. Erosion of the final cover system will be minimized by interception of storm-water runoff at benches and final cover tiers. The tiers will intercept sheet flow from the final cover system and direct the collected surface-water runoff to the stormwater management system.

A vegetative cover will be placed on the final cover slopes of the disposal facility as described in Section 7.3. This vegetative cover will minimize erosion and reduce soil loss from the final cover system. The final cover system will be periodically inspected and erosion damage or vegetative stress will be repaired before significant erosion has a chance to develop.

7.5 Drainage

The proposed disposal cells will use the tiers at different elevations to intercept the surface water runoff from higher elevations and direct the water to the perimeter detention areas around the disposal facility.

As required, the swales, culverts, and perimeter ditches will be maintained on a regular basis. Significant sediment and debris, which has accumulated in the swales, culverts, and perimeter ditches, will be removed to facilitate flow and prevent overflow. Significant sediment and debris is considered any amount that impedes flow in the swale or any buildup greater than 0.5 feet.

7.6 Certification of Closure Construction Completion

The CG-CD shall provide a certification of closure construction completion to the Department within 30 days after closing, covering, and seeding the disposal unit and a copy will be submitted to the South District Office. CG-CD shall also provide a final survey report done by a professional surveyor, in accordance with F.A.C. Rule 62-701.730(9)(d). Upon receipt of the certification of closure construction completion documents the Department shall within 30 days acknowledge by letter that notice of termination of operations and closing of the facility has been received. The date of this letter shall be the official date of landfill closing for the purpose of determining the long-term care period, in accordance with F.A.C Rule 62-701.730(9)(e).

SECTION 8

RECORDKEEPING

8.1 Overview

An operating record will be maintained at the site including all records, reports, analytical results, demonstrations and notifications; any construction, operation, and closure permits, including all modifications to those permits, issued by the FDEP, along with the engineering drawings and supporting information; as well as training verifications. This record will be kept with the operation plan at or near the disposal facility, or in an alternate location designated in the operating permit which is readily accessible to CG-CD operators. The operating record will be available for inspection at reasonable times by the FDEP and maintained for the design period of the disposal facility.

As part of the operating record, C&D disposal records will be maintained. These C&D records will indicate the amount of each type of C&D received each day. Reports, summarizing the C&D records will be compiled monthly and copies will be provided to FDEP quarterly. The records will be kept with the operation plan at the CG-CD facility and will be available for inspection at reasonable times by the FDEP. These records will be kept for the design period of the CG-CD facility. An annual report on Form 62-701.900(7) shall be submitted to FDEP Tallahassee office and a copy will be submitted to the South District Office.

Other records and reports required under applicable federal and state environmental statutes and regulations will be kept in accordance with the procedures set forth in those laws.

Calusa Green, LLC
Application for Planned Development Rezoning

Operation Plan – Biosolids Composting Facility

SECTION 1

INTRODUCTION

1.1 Terms of Reference

This Operation Plan has been prepared by Southwest Engineering & Design, Inc (SED) on behalf of Calusa Green, LC for a Biosolids Composting Facility which shall be referenced in this document as (CG-BCF) who will own and operate the facility. The location of the CG-BCF facility is shown in Figure 1. The Operation Plan for CG-BCF has been prepared to comply with the requirements of Rule 62-640 FAC. of the Florida Administrative Code (FAC).

1.2 Purpose and Scope of the Operation Plan

The Operation Plan provides a detailed plan for the performance of the daily operations for the CG-BCF, including contingency operations, as required by, SEC. 1-12-109(a)(6) of the County Code and Section 62-640 of the FAC. The primary purpose of the Operation Plan is to describe the framework to operate and manage the CG-BCF so that it is operated and maintained in a condition that protects the public health and the environment. All activities at the facility shall be performed in accordance with this plan and 62-640 FAC. The plan shall be updated as operations change but no less frequently than upon renewal of the permit. The Department shall be notified of changes to the plan other than those required for routine maintenance.

1.3 Description of Operations

Calusa Green intends to provide composting of yard/green waste initially and then under a FDEP Wastewater Treatment Facility Permit introduce Biosolids into the compost with the intent of producing Class AA compost for distribution to commercial users within Florida and for use as cover material at the landfill to promote vegetative cover. Covered open air structures will be used for the biosolids active composting.

1.4 Site Conditions

The CG-BCF is located in the Operations Area internal to the property boundary to provide adequate buffers. This area is within the master stormwater system of the Calusa Green project area and is close to the leachate collection/treatment site. Access is controlled by the main gated entrance to Calusa Green.

SECTION 2

ENVIRONMENTAL CONTROLS

Environmental

The proposed composting facility will be sited on a paved working surface with perimeter stormwater collection and therefore will not have any adverse environmental effects.

Minimal odors will be generated from the proposed biosolids receiving and active composting areas. Noise, odors, and aerosol drift from the facility are reduced by a buffer of a minimum 800 feet or more to Calusa Green's property line. In addition, the access road to the composting facility is paved; therefore, dust generated from truck traffic will be minimal or non-existent. There are no existing or proposed residential areas in the properties surrounding the Landfill property; therefore, noise, odors, dust, if any, and lighting, if any, will not affect the public or neighboring properties. Further, public accessibility to the facility is controlled. Biosolids and product compost sampling will be done to meet the requirements of Rule 62-640 FAC.

2.1 Composting Active Area Controls

2.1.1 Littler Control

Maintaining proper litter control is an essential part of keeping complaints to a minimum. When working in areas below natural grade, litter is less likely to escape than when working above natural grade. Vegetative material brought to the compost facility may have occasional litter in the piles waiting to be shredded for compost. Movable/permanent fences may be positioned near the stockpile as necessary. Permanent litter fences are also be placed around the perimeter of the Calusa Green site for additional litter control.

2.1.2 Buffer Maintenance

Litter may occur even with proper litter controls. The following clean-up and maintenance procedures will be followed on a routine basis to maintain the buffer areas of the Calusa Green facility:

- Litter clean-up from along fences and buffer vegetation: Litter will be removed from and along litter fences and vegetation as necessary. Litter will not be allowed to accumulate in buffer vegetation.

- Clean-up along on-site roads and buffer areas: Litter occurring along on-site roads and in buffers will not be allowed to accumulate. This litter will be cleaned up as necessary.

- Clean-up at entrance area and entrance road: The site entrance and the road leading to the entrance (1/4 mile each direction) will be inspected daily. These locations will be cleared of litter as necessary.

- Vegetation will be maintained and supplemented as necessary in order to provide an adequate visual screen.

2.1.3 Dust Control

- ***Air Quality and Dust Emissions***

"The Clean Air Act requires EPA to set National Ambient Air Quality Standards for pollutants considered harmful to public health and the environment. The Clean Air Act establishes two types of national air quality standards. Primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings."(www.epa.gov/ebtpages/airairquality.html)

- ***Airborne particles***

Airborne particles are solids suspended in the air. Larger particles - larger then 100 μm are defined as follows:

- terminal velocities > 0.5 m/s
- fall out quickly
- includes hail, snow, insect debris, room dust, soot aggregates, coarse sand, gravel, and sea spray

Medium-size particles - in the range 1 to 100 μm are defined as follows:

- sedimentation velocities greater than 0.2 m/s
- settles out slowly
- includes fine ice crystals, pollen, hair, large bacteria, windblown dust, fly ash, coal dust, silt, fine sand, and small dust

Small particles - less than 1 μm are defined as follows:

- falls slowly, take days to years to settle out of a quiet atmosphere. In a turbulent atmosphere they may never settle out
- can be washed out by water or rain
- includes viruses, small bacteria, metallurgical fumes, soot, oil smoke, tobacco smoke, clay, and fumes

- ***Dust Impact***

According to Charlotte County Airport Authority the prevailing winds are from the west and southwest with speeds ranging from 3 to 9 knots (3.5 to 10.4 mph). This information was also confirmed by the following website:

http://www.sailflow.com/windandwhere.iws?regionID=114&regionProductID=30&timeoffset=0

The proposed CG-BCF will have minimal impact on air quality in the area surrounding the compost facility. The entrance into the site and the working surface will be paved. The compost material will be wetted to maintain the moisture content to promote composting.

To reduce dust emissions the contractor will take extra measures by watering exposed soil within the limits of the proposed development to prevent a nuisance.

2.1.4 Vector Control

Vectors, birds, and insects will be minimized. Keeping the compost process activated by periodic turning, limiting stockpile periods and eliminating ponding water are the primary safeguards against vector and insect problems. These controls also deter foraging by birds.

The operator of the CG-BCF shall take adequate steps to control or prevent the propagation, harborage or attraction of flies, rodents or other vectors and to minimize bird problems.

Objectives

Identify the basic regulatory requirements for:

- Birds
- Rodents
- Flies
- Stinging Insects/Bees
- Mosquitoes
- Coyotes, feral cats, and feral hogs
- Raccoons and possums, and other critters at landfills

Bird Deterrents

- Removal of any garbage that may be introduced with the vegetative debris received
- Additional deterrents will be implemented as necessary in order to rid CG-BCF of birds. These deterrents take many forms including:

- Noisemakers
- Bird distress sounds
- Reflective tape
- Decoys, typically designed to look like an owl or other bird of prey

Rodent Control

- Removal of any garbage that may be introduced with the vegetative debris received
- Exclusion from buildings and shelters
- Rodenticides
- Traps

Fly Control

- Frequent mixing of compost
- Insecticides
- Insecticide-free traps
- Pheromone traps
- Plain sticky traps

Stinging Inspect Control

- Removal of their nests
- Insecticides
- Professional pest control services

Mosquito Control

- Using shredded vegetation to absorb any standing puddles
- Ensure good drainage throughout site
- Pesticides

Controlling Coyotes, Feral Cats and Hogs

- Site fencing including hog wire (exclusion) at the perimeter or the Calusa Green site.
- Noisemaking devices
- Repellants
- Trapping and relocation

Raccoons, Possums and other critters

- Removal of any garbage that may be introduced with the vegetative debris received

Inspection Report Preparation

- On the inspection report, state the standard requirements, evidence observed or vector indicators, describe the location and extent of the bird or vector problem.
- Photos for documentation

- Proposed remedy to observed vector problem

If problems with vectors, birds or insects occur, monitoring and surveys for vectors will be conducted to verify the effectiveness or identify and implement improved vector control practices.

2.1.5 Noise Control

The location of the CG-BCF is in the center of the overall project site and exceeds the setback distances required. All equipment powered by internal combustion engines will have mufflers installed and maintained in good repair. Screening berms will also be used, if necessary, to deflect sound upward.

2.2 Stormwater Management:

The surface water management system will be designed and constructed so that surface water runoff from the CG-BCF is routed to dry pretreatment swales/ditches for conveyance and pretreatment before discharge into the wet retention areas/borrow pits.

The working surface for the active composting area will be covered and bermed to prevent any leachate from leaving the active compost area. Any leachate experienced will be re-introduced into the active compost windrows.

Drainage swales, inlets, structures, and the surface-water management areas will be visually inspected monthly or following storm events. The frequency of inspections may be modified as appropriate based on progressive experience with the landfill drainage system, however, in no case will inspections be less frequent than quarterly. Regardless of the inspection frequency, the system will be inspected following each 25-year or greater storm event.

Drainage swales, inlets, and structures will be cleared of obstructing debris as soon as practical after a problem is identified. If channels become filled with an accumulation of debris or soil, cleaning may be required to restore original flow capacity.

2.3 Groundwater Monitoring:

The solid waste disposal area wells will be used as background wells for the composting facility. A down-gradient well will be utilized in the final groundwater sampling/reporting program that will confirm the final number, location, timing and analytical parameters required during the permit issuance.

SECTION 3

OPERATIONAL CONTROLS

3.1 Treatment Goals

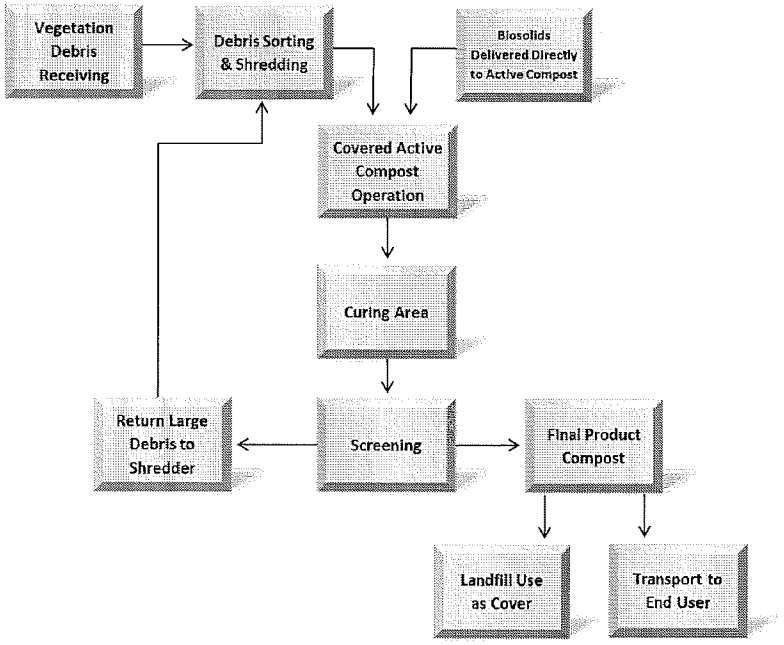
Final compost product generated from the composting facility will meet the risk-based pollutant limits specified in the US EPA's 40 CFR Part 503 and Rule 62-640 FAC as well as comply with the operational standards to reduce disease-causing organisms (pathogens) and to reduce the attraction of vectors (e.g. flies, mosquitoes, and other potential disease-carrying organisms). In addition, the general requirements; management practices; and the monitoring, recordkeeping, and reporting requirements of 40 CFR Part 503 and 62-640 FAC will also be met.

3.2 Facility Components

Components of the compost facility are as follows:

- Vegetative debris receiving and shredding
- Active compost operation (under cover for biosolids)
- Curing area
- Screening of cured compost
- Final compost staging for delivery

A schematic of the process flow is shown below:



3.3 Biosolids Receiving and Active Composting Area

The biosolids will be received directly into the compost buildings, either directly to a windrow in formation, or to a receiving area that will provide sufficient area for the one day of storage. The area in which the active composting will occur with the building is contained by entry/exit containment bumps, containment walls running the length of each side of the building interior to the building steel, as well as an asphalt working surface. The compost buildings, utilized for shielding the active composting area from rain, are designed with 35 foot interior clearance and open sides to 20 feet above grade to allow for ventilation and additional drying enhancement.

3.4 Leachate Collection

It is not anticipated that the active compost phase, under roof, will generate any leachate. A properly formed and mixed windrow will provide for little/no leachate generation as the total solids content levels at the start of the active compost phase should be at a target of 40-45%. Throughout the active phase, given the heat of the composting process, the total solids content increases to a target of 60-70%, which will not include free water that would release as leachate in any meaningful manner.

3.5 Facility Operation

The Calusa Green compost facility will initially be operating and staffed on a 6 day per week schedule, with respect to material receiving, processing and distribution and this may be adjusted from time to time by the facility manager to meet the demands of inbound material customer needs, processing needs and compost marketing cycles. The compost site is not open to the public and is controlled via a gate at the entrance to the landfill property.

Calusa Green will control and verify the type of waste materials received by requiring all deliveries to check in at the weight scale/office location prior to unloading. At this point, all loads will be visually checked both by reviewing manifest documentation (primarily related to the biosolids deliveries), as well as visual observation (primarily related to bulking agent deliveries), to confirm suitability prior to weighing in and unloading. At no time will materials be accepted when the compost facility is not staffed.

Once notification to FDEP is made in accordance with 62-640.880 relative to any merchant biosolids source and confirmation of material acceptability is achieved, biosolids deliveries will be made directly into the compost windrow/building area either directly to a newly forming windrow location, or to a biosolids staging area for later loading into a windrow. Bulking agent deliveries will be made directly to the bulking agent storage area. All deliveries of biosolids and bulking agents will be required to weigh in and out, with net delivered tonnage recorded and other hauling records required by 62-640.880(4) FAC to be maintained.

3.6 Summary of Sampling and Monitoring Points

Incoming biosolids will be sampled and analyzed as required. Original copies of all analysis reports will be submitted with monthly and annual facility reports.

Product Compost sampling and analysis to monitor for pathogen content and metals as required by 62-640.650 FAC will be conducted once per month.

3.7 Record Keeping

The composing facility monitoring and maintenance record will be maintained by the facility operator. Monitoring will be recorded on a monitoring log, which will include the date and time of the observations, name of individual performing observations, description and observations of equipment and facilities monitored, and the date and time remedial actions or repairs are implemented, as warranted. The compost facility and equipment will be maintained in good working order to prevent curtailment of operations because of equipment failure. All maintenance done on equipment will be recorded in the maintenance log. All records required by Rule 62-640.650 FAC will be kept for 5 years from the date recorded.

3.8 Reporting Requirements

Monitoring at this facility will be conducted as mentioned in Section 6.1.1 to meet 62-640.650(1) FAC and reported to the FDEP with the facility's residual monitoring reports, as required. An annual summary documenting the extent of application of the final compost, if they are land applied, will be submitted in accordance with Rule 62-640-650(3)(b) FAC. A Monthly Distribution and Marketing Report will be submitted in accordance with Rule 62-640.650(3)(c) FAC. Copies of the laboratory analytical reports will be submitted with all monitoring results to the FL DEP.