CITRUS COUNTY CENTRAL LANDFILL
CLASS I LANDFILL
COMPILED OPERATION PLAN

Prepared for:

Citrus County Board of County Commissioners

3600 W. Sovereign Path, Suite 267

Lecanto, Florida 34461

Prepared by:

Jones Edmunds

730 NE Waldo Road

Gainesville, Florida 32641

Certificate of Engineering Authorization #1841

Jones Edmunds Project No.: 03860-059-01

June 28, 2018

PURPOSE

This document serves as a compiled Operation Plan for the Citrus County Central Landfill. This compiled Operation Plan includes modifications to sections of the April 18, 2016 Operation Plan prepared by SCS Engineers. The revisions to the April 2016 Operation Plan were made to reflect modifications to the active gas collection and control system (GCCS), the passive gas control system, and the groundwater monitoring plan as submitted in a minor permit modification application to the Florida Department of Environmental Protection (FDEP). Jones Edmunds submitted the minor permit modification application on May 1, 2018, to FDEP.

This compiled Operation Plan includes the 2016 Operation Plan (prepared by SCS Engineers) in Appendix A, the 2018 Supplemental Operation Plan (prepared by Jones Edmunds) in Appendix B, and the Water Quality Monitoring Plan in Appendix C.

The following sections of the April 18, 2016 Operation Plan are replaced as noted below:

- Section K.9, Landfill Gas Monitoring, delete in entirety and replace with Section K.9 in the Supplemental Operation Plan dated April 2018 included in Appendix B.
- Appendix G, LFG Monitoring Form, delete in entirety and replace with the form provided in the Supplemental Operation Plan dated April 2018 included in Appendix B.
- Appendix I, Groundwater Monitoring Plan, delete in entirety and replace with the Water Quality Monitoring Plan dated June 28, 2018 included in Appendix C.
- Figure 9-1, Gas Monitoring Probe Locations, delete in entirety and replace with Figure 9.1, Monitoring Network provided in the Supplemental Operation Plan dated April 2018 included in Appendix B.

LIST OF APPENDICES

Appendix A Operation Plan dated April 18, 2016 (Prepared by SCS)

Appendix B Supplemental Operation Plan dated April 2018 (Prepared by Jones Edmunds)

Appendix C Water Quality Monitoring Plan dated June 28, 2018 (Prepared by Jones Edmunds)

Appendix A

Operation Plan dated April 18, 2016
(Prepared by SCS)

SCS ENGINEERS

Citrus County
Class I Central Landfill
Operation Plan

Citrus County, Florida

Prepared for:

Citrus County
Board of County Commissioners
P.O. Box 340
Lecanto, Florida 34460

Prepared by:

SCS ENGINEERS
4041 Park Oaks Blvd, Suite 100
Tampa, FL 33610
(813) 621-0080

File No. 09210021.26
April 18, 2016

Citrus County
Class I Central Landfill
Operation Plan

Citrus County, Florida

Prepared for:

Citrus County
Board of County Commissioners
P.O. Box 340
Lecanto, Florida 34460

Prepared by:

SCS ENGINEERS
4041 Park Oaks Blvd, Suite 100
Tampa, FL 33610
(813) 621-0080

Charles E. Hilton, Jr. P.E.
PE 46916 6/22/16

File No. 09199033.24
April 18, 2016

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EXECUTIVE SUMMARY

The purpose of this document is to provide a consolidated manual of operating procedures for the Citrus County Central Landfill. In every case, if there is a conflict between any F.A.C rule and this Operation Plan, the rule will prevail. This operations plan supersedes previous operations plans submitted to the Florida Department of Environmental Protection (FDEP) for this facility. This plan has been prepared and organized in accordance with Florida Rule 62-701, Florida Administrative Code (F.A.C.) and Part K of FDEP's permit application form for solid waste management facilities (Part K).

The Citrus County Landfill is owned and operated by the Citrus County Board of County Commissioners. Vehicles access the Citrus County Landfill via State Road 44. The County disposes of its solid waste in an 80-acre lined area that is subdivided into smaller areas referred to as phases. A site plan of the Citrus County landfill, including the current active area, Phase 3, is included as Figure 1-1.

All waste arriving at the Citrus County landfill is weighed at the scale house. The scale house attendant directs vehicles carrying waste to the areas where the wastes are unloaded. Commercial customers are directed to the landfill if they are disposing of Class I waste or to the materials management area for all other materials. The materials management area provides temporary storage for recyclable materials such as tires, oil, fluorescent bulbs, metal, and yard waste. The County refers to this area as the Citizen's Service Area. In addition, the materials management area provides a facility for citizens to unload their solid waste. Hazardous wastes are temporarily placed in the Hazardous Waste Collection and Storage Facility. Locations for the Citizen's Service Area, Citizens' Solid Waste Drop-Off Facility and the Hazardous Waste Collection and Storage Facility are shown on Figure 1-1.

A ramp to and from the filling area provides access to the working face of the landfill from the west side of the Class I landfill via the central access road. Waste is spread over the working face area of the landfill, placed in 2-foot layers, compacted by a compactor, and covered at the end of the working day.

Leachate generated from the landfill is either pumped to the leachate storage facility prior to being pumped to the Meadowcrest Waste Water Treatment Plant (WWTP) or used as irrigation on the Phases 2 and 3 (a maximum of 4,633 gal per day can be recirculated in those cells during non-rainfall events). The leachate storage facility is located on the west side of the Class I Landfill. If the leachate generated cannot be treated at the Meadowcrest WWTP, the leachate is transported to one of several Citrus County wastewater treatment plants.

Stormwater run-off is directed away from open areas on the active face of the landfill by a means of berms and swales along the side slopes of the landfill. The swales outside the disposal area divert stormwater into the perimeter ditches that are located outside the lined berms and, therefore, isolated from the leachate and solid waste. Within the landfill disposal area, stormwater run-off that has not contacted waste or mixed with leachate is pumped to the

stormwater management system. Stormwater run-off which contacts waste or mixes with leachate is treated as leachate.

Based on field observations by FDEP, the County was directed to address three issues referred to as "Action Items". These include drainage atop the 7 acre closure, standing water in the active operations area, and secondary liner zone leachate exceedances. The action plans are included herein in Appendix K.

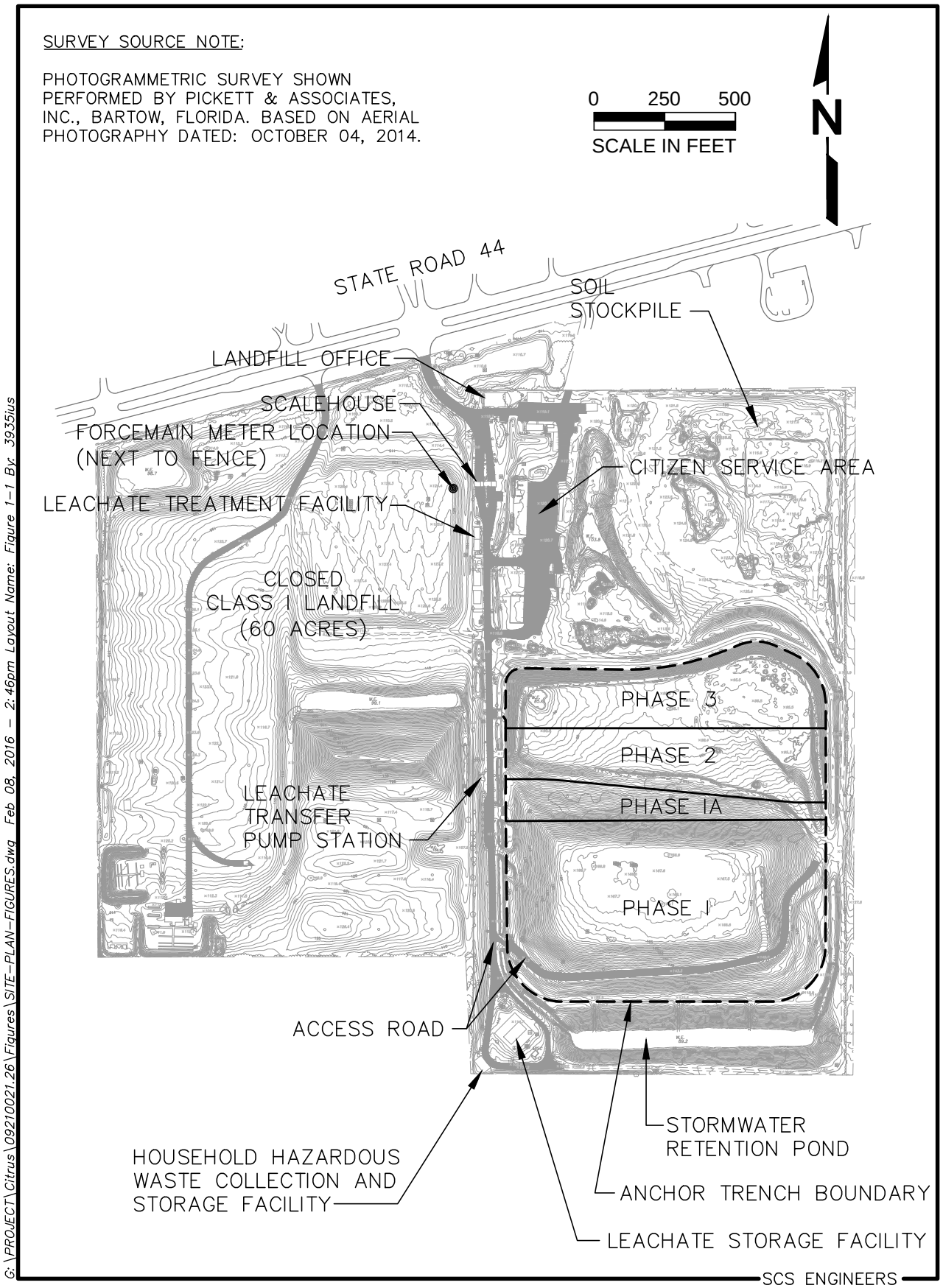


Figure 1–1. Site Plan, Citrus County Central Landfill

Section K

LANDFILL OPERATIONS AND MAINTENANCE (RULE 62-701.500(2), F.A.C.)

K.1 TRAINING AND CERTIFICATION OF OPERATORS AND SPOTTERS RULE 62-701.500(1), F.A.C.)

In accordance with Rule 62-701.500(1), F.A.C., at least one trained operator will be on duty at the Citrus County Central Landfill whenever waste is received at the facility. At least one trained spotter will be present at each landfill active face when waste is received. Operator and spotter training will comply with Rule 62-701.320(15), F.A.C. Operators at the Citrus County Central Landfill shall participate in at least 24 hours of initial training. Every three years landfill operators shall participate in continuing education courses totaling 16 hours. All Operators training will consist of courses conducted by the University of Florida TREEO Center, or other courses presented by other providers that have been approved by the Florida Solid Waste Management Training Committee (SWMTC).

In accordance with Rule 62-701.320.15, F.A.C., Spotters shall participate in 8 hours of initial training that shall include Spotting at Construction and Demolition Sites, Landfills, and Transfer Stations (SWMTC 8 hours) and/or Waste Screening and Identification for Landfill Operators and Spotters (SWMTC 8 hours) conducted by the University of Florida TREEO Center or other SWMTC approved providers. Every three years Spotters shall participate in continuing education courses totaling four hours. The compactor operator will be responsible for evaluating each load visually as it is dumped and serve as the spotter at the working face of the facility. Refer to Appendix E for the Training Certificates.

K.2 LANDFILL OPERATIONS PLAN PROCEDURES

K.2.a DESIGNATING RESPONSIBLE OPERATING AND MAINTENANCE PERSONNEL (Rule 62-701.500(2) (a), F.A.C.)

The persons directly responsible for major components of the landfill follow:

Component	Responsible Party
Operations	Field Crew Leader, Sammy Walker
Maintenance	Maintenance Supervisor, Aaron Lake
Permitting Requirements	Solid Waste Management Division Director, Henry Norris
Water QualityTesting	Solid Waste Management Division Director, Henry Norris
Hazardous Waste Operations	Hazardous Waste Coordinator, Dan Sherlock

The landfill Field Crew Leader has overall responsibility for the operation of the landfill. The landfill Field Crew Leader is responsible for the day-to-day implementation of the Operations Plan and, along with the Solid Waste Management Division (SWMD) Director, is responsible for environmentally safe operations in accordance with state and federal regulations.

K.2.b EMERGENCY PREPAREDNESS AND RESPONSE AS REQUIRED IN(Rule 62-701.500(2)(b), F.A.C.)

The Emergency Incidents and Contingency Plan, in accordance with 62-701.320(16), is included in Appendix B of this Operations Plan. The plan for the facility addresses the following five potential emergencies:

- Equipment failure
- Unusual operating conditions resulting from poor weather conditions
- Accidents
- Fire
- Unavailable landfill capacity

K.2.b.1 Emergency Incidents Plan

In accordance with rule 62-701.320(16), F.A.C., Citrus County has developed a site specific Emergency Incidents and Contingency Plan which is included in Appendix B. This plan includes additional detail for responding to emergency incidents at the Central Landfill.

K.2.b.2 Equipment Failure

Sufficient back-up equipment will be provided on-site for equipment breakdowns and for downtime because of normal routine equipment maintenance. In the case of a major equipment failure, the following procedures will be followed:

- Maintain duplicate equipment capability
- Contact contractors and rental equipment dealers as pre-arranged, to furnish equipment on short-term notice (within 24 hours)

In the event of equipment failure, the Field Crew Leader will contact the Landfill Maintenance Supervisor Within 24 hours of notification by the Landfill Maintenance Supervisor the equipment will be replaced with back-up capability if necessary, or repaired and placed back in operating condition.

All equipment maintenance will either be performed by Citrus County or will be contracted by Citrus County to a maintenance contractor.

Redundant pumping systems are provided for both the leachate and stormwater transfer system.

An emergency power generator is available for stormwater and leachate facilities.

K.2.b.3 Poor Weather Conditions and Natural Disasters

Unusual operating conditions could result from excessive rainfall and electrical storms. The type and volume of materials to be disposed of after a hurricane or excessive storms will change normal landfill operations. During extremely high wind conditions or electrical storms, disposal

operations will be temporarily suspended to protect the workers. Disposal operations will be suspended immediately before and during a hurricane or tornado.

During rainy weather, access to the working face along on-site roads must be maintained. It may be necessary to grade out ruts more frequently than during normal operations, or it may be necessary to apply additional material to the on-site access roads to counteract the effects of rain.

K.2.b.4 Fire

Waste loads that arrive at the landfill on fire will not be deposited at the working face. They will be deposited away from the working face on an area that has previously been covered with daily soil cover. The load will then be spread out and covered with daily cover soil cover to extinguish the fire. If a fire does occur at the landfill working face, a temporary area will be identified as far away from the fire as possible but still within the limits of the lined disposal area where daily soil cover has previously been placed. Berms will be constructed around the temporary area using on-site equipment and soil materials from the on-site stockpile. Solid waste entering the facility will be placed in the temporary area until the fire is extinguished. Then the waste will be transported from the temporary area to the working face using on-site equipment. The soil berms around the temporary area will then be leveled and spread out over the surface at the temporary area.

K.2.b.5 Temporary Transfer Station

Citrus County will implement a temporary transfer station if any condition prevents normal disposal operations at the landfill for more than 48 hours. This temporary transfer station will be located on top of the existing lined landfill. The transfer station will be constructed as a split-grade facility. Waste collection trucks will unload on the upper level. A front loader will lift the off-loaded waste and place into transfer vehicle located on the lower level. The transfer trucks will be weighed prior to leaving the site to ensure that they are legal for over-the-road transport. Crushed concrete and asphalt will be used as an operating surface. This provides an area for trucks to unload. Sloping the area away from the tipping area to a perimeter berm will provide drainage. This liquid will either be allowed to percolate into waste or be collected. Collected liquid will be pumped to the leachate storage tank. Precipitation that falls outside the perimeter berm will be managed as stormwater. Litter fences will be placed around the facility to reduce the potential for blowing litter. The temporary transfer station will not be operated for more than 30 days unless additional approval is granted from FDEP. The County has a reciprocal agreement with Hernando County for emergency access to the disposal facilities should the need arise. See Appendix J for a copy of that interlocal agreement.

K.2.C CONTROL/INSPECTION OF INCOMING WASTE (Rule 62-701.500(2)(c), F.A.C.)

All solid waste arriving at the landfill is routed through the scale house. Scale house attendants screen visible loads for unacceptable materials including recyclables, hazardous waste, and medical waste. From the scale house, loads are directed to either the Class I disposal area or to the citizen waste drop off management area. The Citizen's Service Area provides temporary

storage for recyclable material, waste oils, yard waste, white goods, batteries, and tires. A spotter will be located at the Citizen's Service Area and at the landfill working face to observe the types of waste actually deposited. If prohibited wastes are discovered, the spotter will direct the vehicle back to the office. If the waste has not yet been unloaded, the person responsible for shipping the waste will be notified. If the waste has been deposited, the area of the waste load should be blocked from public access until the generator or hauler of the waste cleans up the waste. If the generator or hauler of the waste cannot be identified or is unable to remove the waste, Citrus County will be responsible for cleanup, transportation, and disposal of the waste at an appropriate waste management facility.

Special waste shall be managed as follows:

- Used oil and antifreeze are each placed into double-wall containers within the Customer Service Area and collected by a contractor.
- Lawn debris is placed within the registered yard waste processing facility for management.
- Tires are placed into the permitted used tire facility for management.
- Appliances - all Freon containing appliances shall have the Freon removed by County personnel and then placed within the scrap metal recycling container. The container is collected by a contractor.
- Lead acid batteries are placed on pallets and collected by a recycling contractor once several pallets are loaded. (Collections will occur at a minimum of once per month)

The landfill has a permanent household hazardous waste collection and storage facility located at the southwest corner of the existing landfill site as shown in Figure 1-1. The facility is used for the collection and storage of household hazardous waste and Conditionally Exempt Small Quantity Generator (CESQG) waste. The building is engineered to comply with EPA, NFPA, and OSHA standards and regulations for storing hazardous chemicals and wastes. The household hazardous waste collection/storage ("HHW C/S") will be operated in accordance with the guidelines outlined in the Facility Standards and Emergency Incidents Plan (last Revised August 2015), which is on file at the landfill office. The current schedule allows for periodic program days for HHW and CESQG collection. The following is a summary of some HHW C/S guidelines:

- HHW received at the Citizen Drop-off area shall be identified and relocated for storage within the containment area of the HHW C/S Facility at the end of each collection day.
- Spillage shall be removed and properly packaged for disposal. Soils that have been contaminated by spills shall be removed and packaged for proper disposal on the same day as the spill occurred.
- Liquids, including contaminated rainwater, shall not be discharged outside of the containment structures.
- Latex paints shall be stored within a secondary containment area and may be either collected by a contractor or used as an approved alternate daily cover (ADC) process.

- Waste received at the HHW C/S Facility shall be stored within containment areas at all times.
- Records on the quantities of HHW collected and removed for disposal shall be compiled quarterly and maintained at the facility for Department review upon request.

The specific waste handling procedures for this facility is described in the Facility Standards and Emergency Incidents Plan (last Revised August 2015), which is on file in the landfill office.

K.2.d WEIGHING OF INCOMING WASTES (Rule 62-701.500(2)(d), F.A.C.)

Weighing of incoming wastes will be performed at the scale house. Each customer receives a receipt made out by an automatic cash register showing the type of refuse, amount, and fee. These receipts are utilized for financial accountability and to complete the necessary daily, weekly, monthly, and annual activities/materials reports required by the Florida Department of Environmental Protection (FDEP) and Citrus County.

K.2.E VEHICLE TRAFFIC CONTROL AND UNLOADING (Rule 62-701.500(2)(e), F.A.C.)

All traffic entering the landfill must pass though the scale house. Vehicle traffic control and unloading is directed by color-coded signage for unloading areas and the attendant in the scale house. The attendant will direct the vehicle to the point of unloading compatible with the waste. Additional traffic directions will be provided, when needed, by the equipment operator or spotters.

K.2.F METHOD AND SEQUENCING OF FILLING WASTES (Rule 62-701.500(2)(f), F.A.C.)

The Citrus County Landfill will be operated using the area fill method. Waste delivered to landfill will be directed to the working face area of the landfill for unloading. Once unloaded, waste will be spread in layers approximately 2-feet in thickness and compacted to approximately 1 foot in thickness. Refer to Appendix A for the fill sequencing plans for the remainder of Phase 1/1A, Phase 2, and Phase 3.

K.2.G WASTE COMPACTION AND APPLICATION OF COVER (Rule 62-701.500(2)(g), F.A.C.)

K.2.g.1 Method of Filling Wastes/Compaction

The procedure for filling and compacting of the initial waste lifts over areas of exposed liner will be as follows:

- To protect the integrity of the leachate collection system and liner, driving vehicles directly over the liner will be prohibited.
- The liner will be covered with a minimum of 2 feet of protective soil at least one week prior to the placement of waste.

- The protective soil layer is placed on the liner using low ground pressure tracked dozer. The equipment operator is directed by a spotter to ensure that the soil is placed correctly and that the equipment does not come in contact with the liner. The 2-foot minimum in-place thickness of the protective soil layer is verified by the landfill operator.
- The landfill spotter directs equipment away from the side slope liner during normal operations.
- The initial lift of waste will be 4 feet thick and selected for material that will not cause damage to the liner. The initial lift of waste will be spread with equipment that will preserve the integrity of the liner system.

The procedures for filling and compaction of all waste will be as follows:

- Waste will be placed against the working face of the previous days waste, so that the first row will act as a means of access and a berm to guide the placement of waste material for the remaining rows.
- The waste will be spread and completed in 2-foot layers and compacted to approximately 1 foot in thickness by a minimum of five passes using a landfill compactor.

The procedures for protective sand placement are as follows:

- The County will select sand from the cover soil stockpile that is of average consistency; not overly clayey or overly sandy. This allows the material to be applied to the slopes without sloughing or sticking to equipment. The protective cover soil is initially placed at the toe of the slope and pushed up hill. No more than 15 feet vertical of protective cover soil is placed at one time.
- The depth of the protective cover soil is monitored by using plastic traffic cones that have been shortened to 2 feet in height. These cones are secured to the geogrid on the side slope with plastic tie strips. Protective cover soil is applied such that no cones are visible after placement. The protective cover soil is pushed up the slope so that there is always 2 feet of protective cover soil between the liner system components and the equipment.

The procedures for tarp removal will be as follows:

- At the point in progression of the fill sequence plan it becomes necessary to expand the filling into new areas of the cell the County will cut the rain tarp at the location for the new berm to separate the active area from the rain tarp area. A new berm will be constructed into which the end of the remaining tarp will be anchored. The tarp section to be removed will be carefully cut into manageable sizes and rolled up for reuse on erosion control projects.
- The tarp will only be cut using a hook knife that prevents cutting any materials below the tarp material. The tarp will be cut at the location where it enters the anchor trench

so the tarp material located in the anchor trench will remain in place without disturbing the anchor trench.

The procedures for rain tarp repair are as follows:

- Should damage occur to the rain tarp the County will repair it using an adhesive product manufactured by 3M. The County cuts out a patch piece and applies the glue to the section to be repaired.

K.2.g.2 Daily and Intermediate Cover

Cover material will be utilized to minimize vector breeding, animal attraction, and fire potential, as well as to prevent blowing litter and control odors. Daily cover will be composed of soil from the on-site stockpile, a 50/50 mixture of yard waste mulch and soil, synthetic materials such as tarps and geomembranes, or approved ADC material consisting of a spray on slurry of polymer recycled paper fibers, and latex paint, per manufacturer specifications. Daily soil cover will be placed and compacted to a minimum thickness of 6 inches; spray on daily cover will be applied per manufacturer specifications and shall not be used in the rain. The intermediate cover will be comprised of soil from the on-site stockpile or a 50/50 mixture of yard waste mulch and soil. The intermediate soil cover will be placed and compacted to a minimum thickness of 12 inches. Mulch is from on-site recycled yard waste.

If tarps or geomembranes are used as temporary daily cover, the tarps or geomembranes will be spread to cover the waste material. Sand or the tarp spreader bar will be used to minimize wind uplift. When the working face area exceeds the area of available tarp, then six inches of compacted soil will be placed to cover the waste material. A 50/50 mixture of yard waste mulch and soil may be spread over the initial soil cover for stabilization and erosion control measures.

When using ADC material, the waste shall be compacted within the working face before applying the ADC to ensure proper coverage of the waste and applied per manufacturer's specification. If uneven waste surfaces are present, spray-on materials will be applied from at least two different angles to ensure complete coverage of the waste. The landfill operator or designee will receive training in the proper mixing, application and use of the spray-on material from the manufacturer, or its representative. The operator who has received the manufacturer's training will be the one to apply the spray-on cover or provide direct supervision of the landfill staff doing the application to ensure that the material is properly applied.

K.2.g.3 Final Cover

The final cover system will be designed in accordance with Rule 62-701.600(5), F.A.C. The final cover will be placed on the intermediate cover as phases of the facility are closed. The conceptual final cover system for landfill closure, from top to bottom includes the following:

- 24-inch soil layer with the upper 6 inches capable of supporting vegetative growth
- Composite drainage net layer (geosynthetic filter fabric with drainage net)

- 40-mil textured geomembrane

K.2.h OPERATION OF GAS, LEACHATE, AND STORMWATER CONTROLS (Rule 62-701.500(2)(h), F.A.C.)

K.2.h.1 Landfill Gas Controls

The landfill gas (LFG) management system at the site currently consists of passive vents in the closed landfill, which serves to minimize the potential for off-site migration of LFG. A landfill gas collection and control (GCCS) system that includes vertical extraction wells and tie-ins to the existing leachate collection and removal system (LCRS) is operated in the Class I landfill (Phase 1/1A and Phase 2). The system will be expanded into Phase 3 as appropriate utilizing horizontal and vertical collection components. The LFG from this system is routed via header and lateral pipe to a blower/flare station where the gas is combusted in a candlestick flare. The GCCS is a voluntary active LFG collection and control system that proactively reduces methane emissions to the atmosphere. This system is not required by the Federal New Source Performance Standards (NSPS) and therefore the operation, monitoring, reporting, and recordkeeping requirements of the NSPS do not apply.

The operations procedures for the GCCS will be as follows:

1. The vertical extraction wells and LCRS tie-ins should be inspected periodically (i.e., on a monthly or bi-monthly basis) to ensure that all components are functioning properly.
2. As filling operations continue, vertical wells in the active area of the landfill will be raised.
3. The pneumatic pumps should be inspected periodically to ensure proper operation. The frequency of inspection will be determined based on field operations and whether the pumps are maintaining liquid levels in the sumps low enough to not impact vacuum distribution to the wellfield. Pump counters should be checked and cycle counts recorded and reviewed to ensure pump operation.
4. The following is a list of spare parts that may be kept on site:

    - Wellhead components
    - Sample ports
    - Dust caps
    - Orifice plates (assorted diameters; 0.1 inch through 1.4 inch)
    - 2” Fernco quick caps
    - Fernco bushings and couplings (assorted 4 and 6-inch diameter sizes)
    - Worm-gear hose clamps, assorted sizes
    - Kanaflex flexible hoses and clamps

K.2.h.2 Start-up and Shutdown Procedures

The GCCS is designed to operate continuously except for periods of automatic or manual shutdowns. Startup and shutdown events are generally planned events associated with system repair, maintenance, testing, and upgrades. Startup and shutdown procedures are outlined in the blower/flare station O&M manual provided by the flare manufacturer, Shaw LFG Specialties, LLC, which is maintained on site.

GCCS shutdown events generally include shutdown of the gas collection system, the gas control system, and any ancillary equipment that could affect the operations or monitoring of the GCCS. There are two general types of shutdown events, those that are initiated manually by an operator (e.g. for purposes of system maintenance) and those that are initiated automatically by the control system in response to certain monitored conditions.

Some events that may cause the GCCS to shutdown automatically are listed below:

- Loss of gas flow to the flare
- High inlet gas temperature
- Flame sensor detects loss of flame
- Elevated flame arrestor temperature
- High liquid level in knockout pot
- Loss of power from the grid
- Treatment system component shutdowns
- Power generation equipment shutdowns.

K.2.h.3 GCCS Operations and Maintenance

Extraction wells are inspected periodically to ensure that all components and fittings are functioning properly. Loose fittings and couplings can introduce air into the system and cumulatively reduce the collection efficiency of the GCCS. Operation and maintenance procedures for the vertical wellheads include the following:

- Wellhead valves should be exercised across their entire range of operation to confirm their functionality periodically. If the valve does not move or is otherwise broken it should be replaced.
- Wellhead sample ports and dust caps should be checked for leaks, and repaired or replaced if necessary.
- Ensure all joints and mechanical fasteners (unions, Fernco couplings, hose clamps, etc.) are in good condition, secure and provide a proper seal from leaks. Any loose or broken fittings should be tightened or repaired.
- Flexible hoses should be inspected for cracks and breaks that can occur as a result of the hose becoming brittle due to exposure to extreme weather conditions.
- The above ground well casing should be checked for cracks or leaks, and the technician should make note of any voids or settlement which may have occurred on the ground near the well.

- Adjust the wellhead valve as necessary to minimize oxygen concentration to no more than 5 percent by volume. If oxygen levels persist above 5 percent it may be necessary to troubleshoot the well or shut it off until oxygen levels can be lowered.

LCRS tie-ins should be inspected periodically to ensure that all components and fittings are functioning properly. Loose fittings and couplings can introduce air into the system and cumulatively reduce the collection efficiency of the GCCS. Operation and maintenance procedures for the wellheads at the LCRS tie-ins include the following:

- Note any odors or signs of built up pressure at LCRS risers, as this indicates the presence of excess LFG in the area that could potentially be collected.
- Wellhead valves should be exercised across their entire range of operation to confirm their functionality periodically. If the valve does not move or is otherwise broken it should be replaced.
- Wellhead sample ports and dust caps should be checked for leaks, and repaired or replaced if necessary.
- Ensure all joints and mechanical fasteners (unions, Fernco couplings, hose clamps, etc.) are in good condition, secure and provide a proper seal from leaks. Any loose or broken fittings should be tightened or repaired.
- Flexible hoses should be inspected for cracks and breaks that can occur as a result of the hose becoming brittle due to exposure to extreme weather conditions.
- Adjust the wellhead valve as necessary to minimize oxygen concentration to no more than 5 percent by volume. If oxygen levels persist above 5 percent it may be necessary to troubleshoot the well or shut it off until oxygen levels can be lowered.

K.2.h.4 System Monitoring

Each monitoring well will be monitored on a quarterly basis, at a minimum, for static pressure, methane or combustible gases using an instrument calibrated to methane, and oxygen concentration at a minimum. Methane will be measured and recorded in terms of a percent by volume. The monitoring equipment will be calibrated in accordance with the manufacturer's recommendations.

The general procedure for monitoring at each well is as follows:

1. Record meteorological conditions including ambient temperature and barometric pressure, if available.
2. Field calibrate the methane monitoring equipment.
3. Prior to monitoring, note any damage to the wellhead, well casing, or LCRS riser pipe and repair if necessary. Failure to repair damage can affect the validity of the monitoring results.
4. Record the time of monitoring for the well.
5. Connect the monitoring instrument to the sampling hose.
6. Turn on the meter and observe the monitored parameters.
7. Remove the instrument and hose .

8. Repeat steps 3 through 7 for each monitored location.

Any problems encountered during monitoring, observations, or other pertinent information that could impact the interpretation of the data shall be recorded.

The following is a list of parameters typically recorded at the wellheads:

- Temperature
- Vacuum
- Methane concentration
- Carbon dioxide concentration
- Oxygen concentration
- Balance gas concentration

The following is a list of parameters typically recorded at the inlet of the blower/flare station:

- Gas flow rate and temperature
- Methane concentration
- Carbon dioxide concentration
- Oxygen concentration
- Balance gas concentration
- System pressure

K.2.h.5 System Maintenance

The wellheads shall be operated and maintained in accordance with the manufacturer's specifications and operational instructions. If any problems are found at the wellheads, wells or nearby header and lateral piping, repairs shall be initiated at that time, if possible. All repair activities will be recorded and kept onsite.

K.2.h.6 Isolation of Portions of the GCCS

The GCCS is designed with header isolation valves that can be closed to isolate header segments to accommodate troubleshooting and repairs. These butterfly valves are shown on the record drawings that are on file with FDEP and maintained on site.

K.2.h.7 Condensate Management System Monitoring and Maintenance

Condensate is formed as LFG that is extracted from the landfill cools. The rate at which it is generated is dependent on the LFG flow rates and the temperature differential between the warmer gas and the cooler piping.

Condensate traps and sumps are located along the header to remove condensate from the gas stream at engineered low points. Condensate collected in the traps drains back into the waste

mass. Condensate collected in sumps with pumps is pumped to the leachate collection tanks via a forcemain.

Because they are self-draining, no maintenance or monitoring is required for the condensate traps. Sump maintenance includes periodically checking and cleaning the pneumatic pumps as recommended by the manufacturer. In addition, the pumping rate can be estimated based on the cycle counter readings.

K.2.h.8 Subsurface Fire Considerations

Subsurface landfill fires, or subsurface oxidation, can occur when buried waste in the landfill ignites. The natural decomposition of waste can create substantially high temperatures, and in the presence of enough oxygen can lead to combustion or oxidation of the waste. These events can be minimized by limiting the potential for atmospheric oxygen to enter the waste mass by ensuring adequate landfill cover and avoiding over pulling on the landfill by the GCCS. The temperature of the extracted LFG will be measured at wellheads.

If a subsurface oxidation is detected, the technician or other site personnel will immediately notify the Site Manager and actions will be implemented to contain and eliminate the oxidation.

The following symptoms may indicate the presence of a subsurface waste oxidation:

- Deformed well casings
- Carbon monoxide (CO) concentrations in excess of 1,000 ppm in the extracted LFG. Levels of CO between 500 and 1,000 ppm are viewed as indicators of a potential subsurface oxidation and require further investigation.
- Dramatic localized settling
- Sharp increase in LFG temperatures
- Smoke or smoky odor emanating from landfill surface or wellheads
- Stressed vegetation
- Presence of sooty material inside GCCS components

The most effective method of preventing, suppressing, and extinguishing a subsurface oxidation is to eliminate the pathways of oxygen intrusion into the landfill. To accomplish this, potential sources of air intrusion must be sealed as much as practical, and it may be necessary to reduce the rate of LFG extraction. In severe cases the entire GCCS may need to be shut down in the areas adjacent to the affected waste mass.

It is important to note that even after these measures have been taken, subsurface oxidation may continue for days or weeks before it is completely extinguished. Daily CO and temperature monitoring of extraction points within the area of the subsurface oxidation should be performed in order to determine the effectiveness of the implemented control measures.

K.2.h.9 Leachate Controls

For Phases 1/1A, 2 and 3, the leachate management system design includes a system of

collection pipes that lead to a sideslope sump. The sideslope sump is located at the low-point at the west end of each cell. The low-point acts as the sump for both the collection and detection systems. For leachate removal, the collection riser and the leak detection riser include submersible pumps. Leachate from Phase 1/1A will be first pumped to the Master Pump Station (MPS), and then pumped to the existing leachate storage tank along with the leachate currently being collected from the 7-acre closed area. Leachate from Phases 2 and 3 will be pumped to the leachate storage tank.

The main components of the Phases 1/1A, 2 and 3 leachate management system includes the following:

- Geocomposite drainage layer with rock filled leachate collection trenches and perforated pipes leading to a main header pipe.
- Collection sump system including collection riser, leak detection riser, and submersible pumps for leachate removal.
- Control panel including pump controls and remote flow meter head, including telemetry relay to the computer monitoring system at the office.
- Connection to influent line to the existing MPS and underground high-density polyethylene piping force main.

A copy of the leachate treatment agreement is provided in Appendix H of this Operations Plan.

Leachate evaporation will be employed as a supplemental method to dispose of leachate. The supplemental evaporation of leachate involves spraying small quantities of leachate from a spray bar mounted on the rear of a tank truck onto Phase 2 and 3 areas of the landfill. Leachate spray evaporation may be applied under the following conditions:

- Leachate may only be applied on Phases 2 and 3, within the bermed working face area.

Leachate generation will be minimized by only operating a single working face and keeping the working face as small as possible. During special events, such as during initial lift filling of the new cell, more than one working face may be operated. Daily and/or intermediate cover will be placed with slopes to promote stormwater runoff. The mixing of stormwater with leachate will be minimized by grading the daily and/or intermediate cover away from the working face and by using soil berms to direct stormwater runoff away from the working face. Gutters and lined conveyance ditches will also be used to collect and transport stormwater to stormwater management facilities.

K.2.h.10 Stormwater Controls

Operation of the existing stormwater system is discussed in Section 10.0 of this Operations Plan. The stormwater system will be managed as required by Rule 62-701.500(10), F.A.C., to meet applicable standards for Rule 62-302, F.A.C., and Rule 62-330, F.A.C. The system shall minimize stormwater from entering waste filled areas and avoid the mixing of stormwater with leachate. All stormwater conveyances shall be inspected at least weekly to verify adequate

performance. Conveyances not performing adequately will be repaired within 3 working days. Documentation of all inspections and repairs will be kept on file at the landfill office.

K.2.i WATER QUALITY MONITORING (Rule 62-701.500(2)(i), F.A.C.)

Groundwater monitoring will be conducted as described in the Citrus County Central Landfill Groundwater Monitoring Plan. Changes to the monitoring plan were addressed in the "Ground Water Monitoring Plan Evaluation Report" by CDM Smith, submitted to FDEP September 2015. The updated Groundwater Monitoring Plan reflects those changes noted in the CDM Smith Report. The plan will be updated periodically based on current operation permit requirements with a current copy held in the solid waste administration offices at the landfill. See Appendix I for the Groundwater Monitoring Plan.

K.2.j MAINTAINING AND CLEANING THE LEACHATE COLLECTION SYSTEM (Rule 62-701.500(2)(j), F.A.C.)

The leachate system at the landfill consists of collection, storage, pre-treatment by aeration in the existing leachate storage tanks, and pumping to a County operated wastewater treatment facility for ultimate disposal for the closed portion and Phases 1/1A, 2, and 3 active portions of the landfill. Maintenance of the leachate system facilities is performed as specified in the manufacturer's manuals kept on file in the landfill office. Inspection and cleaning of the system will be performed every 5 years and/or at the time of permit renewal. Inspection of storage tanks will be performed every 3 years.

K.3 OPERATING RECORDS (RULE 62-701.500(3), F.A.C.)

The operating record will consist of all records, reports, analytical results, and all notifications as required by Rule 62-701, F.A.C. These records are considered an integral part of the operations plan and will be kept at or near the facility. The operating records will be available for inspection at reasonable times upon request by FDEP personnel.

The Citrus County Solid Waste Management Division Director will be responsible for the storage and filing of all operational records. The minimum records to be kept as part of the official operating record include the following:

- Current permits and applications
- Monthly waste disposal records (volume, weight, or truckloads, county of origin)
- Random load checking records
- Leachate quantities (Information collected monthly/submitted annually to FDEP)
- On-site rain gauge data
- Annual estimates of remaining capacity (permitted disposal) in cubic yards
- Regulatory agency inspection reports
- Groundwater sampling plan, including well construction information, sampling locations, and water quality sampling results
- All official notifications to or from FDEP regarding the facility
- Training verifications/certifications
- Landfill Operations Plan, including all supplementary material incorporated by reference
- Leachate tank inspection records
- Gas monitoring records
- Maintenance summary forms
- Gas Collection and Control System operating records
- Unauthorized waste disposal manifests
- Conditionally Exempt Small Quantity Generator (CESQG) verification documentation

K.4 WASTE RECORDS(RULE 62-701.500(4), F.A.C.)

Each month a report of the amount of waste received in tons will be compiled. The report will also include estimates of the amounts of the following waste types:

- Household waste
- Commercial waste
- Ash residue
- Incinerator by-pass waste
- Construction and demolition debris
- Treated biomedical waste
- Agricultural waste
- Industrial waste
- Yard trash
- Sewage sludge
- Industrial sludge
- Water/air treatment sludge
- Waste tires
- Citizen's Service Area
- Household Hazardous Waste facility

In accordance with 62-701.500 reports are compiled monthly and copies provided to FDEP annually by February 1st each year. The types of waste received include Class I, Class III, ash residue, and other wastes.

K.5 ACCESS CONTROL (RULE 62-701.500(5), F.A.C.)

The entire Citrus County Landfill facility is fenced, and access is gate controlled at all times. Figure 1-1 is a site plan of the entire landfill and illustrates the landfill access control facilities. The landfill operates and accepts waste from commercial haulers Monday through Saturday, as follows:

Monday - Friday: 6:30 a.m. to 5:00 p.m.

Holidays and Saturday: 6:30 a.m. to 3:00 p.m.

During periods with inadequate daylight after 6:30 am, the County uses portable light plants to illuminate the working face. The facility does not accept waste from citizens until 8:00 am. During Holiday periods, the operating hours may be adjusted.

K.6 LOAD CHECKING PROGRAM (RULE 62-701.500(6), F.A.C.)

An operator must be on duty at the landfill or no access for waste disposal will be available.

K.6.a WASTE INSPECTION (Rule 62-701.500(6)(a), F.A.C.)

Citrus County has implemented a load checking program to detect and discourage attempts to dispose of unauthorized wastes at the landfill. This program includes at least three random checks by landfill personnel each week and inspection of suspicious loads, which are vehicles that have previously been determined to have delivered unauthorized waste, or loads that have unusually physical characteristics.

If any regulated hazardous wastes are identified during load checking the waste will be immediately placed in the household hazardous waste collection and storage facility for sorting and storage. Following is a summary of the load inspection program. The complete load inspection plan is kept on file in the landfill office.

1. Disposal area personnel will direct a minimum of 3 vehicles per week to a separate area within the working disposal area.

2. The driver of the vehicle will be asked the source of the waste by the inspector. The load will be completely discharged and spread uniformly so that all waste is visible.

3. The inspector will proceed to inspect the load for unauthorized waste. These shall include, but are not limited to the following:

    - Restricted materials (tires, yard waste, etc)
    - Regulated hazardous waste
    - Biomedical waste
    - Containers of liquids
    - Compressed gas cylinders
    - PCB wastes (Transformers)
    - Large quantity of household type hazardous waste (Indication of business source)

4. If any unauthorized items are observed, the waste will be relocated by the County to the appropriate disposal/management area. The collection company will be contacted to send a representative to verify the contents of the load with the inspector and the Crew Leader. The payment for disposal of the waste will be the sole responsibility of the person responsible for shipping the waste.

5. The person responsible for shipping the waste will provide a manifest documenting the proper disposal of the unauthorized waste found during inspection. The manifest must indicate the corresponding identification number assigned to the waste during inspection.

6. If any spill or contamination of regulated hazardous waste or biomedical waste is observed, the Crew Leader will notify a hazardous waste staff member and/or implement the Emergency Incidents and Contingency Plans, as provided in Appendix B. This plan may include the notification of FDEP, persons responsible for shipping the wastes, and/or the generator of the wastes.

7. Landfill personnel will relocate all special wastes such as tires, appliances, lead acid batteries, and lawn debris to the proper disposal areas. A separate invoice will be issued to the persons responsible for shipping the waste and made part of the inspection report. See Section K.2.c for procedures for handling special wastes.

8. If any amount of household hazardous waste is identified, the Crew Leader or a Hazardous Waste staff member will be notified and it will be relocated to the household hazardous waste storage facility.

9. Copies of all completed inspection reports will be forwarded to the Administrative Office for the Division of Solid Waste Management, the persons responsible for shipping the waste, and the Citrus County Special Operations Section. These records will be maintained for the life of the landfill.

10. Vehicles that have previously been determined to have delivered unauthorized waste will be considered suspicious and may be subjected to inspection at any time and in the same manner as the random inspections.

K.6.B HAZARDOUS WASTES AND HANDLING PROCEDURES (Rule 62-701.500(6)(b), F.A.C.)

No hazardous wastes will be accepted at the landfill for disposal. If any regulated hazardous wastes are identified by random load checking, or are otherwise discovered to be improperly deposited at the landfill, the landfill operator shall promptly notify the Department, 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 operator shall assure the cleanup, transportation, and disposal of the waste at a permitted hazardous waste management facility. Subsequent shipments from sources found or suspected to be previously responsible for shipping regulated hazardous waste shall be subject to precautionary measures prior to the solid waste management facility accepting wastes. The Citrus County Special Operations response team is notified for handling and storage of hazardous materials for disposal in an appropriate off-site facility.

The owner or operator shall make arrangements or shall have equipment for temporary storage, handling and transport to an authorized disposal or recycling facility for unauthorized waste which is inadvertently accepted by the facility. Unless an alternate schedule is included in an operation plan submitted with the permit application, which provides for the control of odors and vectors, putrescible waste shall not be stored for longer than 48 hours and non-putrescible waste

shall not be stored for longer than 30 days.

K.6.c RECORDING INSPECTION RESULTS (Rule 62-701.500(6)(c), F.A.C.)

Results of the load checking inspections described in Section K.6 of this document will be recorded in writing and retained at the landfill for a minimum period of 3 years in accordance with 62-701.500(6)(b)(2)(c). This information will include date and time of inspection, name of hauling firm, vehicle identification number, and observations made by landfill personnel during the inspection. In addition, an effort will be made to record the name of the driver, license plate number, and source of waste as stated by the driver. The inspector will sign the written record. A sample form used to document the inspection results is provided in Appendix C.

K.7 WASTE HANDLING REQUIREMENTS(RULE 62-701.500(7), F.A.C.)

The following description represents waste handling requirements as required by Rule 62-701.500(7), F.A.C. Citrus County will meet or exceed the requirements at all times to minimize the potential adverse impacts to employees or public health or safety.

K.7.a WASTE THICKNESS AND COMPACTION FREQUENCIES (Rule 62-701.500(7)(a), F.A.C.)

The waste material will be spread in layers of approximately two feet in thickness and compacted to approximately one foot in thickness, or as thin as practical, by a landfill compactor before the next layer is applied.

K.7.b FIRST LAYER OF WASTE (Rule 62-701.500(7)(b), F.A.C.)

The first lift of waste placed above the liner and leachate collection system will be a minimum of four feet in compacted thickness. Waste loads in this first lift will be screened for any large, rigid objects or other materials that would damage the liner or leachate collection system.

K.7.c SLOPES Of WORKING FACE (Rule 62-701.500(7)(c), F.A.C.)

The working face and side grades above land surface will be sloped at a maximum of 3 feet horizontal to one-foot vertical rise. The lift depth will typically be a maximum of 10 feet. Lift depths may be deeper than 10 feet depending on specific operations, daily waste volumes, width of the working face, and good safety practices.

K.7.d WIDTH OF WORKING FACE (Rule 62-701.500(7)(d), F.A.C.)

The working face will only be wide enough to safely accommodate vehicles unloading materials, and compacting equipment. Since the waste requires daily cover, the width of the working face will be minimized.

K.7.e INITIAL/DAILY COVER (Rule 62-701.500(7)(e), F.A.C.)

Daily cover will consist of six inches of compacted soils, a yard waste/soil mix, synthetic material such as tarps and geomembranes, or a spray on slurry of polymer and recycled paper fibers, as approved by the FDEP.

K.7.f INITIAL COVER PROCEDURES

Daily cover as described in K.7.e above will be placed over the waste at the end of each working day.

K.7.g INTERMEDIATE COVER (Rule 62-701.500(7)(g), F.A.C.)

An intermediate cover in addition to the six-inch initial cover shall be applied and maintained within seven days of cell completion if additional solid waste will not be deposited within 180 days of cell completion. The landfill operator may remove all or part of the intermediate cover before placing additional waste or installing final cover. The following materials meet the criteria of subsection 62-701.200(55), F.A.C., and they may also use them as intermediate cover:

- Recovered screen material.
- A mixture of soil and ground or chipped yard trash provided that soil makes up at least 50 percent by volume of the mixture.

K.7.h FINAL COVER (Rule 62-701.500(7)(h), F.A.C.)

Areas that have been filled to design dimensions will receive final cover within 180 days after attaining final elevation in accordance with the Closure Plan for the Citrus County Central Landfill. A description of the final cover can be found in Section K.2.g.3 of this plan.

K.7.I SCAVENGING AND SALVAGING CONTROL (Rule 62-701.500(7)(i), F.A.C.)

Scavenging will be strictly prohibited at the working face of the landfill.

K.7.j LITTER POLICING METHODS (Rule 62-701.500(7)(j), F.A.C.)

If any litter escapes the litter controls employed in the working area, such litter will be picked up as soon as possible. Litter policing will occur at least on a daily basis. Any litter located outside the working area will be picked-up within 24-hours.

K.7.k EROSION CONTROL (Rule 62-701.500(7)(k), F.A.C.)

Erosion control measures shall be employed to correct any erosion which exposes waste or causes malfunction of the stormwater management system. Such measures shall be implemented within three days of occurrence. If the erosion cannot be corrected within seven days of occurrence the landfill operator shall notify the Department and propose a correction schedule These measures are identified and discussed as follows:

- Intermediate soil cover configured to collect and transport stormwater
- 4”-5” of mulch soil cover to prevent erosion
- Regular inspection of intermediate soil cover
- Benches and lined ditches to transport concentrated volumes of stormwater runoff.

K.7.k.1 Intermediate Soil Cover

Temporary berms to direct stormwater away from solid waste placement and compaction activities will surround the active areas of the landfill. Inactive areas will be covered with

intermediate soil cover with a minimum thickness of 1 foot. The intermediate soil cover will be sloped to promote run-off and decrease infiltration of stormwater.

Intermediately covered areas subject to erosion will be mulched or seeded with grass appropriate to the season as needed to control erosion.

K.7.k.2 Down Drains

Stormwater collected in swales and benches will be directed to lined ditches and/or temporary piping. The lined ditches and/or temporary piping will be installed to transport the collected stormwater to the stormwater management system without damaging the intermediate soil cover. Lightweight reinforced polyethylene will be used to line the ditches.

K.7.k.3 Inspections

The intermediate soil cover will be regularly inspected for erosion damage. Any damage that is discovered will be repaired within 3 days.

K.8 LEACHATE MANAGEMENT (RULE 62-701.500(8), F.A.C.)

The design of the leachate management system includes a system of collection pipes that lead to a side slope sump. The side slope sump is located at the low-point on the west side of each cell. The low-point acts as the sump for both the collection and detection systems. For leachate removal, the collection riser and the leak detection riser will include submersible pumps. Leachate from Phases 1/1A and from the 7-acre closed area will be first pumped to the existing master pump station (MPS) then pumped to the leachate storage tank. Leachate is also pumped from Phases 2 and 3 to the leachate storage tank. Effluent from the leachate storage tank will either be pumped to the Meadowcrest WWTP or used as irrigation on the Phases 2 and 3. The agreement with the WWTP is located in Appendix H. Now that the leachate is going to a WWTP for treatment the on-site treatment plant will be decommissioned and demolished. The leachate will be applied in small quantities within the bermed working face area from a spray bar mounted on the rear of a tank truck. Leachate will not be applied during active precipitation, in the presence of ponding or in quantities that may cause runoff, surface seeps, wind-blown spray, or exceedance of limits as the amounts described below:

- Leachate will be applied in Phase 3 once 30 ft of waste is in place. and may be applied at a rate of 3,552 gal/day. . Leachate recirculation will only be applied within the bermed working face area. If this area is already wet due to rainfall, leachate recirculation will not be applied and will not occur during active rainfall or where any standing water is observed within the bermed working face area.
- Leachate will be applied in Phase 2 and 3 at a maximum rate of 4,663 gal/day once 70 ft of waste is in place. Leachate recirculation will only be applied within the bermed working face area. If this area is already wet due to rainfall, leachate recirculation will not be applied and will not occur during active rainfall or where any standing water is observed within the bermed working face area.

The main components of Phases 1/1A, 2 and 3 leachate management systems include the following:

- Rock filled leachate collection trenches with perforated pipes leading to the sump.
- Collection sump system including collection riser, leak detection riser, and submersible pumps for leachate removal.
- Control panel including pump controls and remote flow meter head.
- Connection to influent line to the existing leachate storage tank.

K.8.a LEACHATE LEVEL MONITORING(Rule 62-701.500(8)(a), F.A.C.)

The depth of leachate over the liner in Phases 1/1A, 2 and 3 is monitored with level transducers on the leachate removal pumps. In addition, the leachate pump side slope risers and leachate collection pipe clean out side slope risers provide a mechanism to observe leachate levels through physical measurements.

With the completion of the leachate force main to the Meadowcrest WWTP there is no longer a requirement for leachate sampling and reporting. The onsite leachate treatment plant is no longer in operation. and will likely be removed in the future.

K.8.b OPERATION AND MAINTENANCE OF LEACHATE COLLECTION SYSTEM (Rule 62-701 .500(8)(b), F.A.C.)

The Landfill Operator will be responsible for maintenance of the leachate systems, including the piping, pump stations, and piping to the leachate storage tank. The equipment manufacturer will provide operation and maintenance manuals for each of the system components. Maintenance of each component will be performed in accordance with manufacturer specifications and documented on a Maintenance Summary Form, included in Appendix D. Maintenance documentation may also include a video of the cleaning procedures. Operation and maintenance manuals include the following:

- Description of unit and component parts, including normal operating characteristics and limiting conditions
- Operating procedures
- Maintenance and overhaul procedures
- Installation instructions
- Original manufacturer's parts list, illustrations, and detailed assembly drawings
- Spare parts ordering instructions
- Manufacturer's printed operating and maintenance instructions

During the filling of each cell a rain tarp system will be employed to cover the exposed cell bottom and sideslopes where operations are not occurring. The rain tarp will be placed such that the area not being filled will be protected and stormwater diverted from the leachate system to the existing channels using the County's hydraulic pumps. In addition, a daily cover material will be placed on the working face during non-working hours as required to minimize leachate generation.

Flow will be monitored from the leachate pumps. Facility personnel will record leachate flows each business day. This will allow determination of leachate production as a function of rainfall and provide information to assess the efficiency of leachate and stormwater management practices. Leachate generation/flows will be reported quarterly and the records will be kept at the facility as part of the official operation record.

At least once each business day facility personnel will inspect each leachate pump station and the leachate level indicators to ensure proper operation. Pumping rates and electrical draw will be confirmed semiannually. If these tests indicate significantly reduced performance, the pumps will be pulled for inspection and repair. A replacement pump will be installed while the repairs are being made.

If leachate flow volume is noticeably decreased, the leachate collection system will be inspected. Possible reasons for low or no flow are pump and/or level transducer malfunction or collection pipe collapse or blockage. If pipe blockage is identified, the collection pipe will be power jetted to remove sediment buildup. Power jetting or rodding will be done from either or both ends of the header.

K.8.c LEACHATE HANDLING (IF REGULATED AS HAZARDOUS WASTE (Rule 62-701 .500(8)(b), F.A.C.)

If, in the future, the leachate becomes classified as a hazardous waste, it will be managed in accordance with Rule 62-730, F.A.C., or other rules as may be applicable at the time.

K.8.d OFF-SITE TREATMENT (Rule 62-701.500(8)(c), F.A.C.)

Leachate is transported via forcemain west on SR 44 to an existing gravity manhole of CR 491 north of SR 44, from which it is conveyed to the Meadowcrest WWTP via existing gravity and transmission mains. If additional treatment and disposal is necessary, leachate will be transported to one of several Citrus County Utilities wastewater treatment plants.

K.8.e CONTINGENCY PLAN FOR MANAGING LEACHATE (Rule 62-701.500(8)(e), F.A.C.)

If the connection to the Meadowcrest WWTP is interrupted, leachate will be transported to one of several Citrus County Utilities wastewater treatment plants. Because multiple wastewater treatment plants are available for leachate disposal, complete interruption of offsite disposal ability is not anticipated.

K.8.f RECORDING LEACHATE QUANTITIES (Rule 62-701.500(8)(f), F.A.C.)

Quantities of leachate collected by the leachate collection and removal system are recorded in gallons per day from the leachate flow observations. Utilities staff record daily flow amounts on a standard form. Completed forms are compiled monthly with the compiled form sent to the facility manager to be filed in the facility's operating record.

Citrus County uses a number of metering points to measure leachate generation. . The flows generated from each landfill phase of the newer 80-acre area are measured directly by flow meters within the discharge line of each pump. Flows from the closed 7-acre area have been measured in the past with an older mechanical flow meter. It is suspected that this meter is not providing accurate readings due to repeated malfunctions. The County has calibrated flow from the 7-acre pumps against the elapsed time meters (ETMs) for each pump. The ETM readings are now taken and converted to flow in gallons in a spreadsheet.
The flow meter located at the discharge location for the treatment plant discharge recirculates back to the master pump station (MPS). Flow meter number 5 records the flow coming from the 7-acre closed area and the treatment plant. With construction of the new leachate forcemain a new meter has been installed in the vicinity of the scalehouse. See Figure 1-1 for the location of

the new meter.

K.8.g RECORDING PRECIPITATION (Rule 62-701.500(8)(g), F.A.C.)

A rain gauge has been installed and is operated and maintained by Citrus County personnel to record precipitation at the disposal facility. Precipitation records will be maintained in the facility's operating record and will be compared with leachate generation rates.

K.8.h INSPECTION AND CLEANING (Rule 62-101.500(8)(h), F.A.C.)

The existing leachate collection systems at the Citrus County Landfill will be pressure cleaned or inspected by video every 5 years or at the time of permit renewal. Results of the cleanings and inspections are kept on file in the landfill office. A copy of the most recent Inspection Report is included as Appendix F.

K.9 LANDFILL GAS MONITORING (RULE 62-701.500(9), F.A.C.)

This LFG monitoring program for the Central Landfill has been prepared in accordance with Rule 62-701.530, F.A.C. As described below, the plan includes monitoring for subsurface LFG migration at the facility property boundary adjacent to the active landfill (Phases 1/1A, 2 and 3) and the closed 60-acre landfill, and in on-site structures. The LFG monitoring program is designed to confirm compliance with the requirements of Rule 62-701.530(1)(a)1, F.A.C., which requires the following:

- The methane concentration in on- or off-site structures may not exceed 25 percent of the lower explosive limit (LEL). The LEL for methane is five percent by volume in air. Therefore, the maximum allowable concentration in on- or off-site structures is 1.25 percent methane by volume.
- The methane concentration at or beyond the landfill property boundary may not exceed the LEL (i.e., five percent methane by volume).

As explained below, the monitoring plan was prepared based on site-specific conditions.

K.9.a BACKGROUND INFORMATION

In November and December of 2005, eighteen permanent monitoring probes were installed along the new property boundary of the site. A new property boundary agreement has been established with the Florida Division of Forestry and FDEP. The 19 monitoring probes are now the only LFG compliance points at the site. The remaining 62 permanent LFG probes and 13 interim probes have been abandoned in place. Figure 9-1 is a site map showing the LFG monitoring probe locations and Figure 9-2 shows a detail of the gas probes.

K.9.b LANDFILL AREAS

The landfill areas on site include the closed 60-acre landfill, a part of which is approximately seven acres that has a bottom liner as well as a geosynthetic cap liner; and the active Phase 1/1A, Phase 2, and Phase 3 landfill cells. The balance of the closed 60-acre landfill is unlined but has been capped with a geosynthetic membrane and protective soil cover. The depth of waste in the closed 60-acre landfill is approximately 40 feet below ground surface. The Phase 1/1A and Phase 2 landfill areas have a geomembrane bottom liner system, and the bottom depth of refuse is approximately 80 feet below ground surface. Groundwater is present approximately 110 feet below ground surface, and the soil at the site is primarily silty and clayey sand.

The GCCS is designed to provide a means of relieving internal gas pressures within the landfill and prevent fugitive emissions of LFG to the atmosphere through the cover soils and the subsurface migration of LFG to the surrounding areas.

The GCCS for Phases 1/1A and 2 include the following features:

- LFG extraction wells composed of 6-inch PVC pipe, installed in a 30-inch borehole and backfilled with FDOT No. 4 stone. The borehole will be sealed with a hydrated bentonite plug and backfilled to grade with clean soil backfill.
- Tie-ins will be made to the existing LCRS risers and these will be connected to the header/lateral system, routing LFG to the blower/flare station.
- A below grade header/lateral network will be installed. All piping will be HDPE SDR 17.
- A 2" HDPE SDR 9 air supply line will be installed at the blower/flare and compressor location to CS-1 on the east side of the Class I cells.
- A condensate sump with a pneumatic pump will be installed at the blower/flare station. An O&M manual for the pneumatic pump will be submitted to the FDEP with the report of construction completion.
- Self-draining condensate traps will be located at engineered low points in the header system for the collection of condensate. The traps will allow for the drainage of condensate from the header and lateral system back into the landfill.
- Collected LFG will be routed to the blower/flare station for combustion via the candlestick flare.

If it is necessary to perform video inspection or cleanout the LCRS via these risers, this can be accomplished by closing the 2-inch wellhead gate valve, disconnecting the flexible hose, and removing the quick release caps or flanged lids and associated piping. For details of the Phase 3 GCCS please see the Phase 3 Construction documents.

K.9.c MONITORING OF ON-SITE STRUCTURES

In order to ensure the safety of workers inside and around permanent structures on site, ambient air will be monitored on a quarterly basis in on-site structures in accordance with the requirements of Rule 62-701.530(2)(a), F.A.C. As stated above, and in Rule 62-701.530(1)(a), F.A.C., the methane concentration in on- or off-site structures may not exceed 25 percent of the LEL, or 1.25 percent methane by volume. The following gas monitoring will be performed in structures at the facility.

- Explosive gas alarms located in the scale house building and leachate treatment plant electrical room will provide continuous monitoring for unacceptable concentrations of explosive gas. These monitors are designed to sound an alarm when methane concentrations exceed 25 percent of the LEL. The signal remains on as long as gas is present, and a red alarm light stays on after an alarm condition in order to alert personnel that methane was detected during their absence. Log sheets will be kept at each location to record when the alarm has been triggered, and each alarm will be calibrated or replaced on a regular basis according to the schedule recommended by the manufacturer.
- On a quarterly basis the following structures will be monitored:
  - Administration building
  - Scale house
  - Leachate treatment plant

- Gun ranges

Monitoring will consist of using handheld instruments to monitor for combustible gases at all slab penetrations, floor drains, cracks in the slabs, along baseboards, in electrical boxes and outlets, and in enclosed spaces such as closets and ground-level cabinets.

K.9.d GAS MONITORING PROCEDURES

K.9.d.1 Monitoring Procedures for Probes

Each probe will be monitored on a quarterly basis for static pressure and methane concentration, or combustible gases using an instrument calibrated to methane. Methane will be measured and recorded in terms of a percent by volume in air or as a percentage of the LEL. The monitoring equipment will be calibrated each day prior to the monitoring.

The general procedure for monitoring at each probe will be as follows:

1. Record meteorological conditions including ambient temperature and barometric pressure.
2. Calibrate the methane monitoring equipment.
3. Purge any calibration gas or gas from previous probes from the methane monitoring instrument.
4. Zero the pressure gauge.
5. Prior to monitoring, note any damage to the probe, and repair if necessary. Failure to repair damage to the above ground casing, cap, or monitoring probe can affect the validity of the monitoring results.
6. Attach the sampling hose to the pressure meter and the labcock valve on the monitoring probe.
7. Record the time of monitoring for the probe.
8. Open the labcock valve.
9. Measure and record the pressure in the probe.
10. Close the labcock valve.
11. Connect the methane monitoring instrument to the sampling hose.
12. Open the labcock valve.
13. Turn on the meter and observe the gas concentration readings, noting any spikes in concentration.
14. After the gas concentration readings stabilize, record the steady-state reading, making note of any spike that occurred prior to reaching a steady-state reading. Note that per Rule 62-701.530(2)(b), F.A.C., purging of the probe is not allowed.
15. Remove the instrument and hose, and close the labcock valve.
16. Repeat steps 3 through 15 for each probe.

Any problems encountered during monitoring, observations, or other pertinent information that could impact the interpretation of the data shall be recorded.

K.9.d.2 Monitoring Procedures for On-Site Structures

The following on-site structures will be monitored for methane or combustible gas on a quarterly basis using handheld field instruments in accordance with Rule 62-701.530(2)(a), F.A.C.:

- Administration building
- Scale house
- Leachate treatment plant
- Gun ranges

Methane will be monitored and recorded in terms of the percent by volume in air or as a percentage of the LEL, and the monitoring equipment will be calibrated each day prior to the monitoring.

The general locations for monitoring at each structure will be as described below.

Administration Building--
A handheld meter will be used to monitor for methane at each of the following locations:

- Along the baseboards in each of the rooms, closets, and hallways
- In all ground-level cabinets
- At the floor drains in the bathrooms
- At all electrical outlets in each room and hallway
- At electrical panels inside and outside the building
- At outdoor electrical outlets

Scale House--
A handheld meter will be used to monitor for methane in the scale house at each of the following locations:

- Along the baseboards
- At any cracks in the concrete slab or flooring
- In all ground-level cabinets
- At all electrical outlets inside and outside of the building
- At electrical panels inside and outside the building

Leachate Treatment Plant--
Methane concentration will be checked at the following locations at the leachate treatment plant until it is removed:

- At any cracks in the concrete slab or flooring
- In any ground-level cabinets
- At all electrical outlets inside and outside of the building
- At electrical panels inside and outside the building

Gun Ranges--
There are two gun ranges on site that are operated by the Withlacoochee Technical Institute on the closed 60-acre landfill. At both gun ranges, the following locations will be monitored for methane.

- At cracks in the concrete slabs

- At all electrical outlets and switches
- At all slab penetrations, such as support posts for the roofs of the firing platforms

K.9.e REPORTING

Results of the monitoring will be reported to FDEP quarterly. A copy of the monitoring form is included as Appendix G to this plan.

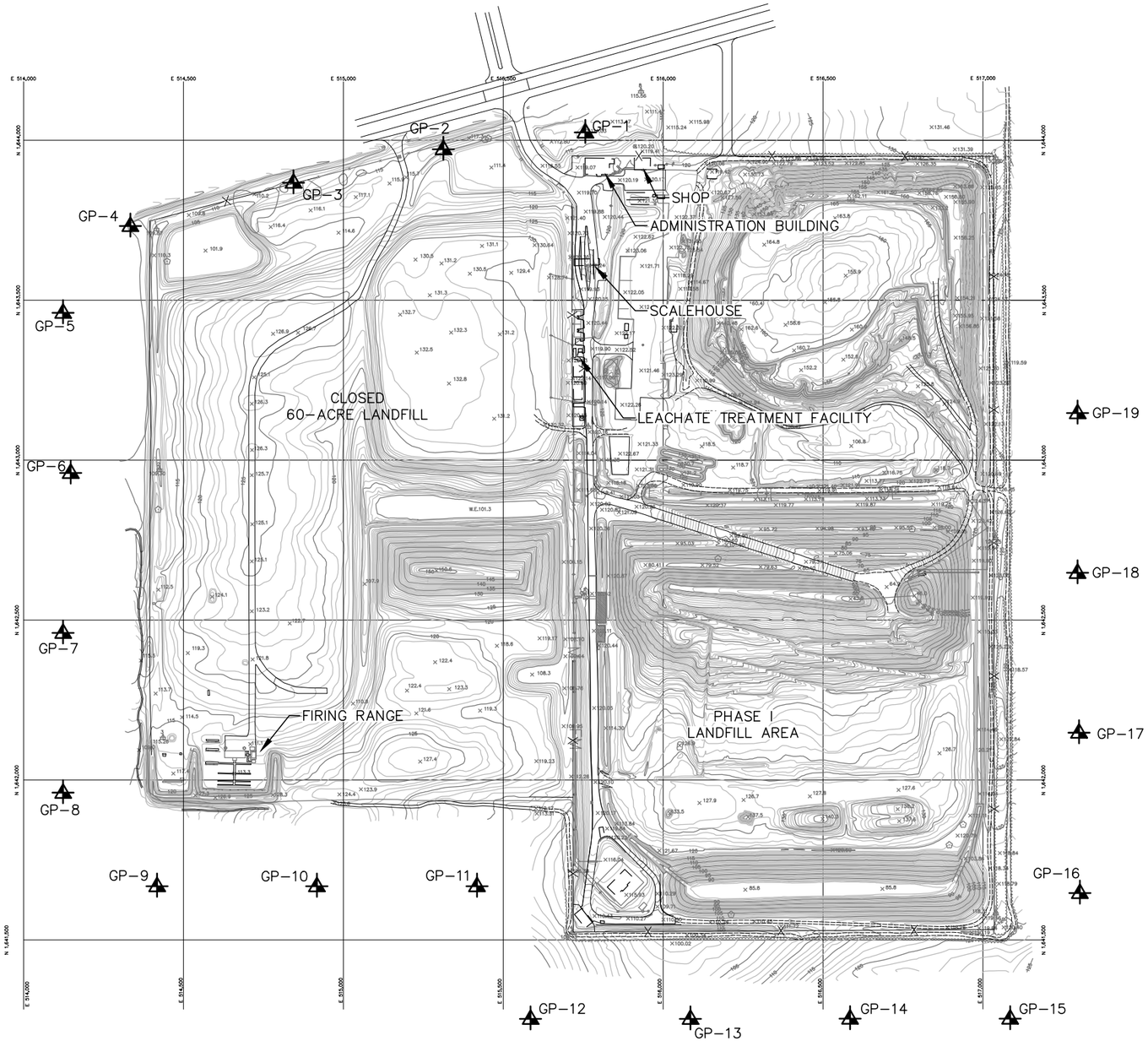
If the results of the monitoring show that combustible gas concentrations exceed the limits specified in Rule 62.701.530(1)(a), F.A.C., Citrus County will take the following actions:

- Immediately take all necessary steps to ensure protection of human health and notify FDEP of the exceedances.
- Within seven days of the detections, submit to FDEP for approval a gas remediation plan. The gas remediation plan must describe the nature and extent of the problem and the proposed remedy. The remedy must be completed within 60 days of detection unless otherwise approved by FDEP.

K.9.f ROUTINE ODOR CONTROL

The site is inspected on a daily basis for odors at the point of compliance. Potential sources for odors include; incoming waste, workface activities, landfill gas, condensate systems, and leachate collection and handling systems. In the event that an odor is detected and a source identified, appropriate steps will be taken to mitigate the incident. The installation of the GCCS should eliminate odors generated by the decomposition of waste.

Deodorants and odor neutralizers will be maintained on site and utilized if soil cover does not mitigate the odor issues at the working face. Daily cover provides and effective seal against the odors. If odors persist daily cover will be increased and cover procedures will be reviewed and altered if necessary.



N

0 200 400

SCALE IN FEET

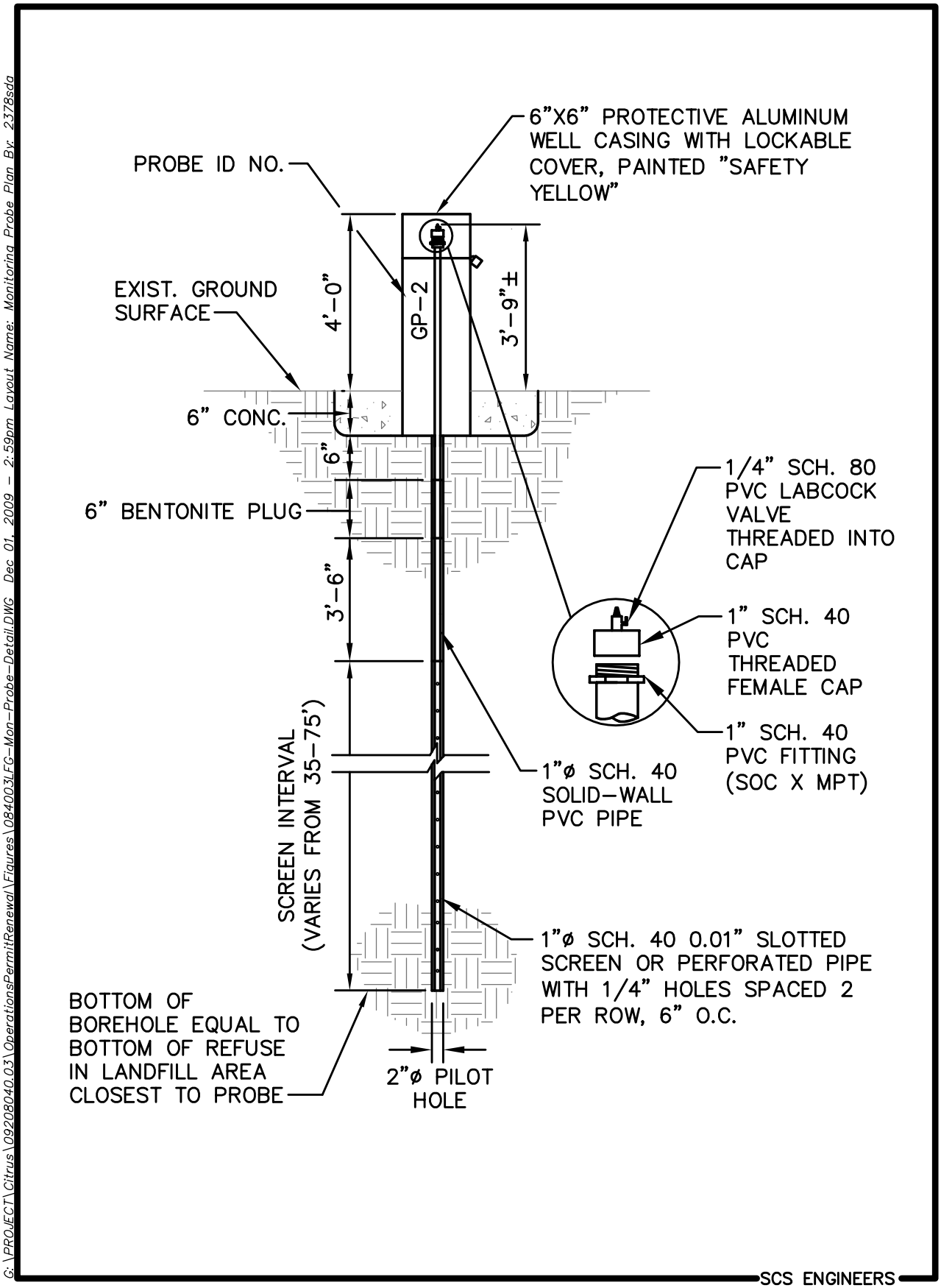
LEGEND

GP-1 LFG MONITORING PROBE
JULY 2007

G:\PROJECT\Citrus\09210021.26\Figures\GasMon.dwg Sep 15, 2015 - 10:30am Layout Name: GasMonPlan By: 3935ius

SCS ENGINEERS

Figure 9-1. Landfill Gas Monitoring Probe Locations, Central Landfill, Citrus County, Florida



G:\PROJECT\Citrus\09208040.03\OperationsPermitRenewal\Figures\084003LFG-Mon-Probe-Detail.DWG Dec 01, 2009 - 2:59pm Layout Name: Monitoring Probe Plan By: 2378sda

Figure 9-2. LFG Monitoring Probe Detail, Citrus County Central Landfill

K.10 STORMWATER MANAGEMENT SYSTEM AND MAINTENANCE (RULE 62-701.500(10), F.A.C.)

The Stormwater Management System will be operated and maintained as necessary to meet the requirements of Rule 62-701.400(9), F.A.C.

K.10.a STORMWATER BEST MANAGEMENT PRACTICES

The landfill will use the following stormwater best management practices (BMPs):

- Side swales
- Grass
- Sod
- Down drains
- Benches
- Dry retention stormwater ponds
- Pumps to transport stormwater
- Lined ditches

Many of these stormwater management systems were constructed during development of Phases 1 and 2 of the Citrus County Central Landfill. Plans and cross sections of these systems, including as-built drawings and modifications, are on file with the FDEP Southwest District office. Additional stormwater management systems were installed as part of the Phase 3 expansion. Record drawings of the Phase 3 expansion were submitted with the construction certification upon completion of the project.

K.10.b STORMWATER MAINTENANCE PROCEDURES

The stormwater management system operation and maintenance will include the following:

- All stormwater conveyance systems will be inspected periodically or after major storm events
- Any damaged systems will be repaired
- Accumulated sediment will be removed as necessary
- All stormwater pumps will be serviced as specified by the pump manufacturer

K.10.c SURFACE DRAINAGE STRUCTURES

During the operation of the facility the County will install portions of the stormwater drainage features as shown on the Operations Drawings, as interim drainage control measures. The interim control measures shall include piping, inlet structures and energy dissipaters as identified on the Operations Drawings. The piping and inlet boxes will be removed and reinstalled as part of final closure construction. The timing for the installation of interim drainage measures shall be as shown on the Filling Sequence Plan of the Operations Drawings.

K.11 EQUIPMENT AND OPERATION FEATURES (RULE 62-701.500(11), F.A.C.)

K.11.a EQUIPMENT (Rule 62-701.500(11)(a), F.A.C.)

Citrus County owns a diverse mix of equipment to spread, compact, and cover the waste in the landfill. While the actual equipment at the landfill may vary, sufficient equipment will be maintained at the site to ensure proper operation of the landfill. A current list of equipment is as follows:

- One landfill compactor
- One excavator
- One bulldozer
- Two wheel loaders
- One water truck
- One fuel truck
- One articulated dump truck
- One skid steer

In addition the site will have auxiliary vehicles including:

- One roll-off truck
- Several pickup trucks
- Several utility vehicles
- Several trailers

Normal maintenance will be performed on site. Major maintenance item repairs (e.g., engine, transmissions, auxiliary drives) will be handled either at the maintenance facilities or at off-site service facilities.

K.11.b RESERVE EQUIPMENT (Rule 62-701.500(11)(b), F.A.C.)

The County has arrangements with suppliers to obtain reserve equipment within 24 hours of equipment breakdown if sufficient equipment is not available to properly operate the landfill.

K.11.c COMMUNICATION EQUIPMENT (Rule 62-701.500(11)(c), F.A.C.)

Landfill employees will be able to communicate by two-way radios, and a telephone is located at the scale house and administrative office.

K.11.d DUST CONTROL (Rule 62-701.500(11)(d), F.A.C.)

Control of dust will be maintained by wetting roads as necessary with a 1,200-gallon water tank truck.

K.11.e FIRE PROTECTION AND FIRE FIGHTING CAPABILITIES (Rule 62-701.500(11)(e), F.A.C.)

The daily soil cover aids in fire prevention at the landfill. The main method of fire extinguishing is to apply soil to the burning waste using a dozer. Ample soil is stockpiled on site if needed for fire extinguishing purposes. The facility is surrounded by a drainage ditch and road that would act as a firebreak protecting the adjacent forest. In addition to soil stockpiles two fire hydrants are located at the site, one in the citizen drop-off area and one near the fill area.

All equipment and vehicles at the landfill will be equipped with fire extinguishers, and all personnel will be trained in their use. All extinguishers will be inspected regularly and repaired or replaced as needed.

Emergency services are notified telephonically using 911.

K.11.f LITTER CONTROL DEVICES (Rule 62-701.500(11)(f), F.A.C.)

Daily cover will provide the main litter control. When the active area of the landfill is below the ground surface, litter is not expected to be a problem. When the active area is above the ground surface, the perimeter ditch and fence will provide a barrier to blowing litter. In addition, portable and/or temporary litter fences will be located adjacent to the working face to prevent litter from being blown away from the working area.

K.11.g SIGNS (Rule 62-701.500 (11)(g), F.A.C.)

Appropriate signs will be utilized and maintained to ensure maximum safety, efficiency, and general information. Signage will include, at a minimum, facility name and operating authority, traffic flow, hours of operation, disposal rates, and restrictions or conditions of disposal.

K.12 ROADS (RULE 62-701.500(12), F.A.C.)

K.12.a ALL-WEATHER ACCESS ROAD (Rule 62-701.500(12)(a), F.A.C.)

All-weather roads, passable and safe under normal operating conditions, will be maintained to prevent dust, rutting or loss of traction. The facility access roads are surfaced with asphaltic concrete. Figure 1-1 shows the locations of the access and perimeter site roads.

K.12.b PERIMETER AND OTHER ON-SITE ROADS (RULE 62-701.500(12)(b), F.A.C.)

Some perimeter roads and internal roads will be constructed of limerock and/or stabilized soils. These roads will be inspected daily and repairs will be made in a timely manner. Limerock roads will be scraped and smoothed with a road grader or dozer as necessary. When needed, roadways will be wetted to control dust and to ensure high visibility. On-site roads will be maintained to allow access to monitoring devices and stormwater controls, for landfill inspections and fire fighting.

K.13 ADDITIONAL RECORDKEEPING AND REPORTING (RULE 62-701.500(13), F.A.C.)

K.13.a PERMIT APPLICATION DOCUMENTATION (Rule 62 -701 .500(13)(a), F.A.C.)

Records of all information used to develop or support the permit applications and any supplemental information submitted to comply with Rule 62-701, F.A.C., pertaining to construction of the facility will be kept throughout the life of the facility. Records pertaining to the operation of the landfill will be kept for the life of the facility.

K.13.b MONITORING INFORMATION (Rule 62-701.500(13)(b), F.A.C.)

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

K.13.c REMAINING LIFE AND CAPACITY ESTIMATE (Rule 62-701.500(13)(c), F.A.C.)

The landfill will maintain an annual estimate of the remaining life and capacity (in cubic yards) of the existing constructed landfill and the remaining capacity and site life of other permitted areas not yet constructed. The annual estimate will be based on a summary of the heights, lengths, and widths of solid waste disposal units. The estimate will be made and reported annually to the FDEP as part of the annual update to the closure and long-term care cost estimates.

K.13.d ARCHIVED RECORDS (Rule 62-701.500(13)(d), F.A.C.)

The landfill may archive records that are more than five years, if necessary. Archived records will be available for inspection within seven days of the receipt of the request.

APPENDIX A

OPERATIONS DRAWINGS (REDUCED SIZE)

CITRUS COUNTY
SOLID WASTE MANAGEMENT DIVISION

CENTRAL LANDFILL
OPERATIONS PERMIT RENEWAL DRAWINGS

CITRUS COUNTY, FLORIDA

SEPTEMBER 2015

BOARD OF COUNTY COMMISSIONERS

Dennis Damato, Commissioner, District 1
Ron Kitchen, Commissioner, District 2
Joe Meek, Commissioner. District 3
Scott Carnahan, Commissioner, District 4
Scott Adams, Commissioner, District 5

COUNTY ADMINISTRATOR

Randy Oliver

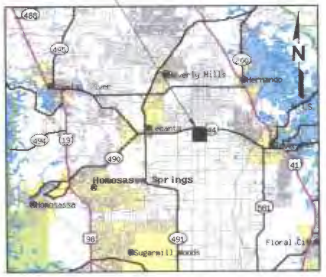
PUBLIC WORKS DEPARTMENT

Jeffery Rogers, Director

SOLID WASTE MANAGEMENT DIRECTOR

Henry Norris

PROJECT LOCATION



LOCATION MAP

DRAWING INDEX

DRAWING NO.		DRAWING TITLE
⚠ 1	-	COVER SHEET
⚠ 2	-	1-MILE AERIAL PHOTOGRAPH
⚠ 3	-	EXISTING FACILITY SITE PLAN (TOPOGRAPHIC SURVEY DATE 04/08/09)
⚠ 4	-	FINAL CLOSURE PLAN
5	-	PHASE 1, 2, AND 3 FILL SEQUENCE CLOSURE PLAN
6	-	SECTIONS
⚠ 7	-	DETAILS
8	-	DRAINAGE DETAILS - 1
9	-	DRAINAGE DETAILS - 2

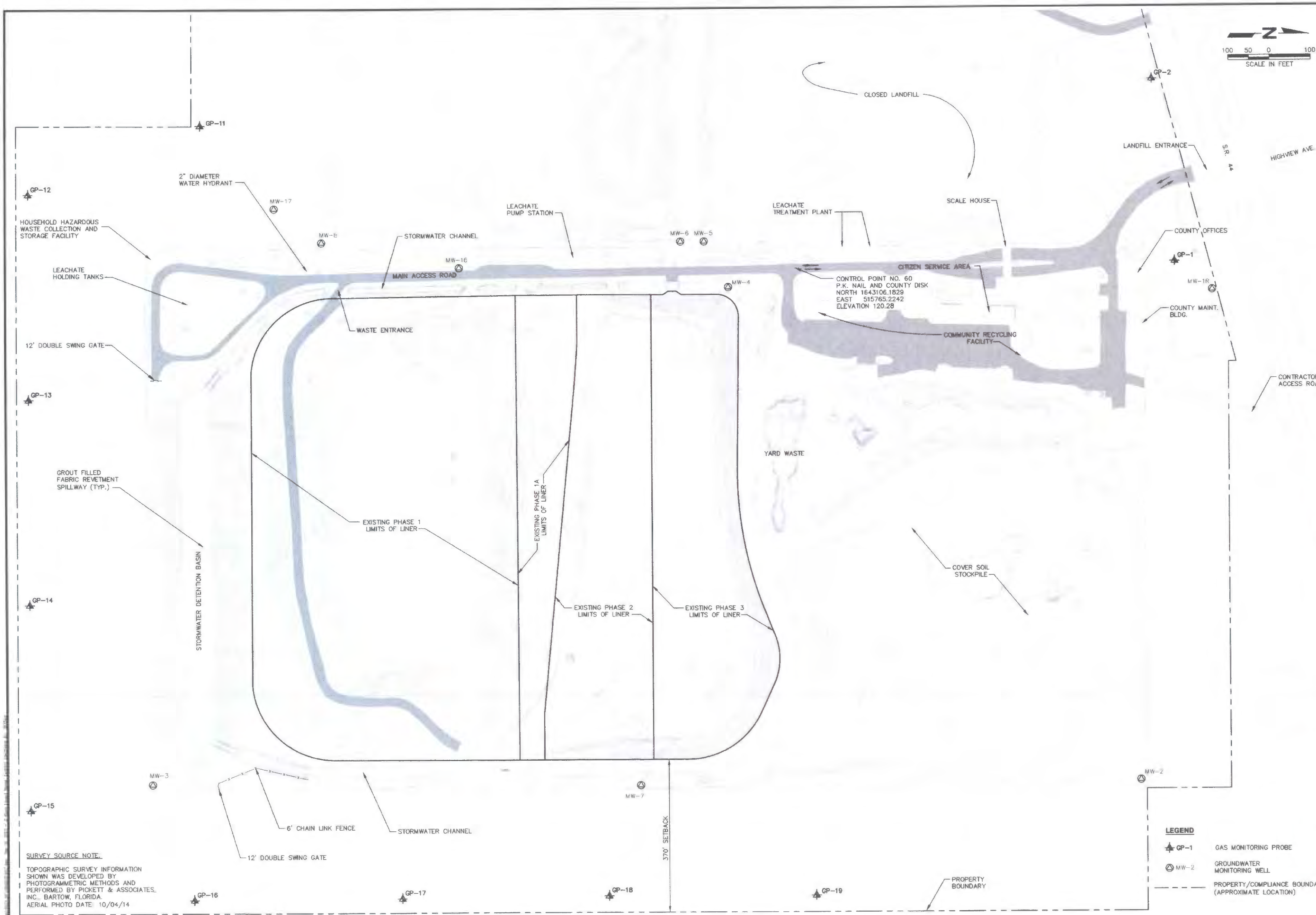
⚠ REVISED PER R.A.I. NO. 1, APRIL 21, 2010
⚠ REVISED WITH NEW AERIAL AND TOPO, SEPTEMBER, 2015

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100
TAMPA, FLORIDA 33610
PH (813) 621-0080 FAX NO. (813) 623-6757
WWW.SCSENGINEERS.COM
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

SCS PROJECT NO. 09210021.26

C. EDWARD HILTON, JR., P.E.
LICENSE NO. 45916 10/5/15

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 150, TAMPA, FL 33610
813.621.0080 FAX 813.621.0787
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00000692
09210021.26
CAD/D FILE: 084003AERIAL
DATE: SEPTEMBER 2015
SCALE: AS SHOWN
DRAWING NO: 2 OF 9
CITRUS COUNTY
SOLID WASTE MANAGEMENT DIVISION
CITRUS COUNTY, FLORIDA
1-MILE AERIAL PHOTOGRAPH
CENTRAL LANDFILL OPERATIONS PERMIT RENEWAL DRAWINGS
REV DATE DESCRIPTION BY
9/9/15 UPDATED AERIAL JLS
LICENSE NO. 49916
N
SCALE IN FEET
600 300 0 600
LEGEND
1 MILE RADIUS (APPROX.)
PHOTO: LABINS AERIAL FLOWN DECEMBER OF 2013
REVISED
DATE 9/9/2015
ONE MILE
ONE MILE
ONE MILE
ONE MILE
PROPERTY LINE
CENTRAL LANDFILL



SURVEY SOURCE NOTE:

TOPOGRAPHIC SURVEY INFORMATION SHOWN WAS DEVELOPED BY PHOTOGRAMMETRIC METHODS AND PERFORMED BY PICKETT & ASSOCIATES, INC., BARTOW, FLORIDA. AERIAL PHOTO DATE: 10/04/14

REVISED
DATE: 9/9/2015

REV	DATE	DESCRIPTION	BY
1	9/9/15	UPDATED TOPO SURVEY	IUS

C. Edward Hilton Jr., P.E.
LICENSE NO. 46916

DRAWING TITLE
EXISTING FACILITY SITE PLAN (TOPOGRAPHIC SURVEY DATE 10/04/14)

PROJECT TITLE
CENTRAL LANDFILL OPERATIONS PERMIT RENEWAL DRAWINGS

CLIENT
CITRUS COUNTY SOLID WASTE MANAGEMENT DIVISION CITRUS COUNTY, FLORIDA

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
813 621-0080 FAX 813 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO. 09210021.26 | DWN. BY: IUS | Q/A RVW BY: CEH
CHK. BY: IUS | APP. BY: CEH | CEH

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DATE: SEPTEMBER 2015
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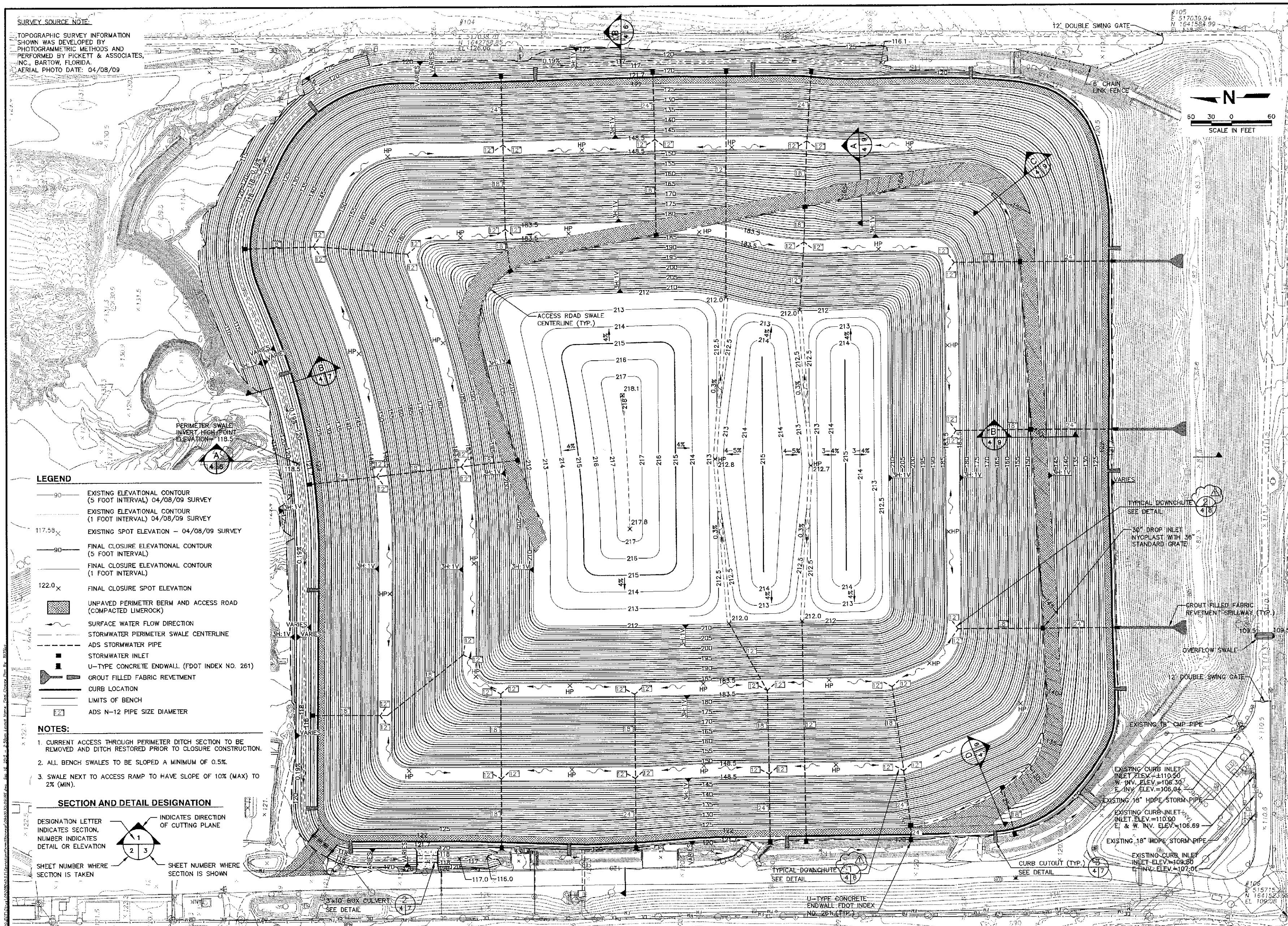
DRAWING NO. 3 of 9



SURVEY SOURCE NOTE:

TOPOGRAPHIC SURVEY INFORMATION SHOWN WAS DEVELOPED BY PHOTOGRAMMETRIC METHODS AND PERFORMED BY PICKETT & ASSOCIATES, INC., BARTOW, FLORIDA. AERIAL PHOTO DATE: 04/08/09

LEGEND

- EXISTING ELEVATIONAL CONTOUR (5 FOOT INTERVAL) 04/08/09 SURVEY
- EXISTING ELEVATIONAL CONTOUR (1 FOOT INTERVAL) 04/08/09 SURVEY
- 117.58× EXISTING SPOT ELEVATION – 04/08/09 SURVEY
- FINAL CLOSURE ELEVATIONAL CONTOUR (5 FOOT INTERVAL)
- FINAL CLOSURE ELEVATIONAL CONTOUR (1 FOOT INTERVAL)
- 122.0× FINAL CLOSURE SPOT ELEVATION
- UNPAVED PERIMETER BERM AND ACCESS ROAD (COMPACTED LIMEROCK)
- SURFACE WATER FLOW DIRECTION
- STORMWATER PERIMETER SWALE CENTERLINE
- ADS STORMWATER PIPE
- STORMWATER INLET
- U-TYPE CONCRETE ENDWALL (FDOT INDEX NO. 261)
- GROUT FILLED FABRIC REVETMENT
- CURB LOCATION
- LIMITS OF BENCH
- ADS N-12 PIPE SIZE DIAMETER

NOTES:

1. CURRENT ACCESS THROUGH PERIMETER DITCH SECTION TO BE REMOVED AND DITCH RESTORED PRIOR TO CLOSURE CONSTRUCTION.
2. ALL BENCH SWALES TO BE SLOPED A MINIMUM OF 0.5%.
3. SWALE NEXT TO ACCESS RAMP TO HAVE SLOPE OF 10% (MAX) TO 2% (MIN).

SECTION AND DETAIL DESIGNATION

- DESIGNATION LETTER INDICATES SECTION, NUMBER INDICATES DETAIL OR ELEVATION
- INDICATES DIRECTION OF CUTTING PLANE
- SHEET NUMBER WHERE SECTION IS TAKEN
- SHEET NUMBER WHERE SECTION IS SHOWN

REV	DATE	DESCRIPTION	BY
1	4/21/10	REVISED PER R.A.I. NO. 1	DHB

DOMINIQUE H. BRAMLETT, P.E. LICENSE NO. 61829

DRAWING TITLE: FINAL CLOSURE PLAN

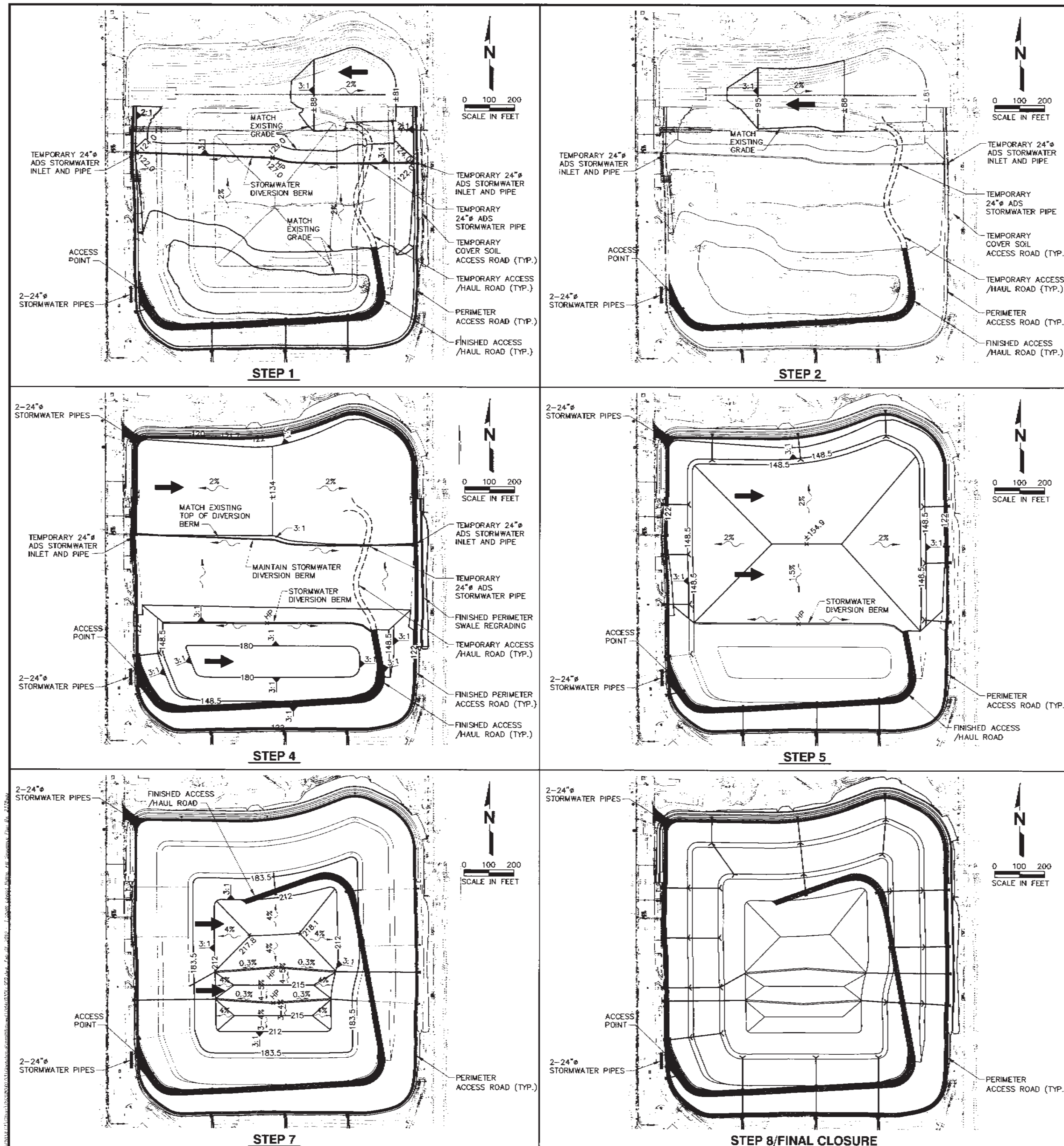
PROJECT TITLE: CENTRAL LANDFILL OPERATIONS PERMIT RENEWAL DRAWINGS

CLIENT: CITRUS COUNTY SOLID WASTE MANAGEMENT DIVISION CITRUS COUNTY, FLORIDA

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
4041 PARK OAKS BLVD, SUITE 100, TAMPA, FL 33610
813 621-0080 FAX 813 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO. 09208040.03 | DSN. BY: DHB | DWN. BY: CTN | CHK. BY: DHB | Q/A RVW BY: DHB | APP. BY: CEH

CADD FILE: 084003CLOSURE
DATE: FEBRUARY 2010
SCALE: AS SHOWN
DRAWING NO. 4 of 9



LEGEND

	EXISTING ELEVATIONAL CONTOUR (5 FOOT INTERVAL) 04/08/09 SURVEY
	EXISTING ELEVATIONAL CONTOUR (1 FOOT INTERVAL) 04/08/09 SURVEY
	EXISTING SPOT ELEVATION 04/08/09 SURVEY
	SURFACE WATER FLOW DIRECTION
	ADS STORMWATER PIPE
	STORMWATER INLET
	U-TYPE CONCRETE ENDWALL (FDOT INDEX NO. 261)
	LIMIT OF FILL AREA CELL
	TEMPORARY ACCESS/HAUL ROAD (APPROX. LOCATION)
	PERMANENT ACCESS/HAUL ROAD (APPROX. LOCATION)
	GENERAL DIRECTION OF FILLING

NOTES

1. FINAL CONSTRUCTION GRADES SHOWN REPRESENT THE TOP OF FINAL COVER/CLOSURE CAP.
2. FUTURE PHASE 3 BOTTOM GRADES SHOWN IN STEPS 1, 2, AND 3 REPRESENT THE APPROXIMATE TOP OF LINER SYSTEM.
3. TOPOGRAPHIC SURVEY INFORMATION SHOWN WAS DEVELOPED BY PHOTOGRAMMETRIC METHODS AND PERFORMED BY PICKETT & ASSOCIATES, INC., BARTOW, FLORIDA.

GENERAL FILL SEQUENCE

STEP 1 – CONTINUE FILLING OPERATIONS IN PHASE 2 UNTIL ALL AREAS HAVE RECEIVED INTERMEDIATE COVER, AND STORMWATER RUNOFF CAN BE DIRECTED TO THE PERIMETER DITCHES. BEGIN FILLING EAST THIRD OF PHASE 3 IN TWO TEN FOOT LIFTS TO PROMOTE STORMWATER RUNOFF TO THE EAST END. A MINIMUM OF 2 PERCENT SLOPE WILL BE PROVIDED FROM WEST TO EAST.

STEP 2 – FILL NEXT THIRD OF THE CELL OF PHASE 3 AREA TO PROMOTE STORMWATER TO THE EAST END. A MINIMUM OF 2 PERCENT SLOPE WILL BE PROVIDED FROM WEST TO EAST.

STEP 3 – FILL LAST THIRD OF THE CELL OF PHASE 3 TO PROMOTE STORMWATER TO THE WEST END. A MINIMUM OF 2 PERCENT SLOPE WILL BE PROVIDED FROM EAST TO WEST (FOR THIS THIRD ONLY).

STEP 4 – FILL UP TO ELEVATION ± 134. FILL PHASE 1 AND 1A TO ELEVATION 180.

STEP 5 – FILL FROM ELEVATION ± 134 TO BENCH AT ELEVATION 148.5 AND COMPLETE CROWN TO ELEVATION ± 154.9.

STEP 6 – CONTINUE FILL TO NEXT BENCH AT ELEVATION 183.5 AND COMPLETE CROWN TO ELEVATION ± 190.2 WITH 2% MIN. SLOPE.

STEP 7 – FILL FROM BENCH AT ELEVATION 183.5 TO TOP OF SLOPE ELEVATION 212 AND COMPLETE CROWN TO ELEVATION 218.1 WITH SLOPES AS SHOWN.

REV	DATE	DESCRIPTION	BY

DOMINIQUE H. BRAMLETT, P.E.
LICENSE NO. 61829
2/08/10

DRAWING TITLE: PHASE 1, 2, AND 3 FILL SEQUENCE CLOSURE PLAN

PROJECT TITLE: CENTRAL LANDFILL OPERATIONS PERMIT RENEWAL DRAWINGS

CLIENT: CITRUS COUNTY SOLID WASTE MANAGEMENT DIVISION CITRUS COUNTY, FLORIDA

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
PH (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO. 09208040.03 | DSN. BY: DHB | DWN. BY: CTN | CHK. BY: DHB | Q/A RVW BY: DHB | APP. BY: CEH

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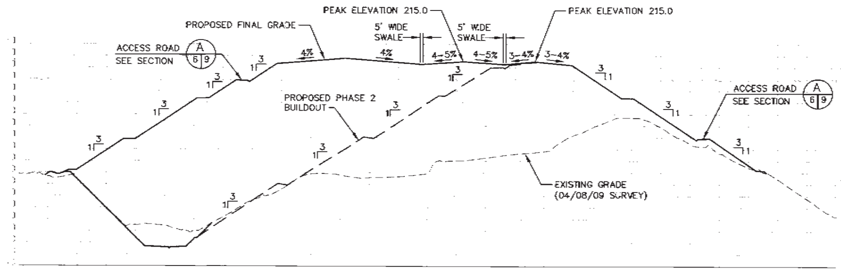
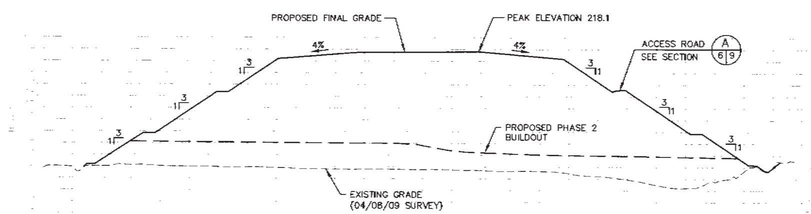
DATE: FEBRUARY 2010
SCALE: AS SHOWN
DRAWING NO. 5 of 9



SECTION A 4|6
SCALE: 1" = 100' HORIZ.
1" = 50' VERT.



SECTION B 4|6
SCALE: 1" = 100' HORIZ.
1" = 50' VERT.

DOMINIQUE H. BRAMLETT, P.E.
LICENSE NO. 61829

REV	DATE	DESCRIPTION	BY

DRAWING TITLE: SECTIONS

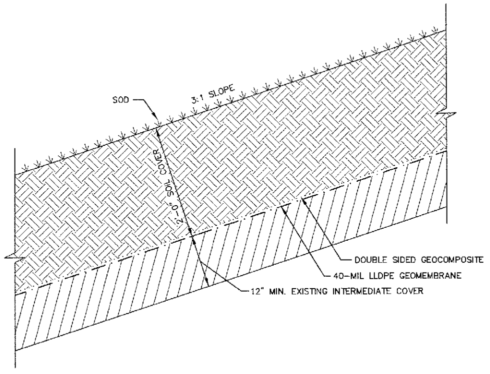
PROJECT TITLE: CENTRAL LANDFILL OPERATIONS PERMIT RENEWAL DRAWINGS

CLIENT: CITRUS COUNTY SOLID WASTE MANAGEMENT DIVISION CITRUS COUNTY, FLORIDA

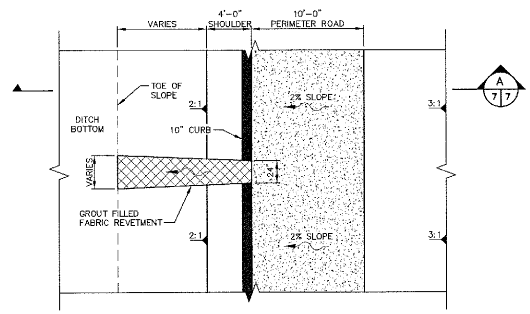
SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
813 621-0080 FAX 813 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO. 09208040.03 | DWN. BY CTN | Q/A RVW BY DHB
DSN. BY DHB | CHK. BY DHB | APP. BY CEH

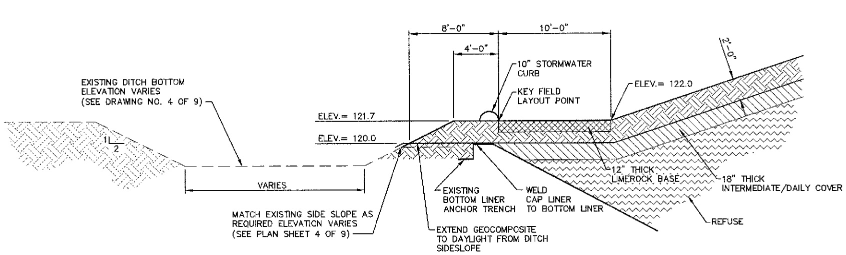
CADD FILE: 084003SECTIONS
DATE: FEBRUARY 2010
SCALE: AS SHOWN
DRAWING NO. **6** of 9



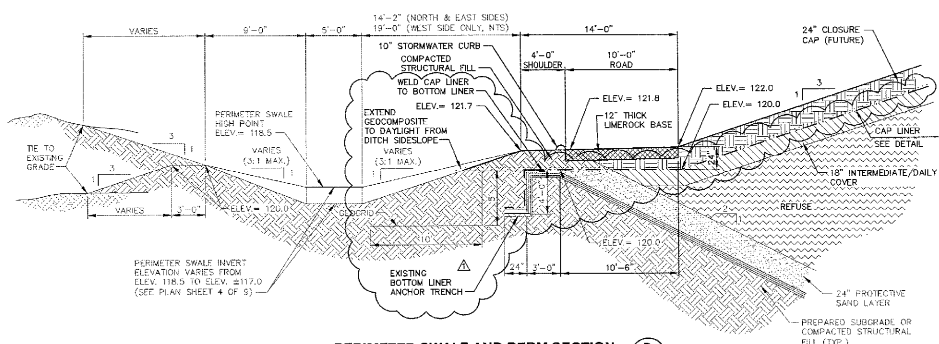
TYPICAL GEOSYNTHETIC CAP SYSTEM DETAIL (1 / 7|7)
SCALE: 1" = 1'



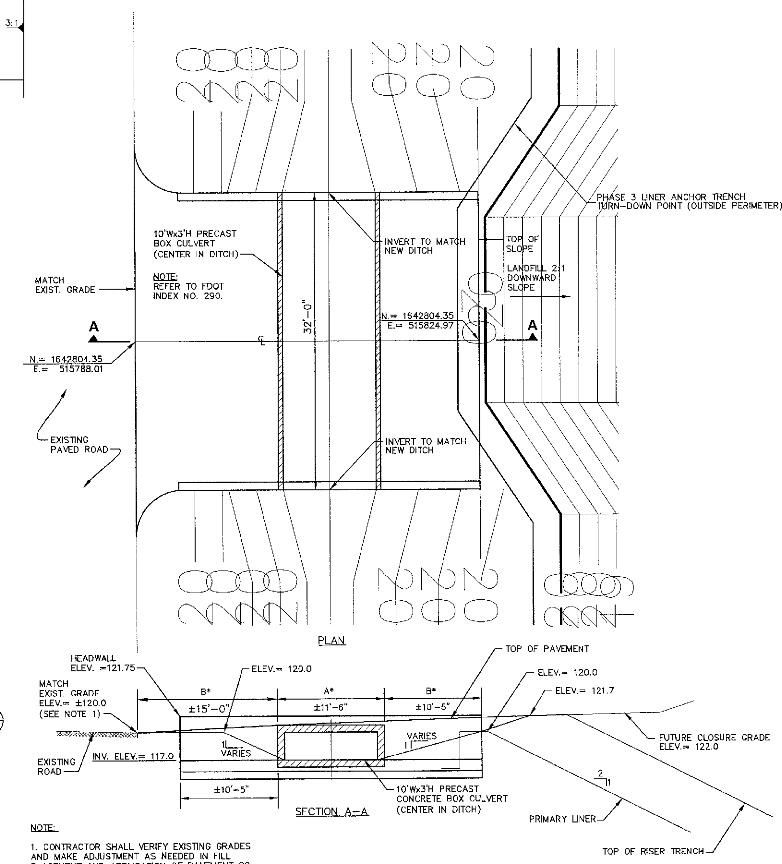
CURB CUTOUT (TYPICAL) DETAIL (3 / 4|7)
SCALE: 1" = 5'



PERIMETER ROAD AND CURB SECTION (A / 7|7)
SCALE: 1" = 5'



PERIMETER SWALE AND BERM SECTION (B / 4|7)
SCALE: 1" = 5'



NOTE:

1. CONTRACTOR SHALL VERIFY EXISTING GRADES AND MAKE ADJUSTMENT AS NEEDED IN FILL PLACEMENT AND APPLICATION OF PAVEMENT SO THAT TRANSITION FROM NEW SURFACE TO EXISTING SURFACE IS FLUSH.

* CULVERT PAVEMENT GUIDE

A = 2" ASPHALT ONLY

B = 2" ASPHALT OVER 8" LIMEROCK BASE

BOX CULVERT DETAIL (2 / 4|7)
NOT TO SCALE

REV	DATE	DESCRIPTION	BY
1	4/21/10	REVISED PER R.A.I. NO. 1	DHB

DOMINIQUE H. BRAMLETT, P.E. LICENSE NO. 61829

DRAWING TITLE: DETAILS

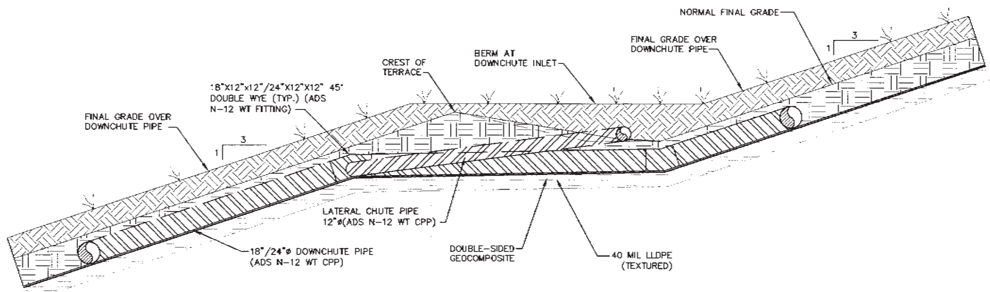
PROJECT TITLE: CENTRAL LANDFILL OPERATIONS PERMIT RENEWAL DRAWINGS

CLIENT: CITRUS COUNTY SOLID WASTE MANAGEMENT DIVISION CITRUS COUNTY, FLORIDA

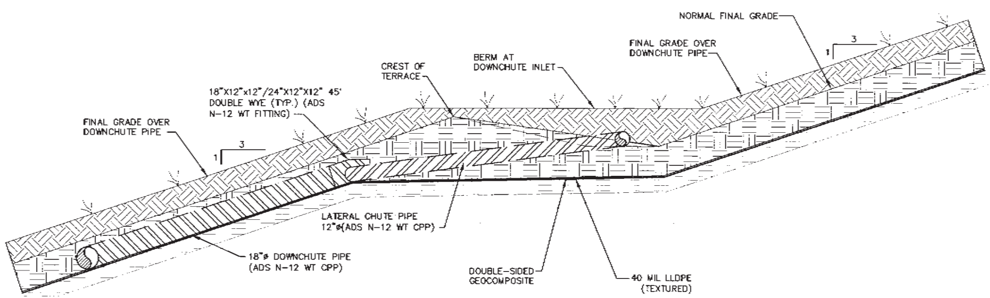
SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
813 621-0080 FAX 813 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO. 09208040.03 | DSN. BY: DHB | DWN. BY: CTN | CHK. BY: DHB | Q/A RVW BY: DHB | APP. BY: CEH

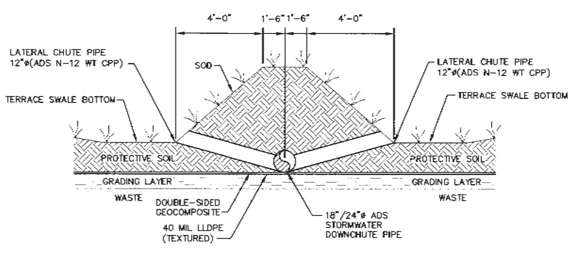
CADD FILE: 084003DETL
DATE: FEBRUARY 2010
SCALE: AS SHOWN
DRAWING NO. 7 of 9



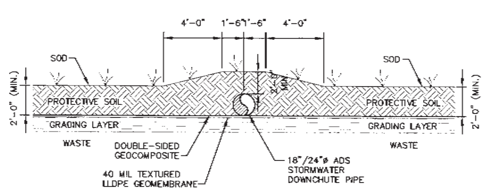
BOTTOM AND MIDDLE TERRACE INLET DOWNCHUTE PIPES SECTION (A / 8 | 8)
SCALE: 1" = 4'-0"



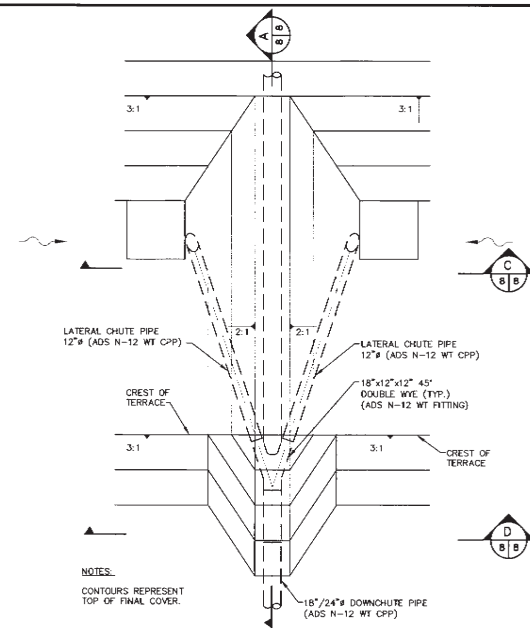
TOP TERRACE INLET AND DOWNCHUTE PIPES SECTION (B / 8 | 8)
SCALE: 1" = 4'-0"



DOWNCHUTE INLET AND DOWNCHUTE PIPE SECTIONS (C / 8 | 8)
SCALE: 1" = 2'-0"



DOWNCHUTE INLET AND DOWNCHUTE PIPE SECTIONS (D / 8 | 8)
SCALE: 1" = 2'-0"



BOTTOM AND MIDDLE TERRACE INLET DOWNCHUTE PIPES (1 / 4 | 8)
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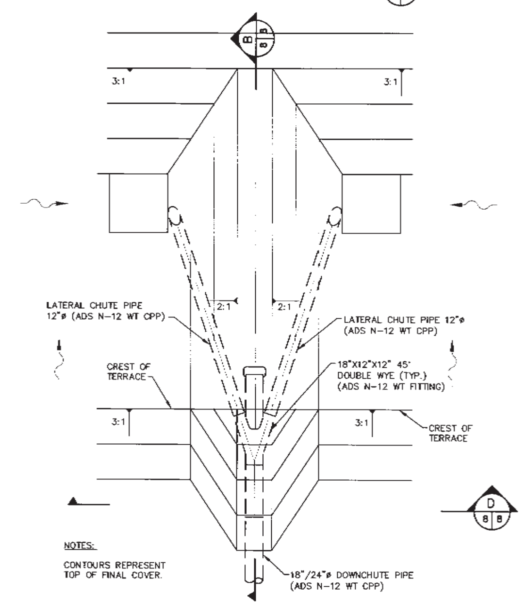


TOP TERRACE INLET AND DOWNCHUTE PIPES (2 / 4 | 8)
SCALE: 1" = 4'-0"

REV	DATE	DESCRIPTION	BY

DOMINIQUE H. BRAMLETT, P.E. LICENSE NO. 61829

DRAWING TITLE: **DRAINAGE DETAILS - 1**

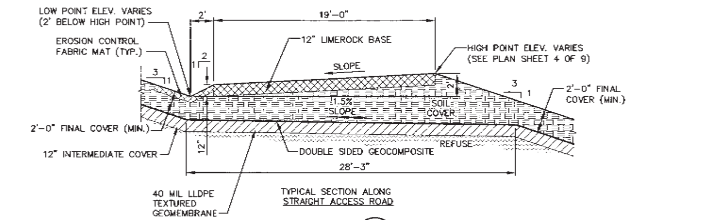
PROJECT TITLE: **CENTRAL LANDFILL OPERATIONS PERMIT RENEWAL DRAWINGS**

CLIENT: **CITRUS COUNTY SOLID WASTE MANAGEMENT DIVISION CITRUS COUNTY, FLORIDA**

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
813 621-0080 FAX 813 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

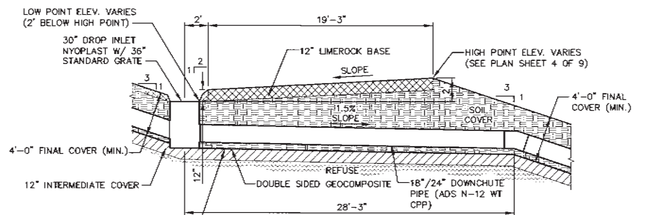
PROJ. NO. 09208040.03 | DWN. BY: CTN | Q/A REVIEW BY: DHB
DSN. BY: DHB | CHK. BY: DHB | APP. BY: CEH

CADD FILE: 084003DRNDETL1
DATE: FEBRUARY 2010
SCALE: AS SHOWN
DRAWING NO. **8** of 9



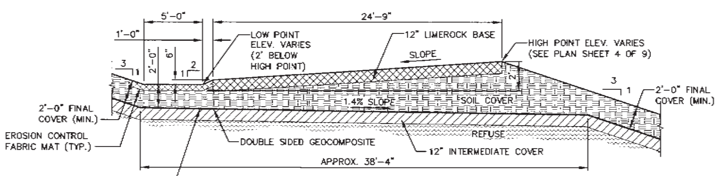
TYPICAL SECTION ALONG STRAIGHT ACCESS ROAD

SECTION A (4,8/9)
SCALE: 1" = 5'



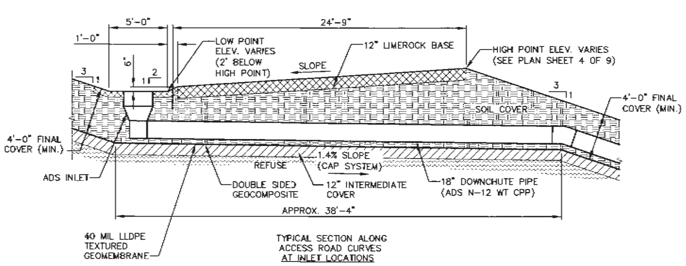
TYPICAL SECTION ALONG STRAIGHT ACCESS ROAD AT INLET LOCATIONS

SECTION B (4/9)
SCALE: 1" = 5'



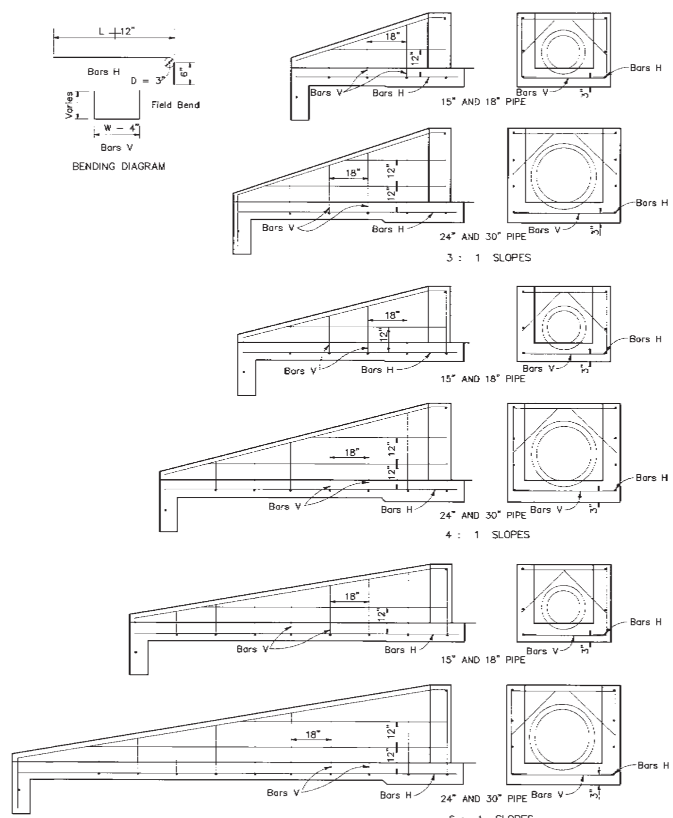
TYPICAL SECTION ALONG ACCESS ROAD CURVES

SECTION C (4/9)
SCALE: 1" = 5'



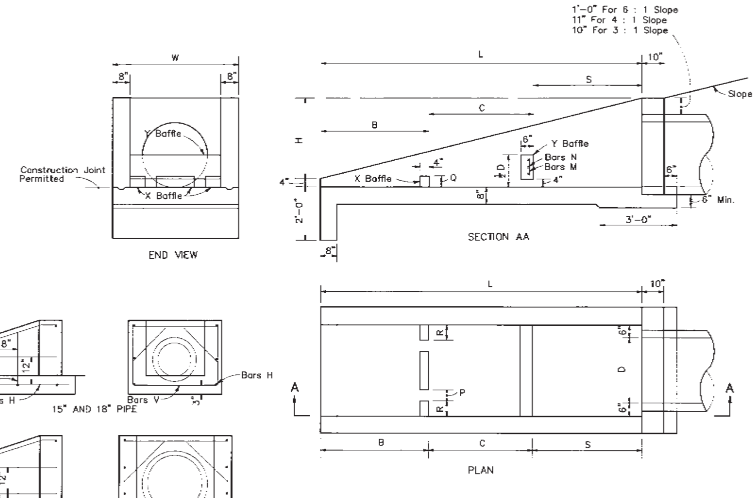
TYPICAL SECTION ALONG ACCESS ROAD CURVES AT INLET LOCATIONS

SECTION D (4/9)
SCALE: 1" = 5'



BENDING DIAGRAM

SIDE VIEWS AND BACKWALL SECTIONS
REINFORCING DETAILS



DIMENSIONAL DETAILS

DIMENSIONS AND QUANTITIES FOR ONE U-ENDWALL											
Rate Of Slope	Pipe Size				Baffle Locations (When Required)				Concrete Class ~ Cu. Yd.	Reinf. Steel Lbs.
	D	Area Sq. Ft.	L	H	W	S	B	C		
3 : 1	15"	1.23	5'-3"	1'-9"	3'-7"	1'-9"	1'-9"	1'-9"	1.19	51
	18"	1.77	6'-0"	2'-0"	3'-10"	2'-0"	2'-0"	2'-0"	1.42	56
	24"	3.14	7'-6"	2'-6"	4'-4"	2'-6"	2'-6"	2'-6"	1.94	77
	30"	4.91	9'-0"	3'-0"	4'-10"	3'-0"	3'-0"	3'-0"	2.54	96
4 : 1	15"	1.23	7'-4"	1'-10"	3'-7"	2'-6"	2'-6"	2'-4"	1.54	64
	18"	1.77	8'-4"	2'-1"	3'-10"	2'-10"	2'-10"	2'-8"	1.84	71
	24"	3.14	10'-4"	2'-7"	4'-4"	3'-6"	3'-6"	3'-4"	2.53	92
	30"	4.91	12'-4"	3'-1"	4'-10"	4'-2"	4'-2"	4'-0"	3.34	124
6 : 1	15"	1.23	11'-6"	1'-11"	3'-7"	3'-10"	3'-10"	3'-10"	2.19	89
	18"	1.77	13'-0"	2'-2"	3'-10"	4'-4"	4'-4"	4'-4"	2.63	103
	24"	3.14	16'-0"	2'-8"	4'-4"	5'-4"	5'-4"	5'-4"	3.59	143
	30"	4.91	19'-0"	3'-2"	4'-10"	6'-4"	6'-4"	6'-4"	4.81	180

DIMENSIONS AND QUANTITIES FOR BAFFLES							
Pipe Size D	X Baffle			Y Baffle Reinf. Steel		Concrete Class ~ Cu. Yd.	Reinf. Steel Lbs.
	P Width	Q Height	R Length	Bar M	Bar N		
15"	4"	4"	4"	2-# 4	1-# 4	0.10	4
18"	4"	4"	5"	3-# 4	2-# 4		8
24"	5"	5"	6"	4-# 4	3-# 4		12
30"	5"	5"	7"	4-# 4	4-# 4		16

ENDWALLS WITH AND WITHOUT BAFFLES FOR 3 : 1, 4 : 1 AND 6 : 1 SLOPES

U-TYPE CONCRETE ENDWALLS
BAFFLES AND GRATE OPTIONAL
15" TO 30" PIPE

FDOT INDEX NO. 261

REV	DATE	DESCRIPTION	BY

DOMINIQUE H. BRAMLETT, P.E.
LICENSE NO. 61829

DRAWING TITLE: **DRAINAGE DETAILS - 2**

PROJECT TITLE: **CENTRAL LANDFILL OPERATIONS PERMIT RENEWAL DRAWINGS**

CLIENT: **CITRUS COUNTY SOLID WASTE MANAGEMENT DIVISION CITRUS COUNTY, FLORIDA**

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610
813 621-0080 FAX 813 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO. 09208040.03 | DSN. BY: DHB | DWN. BY: CTN | CHK. BY: DHB | Q/A RVW BY: DHB | APP. BY: CEH

CADD FILE: 084003DRNDETL2
DATE: FEBRUARY 2010
SCALE: AS SHOWN
DRAWING NO. **9** of 9

APPENDIX B

EMERGENCY INCIDENTS AND CONTINGENCY PLAN

EMERGENCY INCIDENTS AND CONTINGENCY PLAN

for

THE CITRUS COUNTY CENTRAL LANDFILL

and

RELATED FACILITIES

for

CITRUS COUNTY, FLORIDA

COMMISSIONERS

Dennis Damato, County Commission District 1
Ron Kitchen Jr, County Commission District 2
Joe Meek, County Commission District 3
Scott Carnahan, County Commission District 4
Scott Adams, County Commission District 5

ADMINISTRATION

Randy Oliver, County Administrator

COUNTY ATTORNEY

Denise A Dymond Lyn

DEPARTMENT OF PUBLIC WORKS

Jeffery Rogers, Public Works Director

DIVISION OF SOLID WASTE MANAGEMENT

Henry Norris, Director
Citrus County Division of Solid Waste Management
Citrus County Central Landfill
230 West Gulf to Lake Highway
Lecanto, Florida 34461
(352)527-7670

Citrus County Division of Solid Waste Management Facilities

Citrus County Central Landfill Active 80 Acre Site
Citrus County Central Landfill Closed 60 Acre Site
Citrus County Operations Maintenance Building / Diesel Fuel Facility
Citrus County Waste Separation Facility - "Citizen Service Area"
Citrus County Hazardous Waste Collection Center and Storage Facility

EMERGENCY INCIDENTS AND CONTINGENCY PLAN

A. PURPOSE AND SCOPE

The purpose of these plans are to provide information and guidance for managing emergency incidents which could affect the Citrus County Central Landfill Site(s) and to adopt those contingency plans which would avoid, mitigate, or lessen the severity of the situation.

B. PREPAREDNESS

Local authorities have been notified, and should be kept apprised, of the operations at the Citrus County Central Landfill Sites, located at 230 West Gulf to Lake Highway, Lecanto, Florida. A site diagram should be provided to them, as well as a copy of the contingency plan for all revisions.

A current copy of this plan should be maintained at the Central Landfill Administrative Office and at the Hazardous Waste Collection Center. The Citrus County Fire/Rescue, the Department of Public Works and the Sheriff's Office should be given access to the Solid Waste Management Central Facility.

If it becomes necessary to have contact with an outside agency or department, the following information may be used;

Emergency:	Emergency Response 3425 West Southern Street Lecanto, Florida 34461	**Emergency – Dial 911**
Emergency Medical:	Nature Coast EMS 3876 W County Hill Dr Lecanto, Fl 34461	**Emergency – Dial 911** (352) 249-4700
Law Enforcement:	Citrus County Sheriff's Office 1 South Park Avenue Inverness, Florida 34453	**Emergency – Dial 911** (352) 726-4488
Fire and Haz-Mat:	Citrus County Department of Fire/Rescue 3549 Saunders Way Lecanto, Fl. 34461	**Emergency – Dial 911** (352) 489-5000
Hospital:	Citrus Memorial Hospital 502 West Highland Boulevard Inverness, Florida 34453	**Emergency – Dial 911** (352) 726-1551
Environmental:	Department of Agriculture and Consumer Services Division of Forestry 15019 Broad Street Brooksville, Florida 33512	(352) 796-5650
	Department of Environmental Protection	

Division of Waste Management (813) 632-7600
13051 N. Telecom Parkway
Tampa, Florida 33637-0926

Every effort should be made to operate the SWM facilities in a safe manner. All the necessary materials to contain or mitigate small spills, fires or releases should be inspected and maintained on site as outlined in the emergency supplies list. The tools, equipment and materials to clean up all residues should also be available. Daily supplies of material should be utilized to contain and cleanup any de minimus releases during normal operation. Good housekeeping will support a safer work environment.

Florida State Warning Point:

The mission of the State Warning Point Watch Office is to provide the people of the State of Florida and the Division of Emergency Management with efficient and effective communications during normal periods as well as pre-and-post disaster periods and to serve as the contact point in Florida for communications between local Governments and Emergency Agencies, State Government Agencies and the Federal Government.

General Information: 850-226-4329

SPILLS: 800-320-0519 or 850-413-9911
Petroleum Spill - Reportable Quantities:

- Soil: Spills more than 25 gallons.
- Surface Water: All spills, regardless of quantity
- Release Notification Period: Within 24 hours
- Written Report: Yes: *Discharge Report Form*.

C. EMERGENCY RESPONSE COORDINATOR / TEAM

Primary: **Henry Norris - Director Solid Waste Management**

Address 6583 W Robin Ln
Homosassa, Florida 34448

(Work) (352) 527-7670
(Home) (352) 503-9660
(Work Cell) (352) 302-6980

Secondary: **Sammie Walker – Field Crew Leader**

Address: 1511 W Henry-Blair Ln
Dunnellon, Florida 34430

Phone: (Work) (352) 527-7670
(Home) (352) 489-8686
(Work Cell) (352) 400-1646

Secondary: **Dan Sherlock – Hazardous Waste Coordinator**

Address: 902 E Cermak St
Hernando, Florida 34442

Phone: (Work) (352) 527-7670
(Home Cell) (352) 586-8567
(Work Cell) (352) 302-3437

Emergency Response Coordinator Operations: In the event that local emergency response agencies are called, the first arriving emergency response company should establish Incident Command. The Incident Commander who has taken charge should implement and expand, as necessary, the incident command structure.

The Solid Waste Management (SWM) Emergency Response Coordinator (ERC) and Secondary Coordinators should make up this Facility's Emergency Response Team (ERT). To the extent necessary, the Coordinators and Team should assist and be under the direction of the existing command structure. During large scale emergency operations, the SWM Emergency Response Coordinator and ERT may serve as or assign an individual to serve as part of a Unified Command Staff.

D. Solid Waste Management Staff List

Administration:

Henry Norris,	Director, SWM
Claire Smith,	Sr. Secretary
Cathy Winter,	Contract Services Specialist

Programs:

Vacant	Program Manger
Caresse Kokosinski,	Customer Service Representative
Owen Carney,	Recycling Coordinator
Dan Sherlock,	Hazardous Waste Coordinator
Michael Holst	Hazardous Waste Specialist
Susan Heglund	Household Hazardous Waste Technician
Gregory Smith,	Litter Compliance Supervisor
Doug Bemus,	Litter Control Worker
David Norris,	Litter Control Worker

Maintenance:

Aaron Lake,	Maintenance Supervisor
John Schaeffer,	Equipment Services Worker

Scale house Facility:

William Gilmore	Solid Waste Supervisor
Tracy Colson,	Solid Waste Technician
Tammy Bagley,	Solid Waste Technician
Neil Maves,	Lead Solid Waste Technician
David Meeks,	Solid Waste Technician
James Driver,	Solid Waste Technician

Landfill Operations:

Sammie Walker	Operations Crew Leader
Vacant	Heavy Equipment Operator,
Vacant	Heavy Equipment Operator
Harold Gravely	Lead Heavy Equipment Operator
Eric Pert	Heavy Equipment Operator
Billy Black	Medium Equipment Operator
Mike Morvatz	Medium Equipment Operator

E. PREVENTING EMERGENCY INCIDENTS

Operations should be conducted at the Central Landfill Facilities in a manner, which maximizes both worker and environmental safety while minimizing negative impacts to the environment, this Facility and to fellow workers. No smoking should be permitted in the facility's designated compound areas and access should be restricted to authorized personnel in some areas as needed. NO SMOKING signs should be posted in areas around the facilities. Safety and operation plans should be followed at all times.

(1) Leachate Treatment Facility / Scalehouse Operation Facility

The enclosed portion of the scalehouse is outfitted with a methane gas alarm. The enclosed, electrical building is equipped with a methane gas detector and fire alarm. Fire extinguishers are located at both the above locations. In the event of an alarm, the Emergency Response Coordinator should be contacted. An emergency eyewash and shower facility is located at the leachate treatment facility. See Appendix One for material listing and site capacity.

(2) Maintenance Building, Electronics Building and Diesel Fuel Facility

Fire extinguishers are located at the above locations. See Appendix Two for material listing and maximum site capacity.

(3) Waste Separation Facility - Citizen Service Area (CSA)

Fire extinguishers are located at the Furniture collection site, Rimmed Tire collection site and oil collection site, which is in proximity to the wood waste storage site. The CSA is outfitted with an emergency water shower and eye wash station. See Appendix Three for materials accepted and maximum site capacity.

(4) Methane Gas Collection System

Methane Gas is a natural by-product of municipal solid waste decomposition. The system is designed and operated to collect and destroy flammable gases. The leachate collection system is connected to the gas collection system. The flare system has automatic shut-offs and can also be shut down manually. Appendix Four is a summary of methane gas hazard mitigation.

(5) Hazardous Waste Collection and Storage Facility

The Hazardous Waste Collection Center is outfitted with both inside storage and outside storage fusible-link fire extinguishment systems, along with portable BC and ABC extinguishers. The Facility is also outfitted with an emergency water shower and eye wash station. See Appendix Five for specific emergency

F. IDENTIFYING EMERGENCY INCIDENTS

The following situations should be considered emergencies:

(1) Fire or smoke is detected

(2) An explosion occurs

(3) A serious leak or spill is detected

(4) Personal injury/Medical Emergency

(5) Approaching Hurricanes or Tornados

(6) Any other incident which requires immediate attention, such as, but not limited to:

(a) vehicle accident
(b) vehicle disruption, or
(c) incidents which could disrupt the service of this facility

G. CONTINGENCY PLANS

Whenever there is a perceived or actual emergency situation, the person who recognizes the emergency should notify the SWM Administrative Office, via radio or cell phone, who should advise the Emergency Response Coordinator (ERC). In the event the primary ERC is not available, an alternate ERC should be notified. The Emergency Response Coordinator should be responsible for implementing contingency plans. If necessary, the Emergency Response Coordinator should notify all facility personnel and provide for their response, safety and/or evacuation. If necessary, the ERC should implement the notification plan and/or evacuation plan. The Emergency Response Coordinator should direct staff in response procedures as the situation dictates.

The Emergency Response Coordinator should assess possible hazards to human health or the environment that may result from any spill, release, fire or explosion. This assessment should consider both the direct and indirect impact to such entities.

During an emergency, the Emergency Response Coordinator should take all reasonable measures necessary to ensure that fire; explosions, spills and releases do not occur, reoccur or spread to other parts of the facility.

1. Fire

The person who recognizes the emergency should also notify the Administrative Office, via radio/cell phone, who should in turn advise the Emergency Response Coordinator. In the event the primary ERC is not available, an alternate ERC should be notified. The Emergency Response Coordinator should determine if outside agencies need to be contacted and if so, dial 911.

In the event of a small fire, the personnel discovering the fire should determine if they have the proper training and if the fire could be extinguished safely and quickly with the available fire extinguishers. The first consideration should be given to the safety of all people within the facility.

If there is a fire within the chemical holding area of the Leachate Treatment Facility or in the area of the Hazardous Waste Collection Facility, an initial determination should be made concerning the safety of responders or response actions. If a fire is inside a building, the doors of the building should not be opened.

Regardless of whether staff or Fire/Rescue has been utilized to extinguish a fire, the Citrus County Fire/Rescue should be called to complete a Florida Fire Incident Report. In the event of a trash fire which requires offsite assistance the Operations Plan shall be implemented and the event shall be reported to FDEP.

2. Explosion

If an explosion occurs, the person who recognizes the emergency should also notify the Administrative Office, via radio / cell phone, who should advise the Emergency Response Coordinator. The Emergency Response Coordinator should determine if the facility should be evacuated and outside agencies should be contacted. Under no circumstances should life or property be put in peril in attempting to handle explosions.

3. Uncontrolled Leaks or Spills

In the event of an uncontrolled leak or spill, the personnel discovering the leak or spill should take the following actions, if it is safe to do so:

- Notify the Administrative Office, via radio/cell phone, who can advise the ERC.
- Ensure the safety of personnel in the area
- Eliminate sources of ignition
- Stop the flow of any material or gas leak at the source
- Contain the leak or spill

The Emergency Response Coordinator should direct facility staff in response procedures as the situation dictates. Actions may include, but not limited to:
Evacuate area, as needed;

- Initiate actions to notify local authorities, emergency response agency, and government agencies, as needed;

Confirm identification of spilled material and check available Material Safety Data Sheets or Safety Data Sheets and consult the Emergency Response Guide procedures;

- Confirm that additional personnel have been assigned to stop the flow of spilling

product and secure leaks, if it can be done safely;
- Assess the spill threat, site safety, and parameters such as spill volume, extent and direction of movement;
- Follow up on containment efforts;
- Establish a Hot Zone and Cold Zone/Safe Work Area;
- Initiate clean up actions, after it has been investigated and if it can be done safely;
- Follow Clean / Decontamination procedures outlined in Item L. of this document.

4. Personal Injuries

The personnel discovering the injured party should take the following actions:

- Notify the Administrative Office, via radio / cell phone, who should advise the Emergency Response Coordinator.
- Determine if the injured party needs assistance
- Apply First Aid in accordance with the care-giver's level of training or willingness to provide "Good Samaritan" treatment.

5. Approaching Hurricanes or Tornados

Florida Division of Emergency Management flood maps show that the SWM facility is above the elevation and outside of the Storm Surge Level of a Category 5 hurricane. If ordered to evacuate, the ERC should notify staff of the actions to take, to where it is safe to evacuate, or the location of an alternative meeting site, if this facility becomes severely damaged or inaccessible.

Prior to Hurricane Season, which is June through November; the Emergency Response Team should survey facility structures to determine if there are any improvements to make the facility safer. Staff should be apprised of what actions they can take to make their workplace more weather-tight and secure from wind and water damage. When it is determined that a hurricane is approaching the facility, staff should:

- Maintain and monitor a NOAA Weather Alert Radio in the office.
- Plan for a means of on-site communication, in case cell towers or portable radios are disrupted.
- Ensure that each employee understands the SWM call-down procedure for warning and post-storm communications.
- Secure buildings, cover windows, move integral equipment to a secured area.
- Secure or move hazardous waste equipment, drums, cubes and PPE to a secure area.
- Clear property or tie down any items that could become flying missiles in high wind, e.g. scrap metal, tires, cubic yard boxes, trash cans.
- Fill portable gas tanks, fleet vehicles and equipment gas tanks and generators; check oil, water and tires. Fuel pumps will not operate without electricity.
- Make plans to work with limited cash, and no water or power for up to two weeks
- Obtain sufficient cash and supplies for operations, recognizing that banks, ATMs and credit cards may be unable to transact business without electricity.
- Ensure important documents, files, backup tapes, emergency contact information, etc. are taken to a safer location.

- Ensure each employee has a photo ID and an authorization tag for returning to their residence and to locate to their authorized work location.
- Contact commercial customers and suppliers and share the communications and recovery plan in advance.
- Prepare a list of and make contact with vendors to provide disaster recovery services, before they obtain a prior agreement or contract with other businesses
- If evacuation is advisable, turn off unnecessary electricity, water and gas.
- Unplug all valuable electrical, computerized and electronic devices; elevate to a level not susceptible to water damage.
- Paperwork which will not be moved should be double bagged and elevated.
- Close the facility in sufficient time to allow employees to secure their homes, obtain needed supplies and temporarily evacuate, if necessary.
- After the storm passes, use caution before entering the facility. Check for down power lines, structural damage, and uncontrolled leaks or spills. If any electrical equipment is wet, contact an electrician. Prepare loss information for insurance claims and get independent estimates of damages. Take pictures.
- When power is lost, don't connect a portable generator to building wiring (this could kill or injure neighbors or electrical crews.
- Beware of snakes, insects or animals driven to higher ground by flooding.

6. Lightning Strikes

The chances of being struck by lightning are one in 600,000 but can be reduced by following safety rules. Above all, employees' safety comes first.

- Postpone outdoor activities if thunderstorms or lightning are imminent.
- If an employee, community service worker or other individual is in an area without shelter, staff should check on and assist the member to safety.
- If you hear thunder, seek shelter. Move to a sturdy building or vehicle.
- Do not take shelter in a small shed or under isolated trees.
- Get away from bodies of water or from facility fencing.
- Staff should follow the 30 – 30 Rule:

30 Seconds: Count the seconds between seeing lightning and hearing thunder. If this time is less than 30 seconds, lightning is an imminent threat. Seek shelter immediately.

30 Minutes: After hearing the last thunder, wait 30 minutes before leaving shelter. Half of all lightning deaths occur after the storm passes.

7. Other Miscellaneous Emergency Incidents

For any other perceived, imminent or actual emergency situation, the person who recognizes the emergency should notify the Administrative Office, via radio or cell phone, who should advise the Emergency Response Coordinator (ERC). The ERC should take responsibility for implementing the contingency plans. If necessary, the Emergency Response Coordinator should notify all facility personnel and provide for their evacuation and the notification plan should be implemented. The Emergency Response Coordinator should advise their staff in response procedures, as the situation dictates.

The Emergency Response Coordinator should assess possible hazards to human health or the

environment that may have resulted from any release, fire or explosion. This assessment should consider both the direct and indirect impact.

During an emergency, the Emergency Response Coordinator should take all reasonable measures necessary to ensure that fire, explosions, and releases do not occur, reoccur or spread to other parts of the facility.

H. NOTIFICATION PROCEDURE

Whenever there is an imminent or actual emergency situation, the person who recognizes the emergency should notify the Administrative Office, via radio / cell phone, who should advise the Emergency Response Coordinator. In the event the primary Emergency Response Coordinator is not available, an alternate ERC should be notified.

The assigned Emergency Response Coordinator should take responsibility for implementing the contingency plans. If necessary the Emergency Response Coordinator should notify all facility personnel and provide for their evacuation. Generally, the most expedient method of notification should be by two-way radio. The Emergency Response Coordinator should direct the facility staff in response procedures, staging areas or evacuation routes, as the situation dictates.

I. CONTINGENCY EQUIPMENT AND SUPPLIES

Landfill Equipment

- Bulldozer, Caterpillar D6T
- Compactor, Caterpillar 826 G
- Compactor, Caterpillar 826 H
- Excavator, Caterpillar 320EL, w/ 1.56cy bucket
- (2) Front-End Loader(s), Caterpillar, 950(H), w/ 3.75 cu yard multi-purpose bucket
- Fuel Truck, Ford F800 – with 420 gallon, double wall, diesel fuel tank and air compressor
- Water Truck, Freightliner M2106 w/ 2500 gallon tank
- Volvo (A25) Articulated Truck 6-Wheel
- ATV, Kubota RTV1100 CWX-H 4x4
- Toro Workman 1110 Utility Vehicle – Kohler 12 HP engine
- Roll-off truck, Mac with 30 cu yd box
- Multi-Track Loader, Bobcat T630 Skid Steer
- (2) Light Sets, Alamand, with 6kw generator (located in disposal cell and in boneyard)
- Dump Trailer, 8’ x 14’, Hydraulic
- Fork Lift, Caterpillar P6000, Diesel
- Drum Grabber Attachment for 55 Gal. Drums; to be attached to the Fork Lift
- Generator, 150 Kw Caterpillar (Olympian), Trailer mounted,

- Water Transfer Pump, 4" outlet, Mack, Hydraulic drive
- Water Transfer Pump, 4" outlet, Acme, Hydraulic drive
- Water Transfer Pump, 6" outlet, Yanmar, Centrifugal Trash Pump
- Hand Tools and Mechanics Tools, at both the Maintenance Building and HWCC
- Alternative Daily Cover machine, on trailer; 500 gallon tank w/ 18 H.P. pump motor

CONTINGENCY SUPPLIES - AT THE HAZARDOUS WASTE COLLECTION CENTER

Supplies

Shovels	Poly, 65 Gal. Overpack Drum
Brooms	Poly, 30 Gal. Overpack Drum
Squeegee	Metal, 55 Gal. Drums
ABC & BC Fire extinguishers	Poly, 55 Gal. Drums
Bung Wrenches	Poly, 5 Gal. Pails
Hand Tools & Wrenches	Duct Tape
First Aid Kit	Scrub Bushes
PVC Hand Drum Pump (water & corrosives)	Poly Sheeting
Rotary Drum Pump (solvent-safe pump)	Emergency Eye Wash & Shower Station
pH Testing Tape	Drum Wrenches
H_2O Testing Tape	Drum Labeling Materials

Materials

Tube Sock Absorbent	General Purpose Absorbent Pads
Vermiculite, Bagged Absorbent	Oil Absorbent Pads and Socks
Abzorbit, Bagged Absorbent	Sodium Bicarbonate neutralizer

Personal Protection Equipment (PPE)

Chemical Resistant Aprons	Personal Respirator
Chemical Resistant Coveralls	Face Shields
Chemical Resistant Shoe Covers	Both Neoprene and Nitrile Gloves
Chemical Resistant Smocks	Leather Work Gloves
Personally-Issued Hardhats	Clear & Sunglass Safety glasses

J. EVACUATION PROCEDURES

In the event that the facility needs to be evacuated, the Emergency Response Coordinator should notify the Facility personnel by portable radio. All on-site personnel should be accounted for and verified by contacting each supervisor. Depending on the nature and location of the emergency, the Emergency Response Coordinator should advise facility personnel and citizens which evacuation route and plan to implement. Operations staff should take steps to inform all non-county personnel and citizens on site and assist with their safe exit.

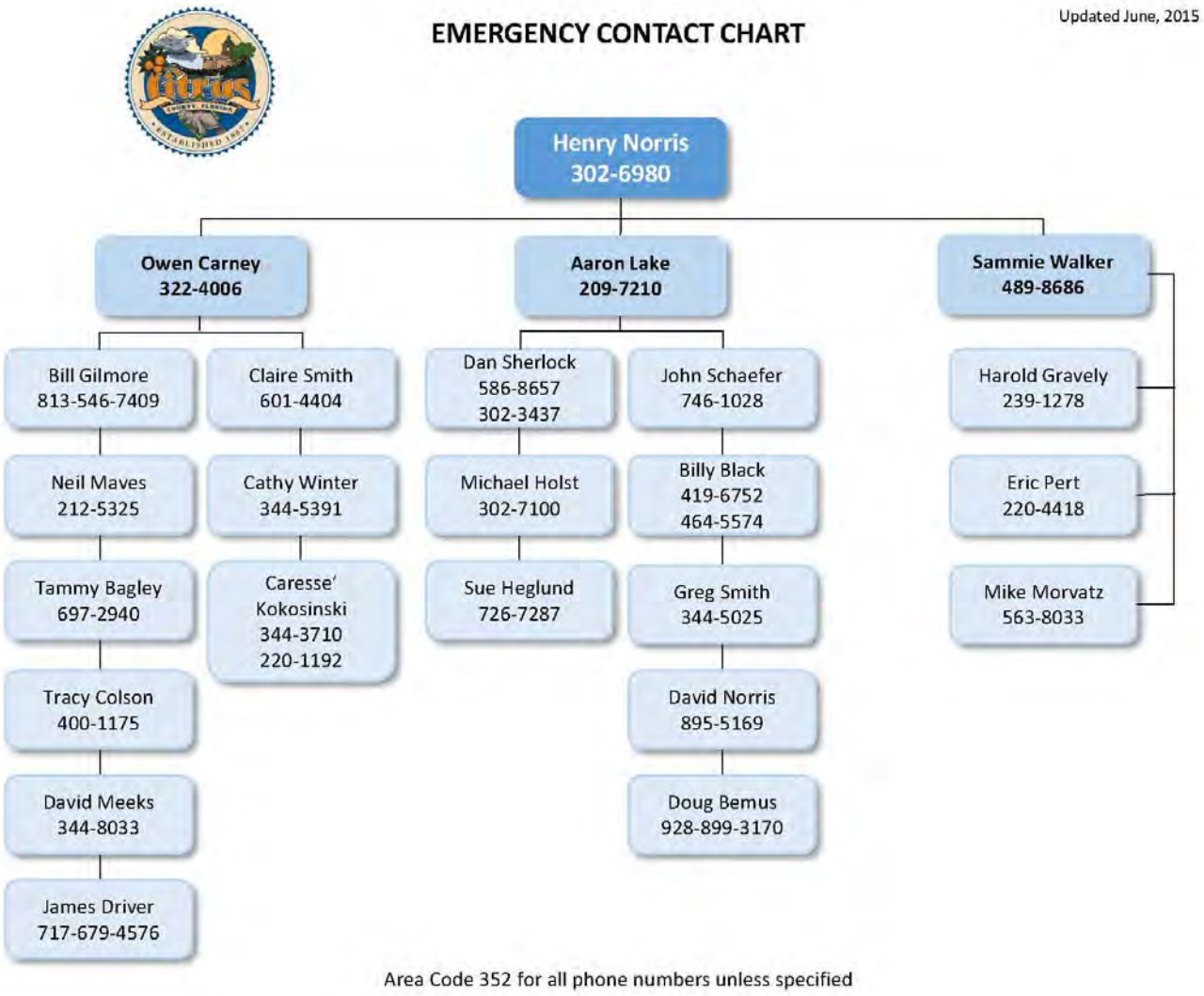
Traffic on roads into the facility should be stopped and re-routed as necessary by Scalehouse personnel. Clear access for response personnel and vehicles to the emergency should be maintained by County personnel.

In the event of a chemical release, bomb threat, fire or other emergency and you are instructed to leave, evacuate immediately. Upon completion of the evacuation of the facility, all personnel are to proceed directly to a rally point, as designated by the Emergency Response Coordinator.

If personnel cannot make it to the primary or secondary rally point, they should evacuate the facility using the nearest up-wind gate.

Primary Rally Point will be the Administrative Office.

Secondary Rally Point will be the Electronics Recycling Building



K. CLEANUP AND DECONTAMINATION

All residues from a release, fire or explosion should be contained and cleaned up in a manner consistent with the emergency spill procedure.

Immediately after the emergency, the Emergency Response Coordinator should provide for treating, storing or disposing of recovered waste, contaminated soil or surface water, or any

other material that results from a release, fire or explosion at the facility.

The Emergency Response Coordinator should ensure that in the affected areas of the facilities:

(1) No waste that may be incompatible with the released material is treated, stored or disposed of until clean up procedure are completed; and

(2) All emergency equipment listed in these contingency plans are cleaned and fit for their intended use before operations are resumed.

Any contaminated equipment should either be cleaned with a suitable solvent, and the discarded solutions handled in an appropriate manner, or discarded with the spill clean up material.

Decontamination should be conducted in accordance with an appropriate decontamination program.

L. FOLLOW UP REPORTING

1. Initially, whenever there is an imminent or actual emergency situation, the Emergency Response Coordinator (or their designee when the Emergency Response Coordinator is on call) should immediately:
   a. Activate internal facility alarms or communication systems, where applicable, to notify all facility alarms or communication systems.
   b. Notify appropriate state or local, emergency response agencies with designated response roles, if their help is needed.

2. In addition, whenever there is a spill/release, fire, or explosion, the Emergency Response Coordinator should immediately identify the character, exact source, amount, and the extent of any released materials. He or she may do this by observation or review of facility records, or if necessary, by chemical analysis.

3. Concurrently, the Emergency Response Coordinator should assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment should consider both direct and indirect effects of the release, fire, or explosion (e.g., the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface water run-off from water or chemical agents used to control fire, or heat-induced explosions).

4. If the Emergency Response Coordinator determines that the facility has had a release, fire, or explosion, which could threaten human health, or the environment, outside the facility, he should report his findings as follows:
   a. If his assessment indicates that evacuation of local areas may be advisable, he should immediately notify appropriate local authorities. The Emergency Response Coordinator should be available to help appropriate officials decide whether local areas should be evacuated; and
   b. He/she should immediately notify either the government official designated as the on-scene coordinator for the area or the State Warning Point (using

their 24-hour number 904/488-1320). Include:

i. Name and telephone number of person reporting;
ii. Name and address of facility;
iii. Time and type of incident (e.g., release, fire);
iv. Name and quantity of material(s) involved, to the extent known;
v. The extent of injuries, if any; and
vi. The possible hazards to human health, or the environment, outside the facility.

5. During the emergency, the Emergency Response Coordinator should take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other areas of the facility. These measures should include where applicable, stopping processes and operations, collecting and containing release waste, and release waste, and removing or isolating containers.

6. During an emergency, the Emergency Response Coordinator should monitor for leaks, pressure buildup, gas generation, or ruptures in containers and/or equipment, wherever this is appropriate.

7. After an emergency, the Emergency Response Coordinator should provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material contaminated by a release, fire, or explosion at the facility.

8. The Emergency Response Coordinator should ensure that, in the affected area(s) of the facility;
   a. No waste that may be incompatible with the released material is stored or handled until cleanup procedures are complete; and
   b. All emergency equipment listed in the EMERGENCY INCIDENTS AND CONTINGENCY PLANS should be cleaned and fit for its intended use before operations are resumed.

9. The owner or operator of the landfill should notify appropriate State and local authorities, in writing, that the facility is once again functional before operations are resumed in the affected area(s) of the facility.

10. The owner or operator should note, in the operating record, the time, date, and details of any incident that requires implementation of the EMERGENCY INCIDENTS AND CONTINGENCY PLANS. Within 24 hours after the incident, the situation should be reported to the Department of Environmental Protection (SW District Office Compliance Assurance Supervisor), and a written report on the incident should be submitted within 7 days. The report should include:

    a. Name, address, and telephone number of the owner or operator;
    b. Name, address, and telephone number of the facility;
    c. Date, time and type of incident (e.g., fire, explosion);
    d. Name and quantity of material(s) involved;
    e. The extent of injuries, if any;

f. An assessment of actual or potential hazards to human health or the environment, where this is applicable; and
g. Estimated quantity and disposition of recovered material that resulted from the incident.

M. SITE LAYOUT

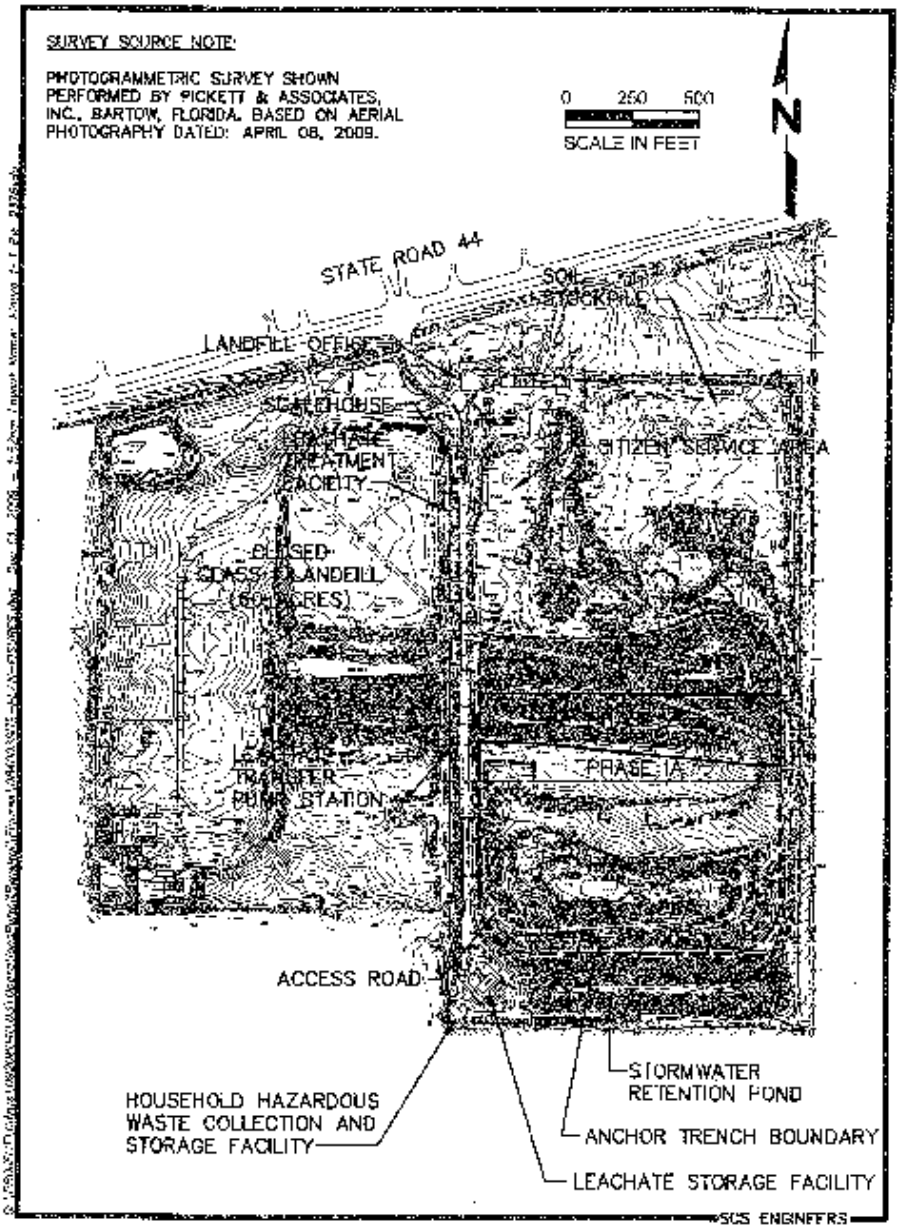


Figure 1-1. Site Plan, Citrus County Central Landfill

APPENDIX ONE

Operations Maintenance Building

and Diesel Fuel Facility

MAINTENANCE "OPERATIONS" BUILDING

DIESEL FUEL FACILITY

MAINTENANCE BUILDING

Chemical Listing	Maximum Quantities on Site
Cans of Gasoline	8 – 5 gallon cans
Oil	2 – 55 gallon drums
Hydraulic Oil	2 – 55 gallon drums
Grease	2 – 120 pound drums
Adhesive for plastics	5 – 5 gallon containers
Fuel Truck (parked in building at night)	420 gallons diesel fuel
Diesel Exhaust Fluid (DEF)	1 – 55 gallon drum

DIESEL FUEL FACILITY

Diesel fuel	4 – 500 gallon tanks

APPENDIX TWO

Citizen Service Area (CSA)

Material List and Maximum Site Capacity

Appendix Two – Citizen Service Area (CSA)

Material	Maximum Materials/Capacity
Garbage & Trash Containers	10 – 30 yd Dumpsters
Recyclable Material Containers	3 – 8 yd containers for Single Stream Recycling 1 – 30 yd container for Styrofoam 1 – 20 yd container flower pots
Waste Oil Containers	2 - 385 gallon, double-wall containers
Anti-Freeze Container	2 - 100 gallon, double wall container
Waste Cooking Oil	1 – 100 gallon double wall container
Waste Tires	115 tons
Scrap Metal	50 tons
Wood Waste	Unprocessed 800 tons Processed 2,000 tons
Lead Acid Batteries	2 Pallets (50 – 75 batteries per pallet) within a secondary containment
Propane Tank Container	1 – 20 yard roll-off container, containing: 250 – 20# tanks 20 – 30# tanks 5 – 60# tanks 10 – 100# tanks 1 – 120 gallon tank
Fluorescent Bulbs	100 – 4' fluorescent tubes 30 – 6' and 8' fluorescent tubes 300 – compact fluorescent lights Up to 8 – 55 gallon drums of crushed bulbs kept in the fluorescent bulb building

APPENDIX THREE

Methane Gas

Hazard Data and Management Summary

Appendix Three – Methane Gas, Hazard Data and Management Summary

Landfill Gas Hazards and Management

Introduction

Inside a landfill, waste breaks down and produces gas, consisting mainly of methane and carbon dioxide. Methane is by far the main threat to safety at a landfill because it can occur in large enough concentrations to explode if a spark is present. Carbon dioxide is relatively nonreactive, but can present some risk of asphyxiation. Minor components include ammonia, benzene, and hydrogen sulfide, of which hydrogen sulfide is the most important because it is easy to detect, giving landfills the distinctive “rotten egg” smell. While methane itself is odorless, it usually occurs in the presence of hydrogen sulfide. These minor gasses are all flammable, but are unlikely to occur in sufficient quantities to explode.

Explosion Hazard

Methane is highly explosive when it makes up between 5% and 15% of the air volume .As the gas moves easily through loose soil, it can be a particular concern when it leaches into the confined spaces of a nearby building. Vapors can travel a considerable distance to an ignition source and flash back over the vapor trail. Contact may cause burns to skin and eyes.

Other Health Hazards

Landfill gas has a putrescent, noxious, odor that, in general, is more problematic to people than any real adverse health effects related to exposure. Breathing methane and carbon dioxide is only hazardous when it is present at high enough levels to significantly decrease the amount of oxygen in the air. In the event of a severe gas leak in a confined space, suffocation can occur. Symptoms of being in an oxygen deprived environment include sudden increased respiration (inability to catch one’s breath), racing heartbeat, poor muscular coordination, and rapid fatigue. In more severe cases, nausea and vomiting often precede loss of consciousness which can lead to death.

Incident Response

The landfill maintains a comprehensive gas management system (Attachment A) to continuously burn off methane gas and mitigate the risk of dangerous buildup. If an emergency gas incident occurs, the following procedure should be used to manage the incident.

- Call 911
- Keep unnecessary people away; isolate hazard area and deny entry.
- Stay upwind, out of low areas and ventilate closed spaces before entering.

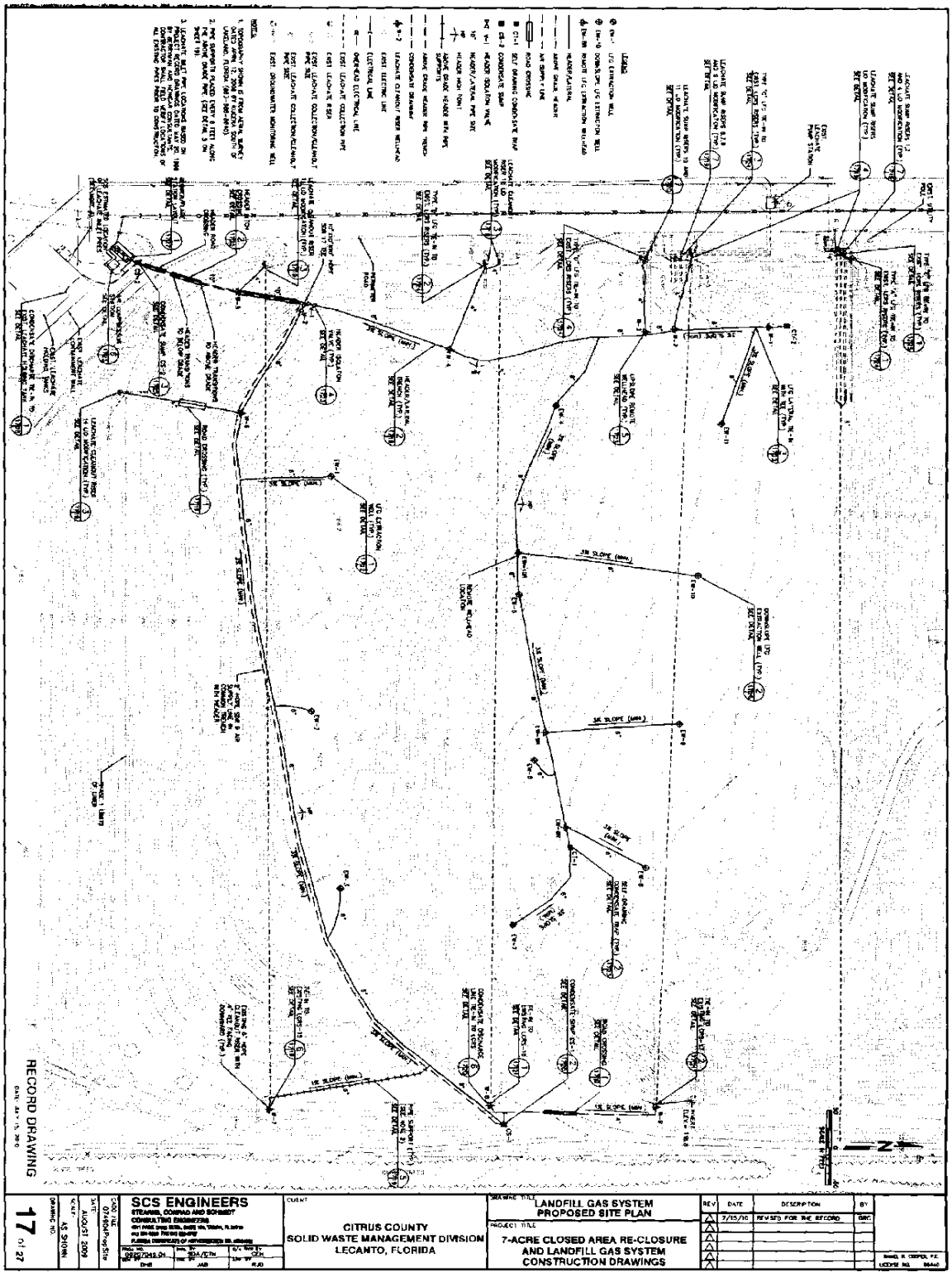
- Fires involving methane should not be extinguished unless the flow of leaking material can be stopped.
- Containers that are exposed to the heat of a fire should be cooled from the side with flooding amounts of water until well after the fire is extinguished.
- Water should be applied from as far away as possible.
- Containers should be moved from the area of the fire and leaks stopped if this can be done without undue risk.
- Water spray may be used to protect personnel attempting to move containers and stop leaks.

Life Support and Treatment

Any Rescuers should wear appropriate respiratory protection.

- Remove victims of inhalation from the toxic environment and monitor for respiratory distress.
- Copiously flush exposed eyes or skin with water.
- Administer 100 percent humidified supplemental oxygen with assisted ventilation as required. If not breathing, give artificial respiration.
- Carefully observe patients with inhalation exposure for the development of any systemic signs or symptoms and administer symptomatic treatment as necessary. Monitor arterial blood gases and chest x-ray in cases with significant exposure.

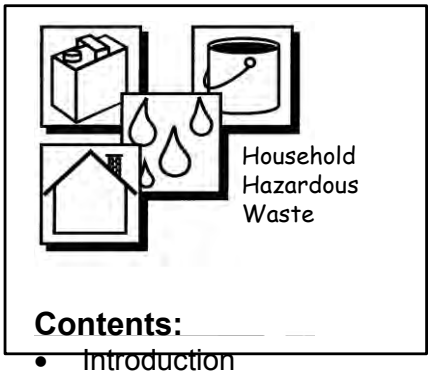
Attachment A



APPENDIX FOUR

Hazardous Waste Facility

Emergency Incidents and Contingency Plans



Appendix Four
Hazardous Waste Facility Emergency Incidents and Contingency Plans

Contents:

Introduction

This HW Program should maintain a copy of the SWM Facility's *EMERGENCY INCIDENTS AND CONTINGENCY PLANS* at the HW Collection Facility. These contingency plans explain the necessary actions to minimize hazards to human health or the environment from fire, explosion, or unplanned emergencies and chemical releases. To the extent possible, these plans should be followed, when an emergency incident occurs.

Regulatory and contractual requirements

Guidelines used for this Program's emergency contingency plans are established within OSHA standards 29 CFR 1910.38 and 1910.120 (a) and (q), EPA standard 40 CFR 265.50, Subpart D, and the Florida Administrative Code, Chapter 62-730 for Hazardous Waste, Chapter 62-737.400 for Management of Spent Universal Waste, and Chapter 62-710 for Used Oil Management.

Contingency Procedures

The emergency telephone number for response to this Facility is **911**. The designated, Emergency Response Coordinator responsible for implementing the emergency contingency plans is the Director of Solid Waste Management. In the Director's absence, he/she should assign this task to another competent staff, as instructed in the SWM *EMERGENCY INCIDENTS AND CONTINGENCY PLANS*. For timely response, this Program should make emergency information available to local emergency response teams or contractors, who may be called upon in an emergency situation.

Spill Response

In the event of an uncontrolled leak or spill, the personnel discovering the leak or spill should take the following actions, only if it is safe to do so:

- Notify the Administrative Office, via radio / cell phone, who will advise the Emergency Response Coordinator.
- Ensure safety of personnel in area, as necessary
- Eliminate sources of ignition
- Stop flow at the source

- Contain the leak or spill

The Emergency Response Coordinator shall direct facility staff in response procedures as the situation dictates. Actions may include, but not limited to:

- Evacuate area, if necessary
- Confirm identification of spilled material and check the Material Safety Data Sheets (MSDS) emergency procedures
- Confirm that additional personnel have been assigned to stop the flow of spilling product and secure leaks, if it can be done safely
- Assess the spill threat, site safety, and parameters such as spill volume, extent and direction of movement
- Follow up containment efforts
- Establish a Hot Zone and Safe Work Area
- Initiate clean up actions, if it can be done safely
- Initiate actions to notify local authorities, emergency response agency, and government agencies, as necessary
- Follow Clean / Decontamination procedures

Hazardous Waste Facility Emergency Incidents and Contingency Plans
Notification for HW Emergency Incidents and Contingency Plans should:

- provide instruction to Program staff on emergency procedures relevant to job duties; see the HW SOG on *Hazard Communications and Employee Right to Know (RTK) Program;*
- provide regular, annual instruction to Program staff on how the contingency Plans should be implemented;
- be easy to assess;
- be placed in the yellow, Emergency Information box at the HW collection Facility;
- contain information which is pertinent to hazardous waste emergencies and contingencies;
- be updated annually, prior to the scheduled, annual training;
- be revised if it fails the desired expectations, after an emergency event; and
- be updated if changes are applicable to contact information, rules or requirements, Facility design, construction, operation, or maintenance
- a form letter including a brief response explaining what should be expected of the emergency responder; see Attachment A Sample, below; and
- a copy of the HW Facility Emergency Incidents and Contingency Plans, with site plan and evacuation maps; see Attachment B with Figures 1 and 2. Figure 1 includes a site map with specific waste type storage locations listed, along with emergency evacuation routes. Figure 2 includes a map indicating the best route to the closest medical facility.

DEPARTMENT OF PUBLIC WORKS

SOLID WASTE MANAGEMENT DIVISION
HAZARDOUS WASTE PROGRAM

P.O. Box 340, Lecanto, FL 34460
230 W Gulf-to-Lake Hwy., Lecanto, FL 34461
Telephone (352) 527-7670, Ext. 4686
Email: hazwasteinfo@bocc.citrus.fl.us
www.bocc.citrus.fl.us/pubworks/swm

June 29, 2015

Fire Chief Jim Goodworth
3600 W. Sovereign Path, Suite 291
Lecanto, Fl. 34461

RE: Emergency Responder Notification Form **Attachment A Sample**

Dear Chief Goodworth,

Enclosed is the Citrus County Hazardous Waste Emergency Contingency Plan. Section 29 CFR Part 1910.38 and 40 CFR Part 265.53 require Hazardous Waste Collection Facility operators to create an emergency contingency plan and to make arrangements with nearby police, fire, hospital, and environmental response contractors to provide an expedient and coordinated response to emergencies.

This letter and the enclosed Plan are to clarify our contingency plan and familiarize your agency with our Facility. This is to be used in the event of a Facility fire, explosion, an unplanned release of hazardous materials, or medical emergency. The Plan describes the services for which your agency would be needed and it designates all other authorities and actions. The Plan also details types, maximum quantities and storage locations for hazardous materials or wastes (e.g., floor and plot plans, escape routes).

The Plan should be reviewed annually and be revised if changes are necessary. This Facility will forward revised copies to you when these changes occur. This Program appreciates your assistance and looks forward to any recommendations or suggestions to ensure a comprehensive and complete Plan.

Respectfully,

Dan Sherlock
Hazardous Waste Coordinator
Division of Solid Waste Management

CC: Solid Waste Management Director

Attachment B

Citrus County HW Emergency Contingency Plan

Address: **Citrus County Hazardous Waste Collection Facility**

230 West Gulf to Lake Hwy.
Lecanto, FL 34461

Office:

PO Box 340
Lecanto, FL 34460

EPA ID number FLD 98-210-2741

Last Revision date August, 2015

1. Emergency Response Coordinator (ERC) responsible for implementing this plan

The Designated Facility staff person responsible for implementing this plan is trained to respond to emergencies or has the information necessary to make decisions on how to respond to an emergency.

Name: **Henry Norris**
Position or Job Title: Director, Solid Waste Management
Phone (Work): (352) 527-7670
Cell Phone 24-hour: (352) 302-6980

First Alternate, Designated Facility staff person responsible for implementing this plan

The First Alternate Designated Facility staff person responsible for implementing this plan is contacted in the event the primary designated Facility staff person responsible for implementing this plan is not able to be reached.

Name: **Dan Sherlock**
Position or Job Title: Household Hazardous Waste, Solid Waste Management
Phone (Work): (352) 527-7670
Cell Phone (Cell): (352) 302-3437

Second Alternate, Designated Facility staff person responsible for implementing this plan

The Second Alternate Designated Facility staff person responsible for implementing this plan is contacted in the event the first alternate designated Facility staff person responsible for implementing this plan is not able to be reached.

Name: **Sammie Walker**
Position or Job Title: Field Crew Leader, Solid Waste Management
Phone (Work): (352) 527-7670
Phone (Cell): (352) 400-1646

2. Emergency telephone numbers

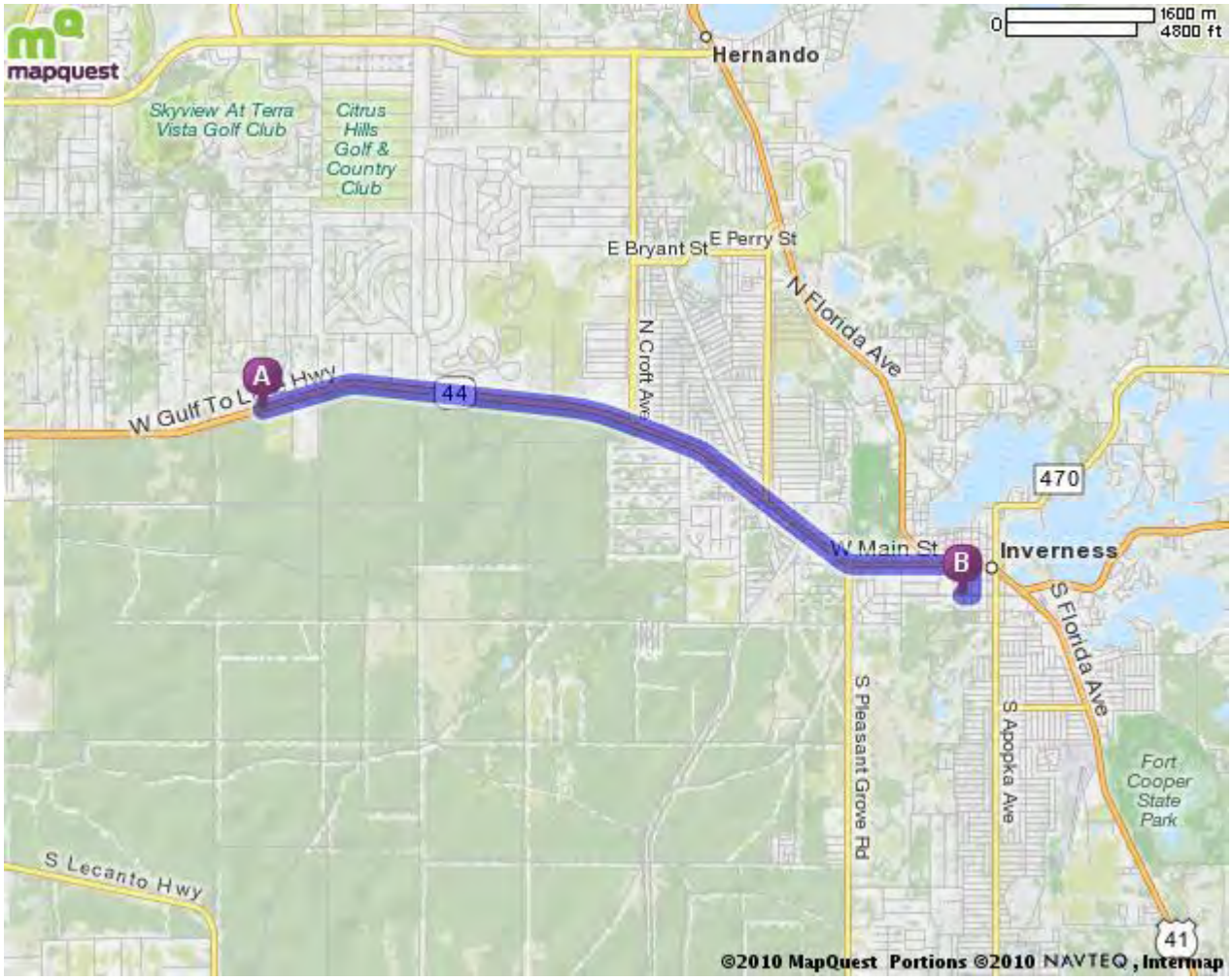
All Emergencies	**911**
Police	**911**

Fire	**911**
Ambulance	**911**
Florida State Warning Point (to report any emergency)	**(800) 320-0519**
Bomb squad (go through local County Sheriff's office)	**911**
Haz-Mat Team (go through local Fire/Rescue)	**911**

3. Hazardous and Universal Waste stored on site

Waste Category / Products	Hazard Class / Label	Package type and size	Maximum Quantity
Ammunition / Fireworks / Flares	Explosives, **Division 1.4**	Poly, 5 gallon buckets w/ screw top lid	< 50 lbs.
Paint and mixed aerosols	Flammable Gas, **Class 2**	(1) 50 gallon cart & (2) 55 gallon drums	< 300 lbs.
Flammable liquids, paints, thinners, fuels	Flammable Liquid, **Class 3**	1 gallon containers & 55 gallon metal drums	6 drums < 2,500 lbs.
Paint related materials and Tars (in cans)	Flammable Liquid, **Class 3**	1 and 5 gallon cans in 4' x 4' metal cages	3 Cages < 2,000 lbs.
Paint related materials, (loose packed)	Flammable Liquid, **Class 3**	Steel, 55 gallon drums w/ open top lids	2 drums < 300 lbs.
Roofing Tars and Adhesives (Bulked)	Flammable Liquid, **Class 3**	Steel, 55 gallon drums w/ open top lids	2 drums < 1,000 lbs.
Reactive solids	Flammable Solids, **Div. 4.1**	Poly, 5 gallon w/ screw top lid	1 container < 10 lbs.
Oxidizers Organic peroxide	Oxidizer, **Division 5.1** Organic Peroxide, **Div. 5.2**	Poly, 5 gallon w/ screw top lid 1 gallon zip-lock bag, labeled	< 50 lbs. < 1 lb.
Pesticides/Poisons	Poison, **Class 6**	Segregated by solids & liquids, into categories, Located on shelves for lab packing	< 1,500 lbs.
Acids	Corrosive, **Class 8**	Poly, 55 gallon, closed-top drum < 800 lbs. Poly, 30 gallon, closed-top drum < 250 lbs. Residential - style containers	2 drums 1 drum < 400 lbs.
Basics (Alkalis)	Corrosive, **Class 8**	Poly, 55 gallon, closed-top drum < 500 lbs. Poly, 30 gallon, closed-top drum < 250 lbs. Residential - style containers	2 drums 1 drum < 400 lbs.
Mercury	Corrosive, **Class 8**	Poly, 5 gallon w/ screw top lid	1 container < 50 lbs.
PCB Ballasts / Capacitors	Miscellaneous, **Class 9**	Poly, 5 gallon w/ screw top lid	2 containers < 100 lbs.
Petroleum or oil wastes w/ dirt or asphalt mix	Miscellaneous, **Class 9**	Steel, 55 gallon drums w/ open top lids	4 containers < 3,000 lbs.
Used Oil for Recycling	Universal Waste **Non-Hazardous Waste**	Steel, 55 gallon drums w/ open top lids	1 container < 300 lbs.
Spent Fluorescent Tubes for Recycling – Crushed in Drums	Universal Waste **Non-Hazardous Waste**	Steel, 55 gallon drums w/ open top lids	1 container < 500 lbs.

Figure 1 – Map to the Closest Hospital



START	1.	Start out going EAST on W GULF TO LAKE HWY/FL-44 E toward S THAYER AVE. Continue to follow FL-44 E.	7.0 mi
	2.	Turn RIGHT onto S OSCEOLA AVE.	0.3 mi
	3.	Turn RIGHT onto W HIGHLAND BLVD.	0.1 mi
END	4.	502 W HIGHLAND BLVD.	

END OF DOCUMENT

SWM EMERGENCY INCIDENTS AND CONTINGENCY PLANS

for

THE CITRUS COUNTY CENTRAL LANDFILL
and
RELATED FACILITIES
for
CITRUS COUNTY, FLORIDA

SECTION II

FACILITY STANDARDS

And

EMERGENCY INCIDENTS PLAN

For the

CITRUS COUNTY

HAZARDOUS WASTE COLLECTION AND STORAGE FACILITY

Located at the

Citrus County Central Landfill
230 West Gulf-to-Lake Highway
Lecanto, FL

Prepared by

Department of Public Works
Division of Solid Waste Management

Updated August 2015

CITRUS COUNTY

HAZARDOUS WASTE COLLECTION AND STORAGE FACILITY

HISTORY

The Citrus County Board of County Commissioners has sponsored the Household Hazardous Waste (HHW) collection program since the late 1980's. The Florida Department of Environmental Protection assisted Citrus County by initiating Household Hazardous Waste "Amnesty Days", two times per year, utilizing a newly purchased collection and storage facility. The metal, Model 22, storage building was purchased from Safety Storage, Inc., Cupertino, California, including options for force air ventilation, dry chemical fire suppression, and two metal bulkheads creating three separate storage spaces. The building was engineered to comply with EPA, NFPA, and OSHA standards and regulations for storing hazardous chemicals and wastes. The building is also corrosion resistant and features interior, secondary containment for the prevention of spills or leaks.

In December of 1991, the facility was relocated from the 60 Acre Central Landfill site to the 80 Acre Expansion Site. Access to the Household Hazardous Waste Collection Center was provided from the main paved road along the west boundary of the Central Landfill facility. The HHW building was sighted in the southwest portion of the Landfill Facility which had existing groundwater monitoring wells, sampled quarterly for contamination detection. The building was constructed on top of a 12" compacted subgrade and 6 mil vapor barrier. The storage building rests on a 45.5' x 14' transfer/containment slab with a 3% center drain. The transfer/ containment slab received a hardener surface treatment of "Lapidolith", or equal upon completion of construction. The transfer/containment slab is sheltered by a 53' x 30' open shed roof, which was added in 1997. Added at the same time was an overhead dry chemical fire suppression system, over the flammable bulking/drum storage area. In the late 1990's, personnel within the Citrus County Hazardous Material Team were used to oversee the HHW and Conditionally Exempt Small Quantity Generators (CESQG) programs. In 2008, the Citrus County Board of County Commissioners hired a Hazardous Waste Coordinator to oversee the HHW and CESQG programs and a Hazardous Waste Specialist to assist the Coordinator and to operate the County CESQG program.

The Citrus County Hazardous Waste Collection Center currently accepts flammable liquids, flammable solids, oxidizers, corrosives, poisonous hazardous waste and a limited amount of Class 1, Division 1.4 materials from households and specific, known, and stable business wastes from Conditionally Exempt Small Quantity Generators which are licensed and situated within Citrus County.

HHW Facility Standards and Emergency Incidents Plan

INTRODUCTION

Citrus County has a permanent Household Hazardous Waste (HHW) program and Conditionally Exempt Small Quantity Generator (CESQG) program for the collection of waste materials at the Household Hazardous Waste Collection Center. Due to the origin of these materials, by statute, they are exempt from many Federal and State Regulations.

Citrus County has adapted/modified the proposed HHW Facility Standards (draft 3 – July 1996), as prepared by Committee Members, State of Florida County Household Hazardous Waste Project Managers, as guidance to a site specific guideline for Citrus County personnel utilization for facility operations, in accordance with section "Applicability".

> "The standards were proposed for facilities which collect HHW with in-house staff, and;
>
> 1. also bulk, neutralize or otherwise treat waste; or
> 2. also collect CESQG waste with in-house staff; or
> 3. both 1 and 2 above."

The Citrus County Division of Solid Waste Management, through its Household Hazardous Waste Collection Center, performs both operations 1 and 2 above.

1. FACILITY PERSONNEL

1. Facility Manager shall be the Director for the Division of Solid Waste Management, Department of Public Works.

2. Facility Site Supervisor shall be the Household Hazardous Waste Coordinator, Division of Solid Waste Management, and/or his/her assignee.

3. Facility Site Assistant shall be the Hazardous Waste Specialist, Division of Solid Water Management, and/or his/her assignee.

4. Facility Staff Spotter shall be Solid Waste Management personnel trained in the facility operational and spotting requirements.

5. Facility Site Staff, during times of program operation, shall be personnel trained in the facility operational requirements.

HHW AND CESQG OPERATIONAL CHAIN OF COMMAND:

Division Director	Henry Norris
Operations Manager	Vacant

Hazardous Waste Coordinator	Daniel Sherlock
Hazardous Waste Specialist	Michael Holst
Hazardous Waste Technician	Susan Heglund

II. PHYSICAL FACILITY – MINIMUM STANDARDS

A. Containment

1. All waste shall be stored in either the HHW storage building, in drums or on the secondary containment pallets at the facility.

2. All liquid waste shall be stored within secondary containment structures capable of containing 110% of the largest two containers in storage.

3. Containers holding liquid shall be placed so that material escaping from a small leak in a non-pressurized container will not fall outside the containment structure.

4. All non-liquid waste shall be stored within secondary containment structures capable on containing all storm water reasonably expected to fall or run onto the structure in a 25 year flood or on a paved and sheltered surface which would be substantially unaffected by a 25 year flood.

5. Storm water shall be prevented from accumulating within in-service containment structures in amounts in excess of 10% of their volume.

6. Containers shall be protected from deterioration due to excessive exposure to storm water or condensation.

B. Required Equipment

During hours of operation, the facility is equipped with the following, unless none of the hazards posed by waste handled at the facility could require a particular kind of equipment specified below:

1. Voice communication from the site supervisor shall be utilized to provide immediate emergency instruction to facility personnel.

2. A device, such as a portable telephone available at the scene of operation, or a hand-held two-way radio, capable of summoning emergency assistance

from local police department, fire department, or State or local emergency response teams.

3. Portable, Class ABC fire extinguishers

4. Spill control, absorbent pads, socks, materials and equipment, including all necessary and appropriate personal protective equipment (PPE) and clothing and decontamination equipment.

5. If needed, there is equipment at the Landfill capable of providing water at adequate volume and pressure to supply water hose streams, or water spray systems for fire suppression and/or decontamination.

6. Emergency show and eyewash station

III. WASTE ACCEPTANCE CRITERIA

A. Household Waste

The facility shall only accept household hazardous waste if:

1. It is acceptable material for disposal with the County's Hazardous Waste Contractor;

2. If it is generate from a Citrus County residence; and

3. If it can be safely stored prior to disposal.

B. CESQG Waste

Facility personnel will enforce the following additional criteria with respect to any CESQG waste that they accept. (This section applies to wastes that the facility Accepts, not to waste accepted directly by the disposal contractor):

1. They verify that the source is Citrus County generated and Conditionally Exempt;

2. It is acceptable material for disposal with the County's Hazardous Waste Contractor;

3. They do not accept unknown chemicals or compounds from CESQG's. The generator is required to identify the process generating the waste and all materials that were used in the process. From that information, the generator or the facility supervisor should be able to determine which EPA

waste codes are applicable to that waste;

4. They only accept waste if they can verify that it is what the generator says it is; and

5. If it can be safely stored prior to disposal.

6. Whenever possible, businesses needing to dispose of their CESQG waste will be directed to and provided a listing of the various, available, hazardous waste collection contractors serving the Citrus County area.

C. Acceptance of Materials During Normal Operating Hours

1. Household Hazardous Waste shall be accepted from county residents on Tuesday, Thursday, and Friday, from 9:00 am till 1:00 pm.

2. Upon arrival at the HHW Collection Center (HHWCC), participants will be informed of the NO SMOKING requirement, if necessary, and asked to unload their vehicle and place items on the carts (staff will assist, as needed).

3. HHWCC staff, wearing appropriate PPE, will unload and process the participant's waste, as follows:

    - Identifies chemicals by label information and/or inquiries of the participant.

    - Verifies acceptability of chemicals using acceptable and non-acceptable materials charts and standards.

    - Refers participant for disposal of non-acceptable materials

    - Directs and assists in removing materials from vehicle

    - Upon removal of leaking or open containers, places such into poly bags or over-packs, in appropriate containers, using absorbent

    - Places materials onto cart(s)

    - Labels any materials which are insufficiently labeled

    - Assists participant on exiting the site

    - Following segregation procedures, sorts and segregates materials by:

1. DOT Hazard Class

2. Chemical compatibility

D. Acceptance of Materials Outside of Normal Collection Hours:

1. If the resident is unable to be at the HHW Collection Center during normal collection periods, household hazardous waste may be accepted from Citrus County residents, preferably, by appointment only.

2. The scale house operator will first screen incoming waste. If a citizen cannot dispose of their HHW during normal acceptance times, the scale house operator shall direct the participant to a Citizen Service Area (CSA) staff spotter. Before taking possession of the waste, the CSA staff spotter shall question the person delivering the hazardous waste, to ascertain that it is only from a residential source and to the exact nature of its contents.

3. If the material is paint or a paint related material, staff will ascertain whether or not the can is empty and shall dispose of empty containers as solid waste. If the material is a latex and solid, staff may dispose of the container as solid waste.

4. All paint-related wastes collected in this manner will be relocated daily to the HHW Collection Center. Whenever the materials are being relocated to the HHW Collection Center area, staff shall be equipped with a two-way radio.

5. At the end of every work day, the CSA staff spotter will check the used oil Collection site, anti-freeze/battery collection site, and the citizen's service area drop-off site for any household hazardous waste that may have been left. If the CSA staff spotter discovers questionable, unknown or non-paint material, the Household Hazardous Waste Coordinator or their designee shall be contacted for guidance and disposal assistance.

IV. PERSONNEL

A. Training

HHW facility personnel and staff spotter(s) shall successfully complete training program(s) that teach them to perform their duties in a way that ensures the facility is operated in a manner that protects them and the public from potential health and safety hazards at the site and is protective of the environment.

1. Each individual involved with the HHW program shall receive training and certification according to their job description and scope of responsibility. Each

training program shall be taught by a person who is certified to train others in hazardous waste management procedures, including instruction in regard to personnel hazardous waste management procedures. The person providing the training shall have no less than 40 hours training in appropriate aspects of hazardous waste/material management including selection of protective clothing and equipment and emergency response.

2. At a minimum, the initial training program is designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing them with HHW material acceptance procedures, emergency procedures, including Emergency Incidents Plan implementation, emergency equipment, and emergency systems, including where applicable:

    a. Procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment;
    b. Communications or alarm systems;
    c. Response to fires or explosions;
    d. Response to discharges to the land surface; incidents; and
    e. Shutdown of operations.

3. All personnel who handle hazardous waste (or items, which would be hazardous waste if regulated) are trained in sorting materials by hazard class and compatibility group.

4. Facility personnel shall successfully complete their initial training program within six months after the date of their employment or assignment to a facility. New employees shall not work in unsupervised positions until they have completed the training requirements.

5. The Hazardous Waste Coordinator shall perform an annual review of the minimum, initial training requirement and of each member's needs and progress toward achieving such training.

6. Facility personnel who receive CESQG waste, bulks or otherwise treats any waste material, should have on staff and on duty, at least one person who has no less than 40 hours training in appropriate aspects of hazardous waste/material management including selection of protective clothing and equipment and emergency response.

B. Personnel Records

The following documents and records shall be maintained at the facility manager's office:

1. The job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job;

2. A written job description for each position. This description may be consistent with its degree of specificity with descriptions for other similar positions at the same site, but should include the requisite skill, education, or other qualifications, and duties of facility personnel assigned to each position;

3. A written description of the type and amount of both introductory and continuing Training that will be given to each person filling a position; and

4. Record that documents the training or job experience required for each position has been completed by facility personnel.

V. OPERATIONS

A. Maintenance and Operation of HHW Facility

1. The facility shall be maintained and operated to minimize the possibility of a fire, Explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil or surface water that could threaten human health or the environment.

2. All facility communications or alarm system, fire protection equipment, spill control equipment, and decontamination equipment, where required, shall be tested and maintained in accordance with manufacturer's recommendations and as necessary to assure its proper operation in time of emergency.

3. Facility personnel shall maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless aisle space is not needed for any of these purposes.

4. Whenever hazardous waste is being poured, mixed, bulked, or otherwise handled, all personnel involved in the operation shall have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, unless such a device is not necessary.

5. Normal operational procedures require two personnel on site at all times, but, if there is ever just one employee on the premises while the facility is in operation, he shall have immediate access to a device, such as a telephone (immediately available at the scene of operation) or a hand-held two-way radio, capable of summoning emergency assistance. (Telephones and radios shall not be placed

in areas where the atmosphere may become explosive due to the presence of flammable vapors, dusts, or gases.)

B. Accumulation Time

1. The HHW collection facility will be accumulating household hazardous waste and CESQG waste on-site, and shall store the material as follows:

    a. The waste will be placed in containers; a container may be considered a storage building or a DOT approved drum.
    b. The amount of waste accumulated will not place the facility in violation of any part of section II.A,V.D, or V.E; and
    c. While accumulated on-site, each container is labeled with the appropriate DOT label and a description of the contents. A proper label on the storage building door describes the hazardous properties of the materials stored inside.

2. The household hazardous waste and CESQG waste collected for treatment or disposal shall not be accumulated on site for more than 210 days. Once the capacity limit or accumulation time limit is reached, all hazardous waste collected shall be shipped to a permitted hazardous waste facility for treatment or disposal. The operator may request DEP approval of a longer accumulation time period for specific wastes which are accumulated slowly.

C. Management of Containers

1. If a container holding hazardous waste is not in good condition or if it begins to leak, the operator shall pack the container and its contents in a larger container that is in good condition, or manage the waste in some other way that complies with the requirements of this part.

2. The operator shall use containers made of or lined with materials which will not react with, and are otherwise compatible with, the hazardous waste to be stored, so that the ability of the container to contain the waste is not impaired and is in compliance with that material’s packing code.

3. A container holding hazardous waste should always be closed during storage, except when it is necessary to add or remove waste.

4. A container holding hazardous waste should not be opened, handled, or stored In a manner which may rupture the container or cause it to leak.

5. HHW staff shall inspect areas where containers are stored, at least weekly, looking for leaks and for deterioration caused by corrosion or other factors.

The operator shall keep records and results of these weekly inspections.

D. Special Requirements for Ignitable or Reactive Waste

1. Containers holding ignitable or reactive waste shall be located within the transfer/containment slab, with a secondary containment area and grounded to minimize static electricity.

2. HHW stall shall take precautions to prevent accidental ignition of ignitable waste. This waste will be separated and protected from sources of ignition, including but not limited to: open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks, (static, electrical, or mechanical), spontaneous ignition (e.g. from heat-producing chemical reactions), and radiant heat. While ignitable waste is being handled, the owner or operator should confine smoking and open flame to a specialty designated location. “No Smoking” signs are conspicuously placed wherever there is a hazard from ignitable waste.

3. Reactive wastes shall receive such special handling and storage as needed to prevent unintentional reactions.

E. Special Requirements for Incompatible Wastes

The following are guidelines for prevention of fires, explosions, gaseous emissions, leaching, or other discharge of hazardous waste or hazardous waste constituents which could result from the mixing of incompatible waste or if a container break or leaks.

1. Incompatible waste, or incompatible waste and materials should not be placed in the same container;

2. Hazardous waste should not be placed in an unwashed container that previously held an incompatible waste or material; and

3. Incompatible wastes should be stored separately. They should be separated by a minimum of two impervious barriers such that, should any one container fail, no waste or vapors will come into contact with incompatible material or containers.

F. Handling Requirements for Ignitable, Reactive, or Incompatible Wastes

Repackaging or treatment, including bulking or neutralizing of ignitable, reactive, or incompatible waste, shall be conducted so that it does not:

1. Generate extreme heat or pressure, fire or explosion, or violent reaction;

2. Produce uncontrolled toxic vapors, dusts, or gases in sufficient quantities to

threaten human health;

3. Produce uncontrolled flammable vapors, dusts, or gases in sufficient quantities to pose a risk of fire or explosion;

4. Damage the structural integrity of the device or facility containing the waste; or

5. Threaten human health or the environment.

VI. PREPARADNESS AND PREVENTION

A. Arrangements with Local Authorities

1. The Facility Manager shall make the following arrangements, through distribution of an Emergency Incidents Plan, outlining the type of waste handled at the facility and the potential need for the services of these organizations:

   a. Arrangements to familiarize police, fire department, and emergency response teams with the layout of the facility, properties of the facility, properties of hazardous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to roads inside the facility, and possible evacuation routes;

   b. Where more than one police and fire department might respond to an emergency, agreements designating primary emergency authority to a specific police and a specific fire department, and agreements with any other to provide support to the primary emergency authority;

   c. Agreements with State emergency response teams, emergency response contractors, and equipment suppliers; and

   d. Arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses that could result from tires, explosions, or release at the facility.

B. HHW COLLECTION CENTER EMERGENCY EQUIPMENT LIST

Equipment:

Shovels	Poly, 65 Gal. Overpack Drum
Brooms	Poly, 30 Gal. Overpack Drum
Squeegee	Metal, 55 Gal. Drums

ABC Fire Extinguishers
Bung Wrench
Hand Tools & Wrenches
First Aid Kit
PVC Hand Drum Pump (water & corrosives)
Rotary Drum Pump (ignitable solvent pump)
pH Testing Tape
H_2O Testing Tape
Poly, 55 Gal. Drums
Poly, 5 Gal. Pails
Duct Tape
Scrub Brushes
Poly Sheeting
Emergency Eye Wash & Shower Station
Drum Wrenches
Drum Placard Labeling Materials

Materials:

Mercury Absorbent
Vermiculite, Bagged Absorbent
Abzorit, Bagged Absorbent
Absorbent Pads
Absorbent Socks
Sodium Bicarbonate Neutralizer

Personal Protection Equipment (PPE) – located at the HHW Collection Center;

Chemical Resistant Aprons
Chemical Resistant Coveralls
Chemical Resistant Shoe Covers
Chemical Resistant Smocks
Hardhats
Personal Respirator
Face Shields
Both Neoprene and Nitrile Gloves
Leather Work Gloves
Clear & Sunglass Safety Glasses

C. ADJUNCT EQUIPMENT AVAILABLE ON SWM SITE

Bulldozer, Caterpillar D6T
Compactor, Caterpillar 826(G)
Compactor, Caterpillar 826(H)
Excavator, Caterpillar 320EL
Front-End Loader(s) (2), Caterpillar, 950(H) w/Balderson Quick Attach Tire Grapple & Broom
Fuel Truck, Ford F350 w/400 gallon diesel fuel tank and air compressor
Water Truck, Freightliner M2106, w/2500 gallon tank
Articulated Dump Truck, Volvo, (A25) 315 HP, 19.6 yds.
Roll-off Truck, Mack, w/30 cubic yard box
Track Loader, Bobcat T630 (Skid Steer)
Fork Lift, Caterpillar P6000, Diesel
Lite Sets (2), Alamand w/6kw generator (located in disposal cell and the CSA)
Dump Trailer, Tandem Axle 8' x 14'
Grabber Attachment for 55 Gal. Drums, Attached to Fork Lift
Generator, 150 Kw Caterpillar (Olympian), Trailer Mounted
Water Pump on Construction Trailer, 100 g.p.m., w/1000 gallon water capacity
Water Transfer Pump, 4" outlet, Mack, Hydraulic Drive
Water Transfer Pump, 4" outlet, Acme, Hydraulic Drive
Hand Tools and Mechanics Tools, at both the Landfill Maintenance Building and HHWCC

VII. EMERGENCY INCIDENTS PLAN AND PROCEDURES

A. EMERGENCY RESPONSE COORDINATOR

Primary: **Henry Norris - Director Solid Waste Management**

Address: 6583 W Robin Ln
Homosassa, FL 34448

Phone: (Work) (352) 527-7670
(Direct) (352) 527-7671
(Home) (352) 503-9660
(Work Cell) (352) 302-6980

Secondary: **Daniel Sherlock – Hazardous Waste Coordinator**

Address: 902 E. Cermak St
Hernando, FL 34442

Phone: (Work) (352) 527-7670
(Direct) (352) 527-5570
(Work Cell) (352) 302-3437
(Home) (352) 586-8657

Secondary Operations **Sammie Walker Jr. – Operations Crew Leader**

Address: 1511 W Henry Blair Ln
Dunnellon, FL 34430

Phone: (Work) (352) 527-7670
(Direct) (352) 527-5572
(Home) (352) 489-8686
(Work Cell) (352) 400-1646

Emergency Response Coordinator Operations: In the event that local emergency response agencies are called, the first arriving company shall establish Incident Command. The command structure for that responding agency shall then be put into effect. The Solid Waste Management (SWM) Emergency Response Coordinator and response team shall follow the Incident Commander's direction. In large operations, the SWM Emergency Response Coordinator may serve as or assign an individual to serve as part of a Unified Command Staff.

B. EMERGENCY RESPONSE PROCEDURES

1. Whenever there is a perceived, imminent or actual emergency situation, the

Emergency Response Coordinator (or their designee when the Emergency Response Coordinator is on call) should immediately:

a. Activate internal facility alarms or communication systems, where applicable, to notify all facility staff personnel.
b. Notify appropriate state or local emergency response agencies with designated response roles if their help is needed.

2. Whenever there is a release, fire or explosion, the Emergency Response Coordinator should immediately identify the character, exact source, amount and the extent of any released materials. He or she may do this by observation or review of facility records; or if necessary, by chemical analysis.

3. Concurrently, the Emergency Response Coordinator should assess possible Hazards to human health or the environment that may result from the release, fire, or explosion. This assessment should consider both direct and indirect effects of the release, fire or explosion (e.g., the effects of any toxic, irritating or asphyxiating gases that are generated, or the effects of any Hazardous surface water run-off from water or chemical agents used to control fire, or heat-induced explosions).

4. If the Emergency Response Coordinator determines that the facility has had a release fire or explosion, which could threaten human health or the environment, outside the facility, he should report his findings as follows:

   a. If his assessment indicates that evacuation of local areas may be advisable, he should immediately notify appropriate local authorities. The Emergency Response Coordinator should be available to help appropriate officials decide whether local areas should be evacuated; and

   b. He/she should immediately notify either for government official designated as the on-scene coordinator for the area or the State Warning Point (using their 24-hour number (904) 488-1320. The report should Include:

      i. Name and telephone number of person reporting;
      ii. Name and address of facility;
      iii. Time and type of incident (e.g., release, fire);
      iv. Name and quantity of material(s) involved, to the extent known;
      v. The extent of injuries, if any; and
      vi. The possible hazards to human health, or the environment outside the facility.

5. During the emergency, the Emergency Response Coordinator should take all

reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other areas of the facility. These measures should include, where applicable, stopping processes and operations, collecting and containing release waste, and release waste, and removing or isolating containers.

6. During an emergency, the Emergency Response Coordinator should monitor for leaks, pressure buildup, gas generation, or ruptures in containers and/or equipment, wherever this is appropriate.

7. Immediately after an emergency, the Emergency Response Coordinator should provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material contaminated by a release, fire, or explosion at the facility.

8. The Emergency Response Coordinator should ensure that, in the affected area(s) of the facility;

    a. No waste that may be incompatible with the released material is stored or handled until cleanup procedures are complete; and
    b. All emergency equipment listed in the Emergency Incidents Plan is cleaned and fit for its intended use before operations are resumed.

9. The owner or operator should notify appropriate State and local authorities in writing, that the facility is once again functional before operations are resumed in the affected area(s) of the facility.

10. The owner or operator should note in the operating record the time, date, and details of any incident that requires implementing the Emergency Incidents Plan. Within 24 hours after the incident, the situation shall be reported to the Department of Environmental Protection (District Office Hazardous Waste Supervisor), and a written report on the incident should be submitted within 15 Days. The report should include:

    a. Name, address, and telephone number of the owner or operator;
    b. Name, address and telephone number of the facility;
    c. Date, time and type of incident (e.g. fire, explosion);
    d. Name and quantity of material(s) involved;
    e. The extent of injuries, if any;
    f. An assessment of actual or potential hazards to human health or the environment, where this is applicable; and
    g. Estimated quantity and disposition of recovered material that resulted from the incident.

APPENDIX C

SAMPLE LOAD CHECKING INSPECTION FORMS

CITRUS COUNTY CENTRAL LANDFILL

WEEKLY MONITORING OF WASTE – INSPECTION RESULTS

HAULING COMPANY: **DATE:** **TIME:**

DRIVER NAME: FIRST **LAST:**

CO. ID# OF VEHICLE: **(VEHICLE TAG NO.)**

SOURCE OF WASTE AS STATED BY DRIVER: **RESIDENTIAL ROUTE [ ]**

COMMERCIAL ROUTE [ ] **OTHER [ ]**

OBSERVATIONS OF THE INSPECTOR INDICATES THE FOLLOWING RESTRICTED MATERIAL WAS LOCATED IN THE VEHICLE LOAD WHEN DISCHARGED INTO THE LANDFILL DISPOSAL AREA OR AT THE YARD WASTE FACILITY: **YES ( )** **NO ( )**

TIRES: **WHITE GOODS:** **BAGGED LAWN DEBRIS:** **LOOSE LAWN DEBRIS:**

GARBAGE IN YARD WASTE AREA: **SLUDGE (WITH > 12% LIQUID):**

DRUMS OVER 20 GAL WITHOUT HOLES: **OTHER:**

RELOCATION ACTION:

RED BAGS (BIOMEDICAL): **HOUSEHOLD HAZARDOUS WASTE SUCH AS:**

PAINTS: **PAINT RELATED – (THINNERS):** **AEROSALS:**

POISONS: **REACTIVES:** **CORROSIVES:** **FLAMMABLES:**

OIL/FILTERS: **BATTERIES:** **OTHER(S):**

ACTION TAKEN FOR HW MATERIALS:

INSPECTOR SIGNATURE AND TITLE

FOLLOW UP

PICTURE OF LOAD TAKEN YES( ) NO( ) BY:

SCALEHOUSE ADVISED TO ADD WRC: YES ( ) NO ( ) NUMBER OF CHARGES
(971C= WASTE RELOCATION CHARGE @ $90 PER EVERY HOUR TO RELOCATE MATERIAL

ADM. FOLLOW-UP: WRC VERIFIED IN SYSTEM YES ( ) NO ( ) By:

ADM. FOLLOW-UP - PICTURE ATTACHED TO REPORT:

APPENDIX D

MAINTENANCE SUMMARY FORM

MAINTENANCE SUMMARY FORM

PROJECT: _____ CONTRACT NO.: _____

1. EQUIPMENT ITEM _____
2. MANUFACTURER _____
3. EQUIPMENT/TAG NUMBER(S) _____
4. WEIGHT OF INDIVIDUAL COMPONENTS (OVER 100 POUNDS) _____
5. NAMEPLATE DATA (hp, voltage, speed, etc.) _____
6. MANUFACTURER'S LOCAL REPRESENTATIVE
   a. Name _____ Telephone No. _____
   b. Address _____
7. MAINTENANCE REQUIREMENTS

Maintenance Operation Comments	Frequency	Lubricant (If Applicable)
List briefly each maintenance operation required and refer to specific information in manufacturer's standard maintenance manual, if applicable. (Reference to manufacturer's catalog or sales literature is not acceptable.)	List required frequency of each maintenance operation.	Refer by symbol to lubricant list required.

8. LUBRICANT LIST

Reference Symbol	Shell	Standard Oil	Gulf	Arco	Or Equal
List symbols used in No. 7 above.	List equivalent lubricants, as distributed by each manufacturer for the specific use recommended.				

9. RECOMMENDED SPARE PARTS FOR OWNER'S INVENTORY

Part No.	Description	Unit	Quantity	Unit Cost
Note: Identify parts provided by this Contract with two asterisks.				

Instructions for completing the Equipment Operator Service Report

It is the responsibility of each equipment operator to ensure that this form is correctly and completely filled out.
It is to be used by each operator to monitor the condition of the equipment.
It is designed to be used by atleast two operators a day but can be used by more if need be.
Information on this form is used to track data such as hours used, fuel usage, oil consumption and to notify the supervisor and other operators of the condition of the equipment.
Safety items must be reported immediately to the supervisor on duty

Explanation of entries to be made: Refer to the operators manual for further instructions.

Daily Walk Around Inspection:
Each operator will do a thorough walk around inspection as prescribed in the operators manual before operation.

Beginning Hours:
Record the hours that you started operating the equipment.

Refuel Hours:
Record the hours that you filled the fuel tank. This will differ depending on when fuel is added.

Ending Hours:
Record the hours when you leave the equipment.

Fuel Added, Gallons:
Record the total amount of fuel added to the fuel tank.

Check/Top-off Engine Oil:
Check the oil and if needed record the amount added.

Check Coolant Level:
Look at the sight glass, do not remove radiator cap if engine is hot.

Check Hydraulic Oil Level:
Check the oil and if needed record the amount added.

Check Transmission Oil Level:
Check the oil and if needed record the amount added.

Lubricate per Operators Manual:
Lubricate the points specified in the manual as prescribed in the manual.

Check Drive train for leaks:
Look under and around the equipment for leaks.

Remove debris:
Remove anything that is not part of the machine. Pay attention to pinch areas.

Drain Fuel Filter Water Separator:
Refer to operators manual for procedure.

Backup Alarm & Fire Extinguisher:
These are critical safety items and must be serviceable at all times.

Clean Windows and Cab Interior:
Wash the windows and sweep out the cab. Remove your trash.

Quick Coupler and Tire Pressure:
Ensure that the coupler has no obvious cracks and that the tire pressure is correct.

Check/Clean Cab fresh air filters:
Check and clean both external and internal cab fresh air filters.

Clean Primary Engine Air Cleaner
Clean when necessary. Observe indicator.

Initials:
Place you initials in the space provided to show that you completed the form

Operator Comments:
Space provided for comments relating to machine operation and safety issues.

This form needs to be turned-in to the field crew leader no later than 10:00 AM every Monday for the previous week. He then will review all entries for accuracy and corrective action if necessary.

CITRUS COUNTY SOLID WASTE MANAGEMENT
EQUIPMENT OPERA SERVICE REPORT

Equipment Number: Circle Machine Number	1040 Bomag	9314 Pan Scraper	20154 Roll-off Mileage	20186 Recycle Alley Loader
	9279 Dump Truck	20064 John Deere Dozer	20164 Caterpillar Compactor	20187 Cell Loader

OPERATOR DAILY CHECKS & SERVICES	WEEK OF:						TO:					
	Monday		Tuesday		Wed		Thursday		Friday		Sat	
Daily Walk Around Inspection												
Beginning Hours												
Refuel Hours												
Ending Hours												
Fuel Added, Gallons												
Check / Top-off Engine Oil												
Check Coolant Level												
Check Hydraulic Oil Level												
Check Transmission Oil Level												
Lubricate per Operator Manual												
Check Drivetrain For Leaks												
Remove Debris From Pinch Areas												
Drain Fuel Filter Water Seperator												
Backup Alarm & Fire Extinguisher												
Clean Windows and Cab Interior												
Quick Coulper and Tire Pressure												
Check / Clean Cab Fresh Air Filter												
Clean Primary Engine Air Cleaner												
Initials												

"Equipment failure is not an option"

Operator Comments:

Total Hours Operated

Total Fuel Used

Gallons Per Hour

Next Service Due

Posted

Must be given to Prime

02/18/2 Updated

DATE	Nature Of Problem or Parts & Or Material Required	Date Corrected	Init

APPENDIX E

TRAINING CERTIFICATES

Florida DEP Solid Waste Management Facility Operator Courses

Name: Bagley, Tammy
Title:
Company: Citrus County Solid Waste Management
Address: PO Box 340
Lecanto, FL 34460-0340
Phone: Phone: (352) 527-7670 ext. 4690

Spotter / Waste Screener

Status: **Current**

- Initial Date: 04/27/2012
- Current period: 04/27/2015 - 04/26/2018 Hours needed before 04/26/2018: 4

Period: **04/27/2012 - 04/26/2015 - (Initial Period)**

Course	Course Name	Provider	Completion Date	Hours
248	Spotter Training for Solid Waste Facilities	University of Florida - TREEO	04/27/2012	Initial
718	4-Hour Refresher Course for Spotters at Landfills, C&D Sites and Transfer Stations	University of Florida - TREEO	01/28/2015	4
			Total:	4
			Hours Needed:	0

Period: **04/27/2015 - 04/26/2018**

Course	Course Name	Provider	Completion Date	Hours
No courses have been taken yet during this time period.				
			Total:	0
			Hours Needed:	4

Status: **Current**

- Continuing Education (CE) Minimum 3 Year Requirements:

  16 hours Class I II III Landfill / Construction and Demolition Debris
  8 hours Transfer Station / Material Recovery Facility
  4 hours Spotter

- **Expired:** If you have exceeded the 3 year training period without achieving the minimum continuing education, you must start over by taking an approved initial course and pass exam. There is not a grace period.
- Initial hours are not counted toward continuing education.
- An Initial course can be taken as a continuing education course only if it was not taken as the operator's or spotter's initial training. No CE credit will be given for the same course taken within the same 3-year period.
- If you have any questions, please contact djenkins@treeo.ufl.edu or mkeilhauer@treeo.ufl.edu or call (352) 392-9570 extensions 227 or 230.

Florida DEP Solid Waste Management Facility Operator Courses

Name: Bemus, Doug
Title:
Company: Citrus County Solid Waste Management
Address: PO Box 340
Lecanto, FL 34460-0340
Phone: Phone: (352) 527-7670 ext. 4690

Spotter / Waste Screener

Status: **Current**

- Initial Date: 01/28/2015
- Current period: 01/28/2015 - 01/27/2018 - (Initial Period) Hours needed before 01/27/2018: 4

Period: **01/28/2015 - 01/27/2018 - (Initial Period)**

Course	Course Name	Provider	Completion Date	Hours
248	Spotter Training for Solid Waste Facilities	University of Florida - TREEO	01/28/2015	Initial
			Total:	0
			Hours Needed:	4

Status: **Current**

- Continuing Education (CE) Minimum 3 Year Requirements:
  - 16 hours Class I II III Landfill / Construction and Demolition Debris
  - 8 hours Transfer Station / Material Recovery Facility
  - 4 hours Spotter
- **Expired:** If you have exceeded the 3 year training period without achieving the minimum continuing education, you must start over by taking an approved initial course and pass exam. There is not a grace period.
- Initial hours are not counted toward continuing education.
- An Initial course can be taken as a continuing education course only if it was not taken as the operator's or spotter's initial training. No CE credit will be given for the same course taken within the same 3-year period.
- If you have any questions, please contact djenkins@treeo.ufl.edu or mkeilhauer@treeo.ufl.edu or call (352) 392-9570 extensions 227 or 230.

Florida DEP Solid Waste Management Facility Operator Courses

Name: Black, Billy M.
Title:
Company: Citrus County Solid Waste
Address: PO Box 340
Lecanto, FL 34460
Phone: Phone: (352) 527-7670 ext: 4693

Spotter / Waste Screener

Status: **Current**

- Initial Date: 11/30/2010
- Current period: 11/30/2013 - 11/29/2016 Hours needed before 11/29/2016: 4

Period: **11/30/2010 - 11/29/2013 - (Initial Period)**

Course	Course Name	Provider	Completion Date	Hours
248	Spotter Training for Solid Waste Facilities	University of Florida - TREEO	11/30/2010	Initial
718	4-Hour Refresher Course for Spotters at Landfills, C&D Sites and Transfer Stations	University of Florida - TREEO	10/30/2013	4
			Total:	4
			Hours Needed:	0

Period: **11/30/2013 - 11/29/2016**

Course	Course Name	Provider	Completion Date	Hours
No courses have been taken yet during this time period.				
			Total:	0
			Hours Needed:	4

Status: **Current**

- Continuing Education (CE) Minimum 3 Year Requirements:

  16 hours Class I II III Landfill / Construction and Demolition Debris
  8 hours Transfer Station / Material Recovery Facility
  4 hours Spotter

- **Expired:** If you have exceeded the 3 year training period without achieving the minimum continuing education, you must start over by taking an approved initial course and pass exam. There is not a grace period.
- Initial hours are not counted toward continuing education.
- An Initial course can be taken as a continuing education course only if it was not taken as the operator's or spotter's initial training. No CE credit will be given for the same course taken within the same 3-year period.
- If you have any questions, please contact djenkins@treeo.ufl.edu or mkeilhauer@treeo.ufl.edu or call (352) 392-9570 extensions 227 or 230.

Florida DEP Solid Waste Management Facility Operator Courses

Name: Carney, Owen D.
Title: Recycling Coordinator
Company: Citrus County Solid Waste Management
Address: 230 W. Gulf to Lake Hwy.
Lecanto, FL 34460
Phone: Phone: (352) 527-7670 ext: 4692

Class I, III Landfill Operator

Status: **Current**

- Initial Date: 05/11/2007
- Current period: 05/11/2013 - 05/10/2016 Hours needed before 05/10/2016: 16

Period: **05/11/2007 - 05/10/2010 - (Initial Period)**

Course	Course Name	Provider	Completion Date	Hours
442	Initial Training Course for Landfill Operators and C&D Sites - 24 Hour	University of Florida - TREEO	05/11/2007	Initial
443	Initial Training Course for Transfer Station Operators and Materials Recovery Facilities - 16 Hour	University of Florida - TREEO	09/19/2007	12
424	National Incident Management System [NIMS] and Introduction IS-00700	Emergency Management Institute	11/20/2007	4
281	Health and Safety for Solid Waste Workers-8 Hours	University of Florida - TREEO	12/13/2007	8
512	Recycle Florida Today 2008 Annual Conference	Recycle Florida Today, Inc	06/04/2008	4
554	Recycle Florida Today 2009 Annual Conference	Recycle Florida Today, Inc	06/09/2009	2
			Total:	30
			Hours Needed:	0

Period: **05/11/2010 - 05/10/2013**

Course	Course Name	Provider	Completion Date	Hours
603	Recycle Florida Today - 2010 Annual Conference	Recycle Florida Today, Inc	05/15/2010	2
730	Heavy Equipment Safety	University of Florida - TREEO	03/06/2012	4
494	Permit Required Confined Space Awareness	University of Florida - TREEO	03/06/2012	4
697	Recycle Florida Today 2012 Annual Conference	Recycle Florida Today, Inc	06/05/2012	2
718	4-Hour Refresher Course for Spotters at Landfills, C&D Sites and Transfer Stations	University of Florida - TREEO	04/24/2013	4
			Total:	16
			Hours Needed:	0

Period: **05/11/2013 - 05/10/2016**

Course	Course Name	Provider	Completion Date	Hours
No courses have been taken yet during this time period.				
			Total:	0
			Hours Needed:	16

Status: **Current**

- Continuing Education (CE) Minimum 3 Year Requirements:

16 hours	Class I II III Landfill / Construction and Demolition Debris
8 hours	Transfer Station / Material Recovery Facility
4 hours	Spotter

- **Expired:** If you have exceeded the 3 year training period without achieving the minimum continuing education, you must start over by taking an approved initial course and pass exam. There is not a grace period.
- Initial hours are not counted toward continuing education.
- An Initial course can be taken as a continuing education course only if it was not taken as the operator's or spotter's initial training. No CE credit will be given for the same course taken within the same 3-year period.
- If you have any questions, please contact djenkins@treeo.ufl.edu or mkeilhauer@treeo.ufl.edu or call (352) 392-9570 extensions 227 or 230.

Florida DEP Solid Waste Management Facility Operator Courses

Name: Carney, Owen D.
Title: Recycling Coordinator
Company: Citrus County Solid Waste Management
Address: 230 W. Gulf to Lake Hwy.
Lecanto, FL 34460
Phone: Phone: (352) 527-7670 ext: 4692

Spotter / Waste Screener

Status: **Current**

- Initial Date: 10/19/2006
- Current period: 10/19/2012 - 10/18/2015 Hours needed before 10/18/2015: 0

Period: **10/19/2006 - 10/18/2009 - (Initial Period)**

Course	Course Name	Provider	Completion Date	Hours
248	Spotter Training for Solid Waste Facilities	University of Florida - TREEO	10/19/2006	Initial
186	Pedestrian, Vehicles, and Equipment Safety in Landfills	University of Florida - TREEO	03/13/2007	2
286	Hazardous Materials Chemistry for the Non-Chemist	University of Florida - TREEO	04/23/2007	4
442	Initial Training Course for Landfill Operators and C&D Sites - 24 Hour	University of Florida - TREEO	05/11/2007	4
443	Initial Training Course for Transfer Station Operators and Materials Recovery Facilities - 16 Hour	University of Florida - TREEO	09/19/2007	4
281	Health and Safety for Solid Waste Workers-8 Hours	University of Florida - TREEO	12/13/2007	4
			Total:	18
			Hours Needed:	0

Period: **10/19/2009 - 10/18/2012**

Course	Course Name	Provider	Completion Date	Hours
730	Heavy Equipment Safety	University of Florida - TREEO	03/06/2012	4
494	Permit Required Confined Space Awareness	University of Florida - TREEO	03/06/2012	4
697	Recycle Florida Today 2012 Annual Conference	Recycle Florida Today, Inc	06/05/2012	2
			Total:	10
			Hours Needed:	0

Period: **10/19/2012 - 10/18/2015**

Course	Course Name	Provider	Completion Date	Hours
718	4-Hour Refresher Course for Spotters at Landfills, C&D Sites and Transfer Stations	University of Florida - TREEO	04/24/2013	4
			Total:	4
			Hours Needed:	0

Status: **Current**

- Continuing Education (CE) Minimum 3 Year Requirements:

16 hours	Class I II III Landfill / Construction and Demolition Debris
8 hours	Transfer Station / Material Recovery Facility
4 hours	Spotter

- **Expired:** If you have exceeded the 3 year training period without achieving the minimum continuing education, you must start over by taking an approved initial course and pass exam. There is not a grace period.
- Initial hours are not counted toward continuing education.
- An Initial course can be taken as a continuing education course only if it was not taken as the operator's or spotter's initial training. No CE credit will be given for the same course taken within the same 3-year period.
- If you have any questions, please contact djenkins@treeo.ufl.edu or mkeilhauer@treeo.ufl.edu or call (352) 392-9570 extensions 227 or 230.

Florida DEP Solid Waste Management Facility Operator Courses

Name:	Colson, Tracy
Title:	
Company:	Citrus County Solid Waste Management
Address:	PO Box 340 Lecanto, FL 34460-0340
Phone:	Phone: (352) 527-7670

Spotter / Waste Screener

Status: **Current**

- Initial Date: 10/30/2013
- Current period: 10/30/2013 - 10/29/2016 - (Initial Period) Hours needed before 10/29/2016: 4

Period: **10/30/2013 - 10/29/2016 - (Initial Period)**

Course	Course Name	Provider	Completion Date	Hours
248	Spotter Training for Solid Waste Facilities	University of Florida - TREEO	10/30/2013	Initial
			Total:	0
			Hours Needed:	4

Status: **Current**

- Continuing Education (CE) Minimum 3 Year Requirements:

16 hours	Class I II III Landfill / Construction and Demolition Debris
8 hours	Transfer Station / Material Recovery Facility
4 hours	Spotter

- **Expired:** If you have exceeded the 3 year training period without achieving the minimum continuing education, you must start over by taking an approved initial course and pass exam. There is not a grace period.
- Initial hours are not counted toward continuing education.
- An Initial course can be taken as a continuing education course only if it was not taken as the operator's or spotter's initial training. No CE credit will be given for the same course taken within the same 3-year period.
- If you have any questions, please contact djenkins@treeo.ufl.edu or mkeilhauer@treeo.ufl.edu or call (352) 392-9570 extensions 227 or 230.

Florida DEP Solid Waste Management Facility Operator Courses

Name:	Driver, James
Title:	
Company:	Citrus County Solid Waste Management
Address:	PO Box 340 Lecanto, FL 34460-0340
Phone:	Phone: (352) 527-7670 ext. 4690

Spotter / Waste Screener

Status: **Current**

- Initial Date: 01/28/2015
- Current period: 01/28/2015 - 01/27/2018 - (Initial Period) Hours needed before 01/27/2018: 4

Period: **01/28/2015 - 01/27/2018 - (Initial Period)**

Course	Course Name	Provider	Completion Date	Hours
248	Spotter Training for Solid Waste Facilities	University of Florida - TREEO	01/28/2015	Initial
			Total:	0
			Hours Needed:	4

Status: **Current**

- Continuing Education (CE) Minimum 3 Year Requirements:

16 hours	Class I II III Landfill / Construction and Demolition Debris
8 hours	Transfer Station / Material Recovery Facility
4 hours	Spotter

- **Expired:** If you have exceeded the 3 year training period without achieving the minimum continuing education, you must start over by taking an approved initial course and pass exam. There is not a grace period.
- Initial hours are not counted toward continuing education.
- An Initial course can be taken as a continuing education course only if it was not taken as the operator's or spotter's initial training. No CE credit will be given for the same course taken within the same 3-year period.
- If you have any questions, please contact djenkins@treeo.ufl.edu or mkeilhauer@treeo.ufl.edu or call (352) 392-9570 extensions 227 or 230.

Florida DEP Solid Waste Management Facility Operator Courses

Name: Gilmore, William M.
Title: Lead Solid Waste Technician
Company: Citrus County Solid Waste Management
Address: PO Box 340
Lecanto, FL 34460-0340
Phone: Phone: (352) 527-7670

Class I, III Landfill Operator

Status: **Current**

- Initial Date: 11/15/2007
- Current period: 11/15/2013 - 11/14/2016 Hours needed before 11/14/2016: 16

Period: **11/15/2007 - 11/14/2010 - (Initial Period)**

Course	Course Name	Provider	Completion Date	Hours
195	24-Hour Initial Training Course for Landfill Operators (Class I, II, III and C&D Sites)	University of Florida - TREEO	11/15/2007	Initial
281	Health and Safety for Solid Waste Workers-8 Hours	University of Florida - TREEO	09/25/2008	8
443	Initial Training Course for Transfer Station Operators and Materials Recovery Facilities - 16 Hour	University of Florida - TREEO	09/28/2010	12
			Total:	20
			Hours Needed:	0

Period: **11/15/2010 - 11/14/2013**

Course	Course Name	Provider	Completion Date	Hours
730	Heavy Equipment Safety	University of Florida - TREEO	03/06/2012	4
494	Permit Required Confined Space Awareness	University of Florida - TREEO	03/06/2012	4
782	Globally Harmonized System [GHS] of Hazard Communication - The New Requirement	University of Florida - TREEO	07/23/2013	2
740	Introduction to Debris Operations IS-632.a - Online	FEMA / National Emergency Training Center	09/27/2013	2
803	Leachate Management Fundamentals for Solid Waste Management Facilities - Online	Waste University	10/11/2013	2
809	What's that Smell? Odor Evaluation, Management, and Documentation for Waste Facility Personnel - Online	Waste University	10/14/2013	2
			Total:	16
			Hours Needed:	0

Period: **11/15/2013 - 11/14/2016**

Course	Course Name	Provider	Completion Date	Hours
No courses have been taken yet during this time period.				
			Total:	0
			Hours Needed:	16

Status: **Current**

- Continuing Education (CE) Minimum 3 Year Requirements:

16 hours	Class I II III Landfill / Construction and Demolition Debris
8 hours	Transfer Station / Material Recovery Facility
4 hours	Spotter

- **Expired:** If you have exceeded the 3 year training period without achieving the minimum continuing education, you must start over by taking an approved initial course and pass exam. There is not a grace period.
- Initial hours are not counted toward continuing education.
- An Initial course can be taken as a continuing education course only if it was not taken as the operator's or spotter's initial training. No CE credit will be given for the same course taken within the same 3-year period.
- If you have any questions, please contact djenkins@treeo.ufl.edu or mkeilhauer@treeo.ufl.edu or call (352) 392-9570 extensions 227 or 230.

Florida DEP Solid Waste Management Facility Operator Courses

Name: Gilmore, William M.
Title: Lead Solid Waste Technician
Company: Citrus County Solid Waste Management
Address: PO Box 340
Lecanto, FL 34460-0340
Phone: Phone: (352) 527-7670

Spotter / Waste Screener

Status: **Current**

- Initial Date: 07/25/2007
- Current period: 07/25/2013 - 07/24/2016 Hours needed before 07/24/2016: 0

Period: **07/25/2007 - 07/24/2010 - (Initial Period)**

Course	Course Name	Provider	Completion Date	Hours
248	Spotter Training for Solid Waste Facilities		07/25/2007	Initial
281	Health and Safety for Solid Waste Workers-8 Hours	University of Florida - TREEO	09/25/2008	4
			Total:	4
			Hours Needed:	0

Period: **07/25/2010 - 07/24/2013**

Course	Course Name	Provider	Completion Date	Hours
443	Initial Training Course for Transfer Station Operators and Materials Recovery Facilities - 16 Hour	University of Florida - TREEO	09/28/2010	4
730	Heavy Equipment Safety	University of Florida - TREEO	03/06/2012	4
494	Permit Required Confined Space Awareness	University of Florida - TREEO	03/06/2012	4
782	Globally Harmonized System [GHS] of Hazard Communication - The New Requirement	University of Florida - TREEO	07/23/2013	2
			Total:	14
			Hours Needed:	0

Period: **07/25/2013 - 07/24/2016**

Course	Course Name	Provider	Completion Date	Hours
740	Introduction to Debris Operations IS-632.a - Online	FEMA / National Emergency Training Center	09/27/2013	2
803	Leachate Management Fundamentals for Solid Waste Management Facilities - Online	Waste University	10/11/2013	2
809	What's that Smell? Odor Evaluation, Management, and Documentation for Waste Facility Personnel - Online	Waste University	10/14/2013	2
			Total:	6
			Hours Needed:	0

Status: **Current**

- Continuing Education (CE) Minimum 3 Year Requirements:

16 hours	Class I II III Landfill / Construction and Demolition Debris
8 hours	Transfer Station / Material Recovery Facility
4 hours	Spotter

- **Expired:** If you have exceeded the 3 year training period without achieving the minimum continuing education, you must start over by taking an approved initial course and pass exam. There is not a grace period.
- Initial hours are not counted toward continuing education.
- An Initial course can be taken as a continuing education course only if it was not taken as the operator's or spotter's initial training. No CE credit will be given for the same course taken within the same 3-year period.
- If you have any questions, please contact djenkins@treeo.ufl.edu or mkeilhauer@treeo.ufl.edu or call (352) 392-9570 extensions 227 or 230.

Florida DEP Solid Waste Management Facility Operator Courses

Name: Gravely, Harold
Title: Heavy Equipment Operator
Company: Citrus County Solid Waste Management
Address: PO Box 340
Lecanto, FL 34460-0340
Phone: Phone: (352) 527-7670

Spotter / Waste Screener

Status: **Current**

- Initial Date: 09/25/2000
- Current period: 09/25/2012 - 09/24/2015 Hours needed before 09/24/2015: 0

Period: **09/25/2000 - 09/24/2003 - (Initial Period)**

Course	Course Name	Provider	Completion Date	Hours
111	Landfill Operations and Waste Screening for Class I, II, III Sites	Kohl Consulting, Inc.	09/25/2000	Initial
256	Waste Screening & Identification for Landfill Operations and Spotters Refresher	Citrus County - Hazardous Material Section	08/29/2002	4
			Total:	4
			Hours Needed:	0

Period: **09/25/2003 - 09/24/2006**

Course	Course Name	Provider	Completion Date	Hours
295	Heavy Equipment Operator Training - 4 Hours	Fleet Solutions	04/16/2004	4
			Total:	4
			Hours Needed:	0

Period: **09/25/2006 - 09/24/2009**

Course	Course Name	Provider	Completion Date	Hours
248	Spotter Training for Solid Waste Facilities		07/25/2007	8
396	SWANA-FL Chapter Annual Road-e-o Safety Training	Solid Waste Association of North America (SWANA - Florida Chapter)	04/05/2008	2
			Total:	10
			Hours Needed:	0

Period: **09/25/2009 - 09/24/2012**

Course	Course Name	Provider	Completion Date	Hours
463	4-Hour Refresher Course for Spotters at Landfills, C&D Sites and Transfer Stations	University of Florida - TREEO	04/27/2012	4
			Total:	4
			Hours Needed:	0

Period: **09/25/2012 - 09/24/2015**

Course	Course Name	Provider	Completion Date	Hours
718	4-Hour Refresher Course for Spotters at Landfills, C&D Sites and Transfer Stations	University of Florida - TREEO	01/28/2015	4
			Total:	4
			Hours Needed:	0

Status: **Current**

- Continuing Education (CE) Minimum 3 Year Requirements:

16 hours	Class I II III Landfill / Construction and Demolition Debris
8 hours	Transfer Station / Material Recovery Facility
4 hours	Spotter

- **Expired:** If you have exceeded the 3 year training period without achieving the minimum continuing education, you must start over by taking an approved initial course and pass exam. There is not a grace period.
- Initial hours are not counted toward continuing education.
- An Initial course can be taken as a continuing education course only if it was not taken as the operator's or spotter's initial training. No CE credit will be given for the same course taken within the same 3-year period.
- If you have any questions, please contact djenkins@treeo.ufl.edu or mkeilhauer@treeo.ufl.edu or call (352) 392-9570 extensions 227 or 230.

Florida DEP Solid Waste Management Facility Operator Courses

Name:	Heglund, Susan
Title:	Hazardous Waste Technician
Company:	Citrus County Solid Waste Mgt
Address:	PO Box 340 Lecanto, FL 34460
Phone:	Phone: (352) 527-7670

Spotter / Waste Screener

Status: **Current**

- Initial Date: 11/29/2005
- Current period: 11/29/2014 - 11/28/2017 Hours needed before 11/28/2017: 4

Period: **11/29/2005 - 11/28/2008 - (Initial Period)**

Course	Course Name	Provider	Completion Date	Hours
248	Spotter Training for Solid Waste Facilities	University of Florida - TREEO	11/29/2005	Initial
186	Pedestrian, Vehicles, and Equipment Safety in Landfills	University of Florida - TREEO	03/13/2007	2
463	4-Hour Refresher Course for Spotters at Landfills, C&D Sites and Transfer Stations	University of Florida - TREEO	11/20/2008	4
			Total:	6
			Hours Needed:	0

Period: **11/29/2008 - 11/28/2011**

Course	Course Name	Provider	Completion Date	Hours
281	Health and Safety for Solid Waste Workers-8 Hours	University of Florida - TREEO	09/23/2010	4
286	Hazardous Materials Chemistry for the Non-Chemist	University of Florida - TREEO	04/04/2011	4
285	Chemical Compatibility and Storage	University of Florida - TREEO	04/05/2011	4
			Total:	12
			Hours Needed:	0

Period: **11/29/2011 - 11/28/2014**

Course	Course Name	Provider	Completion Date	Hours
717	4-hour OSHA Hazardous Materials Awareness Level Course		11/14/2012	4
718	4-Hour Refresher Course for Spotters at Landfills, C&D Sites and Transfer Stations	University of Florida - TREEO	02/19/2014	4
			Total:	8
			Hours Needed:	0

Period: **11/29/2014 - 11/28/2017**

Course	Course Name	Provider	Completion Date	Hours
No courses have been taken yet during this time period.				
			Total:	0
			Hours Needed:	4

Status: **Current**

- Continuing Education (CE) Minimum 3 Year Requirements:

16 hours	Class I II III Landfill / Construction and Demolition Debris

8 hours	Transfer Station / Material Recovery Facility
4 hours	Spotter

- **Expired:** If you have exceeded the 3 year training period without achieving the minimum continuing education, you must start over by taking an approved initial course and pass exam. There is not a grace period.
- Initial hours are not counted toward continuing education.
- An Initial course can be taken as a continuing education course only if it was not taken as the operator's or spotter's initial training. No CE credit will be given for the same course taken within the same 3-year period.
- If you have any questions, please contact djenkins@treeo.ufl.edu or mkeilhauer@treeo.ufl.edu or call (352) 392-9570 extensions 227 or 230.

Florida DEP Solid Waste Management Facility Operator Courses

Name:	Holst, Michael Richard
Title:	Hazardous Waste Specialist
Company:	Citrus County Solid Waste
Address:	230 W. Gulf to Lake Hwy. Lecanto, FL 34460
Phone:	Phone: (352) 527-7670

Class I, III Landfill Operator

Status: **Current**

- Initial Date: 02/25/2011
- Current period: 02/25/2014 - 02/24/2017 Hours needed before 02/24/2017: 0

Period: **02/25/2011 - 02/24/2014 - (Initial Period)**

Course	Course Name	Provider	Completion Date	Hours
442	Initial Training Course for Landfill Operators and C&D Sites - 24 Hour	University of Florida - TREEO	02/25/2011	Initial
730	Heavy Equipment Safety	University of Florida - TREEO	03/06/2012	4
494	Permit Required Confined Space Awareness	University of Florida - TREEO	03/06/2012	4
717	4-hour OSHA Hazardous Materials Awareness Level Course		11/14/2012	4
799	The Anatomy of MSW - Online	Waste University	01/24/2014	2
801	The Anatomy of C&D Debris - Online	Waste University	01/24/2014	2
			Total:	16
			Hours Needed:	0

Period: **02/25/2014 - 02/24/2017**

Course	Course Name	Provider	Completion Date	Hours
69	U.S. DOT Hazardous Materials/Waste Transportation	University of Florida - TREEO	03/03/2014	6
63	Hazardous Waste Regulations for Generators	University of Florida - TREEO	03/04/2014	4
845	NAHMMA 2014 National Conference	FDEP/NAHMMA - Florida Chapter	08/21/2014	8
720	Understanding Hazardous Waste Regulations in Solid Waste Operations and Recycling	University of Florida - TREEO	01/14/2015	8
			Total:	26
			Hours Needed:	0

Status: **Current**

- Continuing Education (CE) Minimum 3 Year Requirements:

16 hours	Class I II III Landfill / Construction and Demolition Debris
8 hours	Transfer Station / Material Recovery Facility
4 hours	Spotter

- **Expired:** If you have exceeded the 3 year training period without achieving the minimum continuing education, you must start over by taking an approved initial course and pass exam. There is not a grace period.
- Initial hours are not counted toward continuing education.
- An Initial course can be taken as a continuing education course only if it was not taken as the operator's or spotter's initial training. No CE credit will be given for the same course taken within the same 3-year period.
- If you have any questions, please contact djenkins@treeo.ufl.edu or mkeilhauer@treeo.ufl.edu or call (352) 392-9570 extensions 227 or 230.

Florida DEP Solid Waste Management Facility Operator Courses

Name:	Holst, Michael Richard
Title:	Hazardous Waste Specialist
Company:	Citrus County Solid Waste
Address:	230 W. Gulf to Lake Hwy. Lecanto, FL 34460
Phone:	Phone: (352) 527-7670

Spotter / Waste Screener

Status: **Current**

- Initial Date: 11/29/2005
- Current period: 11/29/2014 - 11/28/2017 Hours needed before 11/28/2017: 0

Period: **11/29/2005 - 11/28/2008 - (Initial Period)**

Course	Course Name	Provider	Completion Date	Hours
248	Spotter Training for Solid Waste Facilities	University of Florida - TREEO	11/29/2005	Initial
396	SWANA-FL Chapter Annual Road-e-o Safety Training	Solid Waste Association of North America (SWANA - Florida Chapter)	03/24/2006	2
186	Pedestrian, Vehicles, and Equipment Safety in Landfills	University of Florida - TREEO	03/13/2007	2
396	SWANA-FL Chapter Annual Road-e-o Safety Training	Solid Waste Association of North America (SWANA - Florida Chapter)	05/12/2007	2
			Total:	6
			Hours Needed:	0

Period: **11/29/2008 - 11/28/2011**

Course	Course Name	Provider	Completion Date	Hours
396	SWANA-FL Chapter Annual Road-e-o Safety Training	Solid Waste Association of North America (SWANA - Florida Chapter)	05/02/2009	2
442	Initial Training Course for Landfill Operators and C&D Sites - 24 Hour	University of Florida - TREEO	02/25/2011	4
			Total:	6
			Hours Needed:	0

Period: **11/29/2011 - 11/28/2014**

Course	Course Name	Provider	Completion Date	Hours
494	Permit Required Confined Space Awareness	University of Florida - TREEO	03/06/2012	4
730	Heavy Equipment Safety	University of Florida - TREEO	03/06/2012	4
717	4-hour OSHA Hazardous Materials Awareness Level Course		11/14/2012	4
799	The Anatomy of MSW - Online	Waste University	01/24/2014	2
801	The Anatomy of C&D Debris - Online	Waste University	01/24/2014	2
63	Hazardous Waste Regulations for Generators	University of Florida - TREEO	03/04/2014	4
845	NAHMMA 2014 National Conference	FDEP/NAHMMA - Florida Chapter	08/21/2014	2
			Total:	22
			Hours Needed:	0

Period: **11/29/2014 - 11/28/2017**

Course	Course Name	Provider	Completion Date	Hours
720	Understanding Hazardous Waste Regulations in Solid Waste Operations and Recycling	University of Florida - TREEO	01/14/2015	4
			Total:	4

Hours Needed:	0

Status: **Current**

- Continuing Education (CE) Minimum 3 Year Requirements:

16 hours	Class I II III Landfill / Construction and Demolition Debris
8 hours	Transfer Station / Material Recovery Facility
4 hours	Spotter

- **Expired:** If you have exceeded the 3 year training period without achieving the minimum continuing education, you must start over by taking an approved initial course and pass exam. There is not a grace period.
- Initial hours are not counted toward continuing education.
- An Initial course can be taken as a continuing education course only if it was not taken as the operator's or spotter's initial training. No CE credit will be given for the same course taken within the same 3-year period.
- If you have any questions, please contact djenkins@treeo.ufl.edu or mkeilhauer@treeo.ufl.edu or call (352) 392-9570 extensions 227 or 230.

Florida DEP Solid Waste Management Facility Operator Courses

Name:	Kokosinski, Caresse E.
Title:	
Company:	Citrus County Solid Waste Management
Address:	PO Box 340 Lecanto, FL 34460
Phone:	Phone: (352) 527-7670

Spotter / Waste Screener

Status: **Current**

- Initial Date: 05/10/2011
- Current period: 05/10/2014 - 05/09/2017 Hours needed before 05/09/2017: 4

Period: **05/10/2011 - 05/09/2014 - (Initial Period)**

Course	Course Name	Provider	Completion Date	Hours
248	Spotter Training for Solid Waste Facilities	University of Florida - TREEO	05/10/2011	Initial
718	4-Hour Refresher Course for Spotters at Landfills, C&D Sites and Transfer Stations	University of Florida - TREEO	02/19/2014	4
			Total:	4
			Hours Needed:	0

Period: **05/10/2014 - 05/09/2017**

Course	Course Name	Provider	Completion Date	Hours
No courses have been taken yet during this time period.				
			Total:	0
			Hours Needed:	4

Status: **Current**

- Continuing Education (CE) Minimum 3 Year Requirements:

16 hours	Class I II III Landfill / Construction and Demolition Debris
8 hours	Transfer Station / Material Recovery Facility
4 hours	Spotter

- **Expired:** If you have exceeded the 3 year training period without achieving the minimum continuing education, you must start over by taking an approved initial course and pass exam. There is not a grace period.
- Initial hours are not counted toward continuing education.
- An Initial course can be taken as a continuing education course only if it was not taken as the operator's or spotter's initial training. No CE credit will be given for the same course taken within the same 3-year period.
- If you have any questions, please contact djenkins@treeo.ufl.edu or mkeilhauer@treeo.ufl.edu or call (352) 392-9570 extensions 227 or 230.

Florida DEP Solid Waste Management Facility Operator Courses

Name:	Lake, Aaron W.
Title:	Landfill Maintenance Coordinator
Company:	Citrus County Solid Waste Management
Address:	PO Box 340 Lecanto, FL 34460
Phone:	Phone: (352) 527-7670

Class I, III Landfill Operator

Status: **Current**

- Initial Date: 05/11/2007
- Current period: 05/11/2013 - 05/10/2016 Hours needed before 05/10/2016: 14

Period: **05/11/2007 - 05/10/2010 - (Initial Period)**

Course	Course Name	Provider	Completion Date	Hours
442	Initial Training Course for Landfill Operators and C&D Sites - 24 Hour	University of Florida - TREEO	05/11/2007	Initial
424	National Incident Management System [NIMS] and Introduction IS-00700	Emergency Management Institute	11/19/2007	4
281	Health and Safety for Solid Waste Workers-8 Hours	University of Florida - TREEO	12/13/2007	8
522	Spill Prevention Control and Countermeasure (SPCC) Training and Development Course	University of Florida - TREEO	12/04/2008	6
			Total:	18
			Hours Needed:	0

Period: **05/11/2010 - 05/10/2013**

Course	Course Name	Provider	Completion Date	Hours
494	Permit Required Confined Space Awareness	University of Florida - TREEO	03/06/2012	4
730	Heavy Equipment Safety	University of Florida - TREEO	03/06/2012	4
717	4-hour OSHA Hazardous Materials Awareness Level Course		11/14/2012	4
718	4-Hour Refresher Course for Spotters at Landfills, C&D Sites and Transfer Stations	University of Florida - TREEO	04/24/2013	4
			Total:	16
			Hours Needed:	0

Period: **05/11/2013 - 05/10/2016**

Course	Course Name	Provider	Completion Date	Hours
782	Globally Harmonized System [GHS] of Hazard Communication - The New Requirement	University of Florida - TREEO	07/23/2013	2
			Total:	2
			Hours Needed:	14

Status: **Current**

- Continuing Education (CE) Minimum 3 Year Requirements:

16 hours	Class I II III Landfill / Construction and Demolition Debris
8 hours	Transfer Station / Material Recovery Facility
4 hours	Spotter

- **Expired:** If you have exceeded the 3 year training period without achieving the minimum continuing education, you must start over by taking an approved initial course and pass exam. There is not a grace period.

- Initial hours are not counted toward continuing education.
- An Initial course can be taken as a continuing education course only if it was not taken as the operator's or spotter's initial training. No CE credit will be given for the same course taken within the same 3-year period.
- If you have any questions, please contact djenkins@treeo.ufl.edu or mkeilhauer@treeo.ufl.edu or call (352) 392-9570 extensions 227 or 230.

Florida DEP Solid Waste Management Facility Operator Courses

Name: Lake, Aaron W.
Title: Landfill Maintenance Coordinator
Company: Citrus County Solid Waste Management
Address: PO Box 340
Lecanto, FL 34460
Phone: Phone: (352) 527-7670

Spotter / Waste Screener

Status: **Current**

- Initial Date: 08/24/2004
- Current period: 08/24/2013 - 08/23/2016 Hours needed before 08/23/2016: 4

Period: **08/24/2004 - 08/23/2007 - (Initial Period)**

Course	Course Name	Provider	Completion Date	Hours
248	Spotter Training for Solid Waste Facilities	University of Florida - TREEO	08/24/2004	Initial
396	SWANA-FL Chapter Annual Road-e-o Safety Training	Solid Waste Association of North America (SWANA - Florida Chapter)	05/08/2005	2
186	Pedestrian, Vehicles, and Equipment Safety in Landfills	University of Florida - TREEO	03/13/2007	2
442	Initial Training Course for Landfill Operators and C&D Sites - 24 Hour	University of Florida - TREEO	05/11/2007	4
			Total:	8
			Hours Needed:	0

Period: **08/24/2007 - 08/23/2010**

Course	Course Name	Provider	Completion Date	Hours
281	Health and Safety for Solid Waste Workers-8 Hours	University of Florida - TREEO	12/13/2007	4
			Total:	4
			Hours Needed:	0

Period: **08/24/2010 - 08/23/2013**

Course	Course Name	Provider	Completion Date	Hours
730	Heavy Equipment Safety	University of Florida - TREEO	03/06/2012	4
494	Permit Required Confined Space Awareness	University of Florida - TREEO	03/06/2012	4
717	4-hour OSHA Hazardous Materials Awareness Level Course		11/14/2012	4
718	4-Hour Refresher Course for Spotters at Landfills, C&D Sites and Transfer Stations	University of Florida - TREEO	04/24/2013	4
782	Globally Harmonized System [GHS] of Hazard Communication - The New Requirement	University of Florida - TREEO	07/23/2013	2
			Total:	18
			Hours Needed:	0

Period: **08/24/2013 - 08/23/2016**

Course	Course Name	Provider	Completion Date	Hours
No courses have been taken yet during this time period.				
			Total:	0
			Hours Needed:	4

Status: **Current**

- Continuing Education (CE) Minimum 3 Year Requirements:

16 hours	Class I II III Landfill / Construction and Demolition Debris
8 hours	Transfer Station / Material Recovery Facility
4 hours	Spotter

- **Expired:** If you have exceeded the 3 year training period without achieving the minimum continuing education, you must start over by taking an approved initial course and pass exam. There is not a grace period.
- Initial hours are not counted toward continuing education.
- An Initial course can be taken as a continuing education course only if it was not taken as the operator's or spotter's initial training. No CE credit will be given for the same course taken within the same 3-year period.
- If you have any questions, please contact djenkins@treeo.ufl.edu or mkeilhauer@treeo.ufl.edu or call (352) 392-9570 extensions 227 or 230.

Florida DEP Solid Waste Management Facility Operator Courses

Name:	Maves, Neil Austin
Title:	Lead Solid Waste Technician
Company:	Citrus County BOCC-Solid Waste Management
Address:	265 S Leona Ave Lecanto, FL 34461
Phone:	Phone: (352) 212-5325

Class I, III Landfill Operator

Status: **Current**

- Initial Date: 11/20/2014
- Current period: 11/20/2014 - 11/19/2017 - (Initial Period) Hours needed before 11/19/2017: 16

Period: **11/20/2014 - 11/19/2017 - (Initial Period)**

Course	Course Name	Provider	Completion Date	Hours
820	Initial Training for Operators of Landfills and Waste Processing Facilities	University of Florida - TREEO	11/20/2014	Initial
			Total:	0
			Hours Needed:	16

Status: **Current**

- Continuing Education (CE) Minimum 3 Year Requirements:

16 hours	Class I II III Landfill / Construction and Demolition Debris
8 hours	Transfer Station / Material Recovery Facility
4 hours	Spotter

- **Expired:** If you have exceeded the 3 year training period without achieving the minimum continuing education, you must start over by taking an approved initial course and pass exam. There is not a grace period.
- Initial hours are not counted toward continuing education.
- An Initial course can be taken as a continuing education course only if it was not taken as the operator's or spotter's initial training. No CE credit will be given for the same course taken within the same 3-year period.
- If you have any questions, please contact djenkins@treeo.ufl.edu or mkeilhauer@treeo.ufl.edu or call (352) 392-9570 extensions 227 or 230.

Florida DEP Solid Waste Management Facility Operator Courses

Name:	Maves, Neil Austin
Title:	Lead Solid Waste Technician
Company:	Citrus County BOCC-Solid Waste Management
Address:	265 S Leona Ave Lecanto, FL 34461
Phone:	Phone: (352) 212-5325

Spotter / Waste Screener

Status: **Current**

- Initial Date: 11/30/2010
- Current period: 11/30/2013 - 11/29/2016 Hours needed before 11/29/2016: 4

Period: **11/30/2010 - 11/29/2013 - (Initial Period)**

Course	Course Name	Provider	Completion Date	Hours
248	Spotter Training for Solid Waste Facilities	University of Florida - TREEO	11/30/2010	Initial
717	4-hour OSHA Hazardous Materials Awareness Level Course		11/14/2012	4
			Total:	4
			Hours Needed:	0

Period: **11/30/2013 - 11/29/2016**

Course	Course Name	Provider	Completion Date	Hours
No courses have been taken yet during this time period.				
			Total:	0
			Hours Needed:	4

Status: **Current**

- Continuing Education (CE) Minimum 3 Year Requirements:

16 hours	Class I II III Landfill / Construction and Demolition Debris
8 hours	Transfer Station / Material Recovery Facility
4 hours	Spotter

- **Expired:** If you have exceeded the 3 year training period without achieving the minimum continuing education, you must start over by taking an approved initial course and pass exam. There is not a grace period.
- Initial hours are not counted toward continuing education.
- An Initial course can be taken as a continuing education course only if it was not taken as the operator's or spotter's initial training. No CE credit will be given for the same course taken within the same 3-year period.
- If you have any questions, please contact djenkins@treeo.ufl.edu or mkeilhauer@treeo.ufl.edu or call (352) 392-9570 extensions 227 or 230.

Florida DEP Solid Waste Management Facility Operator Courses

Name:	Meeks, David
Title:	
Company:	Citrus County Solid Waste Management
Address:	PO Box 340 Lecanto, FL 34460-0340
Phone:	Phone: (352) 527-7670

Spotter / Waste Screener

Status: **Current**

- Initial Date: 10/30/2013
- Current period: 10/30/2013 - 10/29/2016 - (Initial Period) Hours needed before 10/29/2016: 4

Period: **10/30/2013 - 10/29/2016 - (Initial Period)**

Course	Course Name	Provider	Completion Date	Hours
248	Spotter Training for Solid Waste Facilities	University of Florida - TREEO	10/30/2013	Initial
			Total:	0
			Hours Needed:	4

Status: **Current**

- Continuing Education (CE) Minimum 3 Year Requirements:

16 hours	Class I II III Landfill / Construction and Demolition Debris
8 hours	Transfer Station / Material Recovery Facility
4 hours	Spotter

- **Expired:** If you have exceeded the 3 year training period without achieving the minimum continuing education, you must start over by taking an approved initial course and pass exam. There is not a grace period.
- Initial hours are not counted toward continuing education.
- An Initial course can be taken as a continuing education course only if it was not taken as the operator's or spotter's initial training. No CE credit will be given for the same course taken within the same 3-year period.
- If you have any questions, please contact djenkins@treeo.ufl.edu or mkeilhauer@treeo.ufl.edu or call (352) 392-9570 extensions 227 or 230.

Florida DEP Solid Waste Management Facility Operator Courses

Name:	Morvatz, Mike
Title:	
Company:	Citrus County Solid Waste
Address:	PO Box 340 Lecanto, FL 34461
Phone:	Phone: (352) 527-7670

Spotter / Waste Screener

Status: **Current**

- Initial Date: 02/06/2013
- Current period: 02/06/2013 - 02/05/2016 - (Initial Period) Hours needed before 02/05/2016: 4

Period: **02/06/2013 - 02/05/2016 - (Initial Period)**

Course	Course Name	Provider	Completion Date	Hours
248	Spotter Training for Solid Waste Facilities	University of Florida - TREEO	02/06/2013	Initial
			Total:	0
			Hours Needed:	4

Status: **Current**

- Continuing Education (CE) Minimum 3 Year Requirements:

16 hours	Class I II III Landfill / Construction and Demolition Debris
8 hours	Transfer Station / Material Recovery Facility
4 hours	Spotter

- **Expired:** If you have exceeded the 3 year training period without achieving the minimum continuing education, you must start over by taking an approved initial course and pass exam. There is not a grace period.
- Initial hours are not counted toward continuing education.
- An Initial course can be taken as a continuing education course only if it was not taken as the operator's or spotter's initial training. No CE credit will be given for the same course taken within the same 3-year period.
- If you have any questions, please contact djenkins@treeo.ufl.edu or mkeilhauer@treeo.ufl.edu or call (352) 392-9570 extensions 227 or 230.

Florida DEP Solid Waste Management Facility Operator Courses

Name: Pert, Eric
Title:
Company: Citrus County Solid Waste Management
Address: PO Box 340
Lecanto, FL 34460-0340
Phone: Phone: (352) 527-7670 ext. 4690

Spotter / Waste Screener

Status: **Current**

- Initial Date: 04/27/2012
- Current period: 04/27/2015 - 04/26/2018 Hours needed before 04/26/2018: 4

Period: **04/27/2012 - 04/26/2015 - (Initial Period)**

Course	Course Name	Provider	Completion Date	Hours
248	Spotter Training for Solid Waste Facilities	University of Florida - TREEO	04/27/2012	Initial
717	4-hour OSHA Hazardous Materials Awareness Level Course		11/14/2012	4
718	4-Hour Refresher Course for Spotters at Landfills, C&D Sites and Transfer Stations	University of Florida - TREEO	01/28/2015	4
			Total:	8
			Hours Needed:	0

Period: **04/27/2015 - 04/26/2018**

Course	Course Name	Provider	Completion Date	Hours
No courses have been taken yet during this time period.				
			Total:	0
			Hours Needed:	4

Status: **Current**

- Continuing Education (CE) Minimum 3 Year Requirements:

16 hours	Class I II III Landfill / Construction and Demolition Debris
8 hours	Transfer Station / Material Recovery Facility
4 hours	Spotter

- **Expired:** If you have exceeded the 3 year training period without achieving the minimum continuing education, you must start over by taking an approved initial course and pass exam. There is not a grace period.
- Initial hours are not counted toward continuing education.
- An Initial course can be taken as a continuing education course only if it was not taken as the operator's or spotter's initial training. No CE credit will be given for the same course taken within the same 3-year period.
- If you have any questions, please contact djenkins@treeo.ufl.edu or mkeilhauer@treeo.ufl.edu or call (352) 392-9570 extensions 227 or 230.

Florida DEP Solid Waste Management Facility Operator Courses

Name: Schaeffer, John
Title:
Company: Citrus County Solid Waste
Address: PO Box 340
Lecanto, FL 34460
Phone: Phone: (352) 527-7670

Spotter / Waste Screener

Status: **Current**

- Initial Date: 10/20/2011
- Current period: 10/20/2014 - 10/19/2017 Hours needed before 10/19/2017: 4

Period: **10/20/2011 - 10/19/2014 - (Initial Period)**

Course	Course Name	Provider	Completion Date	Hours
248	Spotter Training for Solid Waste Facilities	University of Florida - TREEO	10/20/2011	Initial
717	4-hour OSHA Hazardous Materials Awareness Level Course		11/14/2012	4
			Total:	4
			Hours Needed:	0

Period: **10/20/2014 - 10/19/2017**

Course	Course Name	Provider	Completion Date	Hours
No courses have been taken yet during this time period.				
			Total:	0
			Hours Needed:	4

Status: **Current**

- Continuing Education (CE) Minimum 3 Year Requirements:

16 hours	Class I II III Landfill / Construction and Demolition Debris
8 hours	Transfer Station / Material Recovery Facility
4 hours	Spotter

- **Expired:** If you have exceeded the 3 year training period without achieving the minimum continuing education, you must start over by taking an approved initial course and pass exam. There is not a grace period.
- Initial hours are not counted toward continuing education.
- An Initial course can be taken as a continuing education course only if it was not taken as the operator's or spotter's initial training. No CE credit will be given for the same course taken within the same 3-year period.
- If you have any questions, please contact djenkins@treeo.ufl.edu or mkeilhauer@treeo.ufl.edu or call (352) 392-9570 extensions 227 or 230.

Florida DEP Solid Waste Management Facility Operator Courses

Name:	Sherlock, Dan S.
Title:	Hazardous Waste Coordinator
Company:	Citrus County Solid Waste
Address:	230 W. Gulf to Lake Hwy. Lecanto, FL 34461
Phone:	Phone: (352) 527-7670 ext. 4682

Class I, III Landfill Operator

Status: **Current**

- Initial Date: 11/18/2011
- Current period: 11/18/2014 - 11/17/2017 Hours needed before 11/17/2017: 8

Period: **11/18/2011 - 11/17/2014 - (Initial Period)**

Course	Course Name	Provider	Completion Date	Hours
442	Initial Training Course for Landfill Operators and C&D Sites - 24 Hour	University of Florida - TREEO	11/18/2011	Initial
730	Heavy Equipment Safety	University of Florida - TREEO	03/06/2012	4
494	Permit Required Confined Space Awareness	University of Florida - TREEO	03/06/2012	4
248	Spotter Training for Solid Waste Facilities	University of Florida - TREEO	04/27/2012	8
708	Train the Trainer: How to Design & Deliver Effective Training	University of Florida - TREEO	06/28/2012	7
717	4-hour OSHA Hazardous Materials Awareness Level Course		11/14/2012	4
782	Globally Harmonized System [GHS] of Hazard Communication - The New Requirement	University of Florida - TREEO	07/23/2013	2
			Total:	29
			Hours Needed:	0

Period: **11/18/2014 - 11/17/2017**

Course	Course Name	Provider	Completion Date	Hours
720	Understanding Hazardous Waste Regulations in Solid Waste Operations and Recycling	University of Florida - TREEO	01/14/2015	8
			Total:	8
			Hours Needed:	8

Status: **Current**

- Continuing Education (CE) Minimum 3 Year Requirements:

16 hours	Class I II III Landfill / Construction and Demolition Debris
8 hours	Transfer Station / Material Recovery Facility
4 hours	Spotter

- **Expired:** If you have exceeded the 3 year training period without achieving the minimum continuing education, you must start over by taking an approved initial course and pass exam. There is not a grace period.
- Initial hours are not counted toward continuing education.
- An Initial course can be taken as a continuing education course only if it was not taken as the operator's or spotter's initial training. No CE credit will be given for the same course taken within the same 3-year period.
- If you have any questions, please contact djenkins@treeo.ufl.edu or mkeilhauer@treeo.ufl.edu or call (352) 392-9570 extensions 227 or 230.

Florida DEP Solid Waste Management Facility Operator Courses

Name: Sherlock, Dan S.
Title: Hazardous Waste Coordinator
Company: Citrus County Solid Waste
Address: 230 W. Gulf to Lake Hwy.
Lecanto, FL 34461
Phone: Phone: (352) 527-7670 ext. 4682

Spotter / Waste Screener

Status: **Current**

- Initial Date: 02/07/2008
- Current period: 02/07/2014 - 02/06/2017 Hours needed before 02/06/2017: 0

Period: **02/07/2008 - 02/06/2011 - (Initial Period)**

Course	Course Name	Provider	Completion Date	Hours
248	Spotter Training for Solid Waste Facilities	University of Florida - TREEO	02/07/2008	Initial
286	Hazardous Materials Chemistry for the Non-Chemist	University of Florida - TREEO	03/12/2009	4
285	Chemical Compatibility and Storage	University of Florida - TREEO	03/13/2009	4
63	Hazardous Waste Regulations for Generators	University of Florida - TREEO	10/06/2009	4
623	8 Hour HazWoper Refresher Training	Trident Consulting Group	03/31/2010	4
609	NAHMMA 2010 Annual Conference	FDEP/NAHMMA - Florida Chapter	07/29/2010	4
			Total:	20
			Hours Needed:	0

Period: **02/07/2011 - 02/06/2014**

Course	Course Name	Provider	Completion Date	Hours
653	NAHMMA 2011 Florida Chapter Annual Conference	University of Florida - TREEO	05/05/2011	4
442	Initial Training Course for Landfill Operators and C&D Sites - 24 Hour	University of Florida - TREEO	11/18/2011	4
730	Heavy Equipment Safety	University of Florida - TREEO	03/06/2012	4
494	Permit Required Confined Space Awareness	University of Florida - TREEO	03/06/2012	4
248	Spotter Training for Solid Waste Facilities	University of Florida - TREEO	04/27/2012	8
717	4-hour OSHA Hazardous Materials Awareness Level Course		11/14/2012	4
782	Globally Harmonized System [GHS] of Hazard Communication - The New Requirement	University of Florida - TREEO	07/23/2013	2
			Total:	30
			Hours Needed:	0

Period: **02/07/2014 - 02/06/2017**

Course	Course Name	Provider	Completion Date	Hours
720	Understanding Hazardous Waste Regulations in Solid Waste Operations and Recycling	University of Florida - TREEO	01/14/2015	4
			Total:	4
			Hours Needed:	0

Status: **Current**

- Continuing Education (CE) Minimum 3 Year Requirements:

16 hours Class I II III Landfill / Construction and Demolition Debris

8 hours	Transfer Station / Material Recovery Facility
4 hours	Spotter

- **Expired:** If you have exceeded the 3 year training period without achieving the minimum continuing education, you must start over by taking an approved initial course and pass exam. There is not a grace period.
- Initial hours are not counted toward continuing education.
- An Initial course can be taken as a continuing education course only if it was not taken as the operator's or spotter's initial training. No CE credit will be given for the same course taken within the same 3-year period.
- If you have any questions, please contact djenkins@treeo.ufl.edu or mkeilhauer@treeo.ufl.edu or call (352) 392-9570 extensions 227 or 230.

Florida DEP Solid Waste Management Facility Operator Courses

Name:	Walker, Sammie
Title:	Operations Crew Leader
Company:	Citrus County Solid Waste Management
Address:	PO Box 340 Lecanto, FL 34460-0340
Phone:	Phone: (352) 527-7670 ext. 4690

Class I, III Landfill Operator

Status: **Current**

- Initial Date: 11/18/2011
- Current period: 11/18/2014 - 11/17/2017 Hours needed before 11/17/2017: 0

Period: **11/18/2011 - 11/17/2014 - (Initial Period)**

Course	Course Name	Provider	Completion Date	Hours
442	Initial Training Course for Landfill Operators and C&D Sites - 24 Hour	University of Florida - TREEO	11/18/2011	Initial
730	Heavy Equipment Safety	University of Florida - TREEO	03/06/2012	4
494	Permit Required Confined Space Awareness	University of Florida - TREEO	03/06/2012	4
248	Spotter Training for Solid Waste Facilities	University of Florida - TREEO	04/27/2012	8
782	Globally Harmonized System [GHS] of Hazard Communication - The New Requirement	University of Florida - TREEO	07/23/2013	2
765	SWANA-FL Road-E-O (Heavy Equipment Safety Training)	Solid Waste Association of North America (SWANA - Florida Chapter)	05/31/2014	4
			Total:	22
			Hours Needed:	0

Period: **11/18/2014 - 11/17/2017**

Course	Course Name	Provider	Completion Date	Hours
765	SWANA-FL Road-E-O (Heavy Equipment Safety Training)	Solid Waste Association of North America (SWANA - Florida Chapter)	04/11/2015	4
443	Initial Training Course for Transfer Station Operators and Materials Recovery Facilities - 16 Hour	University of Florida - TREEO	04/15/2015	12
			Total:	16
			Hours Needed:	0

Status: **Current**

- Continuing Education (CE) Minimum 3 Year Requirements:

16 hours	Class I II III Landfill / Construction and Demolition Debris
8 hours	Transfer Station / Material Recovery Facility
4 hours	Spotter

- **Expired:** If you have exceeded the 3 year training period without achieving the minimum continuing education, you must start over by taking an approved initial course and pass exam. There is not a grace period.
- Initial hours are not counted toward continuing education.
- An Initial course can be taken as a continuing education course only if it was not taken as the operator's or spotter's initial training. No CE credit will be given for the same course taken within the same 3-year period.
- If you have any questions, please contact djenkins@treeo.ufl.edu or mkeilhauer@treeo.ufl.edu or call (352) 392-9570 extensions 227 or 230.

Florida DEP Solid Waste Management Facility Operator Courses

Name:	Walker, Sammie
Title:	Operations Crew Leader
Company:	Citrus County Solid Waste Management
Address:	PO Box 340 Lecanto, FL 34460-0340
Phone:	Phone: (352) 527-7670 ext. 4690

Spotter / Waste Screener

Status: **Current**

- Initial Date: 04/27/2012
- Current period: 04/27/2015 - 04/26/2018 Hours needed before 04/26/2018: 4

Period: **04/27/2012 - 04/26/2015 - (Initial Period)**

Course	Course Name	Provider	Completion Date	Hours
248	Spotter Training for Solid Waste Facilities	University of Florida - TREEO	04/27/2012	Initial
782	Globally Harmonized System [GHS] of Hazard Communication - The New Requirement	University of Florida - TREEO	07/23/2013	2
765	SWANA-FL Road-E-O (Heavy Equipment Safety Training)	Solid Waste Association of North America (SWANA - Florida Chapter)	05/31/2014	2
765	SWANA-FL Road-E-O (Heavy Equipment Safety Training)	Solid Waste Association of North America (SWANA - Florida Chapter)	04/11/2015	2
443	Initial Training Course for Transfer Station Operators and Materials Recovery Facilities - 16 Hour	University of Florida - TREEO	04/15/2015	4
			Total:	10
			Hours Needed:	0

Period: **04/27/2015 - 04/26/2018**

Course	Course Name	Provider	Completion Date	Hours
No courses have been taken yet during this time period.				
			Total:	0
			Hours Needed:	4

Status: **Current**

- Continuing Education (CE) Minimum 3 Year Requirements:

16 hours	Class I II III Landfill / Construction and Demolition Debris
8 hours	Transfer Station / Material Recovery Facility
4 hours	Spotter

- **Expired:** If you have exceeded the 3 year training period without achieving the minimum continuing education, you must start over by taking an approved initial course and pass exam. There is not a grace period.
- Initial hours are not counted toward continuing education.
- An Initial course can be taken as a continuing education course only if it was not taken as the operator's or spotter's initial training. No CE credit will be given for the same course taken within the same 3-year period.
- If you have any questions, please contact djenkins@treeo.ufl.edu or mkeilhauer@treeo.ufl.edu or call (352) 392-9570 extensions 227 or 230.

APPENDIX F

LEACHATE COLLECTION SYSTEM INSPECTION REPORT

FLORIDA JETCLEAN

HIGH PRESSURE WATER JETTING
PIPELINE VIDEO INSPECTION (EX)
VACUUM TRUCK SERVICES
LASER PROFILING / NO DIG REPAIRS

7538 DUNBRIDGE DR., ODESSA, FL 33556
TEL: 800-226-8013 FAX: 813-926-4616
WEB: WWW.FLORIDAJETCLEAN.COM
EMAIL: FLORIDAJETCLEAN@YAHOO.COM

SCS Engineers
Citrus County Landfill
2015 Leachate Pipe Maintenance

Work Performed
April 2015 - July 2015

Conducted By:
Florida Jetclean
800-226-8013

FLORIDA JETCLEAN

HIGH PRESSURE WATER JETTING
PIPELINE VIDEO INSPECTION (EX)
VACUUM TRUCK SERVICES
LASER PROFILING / NO DIG REPAIRS

7538 DUNBRIDGE DR., ODESSA, FL 33556
TEL: 800-226-8013 FAX: 813-926-4616
WEB: WWW.FLORIDAJETCLEAN.COM
EMAIL: FLORIDAJETCLEAN@YAHOO.COM

REPORT

DATE : 7/16/2015
TO : Ed Hilton – SCS Engineers
FROM : Ralph Calistri (floridajetclean@yahoo.com)
SUBJECT : Citrus County Landfill - Existing Leachate Pipes - 2015 Maintenance

Florida Jetclean completed the high-pressure water-jetting and explosion-proof video-inspection of the existing leachate collection piping at the Citrus County Landfill on 7/8/2015. Included with this report are the applicable Jetting logs, Pipe Graphic Reports, and the inspection footage in DVD format.

High-pressure Water-jetting:
As the below jetting log indicates, all existing leachate piping was jetcleaned as far as possible via high-pressure water-jetting nozzle and was blockage free upon completion.

JETTING LOCATION	ACHIEVED DISTANCE (ft)	COMMENTS
P3 - West to East	500.0'	Entire Pipe Jetcleaned Through Overlap
P3 - East to West	1,000.0'	Entire Pipe Jetcleaned Through Overlap
P2 - West to East	500.0'	Entire Pipe Jetcleaned Through Overlap
P2 - East to West	1,000.0'	Entire Pipe Jetcleaned Through Overlap
P1A - West to East	132.0'	Entire Pipe Jetcleaned Through Overlap
P1A - East to West	1,000.0'	Entire Pipe Jetcleaned Through Overlap
10 - West to East	1,300.0'	Jet Stops
11 - West to East	210.0'	Jet Stops
12A - West to East	210.0'	Jet Stops
12B to 15E	1,300.0'	Entire Pipe Jetcleaned Through Overlap
15E to 12B	1,000.0'	Entire Pipe Jetcleaned Through Overlap
13 - West to East	170.0'	Jet Stops
14 - West to East	180.0'	Jet Stops

Explosion-proof Video-inspection:
After jetcleaning was completed the above piping was video-inspected as far as possible using explosion-proof video-inspection equipment (see included Pipe Graphic Reports and DVD's). A summary of the video-inspections are provided below for quick reference. The Pipe Graphic Reports and DVD's should be referenced for complete details.

VIDEO LOCATION	ACHIEVED DISTANCE (ft)	COMMENTS
Phase 3 - East to West	988.4'	Phase 3 Sump Reached

		No Defects Noted
Phase 1A - West to East	89.9'	Impassable Partially Crushed / Oval Pipe
Phase 2 - West to East	455.9'	Camera Can Not Be Pushed Further Dislodged Bead / Ring at 121.7'
Phase 2 - East to West	454.9'	Camera Can Not Be Pushed Further No Defects Noted
Phase 1A - East to West	380.7'	Camera Can Not Be Pushed Further No Defects Noted

All areas of the existing piping viewed with the inspection-camera were in good condition, with no defects noted or visible. All areas of the pipes accessed with the jet nozzle were clean and blockage free as of the completion of our mobilization.

Please call us with questions or concerns.

Regards,

Ralph Calistri - Florida Jetclean - 800-226-8013

Pipe Graphic Report of PLR P3 E LATERAL A **for** CITRUS COUNTY SOLID WASTE

Work Order		**Contract**		**Video** 1	**Setup** 1
Facility		**Operator** BMN		**Van Ref** 4	**Surveyed On** 07/07/2015
Street Name	PHASE 3 LATERAL		**City**	EAST SIDE LAT 3	
Location type	Berm				
Surface					
Survey purpose	Other (state in comments)		**Weather**	Dry	
Pipe Use	Other (state in comments)	**Schedule length**	Ft	**From** P3 E LATERAL	**Depth** Ft
Shape	Circular	**Size** 8 **by**	ins	**To** P3 W LATERAL	**Depth** Ft
Material	Other (state in comments)	**Joint spacing**	Ft	**Direction** Downstream	
Lining		**Year laid**		**Pre-clean** Y	**Last cleaned** 7/7/2015
General note	HDPE LEACHATE COLLECTION			Structural Service Constructional	
Location note				Miscellaneous Hydralic	

0.0 Ft
Start of Survey
Manhole/Node [P3 E LATERAL]
Water level 0

-0.3 Ft

0.0 Ft
Start of Survey
Manhole/Node [P3 E LATERAL]
Water level 0

988.4 Ft
Manhole/Node [P3 W LATERAL]
General observation [SUMP]

PIPE LOGIX INC

FLORIDA JETCLEAN
Phone: 800-226-8013

CCTV pictures of P3 E LATERAL A **for** CITRUS COUNTY SOLID WASTE

Work Order	Video 1	Surveyed On 07/07/2015	Direction Downstream	Setup 1
Street Name PHASE 3 LATERAL		City Name EAST SIDE LAT 3	Weather Dry	
Location Berm		From Manhole P3 E LATERAL	To Manhole P3 W LATERAL	

Date: 07/07/2015
Distance: -0.3 Ft
Obs: Finish of Surveys

Comments:

Date: 07/07/2015
Distance: 988.4 Ft
Obs: Manhole/Node

Comments:
P3 W LATERAL

Date: 07/07/2015
Distance: 988.4 Ft
Obs: General observation

Comments:
SUMP

Pipe Graphic Report of PLR CO E C **for** CITRUS COUNTY SOLID WASTE

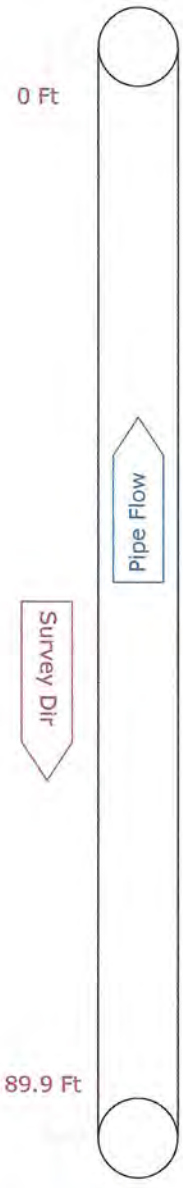
Work Order		**Contract**		**Video** 1	**Setup** 3
Facility		**Operator**		**Van Ref**	**Surveyed On** 04/28/2015
Street Name	CITRUS COUNTY PHASE 1A	**City**	CITRUS COUNTY LF		
Location type	Berm				
Surface					
Survey purpose	Other (state in comments)			**Weather**	Light rainfall

Pipe Use	Other (state in comments)	**Schedule length**	Ft	**From** CO W	**Depth**	Ft
Shape	Circular	**Size** 8 **by**	ins	**To** CO E	**Depth**	Ft
Material	Other (state in comments)	**Joint spacing**	Ft	**Direction** Upstream		
Lining		**Year laid**		**Pre-clean** Y	**Last cleaned** 4/27/2015	

General note JETTING=132 POSSIBLE CRUSHED PIPE

Location note VIDEO IN REVERSE VIDEO SHOWS PHASE 1

Structural Service Constructional
Miscellaneous Hydralic



0.0 Ft Start of Survey
Manhole/Node [CO W]
Water level 0

79.0 Ft General observation [EGG SHAPE JOINT]

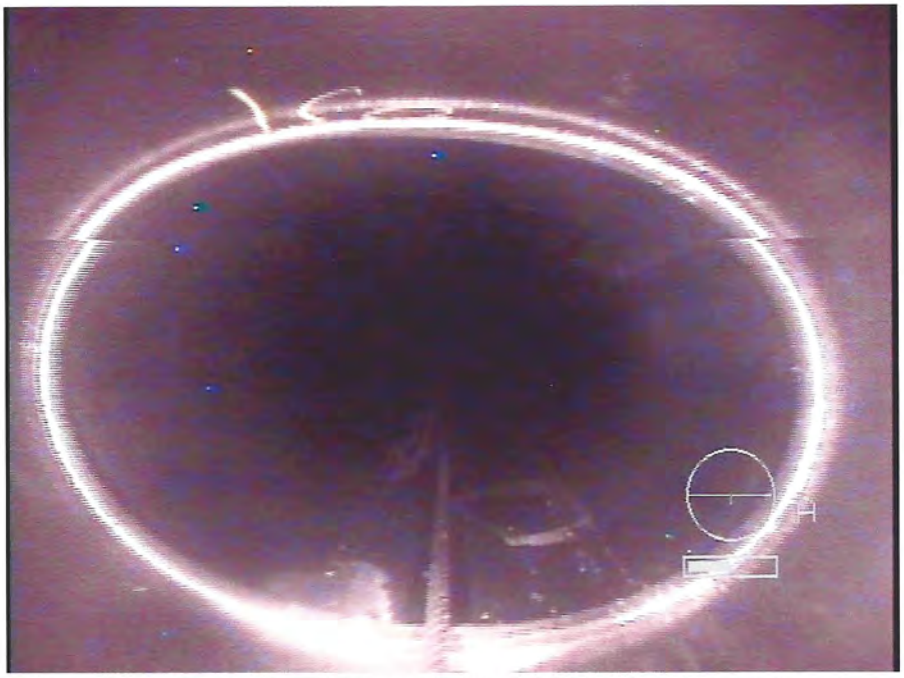
89.9 Ft Survey abandoned [PIPE SIZE REDUCES DUE TO CRUSHED PIPE]

PIPELOGIX INC

FLORIDA JETCLEAN
Phone: 800-226-8013

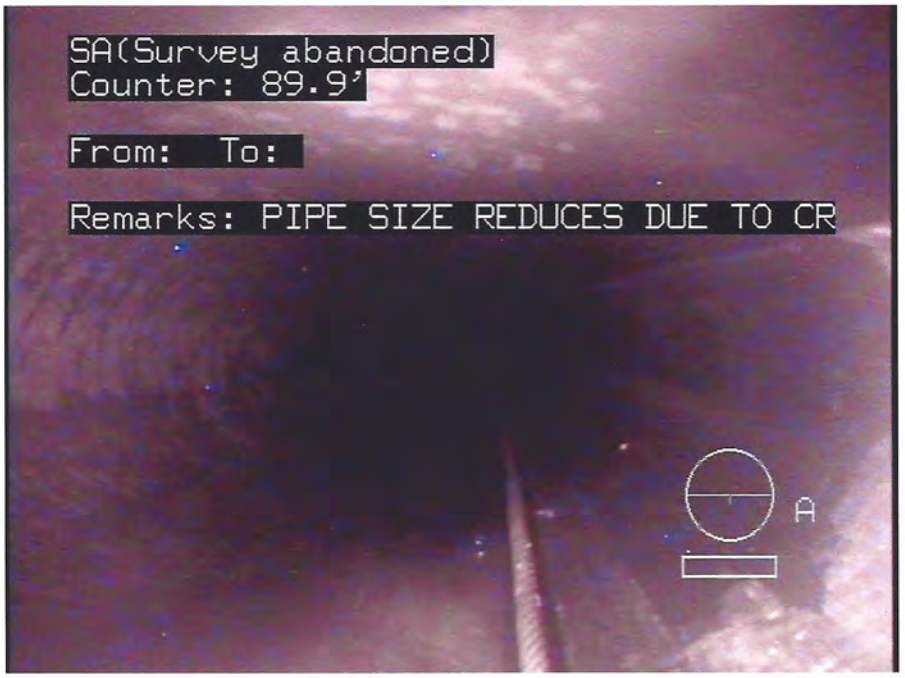
CCTV pictures of CO E C **for** CITRUS COUNTY SOLID WASTE

Work Order		**Surveyed On** 04/28/2015	**Setup** 3
Street Name	CITRUS COUNTY PHASE 1		**Video** 1
City Name	CITRUS COUNTY LF	**Weather** Light rainfall	
Location	Berm		
From Manhole	CO W	**To Manhole** CO E	**Direction** Upstream



Date: 04/28/2015 **Distance:** 79.0 Ft **Obs:** General observation

Comments: EGG SHAPE JOINT



Date: 04/28/2015 **Distance:** 89.9 Ft **Obs:** Survey abandoned

Comments: PIPE SIZE REDUCES DUE TO CRUSHED PIPE

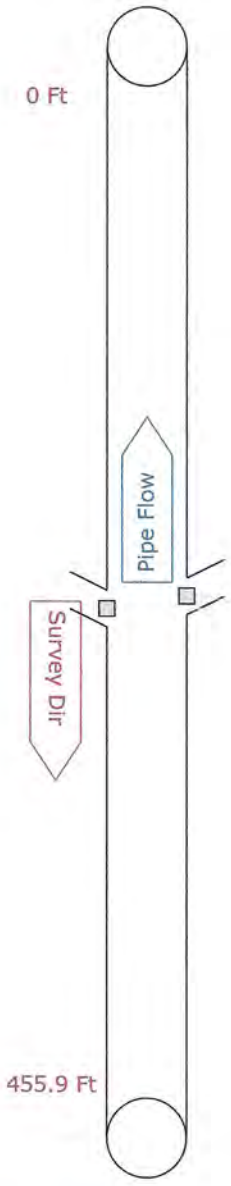
Pipe Graphic Report of PLR CO E D **for** CITRUS COUNTY SOLID WASTE

Work Order		**Contract**		**Video** 1	**Setup** 4
Facility		**Operator**		**Van Ref**	**Surveyed On** 04/28/2015
Street Name	CITRUS COUNTY PHASE 2	**City**	CITRUS COUNTY LF		
Location type	Berm				
Surface					
Survey purpose	Other (state in comments)			**Weather**	Light rainfall

Pipe Use	Other (state in comments)	**Schedule length**	Ft	**From** CO W	**Depth**	Ft
Shape	Circular	**Size** 8 **by**	ins	**To** CO E	**Depth**	Ft
Material	Other (state in comments)	**Joint spacing**	Ft	**Direction** Upstream		
Lining		**Year laid**		**Pre-clean** Y **Last cleaned**	4/27/2015	

General note JETTING=500 OVERLAP
Location note

Structural Service Constructional
Miscellaneous Hydralic



0.0 Ft	Start of Survey Manhole/Node [CO W] Water level 0
121.7 Ft	General observation [?]
229.7 Ft	Lateral or connection exists OK 09 o'clock
235.0 Ft	Lateral or connection exists OK 03 o'clock
455.9 Ft	Survey abandoned [CABLE RESISTANCE]

PIPE INC

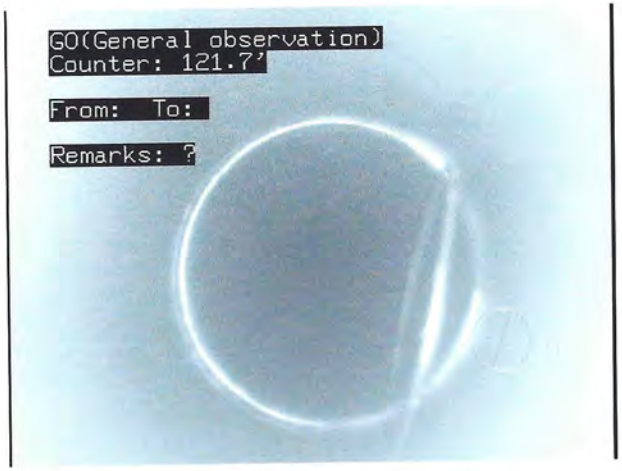
FLORIDA JETCLEAN
Phone: 800-226-8013

CCTV pictures of CO E D **for** CITRUS COUNTY SOLID WASTE

Work Order	Video 1	Surveyed On 04/28/2015	Direction Upstream	Setup 4
Street Name CITRUS COUNTY PHASE 2		City Name CITRUS COUNTY LF	Weather Light rainfall	
Location Berm		From Manhole CO W	To Manhole CO E	

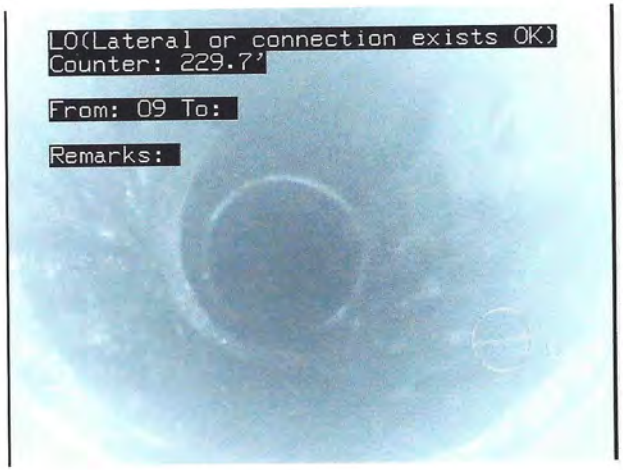
Date: 04/28/2015
Distance: 121.7 Ft
Obs: General observation

Comments:
?



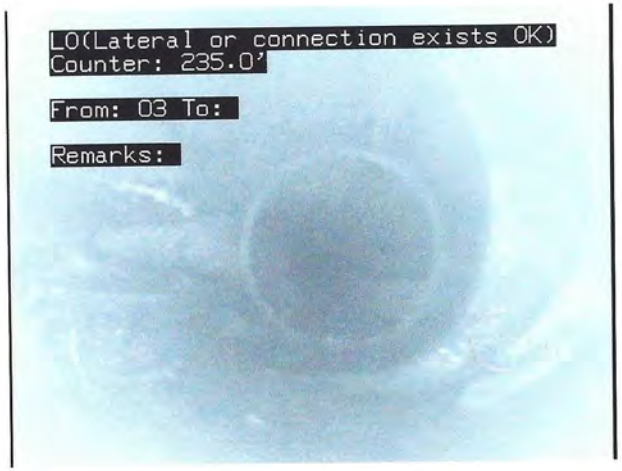
Date: 04/28/2015
Distance: 229.7 Ft
Obs: Lateral or connection exists OK

Comments:



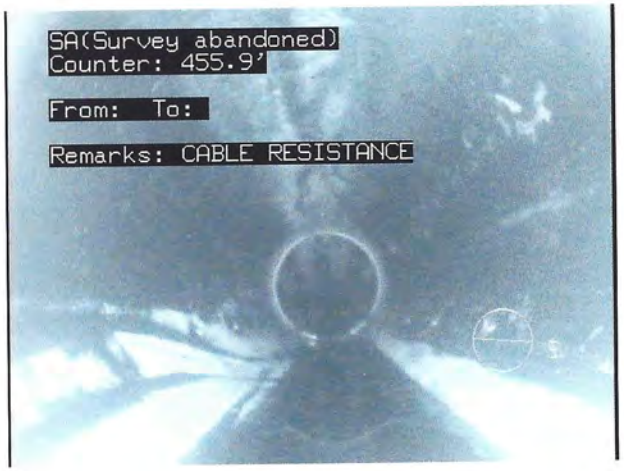
Date: 04/28/2015
Distance: 235.0 Ft
Obs: Lateral or connection exists OK

Comments:



Date: 04/28/2015
Distance: 455.9 Ft
Obs: Survey abandoned

Comments:
CABLE RESISTANCE

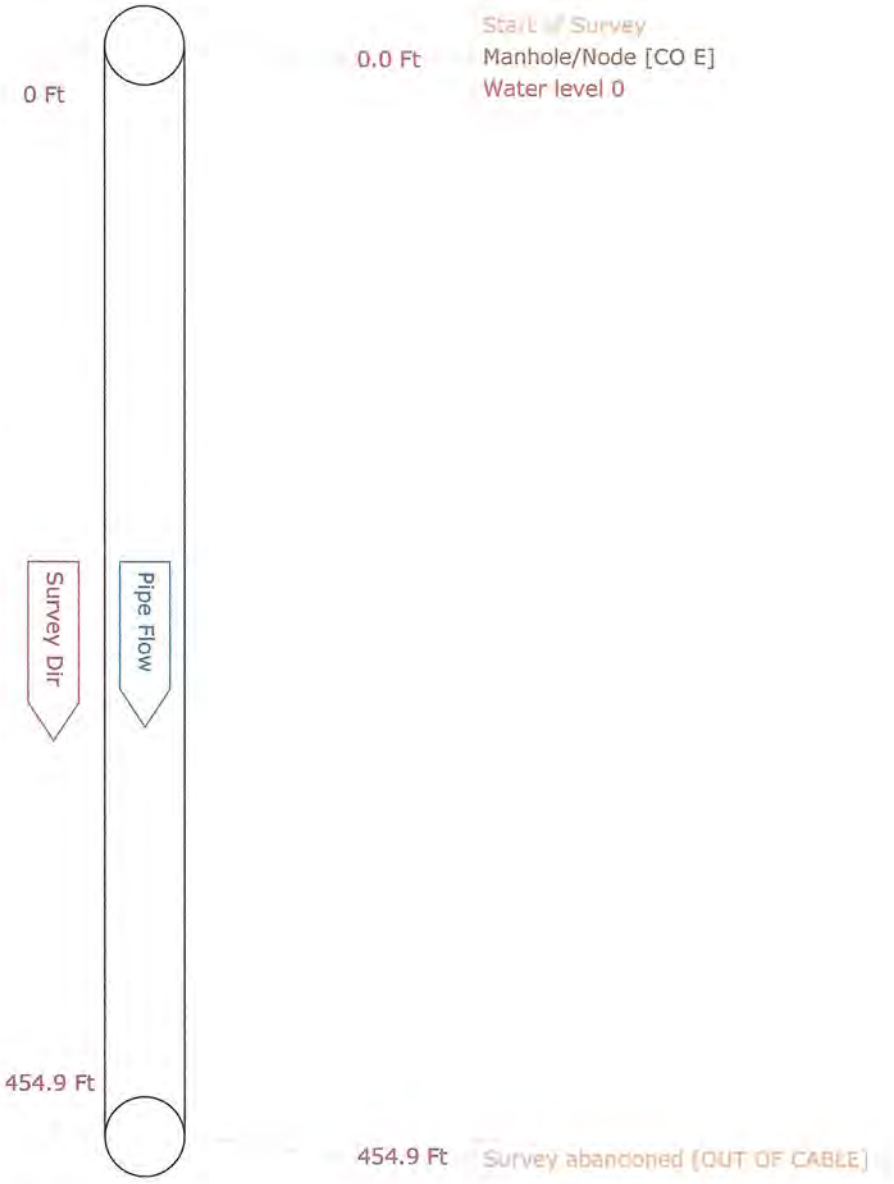


Pipe Graphic Report of PLR CO E G **for** CITRUS COUNTY SOLID WASTE

Work Order		**Contract**		**Video** 1	**Setup** 8
Facility		**Operator**		**Van Ref**	**Surveyed On** 04/28/2015
Street Name	CITRUS COUNTY PHASE 2	**City**	CITRUS COUNTY LF		
Location type	Berm				
Surface					
Survey purpose	Other (state in comments)			**Weather**	Light rainfall

Pipe Use	Other (state in comments)	**Schedule length**	Ft	**From**	CO E	**Depth** Ft
Shape	Circular	**Size** 8 **by**	ins	**To**	CO W	**Depth** Ft
Material	Other (state in comments)	**Joint spacing**	Ft	**Direction**	Downstream	
Lining		**Year laid**		**Pre-clean**	Y **Last cleaned**	4/27/2015

General note	JETTING=1000	Structural	Service	Constructional
Location note		Miscellaneous	Hydralic	

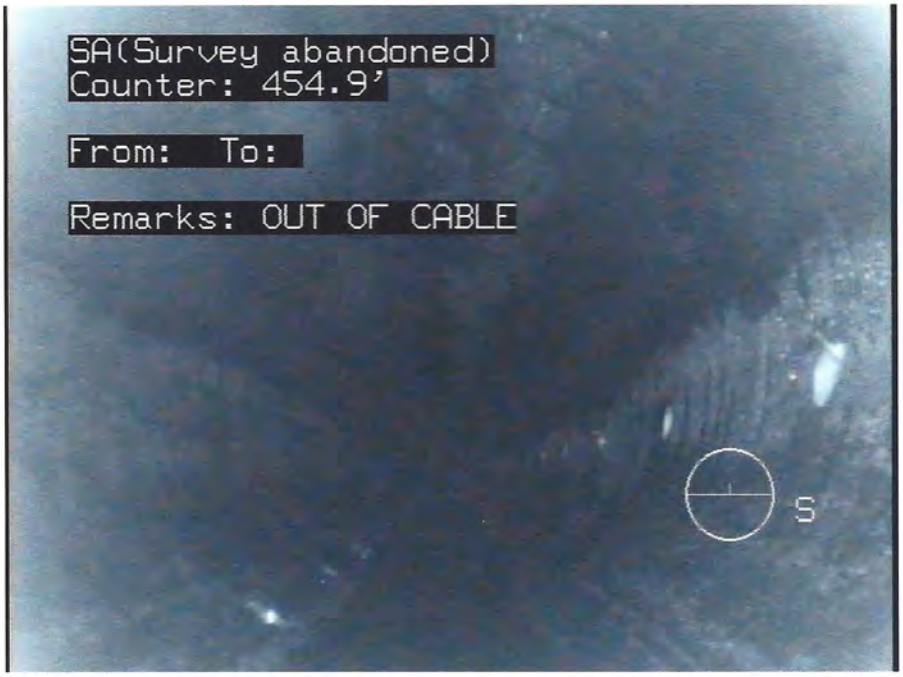


PIPE DOCTOR INC

FLORIDA JETCLEAN
Phone: 800-226-8013

CCTV pictures of CO E G **for** CITRUS COUNTY SOLID WASTE

Work Order		**Surveyed On** 04/28/2015	**Setup** 8
Street Name	CITRUS COUNTY PHASE 2		**Video** 1
City Name	CITRUS COUNTY LF	**Weather** Light rainfall	
Location	Berm		
From Manhole	CO E	**To Manhole** CO W	**Direction** Downstream



Date: 04/28/2015 **Distance:** 454.9 Ft **Obs:** Survey abandoned

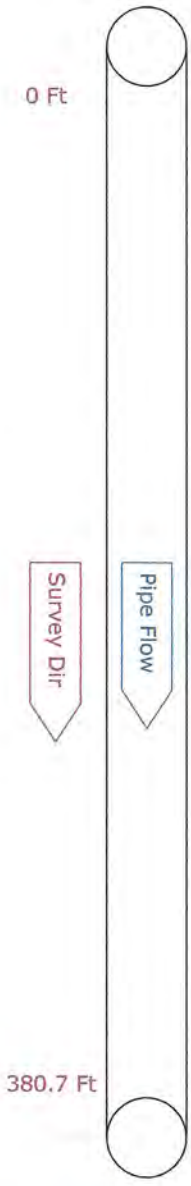
Comments: OUT OF CABLE

Pipe Graphic Report of PLR CO E H **for** CITRUS COUNTY SOLID WASTE

Work Order		**Contract**		**Video** 1	**Setup** 9
Facility		**Operator**		**Van Ref**	**Surveyed On** 04/28/2015
Street Name	CITRUS COUNTY PHASE 1A	**City**	CITRUS COUNTY LF		
Location type	Berm				
Surface					
Survey purpose	Other (state in comments)			**Weather**	Light rainfall

Pipe Use	Other (state in comments)	**Schedule length**	Ft	**From** CO E	**Depth**	Ft
Shape	Circular	**Size** 8 **by**	ins	**To** CO W	**Depth**	Ft
Material	Other (state in comments)	**Joint spacing**	Ft	**Direction** Downstream		
Lining		**Year laid**		**Pre-clean** Y	**Last cleaned** 4/27/2015	

General note	JETTING=1000	Structural	Service Constructional
Location note	VIDEO SHOWS PHASE 1	Miscellaneous	Hydralic



0.0 Ft	Start of Survey Manhole/Node [CO E] Water level 0
192.0 Ft	Camera Submerged Begin
380.7 Ft	Survey abandoned [CABLE RESISTANCE] Survey abandoned [CABLE RESISTANCE]

PIPELOGIX INC

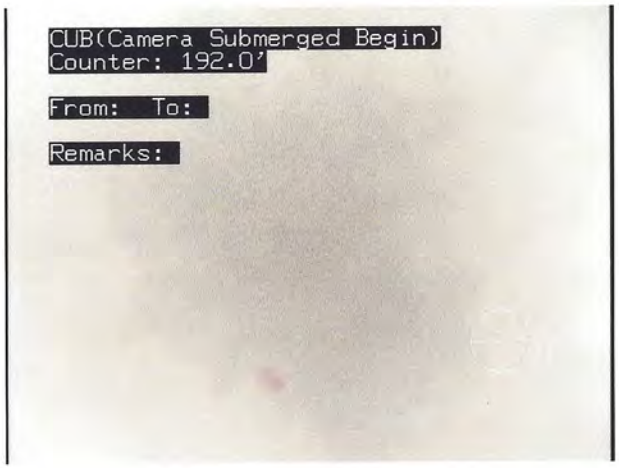
FLORIDA JETCLEAN
Phone: 800-226-8013

CCTV pictures of CO E H **for** CITRUS COUNTY SOLID WASTE

Work Order	Video 1	Surveyed On 04/28/2015	Direction Downstream	Setup 9
Street Name CITRUS COUNTY PHASE 1		City Name CITRUS COUNTY LF	Weather Light rainfall	
Location Berm		From Manhole CO E	To Manhole CO W	

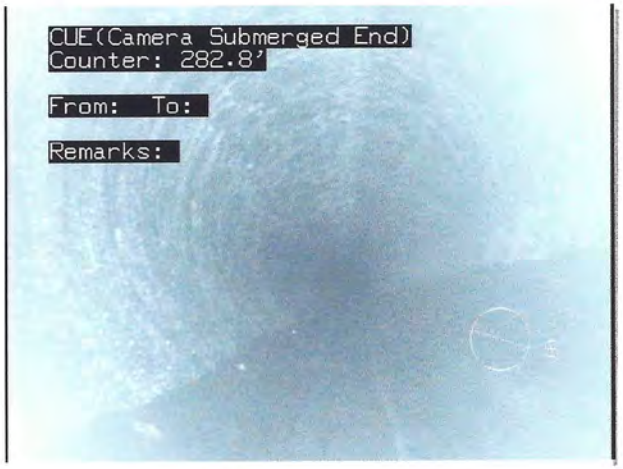
Date: 04/28/2015
Distance: 192.0 Ft
Obs: Camera Submerged Begin

Comments:



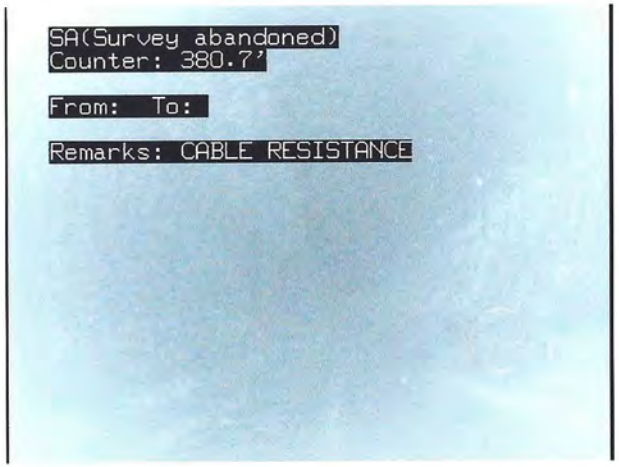
Date: 04/28/2015
Distance: 380.7 Ft
Obs: Survey abandoned

Comments:
CABLE RESISTANCE



Date: 04/28/2015
Distance: 380.7 Ft
Obs: Survey abandoned

Comments:
CABLE RESISTANCE



APPENDIX G

LFG MONITORING FORM

APPENDIX F
LANDFILL GAS MONITORING FORM
CENTRAL LANDFILL, CITRUS COUNTY

Project Name	Citrus County Central Landfill	Date	
Project No		Weather	
Personnel		Comments	
Method of Calibration			

Probe ID No.	CH_4 (%)	CO_2 (%)	O_2 (%)	Balance (%)	Pressure (in-w.c.)	Comments
GP-1						
GP-2						
GP-3						
GP-4						
GP-5						
GP-6						
GP-7						
GP-8						
GP-9						
GP-10						
GP-11						
GP-12						
GP-13						
GP-14						
GP-15						
GP-16						
GP-17						
GP-18						
GP-19						

On-Site Structures	CH_4 (%)	% LEL[1]	Comments
Scale House			
Admin Building			
Gun Range North			
Gun Range South			
Leachate Treatment Plant			

Notes

1 % Lower Explosive Limit (LEL) of methane (CH_4) is 5%

2 On-site structions can not exceed 25% LEL (25% LEL = 1 25% CH_4) per Rule 62-701 530(1)(a), F A C

3 CH_4 at the landfill property boundary can not exceed the LEL of 5% CH_4 per Rule 62-701 530(1)(b), F A C

APPENDIX H

LEACHATE TREATMENT AGREEMENT

BOARD OF COUNTY COMMISSIONERS
DEPARTMENT OF WATER RESOURCES
DIVISION OF UTILITIES
3600 W Sovereign Path Suit 291
Lecanto, Florida 34461-9014
Telephone: (352) 527-7650 Fax: (352) 527-7644
Citrus Springs/Dunnellon/Inglis/Yankeetown area - Toll Free (352) 489-2120
TTY Telephone: (352) 527-5312
www.bocc.citrus.fl.us

MEMORANDUM

To: Larry Brock, Assistant Public Works Director

Thru: Ken Cheek, Water Resources Director
Jeff Rogers, Public Works Director

From: Gary Loggins, Utilities Operations Division Director

Date: **May 27st, 2015**

Re: **Memorandum of Understanding**

This Memo shall serve as a memorandum of understanding (MOU) between Citrus County Utilities Division (Utilities) and Citrus County Solid Waste Management Division (SWM).

Utilities agrees to secure and treat leachate produced at SWM landfill at a monthly base rate of $752.98 plus $8.40 per thousand gallons of leachate treated, not to exceed 100,000 gallons per day on an annual average basis. Flows may be adjusted accordingly by Utilities during extreme wet weather conditions.

SWM agrees to pay a Wastewater Capacity fee of $56,000.00 for 36.15 Equivalent Residential Units (ERU's) at $1,550.00 per ERU. SWM also agrees to pay the $752.98 base rate (6" meter base charge) plus $8.40 per thousand gallons.

SWM agrees to provide annual influent Toxicity Characteristic Leaching Potential test (TCLP) listed in 40 CFR, Part 261.24, Appendix XI, (at leachate storage tanks).

This MOU shall continue through the duration of SWM, landfill long-term care requirements.

Cc: Randy Oliver, Citrus County Administrator

Supplement to Memorandum of Understanding
between Citrus County Utilities Division
and Citrus County Solid Waste Management Division

Dated May 27, 2015

Leachate Force Main Billing

The Utilities Division will read the leachate force main meter at the landfill on a monthly basis and forward the invoicing through the Clerk's Office Finance / Accounts Payable Section for approval of payment by Solid Waste Management.

Leachate Hauling and Disposal Procedure

In the event Solid Waste Management is required to implement contractor hauling and disposal at one of the County's Wastewater Treatment plants, by the 10th of the following month, the Solid Waste Management will provide a monthly summary report to Utilities Division indicating the disposal amount (gallons per day) for each plant and the treatment fee (per day) at the rate of $8.40 per thousand gallons.

Payment shall be through the Journal Voucher process initiated by the Utilities Division upon receipt of the monthly summary report from Solid Waste Management.

APPENDIX I

GROUNDWATER MONITORING PLAN

CITRUS COUNTY CENTRAL LANDFILL
WATER QUALITY MONITORING PLAN
WACS FACILITY NO. SWD/09/39859

Prepared for:

Citrus County

230 W. Gulf to Lake Highway

Lecanto, Florida 34461

Prepared by:

Jones Edmunds & Associates, Inc.

730 NE Waldo Road

Gainesville, Florida 32641-5699

PE Certificate of Authorization #1841

PG Certificate of Authorization #133

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TROY DAVID HAYS LICENSE No. 2679 STATE OF FLORIDA PROFESSIONAL GEOLOGIST

3/2/16

Troy D. Hays, PG

Florida License No. 2679

WATER QUALITY MONITORING PLAN FOR THE CITRUS COUNTY CENTRAL LANDFILL

This Water Quality Monitoring Plan has been prepared to update the monitoring program for the Citrus Central Landfill as proposed in the Water Quality Monitoring Plan Evaluation Report, Semester 01 2013 – Semester 1 2015 (CDM Smith). This monitoring plan follows the format of Part L—Water Quality Monitoring Requirements—of the State of Florida Application for a Permit to Construct, Operate, Modify, or Close a Solid Waste Management Facility. Proposed modifications to the previous monitoring plan—as outlined in Permit # 21375-018-SO/01—are:

- The Zone of Discharge (ZOD) is proposed to be extended to the property boundary. In accordance with Chapter 62-520.465(1), the ZOD for G-II groundwater at an existing facility can extend to the property boundary.
- Leachate monitoring will no longer be performed in accordance with the revisions to 62-701.510. Additionally, leachate effluent sampling is no longer necessary because the facility began piping leachate to the County owned treatment works in May 2015 and leachate is no longer treated and disposed at the site.
- Intermediate well MW-6 has been sampled semi-annually in accordance with condition E.4.c. of the current permit. MW-6 was monitored to evaluate potential impacts to groundwater quality within the ZOD due to the disposal of treated leachate via the percolation ponds. Since leachate is no longer discharged into the percolation ponds at the site, MW-6 is proposed to be re-designated as a piezometer. Water levels will be collected semiannually in conjunction with the compliance monitoring events.
- Additionally, FDEP stated in the 2015 Permit Renewal Request for Additional Information letter to reconcile the water quality plan with Consent Order #05-1078. This updated water quality plan already incorporates the revisions required by the Consent Order and the monitoring of the contamination in the northwest corner of the property. Specifically, the 2015 Permit Renewal Request for Additional Information letter had two questions about the water quality at the site. Those questions are addressed in attachment 3 to this water quality monitoring plan.

A site map that shows the groundwater monitoring network with the proposed changes is provided as Attachment 1.

1. WATER QUALITY MONITORING PLAN

a. Sign and Seal

The water quality monitoring plan has been signed, dated, and sealed in accordance with Chapter 62-701.510(2)(a), FAC.

b. Sampling and Analysis

All sampling and analysis have been performed in accordance with Chapter 62-160, FAC; 62-701.510(2)(b), FAC; the FDEP Standard Operating Procedures 001/01; and the current Permit No. 21375-018-SO/01.

c. Groundwater Monitoring Requirements

(1) There are no detection wells in the existing monitoring network. Existing compliance wells MW-20 and MW-21 are less than 50 feet from the edge of waste and are proposed to be re-designated as detection wells in accordance with Chapter 62-701.510 (3)(a).

(2) There are nine compliance wells—MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, MW-17, MW-20, MW-21—in the existing monitoring network. Compliance wells MW-20 and MW-21 are proposed to be re-designated as detection wells. No additional compliance wells are proposed.

(3) Two background wells—MW-3 and MW-7—are included in the existing monitoring network. Monitoring results indicate that the groundwater near MW-7 has been affected by landfill gas; however, MW-7 remains suitable as a background well with respect to monitoring for a potential discharge of leachate. No changes are proposed to the background wells.

(4) A site map showing the locations of each groundwater monitoring well in the proposed monitoring network is presented as Attachment 1. Attachment 2 is a table that includes well construction information for all wells—existing and proposed.

One intermediate well—MW-6—is included in the existing monitoring network. MW-6 monitors for groundwater quality impacts due to the disposal of treated leachate via the percolation ponds. Since effluent is no longer discharged into the percolation ponds at the site, MW-6 is proposed to be re-designated as a piezometer.

Two assessment wells—MW-18 and MW-19—are included in the existing monitoring network. The assessment wells are downgradient of MW-10. MW-18 is used as a horizontal assessment well and MW-19 is used as a vertical assessment well.

Table 1.c compares the current monitoring network outlined in Permit # 21375-018-SO/01 and the proposed monitoring network.

(5) Well spacing is less than 500 feet across the downgradient direction of groundwater flow and approximately 1,500 feet apart across the

upgradient direction of groundwater flow in the uppermost aquifer—the Floridan aquifer—within the zone of discharge.

(6) The screened intervals of the monitoring wells were positioned to encounter the water table of the unconfined Floridan aquifer throughout normal seasonal fluctuation.

(7) The wells are constructed to provide representative groundwater samples from the zones monitored. Attachment 2 is a table that includes well construction information for all wells.

(8) Unused wells and piezometers will be abandoned properly, as specified in Rule 40D-3.531, FAC, and the rules of the Southwest Florida Water Management District.

(9) There are no detection sensors at the Citrus Central Landfill.

Table 1.c. Existing and Proposed Monitoring Networks.

Existing Network	Proposed Network
Background wells	
MW-3	MW-3
MW-7	MW-7
Detection wells	
–	MW-20
–	MW-21
Compliance Wells	
MW-10	MW-10
MW-11	MW-11
MW-12	MW-12
MW-13	MW-13
MW-14	MW-14
MW-15	MW-15
MW-17	MW-17
MW-20	–
MW-21	–
Assessment Wells	
MW-18	MW-18
MW-19	MW-19
Intermediate Well	
MW-6	–
Piezometers	
MW-1R	MW-1R
MW-2	MW-2
MW-5	MW-5
–	MW-6
MW-8R	MW-8R
MW-9	MW-9
MW-16	MW-16
MW-AA	MW-AA
MW-B	MW-B
MW-E	MW-E
PZ-1 A	PZ-1 A
PZ-2 A	PZ-2 A

d. Surface Water Monitoring Requirements

Surface water is only required to be sampled if there is a discharge off of the Citrus County Central Landfill Property as required by Specific Condition Part E.8 of the Current Permit. The sample will be collected from the body of water from which the discharge occurred.

e. Sampling Frequency and Requirements

(1) Newly installed wells and replacement wells will be sampled for the parameters listed in Rules 62-701.510(7)(a) and (7)(c), FAC, within 2 weeks of well completion and development.

(2) Routine monitoring well sampling and analysis requirements:

(a) Water samples from all monitoring wells (background, detection, and compliance) will be sampled semiannually for the parameters listed in Rule 62-701.510(7)(a), as tabulated in Table e(2)(a).

Table e(2)(a) Monitoring Well Sampling Parameters	
Field Parameters	Laboratory Parameters
Static Water Levels	Total Ammonia -N
Specific Conductivity	Chlorides
pH	Iron
Dissolved Oxygen	Mercury
Turbidity	Nitrate
Temperature	Sodium
Colors and Sheens (by observation)	Total Dissolved Solids (TDS)
	Those parameters listed in 40 CFR Part 258, Appendix I

(b) Assessment wells—MW-18 and MW-19—will be sampled semiannually for the parameters listed in Table e(2)(b).

Table e(2)(b) Assessment Well Sampling Parameters	
Field Parameters	Laboratory Parameters
Static Water Levels	Benzene
Specific Conductivity	Methylene Chloride
pH	Vinyl Chloride
Dissolved Oxygen	
Turbidity	
Temperature	
Colors and Sheens (by observation)	

(3) Surface water is only required to be sampled if there is a discharge off of the Citrus County Central Landfill Property as required by Specific Condition Part E.8 of the Current Permit. If discharge off of the property occurs, samples will be collected for the parameters listed in Rule 62-701.510(7)(b), as tabulated in Table e(3).

Table e(3). Surface Water Sampling Parameters	
Field Parameters	Laboratory Parameters
Specific Conductivity	Unionized Ammonia
pH	Total Hardness
	Biochemical Oxygen Demand (BOD5)
Dissolved Oxygen	Iron
Turbidity	Mercury
Temperature	Nitrate
Colors and Sheens (by observation)	Total Dissolved Solids (TDS)
	Total Organic Carbon (TOC)
	Fecal Coliform
	Total Phosphorus
	Chlorophyll A
	Total Nitrogen
	Chemical Oxygen Demand (COD)
	Total Suspended Solids (TSS)
	Those parameters listed in 40 CFR Part 258, Appendix I

f. Evaluation Monitoring, Prevention Measures, and Corrective Action

(1) Groundwater Corrective Actions

If at any time analyses from the groundwater detect parameters which are significantly above the background water quality or which are at levels above the Department's water quality standards or criteria specified in Chapter 62-520, FAC at the edge of the Zone of Discharge, the well will be resampled within 30 days after the sampling data are received to confirm the data. If the data are confirmed over the background or groundwater criteria or the well is not resampled, FDEP will be notified in writing within 14 days of this finding. Upon notification by the FDEP, evaluation monitoring will be initiated in accordance with Rule 62-701.510(6) FAC.

(2) Surface Water Corrective Actions

Surface Water is only sampled on a per discharge event. The Department will be notified within 24 hours of discovery of a discharge event.

g. Water Quality Monitoring Report Requirements

Groundwater monitoring reporting is required and has been completed in accordance with Rule 62-701.510(8), FAC.

(1) Groundwater compliance monitoring reports are submitted to FDEP semi-annually in accordance with the current permit (FDEP Permit No.21375-018-SO/01). Additionally, these reports are submitted in accordance with the requirements of Chapter 62-701.510(8) (a), FAC. Compliance monitoring reporting due dates are outlined in Table g.

Table g. FDEP Reporting Deadlines	
Groundwater Sampling	
July-December Semiannual Event	60 days from receipt of results and no later than January 15th
January-June Semiannual Event	60 days from receipt of results and no later than July 15th
Surface Water	
Discharge Event	within 60 days of receipt of results

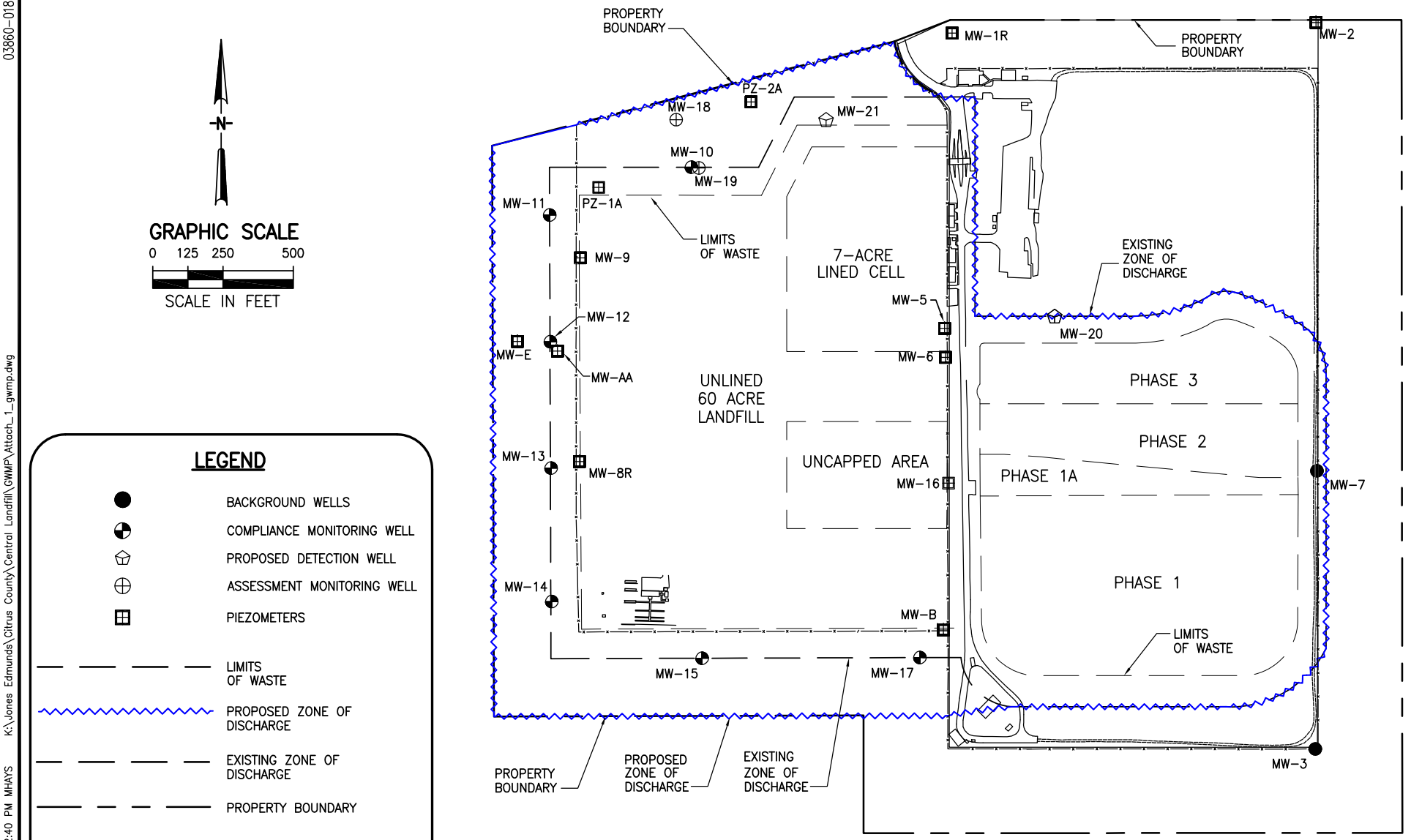
(2) Water quality data will be provided electronically in a format consistent with requirements for importing into FDEP databases and in compliance with the permit.

(3) A technical report signed, sealed, and dated by a P.G. or P.E. will be submitted to the FDEP every 2.5 years in accordance with the requirements of Chapter 62-701.510(8) (b), FAC. The most recent report summarized data from the First Semiannual 2013 through the First Semiannual 2015 sampling events. The report will summarize and interpret the water quality and water level measurements collected during the past 2.5 years. The report will include at least the following:

a) Tabular display of data showing all detected parameters.
b) Graphical display of any leachate key indicator parameters.
c) Hydrographs for all monitoring wells.
d) Trend analysis of any monitoring parameter consistently detected.
e) Comparisons between shallow-, medium-, and deep-zone wells.

f) Comparisons between background water quality and the water quality in detection and compliance wells.
g) Correlations between related parameters such as total dissolved solids and specific conductance.
h) Discussions of erratic and/or poorly correlated data.
i) Interpretation of groundwater contour maps including an evaluation of groundwater flow rates.
j) An evaluation of the adequacy of the water quality monitoring frequency and sampling locations based on site conditions.

ATTACHMENT 1



LEGEND

- BACKGROUND WELLS
- COMPLIANCE MONITORING WELL
- PROPOSED DETECTION WELL
- ASSESSMENT MONITORING WELL
- PIEZOMETERS
- LIMITS OF WASTE
- PROPOSED ZONE OF DISCHARGE
- EXISTING ZONE OF DISCHARGE
- PROPERTY BOUNDARY
- FENCE

NOTE: THIS MAP REFLECTS THE PROPOSED CHANGES TO THE MONITORING NETWORK

ATTACHMENT 1 SITE PLAN
CITRUS COUNTY CENTRAL LANDFILL

JONES EDMUNDS

ATTACHMENT 2

ATTACHMENT 2
CITRUS COUNTY CENTRAL LANDFILL
WELL CONSTRUCTION DETAILS

Well Name	Well Designation	Date Installed	Top of Casing Elevation (Ft. NGVD)	Total Depth (Ft. BLS)	Total Depth (Ft. BTOC)	Screen Details					Filter Pack (Silica Sand)	Well Location	
						Length (Ft.)	Depth (Ft. BLS)		Elevation (Ft. NGVD)			Easting (Ft.)	Northing (Ft.)
							Top	Bottom	Top	Bottom			
MW-AA	Piezometer	NR	105.85	116	117.4	10	106	116	-1.6	-11.6	NR	514330.1915	1642944.6946
MW-B	Piezometer	NR	113.30	128	128.8	20	108	128	4.5	-15.5	NR	515703.188	1641952.201
MW-E	Piezometer	NR	109.36	118	120.9	20	98	118	8.5	-11.5	NR	514187.411	1642978.872
MW-1R	Peizometer	NR	118.07	125	127.8	10	115	125	0.3	-9.7	NR	515734.4675	1644075.0314
MW-2	Piezometer	NR	136.05	161	163.8	15	146	161	-12.8	-27.8	NR	517016.947	1644134.012
MW-3	Background	NR	120.31	119	119.8	15	104	119	15.5	0.5	NR	517026.689	1641528.493
MW-5	Piezometer	NR	120.98	120	122.5	10	110	120	8.5	-1.5	NR	515706.7199	1643027.5870
MW-6	Piezometer[1]	NR	118.27	122	124.7	10	112	122	3.6	-6.4	NR	515710.8712	1642921.8127
MW-7	Background	NR	128.47	137	139.06	20	117	137	9.4	-10.6	NR	517032.495	1642518.150
MW-8R	Piezometer	NR	117.96	128	127.98	20	108	128	10.0	-10.0	NR	514408.379	1642551.088
MW-9	Piezometer	NR	113.29	121	120.96	20	101	121	12.3	-7.7	NR	514411.959	1643276.437
MW-10	Compliance	11/2/05	113.37	120.5	120.0	20	100.5	120.5	13.4	-6.6	20/30	514808.4751	1643659.0352
MW-11	Compliance	11/2/05	104.69	112.0	111.7	20	92.0	112.0	13.0	-7.0	Gravel	514299.5523	1643424.8999
MW-12	Compliance	11/2/05	103.36	110.0	109.5	20	90.0	110.0	13.9	-6.1	20/30	514306.5574	1642972.8677
MW-13	Compliance	11/10/05	111.92	120.0	119.5	20	100.0	120.0	12.4	-7.6	20/30	514299.7062	1642543.8233
MW-14	Compliance	11/10/05	108.50	116.0	115.5	20	96.0	116.0	13.0	-7.0	20/30	514302.3733	1642085.7341
MW-15	Compliance	11/10/05	123.58	130.0	129.6	20	110.0	130.0	14.0	-6.0	20/30	514845.7153	1641844.4367
MW-16	Piezometer	10/31/05	119.64	127.0	126.6	20	107.0	127.0	13.0	-7.0	20/30	515765.2792	1642292.6040
MW-17	Compliance	11/3/05	110.85	118.0	117.5	20	98.0	118.0	13.4	-6.7	20/30	515619.9611	1641846.2474
MW-18	Assessment	1/23/07	115.82	120.0	119.7	20	100.0	120.0	16.1	-3.9	20/30	514730.9420	1643746.0676
MW-19	Assessment	1/22/07	113.50	140.0	139.6	10	130.0	140.0	-16.1	-26.1	20/30	514816.3731	1643660.2048
MW-20	Detection[2]	1/12/11	119.76	NR	125.7	20	105.0	125.0	NR	NR	20/30	516104.004	1642999.189
MW-21	Detection[2]	1/12/11	115.63	NR	125.9	20	105.0	125.0	NR	NR	20/30	515259.800	1643743.909
PZ-1 A	Piezometer	1/26/07	110.97	120.0	119.7	20	100.0	120.0	11.3	-8.7	20/30	514454.2759	1643505.5893
PZ-2 A	Piezometer	1/24/07	116.82	120.0	119.8	20	100.0	120.0	17.0	-3.0	20/30	515020.7612	1643833.4593

BLS = Below Land Surface

BTOC = Below Top of Casing

NR = Not recorded

Ft. = Feet

NGVD = National Geodetic Vertical Datum

Notes:

[1] Well MW-6 proposed to be re-designated as a piezometer.

[2] Wells MW-20 and MW-21 are proposed to be re-designated as detection wells.

Top of Casing elevations and survey data (Northing and Easting) from Citus County Boundary Survey dated 09/02/2015.

Total depths (ft btoc) of MW-20 and MW-21 measured on 01/14/2011 by CDM Smith.

Total depths (ft bls) and Filter Pack information from Attachment 2 of the Water Quality and Leachate Monitoring Plan dated 09/22/10.

ATTACHMENT 3

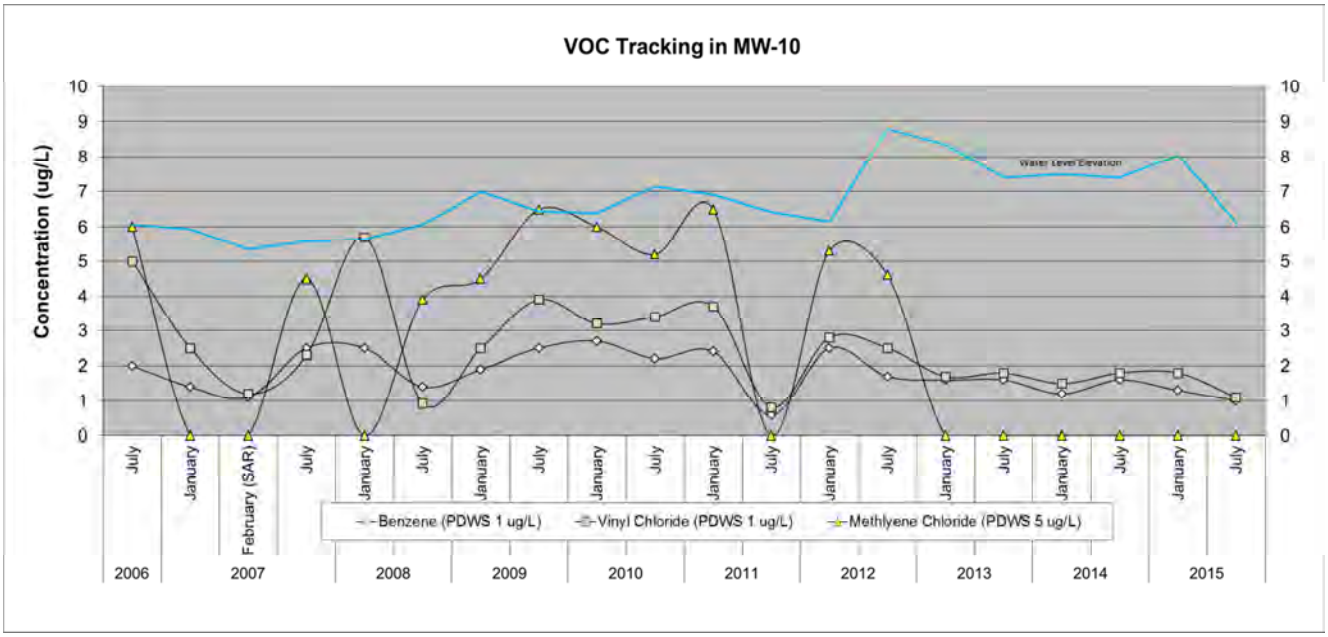
RAI Comment:

Please reconcile your proposed Water Quality Monitoring Plan with Consent Order #05-1078. The specific areas of concern are:

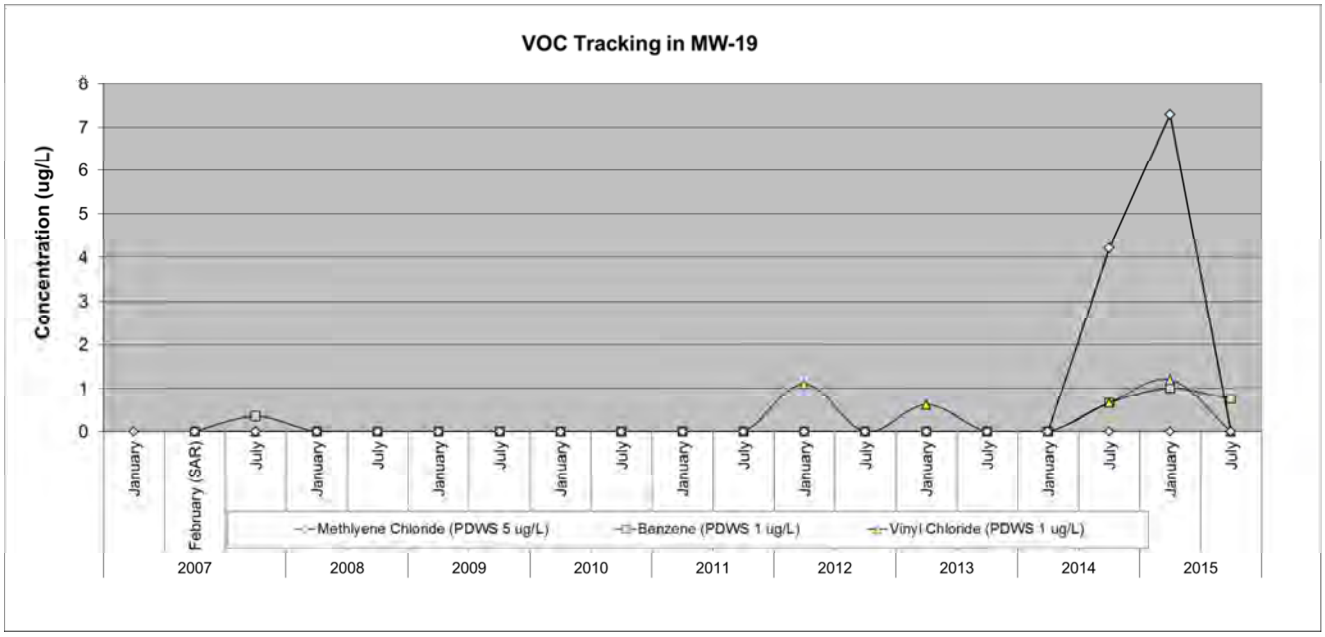
a. *<u>Groundwater Quality – Northwest Corner of Facility</u>*
Impacts to groundwater quality on the west side of the landfill (closed disposal areas) were addressed as part of CO #05-1078. Results reported for recent routine groundwater sampling events show persistent low-level exceedances of Benzene, Methylene Chloride, and Vinyl Chloride at well MW-10 with a downward trend of concentrations. No exceedances have been reported for the lateral extent well (MW-18); however, the vertical extent well (MW-19) has reported a recent and increasing trend of Methylene Chloride concentrations. Please address the increase of Methylene Chloride concentrations detected in vertical extent well MW-19.

Response:

The landfill gas extraction groundwater remediation system was installed in response to elevated VOCs in MW-10. Since the systems installation and optimization in March 2011, the concentrations of the parameters of concern (Benzene, Vinyl Chloride, and Methylene Chloride) have slowly decreased in MW-10.



Concentrations of the parameters of concern have not been detected in downgradient assessment well MW-18; however, recently, Methylene Chloride has been detected in the vertical extent assessment well MW-19. The chart below shows the trends of the parameters of concern in MW-19 since the well was installed.



There have been low level hits of both Benzene and Vinyl Chloride in MW-19 in the past; however, just recently has the well had detections of all 3 parameters at elevated concentrations. Of the parameters of concern, Methylene Chloride is the most soluble in water; therefore it will dissolve into water at the highest concentrations. Methylene Chloride also has the highest Vapor Pressure; therefore, Methylene Chloride will volatilize out of water first due to changes in pressure. Reviewing the first chart, which shows the VOC tracking in MW-10, Methylene Chloride had the greatest concentration and was the first to fall out after implementation of the gas extraction remediation. Since Methylene Chloride has not shown back up in MW-10 it indicates that the gas extraction system is still effecting the VOC concentrations in the groundwater.

The VOC Tracking in MW-19 chart shows a spike in Methylene Chloride associated with smaller spikes of both Benzene and Vinyl Chloride. All of the parameters in MW-19 have decreased during the July 2015 sampling event. The pattern observed in MW-19 is indicative of a plume migrating through the aquifer; however, there was no Methylene Chloride observed in shallow well MW-10. This indicates that the VOCs dissolved into the groundwater in one of two methods.

1. Landfill gas built up inside MW-19 causing condensate to develop inside the well riser, and the condensate dripped down into the groundwater.
    a. Landfill gas will be measured in MW-19 to verify if it is infiltrating into the well. However, if the exceedances were caused by condensate dripping in the well we would expect a more prolonged time of exceedances.

2. The concentrations indicate that a plume of VOCs dissolved into the aquifer and has migrated deeper than the effects of the remediation system and MW-10's screen interval.

a. The low levels observed in the July 2015 sampling event indicate that, if this was the case, the plume has passed and continued exceedances are not expected to occur. Since MW-19 is screened deeper than MW-10 and there has been no associated hits of Methylene Chloride in MW-10, the landfill gas that caused this plume never made it to the landfill gas extraction system to be removed and the landfill gas extraction system did not have sufficient vacuum to pull the VOCs from deeper in the aquifer.

The County is exploring options to optimize the groundwater treatment system over the coming year to prevent further migration of contaminants. Options under consideration include:

1. Shutting down the deeper gas vents and pulling only from the intermediate vent screens might degas without pulling additional gas into contact with the groundwater.

2. Shutting down GEW-1 and GEW-5 would increase the pull from GEW-2, GEW-3, and GEW-4 where more Carbon Dioxide has been detected. Additionally, the County may install solar powered turbines on GEW-1 and GEW-5 and isolate them from the rest of the system.

3. Reversing the air flow in GEW-1 and GEW-5 would channel landfill gas toward GEW-2, GEW-3, and GEW-4. This would require an additional blower fan.

4. Reversing the flow in the deeper wells, pushing subsurface air upward toward the shallower extraction wells. This would require an additional fan.

5. Installing a blower with more capacity to remove more landfill gas from the subsurface.

Consent Order Reconciliation:

Consent Order Status of Compliance

The Consent Order (OGC File No. 05-1078) was specific to the closed unlined 60 acre landfill groundwater exceedances beginning in 2002 in downgradient wells and Landfill gas above the LEL beginning in 2003 at the property boundary.

In a Status of Compliance letter from Deborah Getzoff (FDEP Southwest District Director) dated October 27, 2009, FDEP stated that the Landfill has completed, or is in compliance with, all of the Orders in the Consent Order except for Order 6 and Order 11b. Order 6 and 11b are discussed below:

Order 6: *The approved Groundwater Investigation Plan is incorporated into the Consent Order and must be implemented.*

- Compliance with Item 6 was considered 'pending conclusion of Rule 62-780.600 Site Assessment activities.' As part of the original Site Assessment, a lease agreement with the Department of Forestry expanded the property boundary and zone of discharge. New wells were installed at the new zone of discharge: MW-10, MW-11, MW-12, MW-13, MW-14, MW-15 and MW-17. While this would conclude the specific Site Assessment cited by the Consent Order, through Order 11b the exceedances in MW-10 were made subject to an additional Rule 62-780.600 FAC Site Assessment.

- FDEP issued a "does not object" e-mail dated April 26, 2010 to the proposed corrective actions outlined in the 62-780 Site Assessment Report (SAR) for the exceedances in MW-10. While the e-mail did not expressly state that the SAR was approved, the construction of the remedial system was approved.
- The remedial system for MW-10 was installed and has been in operation since October 2010 and the constituents of concern are slowly decreasing. Based on this, the Site Assessment is complete and the remedial process is now under Rule 62-780.700 FAC – Active Remediation.

The County implemented the approved Groundwater Investigation Plan and now considers Order 6 complete as the assessment sampling of the delineation wells installed around MW-10 are part of the permit.

Order 11b: *If exceedances are found in the initial sampling event of MW-10, MW-11, MW-12, MW-13, MW-14, MW-15 and MW-17, the landfill must conduct a site assessment under Rule 62-780-600.* The October 2009 Status of Compliance letter stated that if these new wells report exceedances in the future, the additional wells will be included in the assessment activities.

- MW-15 detected Vinyl Chloride at 2 µg/L in the initial event, but it was not confirmed in subsequent sampling. MW-10 detected elevated Vinyl Chloride at 5 µg/L and Benzene at 2 µg/L in the second sampling event (not in the initial event), and they were confirmed in subsequent sampling, initiating the 62-780 site assessment.
- A SAR was submitted for MW-10 on October 22, 2007 in accordance with this Order due to VOC exceedances.
- Additional VOC contamination was detected in MW-13 and MW-15 in October 2009. However, concentrations in MW-15 are currently below the standard and occasional detections in MW-13 have been (as defined by the FDEP 'rounding rule') at, but not above the standard. More recent detections in MW-18 through 21 do not apply to the OGC Order.

By the letter of the OGC Consent Order, the contaminants in MW-10 do not apply since they were not detected in the <u>initial</u> sampling event as specified in Order 11. However, they have been treated as though they apply and the requirements of Rule 62-780.600 FAC have been followed. Regarding the contamination in MW-10, the Consent Order has been redundant because the permit also requires the sampling.

No other significant contamination has been detected in the wells listed in the Consent Order, though if contamination is found in the future, the permit would require the initiation of an assessment in accordance with Rule 62-780 FAC. Therefore Order Nos# 6 and # 11b are considered completed.

By the requirements in the site permit, Rule 62-780.700 FAC will continue to be followed for the issues in MW-10 and additional assessment will be initiated if required by FDEP from additional exceedances observed in any of the other wells at the zone of discharge. Therefore, the County concludes that OGC Consent Agreement No. 05-1078, executed on September 20, 2005, is complete and requests that it be closed.

RAI Comment:

Groundwater Quality—Background Well MW-7

The last 4 routine sampling events have reported exceedances of the benzene standard with no apparent trend. It appears unlikely that the adjacent property to the east in the up gradient direction (State Forest) would be a source of benzene in groundwater. Please address potential sources of benzene in background well MW-7.

Response:

Degradation of the groundwater quality in the vicinity of MW-7 is not attributed to a discharge of leachate from the nearby lined Phase I, Phase II, or Phase III landfill cells. Many of the typical indicator parameters for landfill leachate are not present in samples collected from well MW-7 in concentrations that would be expected if the source was landfill leachate. Additionally, there does not appear to be an up gradient off-site source for the VOCs observed in MW-7.

The most likely source of the Benzene observed in the groundwater at MW-7 is attributed to the presence of landfill gas. Gas will migrate in the unsaturated pore space following the path of least resistance. The most likely source is that the liners of the newly installed landfill cells are preventing the dissipation of the landfill gas that emanates from the closed unlined landfill. The gas is migrating under the new landfill liner in contact with the groundwater causing changes in the local geochemistry and exchange of organic contaminants from the gas to the groundwater in the vicinity of well MW-7. The observed increasing parameters in MW-7 are similar to those observed in wells MW-10 and MW-19. The contamination in these wells has been shown to be from landfill gas not from leachate.

Hydraulically, MW-7 is on the up gradient boundary of the landfill and is appropriately positioned for a background well. The parameters observed in this well are expected to be from migrating landfill gas and not from off-site contamination.

APPENDIX J

CITRUS/HERNANDO COUNTIES INTERLOCAL AGREEMENT

INTERLOCAL AGREEMENT
BETWEEN HERNANDO COUNTY AND CITRUS COUNTY FOR
MUTUAL EXCHANGE OF SERVICES FOR
SOLID WASTE DISPOSAL DURING EMERGENCY EVENTS

THIS AGREEMENT is made and entered into by and between HERNANDO COUNTY, a political subdivision of the State of Florida, by and through its Board of County Commissioners, hereinafter called "HERNANDO," and CITRUS COUNTY, a political subdivision of the State of Florida, acting by and through its Board of County Commissioners, hereinafter called "CITRUS."

W I T N E S S E T H:

WHEREAS, In the event of an emergency, CITRUS or HERNANDO may have waste that it wishes to dispose of in the other County's solid waste disposal system; and

WHEREAS, both Counties have additional disposal capacity in its integrated solid waste management system and is willing to accept and dispose of additional solid waste from the other County during an emergency event; and

WHEREAS, CITRUS and HERNANDO, pursuant to Section 163.01, Florida Statutes, wish to enter into this Interlocal Agreement to provide for a mutual exchange of services for the disposal of solid waste at either waste disposal system during an emergency event; and

WHEREAS, through this cooperative agreement, CITRUS and HERNANDO wish to initiate successful and environmentally sound emergency Solid Waste Disposal options for the benefit of both County's residents.

NOW, THEREFORE, in consideration of the foregoing premises, which shall be deemed an integral part of this Interlocal Agreement, and of the mutual covenants and conditions hereinafter set forth, CITRUS and HERNANDO, intending to be legally bound, hereby agree as follows:

SECTION 1. PURPOSES

The WHEREAS clauses set forth above are incorporated herein by reference and made a part of this agreement. Based thereon, it is the purpose and intent of this Agreement to define the terms and conditions of mutual provisions of solid waste disposal services between the Counties. This Agreement is intended to provide a mutual exchange of services for the disposal of solid waste at either County's Solid Waste Management facility during an emergency event. All terms and conditions of this Agreement shall be interpreted in a manner consistent with, and in furtherance of, the purposes as set forth above.

SECTION II. AUTHORITY FOR AGREEMENT

This Agreement is entered into pursuant to the authority set forth in Chapter 87-441, Laws of Florida, Section 163.01, Florida Statutes, as amended, Section 252.38 Florida Statues, and Chapter 403 Part IV, Florida Statutes. Either County warrants and represents to the other county that the execution and delivery of this Agreement has been duly authorized by all appropriate actions of the Governing Body of either County, and this Agreement has been executed and delivered by an authorized officer of either County, and this Agreement constitutes the legal, valid and binding obligation of either County enforceable against it in accordance with its terms (except as enforceability may be limited by applicable bankruptcy or similar laws affecting creditors' rights, and by application of equitable principles if equitable remedies are sought).

SECTION III. DEFINITIONS

Certain terms having specific definitions are used in this Agreement, and these terms and definitions, unless the context clearly indicates to the contrary, are as follows:

A. CITRUS – shall mean CITRUS County, Florida, a political subdivision of the State of Florida.
B. HERNANDO – means HERNANDO County, Florida, a political subdivision of the State of Florida.
C. Governing Body of CITRUS – means the Board of County Commissioners of CITRUS County.
D. Governing Body of HERNANDO – means the Board of County Commissioners of HERNANDO County.
E. Emergency Event – shall mean locally declared state of emergency, failure of the landfill's normal and backup power supply, scales, scalehouse building and / or computers for scalehouse management system.
F. Hazardous Waste – means a waste material, or a combination of waste materials, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible or incapacitating reversible illness or may pose a substantial present or potential hazard to human health or the environment when improperly transported, disposed of, stored, treated, or otherwise managed. The term "hazardous waste" includes, but is not limited to, volatile, chemical, biological, explosive, flammable, radioactive, and toxic materials. "Hazardous Waste" shall also mean waste which is defined as harmful, toxic, dangerous or hazardous at any time during the term of this Agreement pursuant to i. Chapter 82-730 F.A.C ii. Any other Federal, State, HERNANDO County or local codes, statutes or laws; and iii. Any regulations, orders or other actions promulgate or taken with respect to the terms listed in (1) through (iii) above; provided, however, that any such materials which are later determined not to be harmful, toxic, dangerous or hazardous by any governmental agency or unit having appropriate jurisdiction shall not be considered "Hazardous Waste" unless a contrary determination has been made or is made by any other governmental agency or unit having appropriate jurisdiction.
G. Non-processable Waste – means ashes, foundry sand, cesspool and other human wastes, human remains and animal carcasses, tree trunk sections, branches and stumps, matter or material or material longer than six feet, motor vehicles (including major parts such as transmissions, rear ends, springs, and fenders), agriculture machinery and equipment, marine vessels and their major parts, any other large machinery or equipment, liquid waste, any matter or material of which in the Solid Waste Disposal System is prohibited by any law, ordinance, rule, or regulation of any government or public agency having jurisdiction over the project and its operations, ordinance materials, Hazardous Waste and Special Waste.
H. Solid Waste – shall have the same meaning as defined in Rule 62-701.200(13) F.A.C. ("Class I Waste" means solid waste that is not hazardous waste, and this is not prohibited from disposal in a lined landfill under Rule 62-701.300, F.A.C.)
I. Solid Waste Disposal System – means any and all facilities used and useful by the Counties in collection, transportation, and disposal of solid waste, including as applicable, but not limited to, volume reductions, plants, sanitary landfills or other disposal means, resource recovery facilities, including transfer stations to the extent the transfer stations are provided or operated to carry out the provisions of proper disposal.
J. Special Wastes – means any waste that require extraordinary management and includes, but is not limited to: abandoned automobiles; inoperative and discarded refrigerators, ranges, washers, water heaters, and other similar domestic and commercial appliances; used tires; waste oil; sludges; dead animals; septic tank pumpings; and infectious waste.
K. Transfer Station – means a facility where solid waste is placed before being transferred to a solid waste processing or disposal facility.

SECTION IV. COUNTIES OBLIGATION TO PROVIDE DISPOSAL DURING EMERGENCY EVENTS

A. **Disposal Obligation** – During the term of this Agreement, either County shall provide solid waste disposal services to the other party upon notification of their intent to implement emergency operations. Such disposal services shall consist of either County accepting the waste from the other County for disposal in their respective Solid Waste Facility. The respective Counties shall be fully responsible for the control and ultimate disposition of the same.

B. **Disposal Quantities** – Such disposal services shall consist of CITRUS accepting the waste from HERNANDO in the maximum amount of 150 tons per day during emergency operations and HERNANDO accepting the waste from CITRUS in the maximum amount of 400 tons per day during emergency operations. Emergency Operations shall be considered a 60 day period, which period may be extended in writing upon mutual agreement between the Counties.

C. **Status of CITRUS Collectors** – HERNANDO agrees, subject to the tonnage limitations that licensed collectors from CITRUS which are authorized by CITRUS to utilize HERNANDO County's Solid Waste Facility shall be authorized to use said facility upon implementation of emergency operations by CITRUS.
    a. Authorized Disposal – HERNANDO agrees that CITRUS shall not be charged for disposal under the terms of this Agreement for collectors or persons which have not been authorized by CITRUS to utilize the HERNANDO Solid Waste Facility. Any such unauthorized collector or person disposing of solid waste from CITRUS shall be charged by HERNANDO directly for the applicable tipping fee in the event HERNANDO elects to accept such waste.

D. **Status of HERNANDO Collectors** – CITRUS agrees, subject to the tonnage limitations that licensed collectors from HERNANDO which are authorized by HERNANDO to utilize CITRUS County's Solid Waste Facility shall be authorized to use said facility upon implementation of emergency operations by HERNANDO.
    a. Authorized Disposal – CITRUS agrees that HERNANDO shall not be charged for disposal under the terms of this Agreement for collectors or persons which have not been authorized by HERNANDO to utilize the CITRUS Solid Waste Facility. Any such unauthorized collector or person disposing of solid waste from CITRUS shall be charged by CITRUS directly for the applicable tipping fee in the event CITRUS elects to accept such waste.

E. **Reports** – The Counties agrees to provide reports indicating the amount of waste received from either County under the terms of this Agreement.

F. **Hours of Operations** – Both Counties agree that their Solid Waste Disposal Facilities shall be available to accept disposal of waste from the other County for not less than forty (40) hours per week, excluding weeks with legal holidays.

SECTION V: PAYMENT OBLIGATIONS

A. **Service Fee** – Both Counties agree to pay the other County a service charge on a per tonnage basis based upon the actual number of tons delivered at either facility during the emergency period as follows:
    a. Service fee charged to CITRUS for use of HERNANDO'S facility shall be $54.50 per ton.
    b. Service fee charged to HERNANDO for use of CITRUS'S facility shall be $55.00 per ton.

B. **Source of Payments by Counties** – The obligation of either County to pay any monies due under the Agreement does not constitute a general indebtedness of either County within the meaning of any statutory or constitutional provision limiting the amount and nature of indebtedness that may be incurred by either County. The obligations and liabilities of either County under this Agreement are payable solely from operating and maintenance accounts or funds from either County's solid waste collection or disposal operations.

C. **Irrevocable Commitment to Pay** – CITRUS and HERNANDO shall pay the billings submitted by either County throughout the term of this Agreement and said payment shall be without notice or demand and without set-off, counterclaim, suspension or deduction.

D. **Collector Identification** – Both Counties shall provide to the other County specific information identifying the licensed collectors within their respective County, that are authorized to deliver waste to the respective County's Solid Waste Facility under the terms of this Agreement. Such identification shall include, but not be limited to, the collector's name, permit number, vehicle types and registration numbers, and such other information useful in the identification of authorized collectors.

E. **Collector Responsibilities** – Both Counties agree that its' licensed collectors utilizing either County's Solid Waste Disposal Facility shall be responsible for the proper removal, transport and disposal of any non-processable waste, hazardous waste or special waste delivered to the County's Solid Waste Disposal Facility. Said collectors shall also be responsible for compliance with any applicable federal, state or local laws, including the respective Counties ordinances, governing the transportation and disposal of solid waste.

SECTION VI: COLLECTION OF SOLID WASTE

CITRUS and HERNANDO agree that both Counties shall be solely responsible for the collection of solid waste within either County. Furthermore, the Counties agree that they will take all necessary steps to require the collection services permitted or licensed by the respective Counties to deliver the waste at such location and during such times as either County shall direct during emergency events. It is affirmatively understood that neither County shall be obligated to accept waste under the terms of this Agreement from individual residents or other persons from the other County.

SECTION VII: TERM OF AGREEMENT

This Agreement shall have a term of one (1) year, which shall automatically renew for succeeding year periods, unless terminated by either party via the provision of sixty (60) days written notice prior to the expiration of that term year. Notice shall be provided to the administrator of the county being notified of termination. The Counties obligation to deliver and pay for the agreed upon delivered waste tonnage and obligation to accept such waste under the terms of this Agreement shall commence upon mutual agreement of both parties. This agreement is not a put or pay type of agreement.

SECTION VIII: COVENANT OF FURTHER ASSURANCES

The Counties agree that from and after the date of execution hereof, each will, upon the request of the other, execute and deliver such other documents and instruments and take such other action as may be reasonably required to carry out the purpose and intent of this Agreement.

SECTION IX: PRIOR AGREEMENTS

This Agreement shall supersede any or all other agreements between CITRUS and HERNANDO, if any, to the extent that the terms and provisions of any such agreement conflict with the terms and provisions of this Agreement.

SECTION X: ASSIGNMENT

No assignment, delegation, transfer, of this Agreement or part hereof, shall be made, unless approved by both Counties.

SECTION XI: NOTICE

Any notices or other rights permitted or required to be delivered pursuant to the Agreement, shall be delivered to HERNANDO, at the Office of the HERNANDO County Administrator and to CITRUS, at the Office of CITRUS County Administrator.

SECTION XII: AMENDMENT

This Agreement may only be amended by writing duly executed by CITRUS and HERNANDO.

SECTION XIII: FORCE MAJEURE

In the event either County's performance of this Agreement is prevented or interrupted by consequence of an act of God, or of the public enemy, or national emergency, allocation or other governmental restrictions upon the use or availability of labor or materials, rationing, civil insurrection, riot, racial or civil rights disorder or demonstration, strike, embargo, flood, tidal wave, fire, explosion, bomb detonation, nuclear fallout, windstorm, hurricane, sinkholes, earthquake, or other casualty or disaster or catastrophe, or an order, judgment or injunction of any court, or state or deferral administrative agency exercising jurisdiction over the subject matter of this Agreement, or a federal or state statute, or the incorporation of previously unincorporated areas within either County, that the parties shall not be liable for such nonperformance, and the time of performance shall be extended for such time period that such party is diligently attempting to perform.

IN WITNESS WHEREOF, the parties hereto have executed the foregoing agreement on this 19th day of November, 2013 (date of last party's execution).

BOARD OF COUNTY COMMISSIONERS SEAL HERNANDO COUNTY, FLORIDA

ATTEST:

Don Barbee, Clerk

HERNANDO COUNTY, a political subdivision of the State of Florida:

David D. Russell, Jr., Chairman

APPROVED AS TO FORM AND LEGAL SUFFICIENCY

BY County Attorney's Office

CITRUS COUNTY, a political subdivision of the State of Florida:

ATTEST:

Angela Vick, Clerk

OFFICE OF CIRCUIT COURT SEAL CITRUS COUNTY, FLORIDA

J. J. Kenney

Chairman

Approved as to form for the Reliance of Citrus County only:

County Attorney

APPENDIX K

ACTION ITEM SUMMARYS

ACTION PLAN FOR DRAINAGE FROM THE TOP OF THE SEVEN ACRE CLOSED AREA

Some settlement has occurred in the seven-acre area that was reclosed in 2010. This created a ponding condition on the top of the landfill. Additionally, traffic on the top area created a rutted condition that increased the problem.

To address the traffic control situation a limitation of access to the top of that area was instituted by the County. Access is only allowed for maintenance of the hill. No other traffic will be allowed. Signage and/or physical barriers such as cones will provide for a method to redirect traffic from the access.

To address the settlement, the County will bring in soil material to recreate the flow grades in the swales as per the original construction documents. Once regraded, sodding will be placed to control erosion.

The County will monitor the area on a quarterly basis by observing the flow patterns during a storm event. If necessary, adjustments will be made to the grades to provide for the intended runoff.

ACTION PLAN FOR PHASE 3 SECONDARY CONTAINMENT

In April 2014 SCS Engineers in conjunction with Citrus County had presented a report to FDEP outlining a review of the higher than projected liquid quantities in the Secondary Containment. This effort was instituted due to the higher than anticipated pumping rates/quantity from the secondary containment sump of Phase 3. This seemed to generally occur as a result of rainfall events exceeding approximately 1.5 inches.

The lined landfill areas of the active landfill include Phases 1, 1A, 2, and 3. Phases 1 and 1A are near capacity while Phase 2 is still active as is Phase 3. Prior to the construction of Phase 3, that area was used to collect the stormwater runoff from the north slope of Phase 2. Since Phase 3 is the last disposal area that is currently permitted to be constructed, the runoff now runs into the Phase 3 footprint. This means that the actual acreage of runoff exceeds the 6.8 acre area of Phase 3. Additionally, the phasing plan for the filling of Phase 3 piggy-backs against the north slope of Area 2 so the runoff flows from Phase 2 into Phase 3.

An aerial topography flown in 2014, which is in Appendix A, indicates a potential contributing area of approximately 16.8 acres inclusive of Phase 3. The drainage area will be consistent until the Phase 3 waste is filled above the outer berm around the disposal area. At that time, the stormwater will be shed from all phases of the landfill as surface runoff.

Taking this into consideration the total potential Action Leakage Rate at 100 gallons per acre would be a value between 680 gallons per day and 1680 gallons per day based on the contributing areas. This is a somewhat unique condition for the State of Florida in that at approximately 80 feet deep, it is significantly deeper than most others in Florida. Because of that depth combined with the volume of waste disposed on an annual basis being relatively low, it will take years before the waste level reaches the berm height around the disposal unit. Once it

does, most of the stormwater that now falls in the active area will become surface runoff into the swale that is located at the top of the embankments of the disposal areas. Therefore, the amount of water that could potentially enter the secondary containment will be dramatically reduced unless the water is entering the geocomposite from the outer berm swale, which is considered unlikely.

In the interim to reduce the potential amount of water that could enter the secondary system, the County proposes to establish new stormwater swales by constructing a berm system along the face of the Phase 2 north slope. The swale will have a liner provide for management of the flow of surface water to avoid percolation into the waste and to divert the runoff to the perimeter stormwater conveyance system away from Phase 3. Additionally, any other stormwater that falls directly into Phase 3 will be collected in the west end of Phase 3. In a corner of that area, the County will prepare a sump that will serve as the stormwater collection and pumping station. This effort will divert a significant stormwater volume away from percolating into the waste. As the waste is filled the system will be modified to accommodate the concept.

Associated with this approach the County will operate the waste fill area to allow the stormwater control to remain in the west end of Phase 3 until the waste fill is developed above the outer berms of the disposal area. At that point the surface runoff will be directly discharged into the perimeter ditches. Reducing the amount of stormwater that reaches the liner system by diverting the water away from Phase 3 will avoid opportunity for exceedances in the secondary system.

Appendix B

Supplemental Operation Plan
dated April 2018
(Prepared by Jones Edmunds)

CITRUS COUNTY CENTRAL LANDFILL
CLASS I LANDFILL
SUPPLEMENTAL OPERATION PLAN

Prepared for:

Citrus County Board of County Commissioners

3600 W. Sovereign Path, Suite 267

Lecanto, Florida 34461

Prepared by:

Jones Edmunds

730 NE Waldo Road

Gainesville, Florida 32641

Certificate of Engineering Authorization #1841

Jones Edmunds Project No.: 03860-069-01

April 2018

INTRODUCTION

PURPOSE

This document serves as a Supplemental Operation Plan for the Citrus County Central Landfill. This plan supersedes specific sections of the approved Operations Plan prepared by SCS Engineers dated April 18, 2016. This Supplemental Operation Plan addresses the modifications proposed in the April 2018 permit application for the Landfill Gas Migration Control System and the Gas Collection and Control System Expansion prepared by Jones Edmunds.

Section K.9 of the April 2016 Operation Plan was revised to reflect the 2018 proposed modifications. For ease of review and use by the County, Jones Edmunds has revised SCS' Section K.9, Landfill Gas Monitoring, by using tracked changes.

K.9 LANDFILL GAS MONITORING (RULE 62-701.500(9), F.A.C.)

This LFG monitoring program for the Central Landfill has been prepared in accordance with Rule 62-701.530, F.A.C. As described below, the plan includes monitoring for subsurface LFG migration at the facility property boundary adjacent to the active landfill (Phases 1/1A, 2 and 3) and the closed 60-acre landfill, and in on-site structures. The LFG monitoring program is designed to confirm compliance with the requirements of Rule 62-701.530(1)(a)1, F.A.C., which requires the following:

- The methane concentration in on- or off-site structures may not exceed 25 percent of the lower explosive limit (LEL). The LEL for methane is five percent by volume in air. Therefore, the maximum allowable concentration in on- or off-site structures is 1.25-percent methane by volume.
- The methane concentration at or beyond the landfill property boundary may not exceed the LEL (i.e., 5 percent methane by volume).

As explained below, the monitoring plan was prepared based on site-specific conditions.

K.9.a BACKGROUND INFORMATION

In November and December of 2005, ~~eighteen~~ 19 permanent monitoring probes were installed along the new property boundary of the site. A new property boundary agreement has been established with the Florida Division of Forestry and FDEP. The landfill gas monitoring network was modified in 2017 from the approved gas management system design included in the Final Consent Agreement #05-1078. Due to the newly observed parameter exceedances, Jones Edmunds submitted a Landfill Gas Assessment and Groundwater Delineation Plan to FDEP on March 22, 2017, documenting a plan to expand the landfill gas and groundwater monitoring systems north of the closed Class I Landfills. The modifications were completed and are documented in the Landfill Gas Assessment and Groundwater Delineation Report, prepared by Jones Edmunds dated November 28, 2017. The new monitoring network includes the existing gas monitoring probes (GP-1 through GP-19) and 11 new landfill gas monitoring probes (GP-20 through GP-30). The probes were constructed as required in the consent order with long sections of slotted pipe and have been retrofitted for monitoring at varying depths in each probe as described in Part N of the permit modification application. The landfill gas monitoring probes are monitored quarterly. ~~The 19 monitoring probes are now the only LFG compliance points at the site. The remaining 62 permanent LFG probes and 13 interim probes have been abandoned in place.~~ Figure 9-1 is a site map showing the LFG monitoring probe locations and Figure 9-2 shows a detail of the gas probes.

K.9.b LANDFILL AREAS

The landfill areas on site include the closed 60-acre landfill, a part of which is approximately seven acres that has a bottom liner as well as a geosynthetic cap liner; and the active Phase 1/1A, Phase 2, and Phase 3 landfill cells. The balance of the closed 60-acre landfill is unlined but has been capped with a geosynthetic membrane and protective soil cover. The depth of waste in the closed 60-acre landfill is approximately 40 feet below ground surface. The active Class I Landfill (Phase 1/1A, ~~and Phase~~ 2, and 3) ~~landfill areas have~~ has a geomembrane bottom liner system, and the bottom depth of refuse is approximately 80 feet below ground surface. Groundwater is present approximately 110 feet below ground surface, and the soil at the site is primarily silty and clayey sand.

The GCCS at the active Class I Landfill is designed to provide a means of relieving internal gas pressures within the landfill and prevent fugitive emissions of LFG to the atmosphere through the cover soils and the subsurface migration of LFG to the surrounding areas. The GCCS ~~for Phases 1/1A and 2~~ includes the following features:

- LFG extraction wells (EW-1 through EW-11) installed in 2009 are composed of 6-inch PVC pipe, installed in a 30-inch borehole and backfilled with FDOT No. 4 stone. The borehole was~~will be~~ sealed with a hydrated bentonite plug and backfilled to grade with clean soil backfill.
- New LFG extraction wells (EW-12 through EW-18) will consist of 8-inch PVC pipe installed in a 36-inch borehole and backfilled with gravel. The borehole will be sealed with a hydrated bentonite plug and backfilled to grade with clean soil backfill.
- New horizontal gas collector trenches in Phases 2 and 3 with remote wellhead connections (HC-1 through HC-4) will consist of 6-inch lateral piping. The horizontal trenches will drain to the north into Phase 3. Horizontal gas collectors will be installed by constructing a horizontal collector pipe surrounded by porous non-carbonate, non-calcareous media and wrapped in a geotextile filter fabric. Porous media may include tire chips, crushed concrete, or gravel as allowed by permit
- Tie-ins ~~will be~~are made to the existing LCRS risers and ~~these will be~~ are connected to the header/lateral system, routing LFG to the blower/flare station.
- A below grade header/lateral network ~~will be~~ is installed. All piping will be HDPE SDR 17.
- A 2” HDPE SDR 9 air supply line ~~will be~~is installed at the blower/flare and compressor location to CS-1 on the east side of the Class I cells.
- A condensate sump (CS-2) with a pneumatic pump ~~will be~~is installed at the blower/flare station. An O&M manual for the pneumatic pump ~~will be~~ was submitted to the FDEP with the report of construction completion.

- The ~~S~~self-draining condensate traps (CT-1 and CT-2) will be abandoned and replaced with one condensate trap (CS-3) with a dedicated pneumatic pump on the west side of Phase 2 ~~located at engineered low points in the header system for the collection of condensate~~. The ~~traps~~sumps will allow for the drainage of condensate from the header and lateral system ~~back into the landfill~~to the leachate storage tanks.
- Collected LFG ~~will be~~ is routed to the blower/flare station for combustion via the 750 scfm candlestick flare.

If it is necessary to perform video inspection or cleanout the LCRS via these risers, this can be accomplished by closing the 2-inch wellhead gate valve, disconnecting the flexible hose, and removing the quick release caps or flanged lids and associated piping. For details of the ~~Phase 3~~ GCCS please see the ~~Phase 3~~ Construction documents.

The gas migration control system installed at the Closed Class I Landfills will be inspected periodically. All components and fittings including wellheads, condensate sump, and blower skid will be visually inspected for damage and/or proper function. The blower station will be operated and maintained according to the manufacturer's specifications. If any problems are identified at the blower station or condensate sump, repairs shall be completed as soon as possible. All maintenance and repair activities will be recorded and filed on site.

Pneumatic pumps will be periodically visually inspected to ensure proper operation by checking the pump counters and recording cycle counts for each pump in operation. The sumps and condensate knockout pot will be visually inspected to determine if the pumps are maintaining liquid levels at low level.

K.9.c MONITORING OF ON-SITE STRUCTURES

In order to ensure the safety of workers inside and around permanent structures on site, ambient air will be monitored on a quarterly basis in on-site structures in accordance with the requirements of Rule 62-701.530(2)(a), F.A.C. As stated above, and in Rule 62-701.530(1)(a), F.A.C., the methane concentration in on- or off-site structures may not exceed 25 percent of the LEL, or 1.25 percent methane by volume. The following gas monitoring will be performed in structures at the facility.

- Explosive gas alarms located in the scale house building and leachate treatment plant electrical room will provide continuous monitoring for unacceptable concentrations of explosive gas. These monitors are designed to sound an alarm when methane concentrations exceed 25 percent of the LEL. The signal remains on as long as gas is present, and a red alarm light stays on after an alarm condition in order to alert personnel that methane was detected during their absence. Log sheets will be kept at each location to record when the alarm has been triggered, and each alarm will be calibrated or replaced on a regular basis according to the schedule recommended by the manufacturer.

- On a quarterly basis the following structures will be monitored:
  - Administration building
  - Scale house
  - Leachate treatment plant
  - Gun ranges
  - Modular Building
  - Shop
  - Hazardous Waste Drop-Off Center

Monitoring will consist of using handheld instruments to monitor for combustible gases at all slab penetrations, floor drains, cracks in the slabs, along baseboards, in electrical boxes and outlets, and in enclosed spaces such as closets and ground-level cabinets.

K.9.d GAS MONITORING PROCEDURES

K.9.d.1 Monitoring Procedures for Probes

Each probe will be monitored on a quarterly basis for static pressure and methane concentration, or combustible gases using an instrument calibrated to methane. Methane will be measured and recorded in terms of a percent by volume in air or as a percentage of the LEL. The monitoring equipment will be calibrated each day prior to the monitoring.

The general procedure for monitoring at each probe will be as follows:

1. Record meteorological conditions including ambient temperature and barometric pressure.
2. Calibrate the methane monitoring equipment.
3. Purge any calibration gas or gas from previous probes from the methane monitoring instrument.
4. Zero the pressure gauge.
5. Prior to monitoring, note any damage to the probe, and repair if necessary. Failure to repair damage to the above ground casing, cap, or monitoring probe can affect the validity of the monitoring results.
6. Attach the sampling hose to the pressure meter and the labcock valve on the monitoring probe.
7. Record the time of monitoring for the probe.
8. Open the labcock valve.
9. Measure and record the pressure in the probe.
10. Close the labcock valve.
11. Connect the methane monitoring instrument to the sampling hose.
12. Open the labcock valve.

13. Turn on the meter and observe the gas concentration readings, noting any spikes in concentration.
14. After the gas concentration readings stabilize, record the steady-state reading, making note of any spike that occurred prior to reaching a steady-state reading. Note that per Rule 62-701.530(2)(b), F.A.C., purging of the probe is not allowed.
15. Remove the instrument and hose, and close the labcock valve.
16. Repeat steps 3 through 15 for each probe.

Any problems encountered during monitoring, observations, or other pertinent information that could impact the interpretation of the data shall be recorded.

K.9.d.2 Monitoring Procedures for On-Site Structures

The following on-site structures will be monitored for methane or combustible gas on a quarterly basis using handheld field instruments in accordance with Rule 62-701.530(2)(a), F.A.C.:

- Administration building
- Scale house
- Leachate treatment plant
- Gun ranges
- Modular Building
- Shop
- Hazardous Waste Drop-Off Center

Methane will be monitored and recorded in terms of the percent by volume in air or as a percentage of the LEL, and the monitoring equipment will be calibrated each day prior to the monitoring.

The general locations for monitoring at each structure will be as described below.

Administration Building--
A handheld meter will be used to monitor for methane at each of the following locations:

- Along the baseboards in each of the rooms, closets, and hallways
- In all ground-level cabinets
- At the floor drains in the bathrooms
- At all electrical outlets in each room and hallway
- At electrical panels inside and outside the building
- At outdoor electrical outlets

Scale House, Modular Building, and Shop--

A handheld meter will be used to monitor for methane in the scale house, modular building, and shop at each of the following locations:

- Along the baseboards
- At any cracks in the concrete slab or flooring
- In all ground-level cabinets
- At all electrical outlets inside and outside of the building
- At electrical panels inside and outside the building

Leachate Treatment Plant and Hazardous Waste Drop-off Center--
Methane concentration will be checked at the following locations at the leachate treatment plant until it is removed:

- At any cracks in the concrete slab or flooring
- In any ground-level cabinets
- At all electrical outlets inside and outside of the building
- At electrical panels inside and outside the building

Gun Ranges--
There are two gun ranges on site that are operated by the Withlacoochee Technical Institute on the closed 60-acre landfill. At both gun ranges, the following locations will be monitored for methane.

- At cracks in the concrete slabs
- At all electrical outlets and switches
- At all slab penetrations, such as support posts for the roofs of the firing platforms

K.9.e REPORTING

Results of the monitoring will be reported to FDEP quarterly. A copy of the monitoring form is included as Appendix ~~G~~A to this plan.

If the results of the monitoring show that combustible gas concentrations exceed the limits specified in Rule 62.701.530(1)(a), F.A.C., Citrus County will take the following actions:

- Immediately take all necessary steps to ensure protection of human health and notify FDEP of the exceedances.
- Within seven days of the detections, submit to FDEP for approval a gas remediation plan. The gas remediation plan must describe the nature and extent of the problem and the proposed remedy. The remedy must be completed within 60 days of detection unless otherwise approved by FDEP.

K.9.f ROUTINE ODOR CONTROL

The site is inspected on a daily basis for odors at the point of compliance. Potential sources for odors include; incoming waste, workface activities, landfill gas, condensate systems, and leachate collection and handling systems. In the event that an odor is detected and a source identified, appropriate steps will be taken to mitigate the incident. The installation of the GCCS should eliminate odors generated by the decomposition of waste.

Deodorants and odor neutralizers will be maintained on site and utilized if soil cover does not mitigate the odor issues at the working face. Daily cover provides and effective seal against the odors. If odors persist daily cover will be increased and cover procedures will be reviewed and altered if necessary.

WEST GULF TO LAKE HWY

SOLAR POWERED SOIL VAPOR EXTRACTION SYSTEM: GEW-1, GEW-2, GEW-3, GEW-4, GEW-5

ADMINISTRATION BUILDING

APPROXIMATE LFG VENT LOCATION

CLOSED LANDFILL AREA (7 ACRE)

CLOSED LANDFILL AREA B (24 ACRE)

CLOSED LANDFILL AREA A (4.25 ACRE)

PHASE 3

PHASE 2

PHASE 1A

PHASE 1

CHANGE IN PAVEMENT NOT OBVIOUS

LEASED PROPERTY BOUNDARY

OWNED PROPERTY BOUNDARY

BLOWER/FLARE STATION

MW-1R, MW-2, MW-3, MW-5, MW-6, MW-7, MW-8R, MW-9, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, MW-16, MW-17, MW-18, MW-18D, MW-19, MW-19D, MW-20, MW-21, MW-22, MW-AA, MW-B, MW-E

PZ-1, PZ-2

GP-1, GP-2, GP-3, GP-4, GP-5, GP-6, GP-7, GP-8, GP-9, GP-10, GP-11, GP-12, GP-13, GP-14, GP-15, GP-16, GP-17, GP-18, GP-19, GP-20, GP-21, GP-22, GP-23, GP-24, GP-25, GP-26, GP-27, GP-28, GP-29, GP-30

GV-01, GV-02, GV-03, GV-04, GV-05, GV-06, GV-7, GV-8, GV-9

V-1, V-2, V-3, V-4, V-5, V-6, V-7, V-8, V-10, V-12, V-13, V-14, V-15, V-21, V-22, V-23, V-26, V-27, V-28, V-32, V-33, V-34, V-34A, V-A, V-B

CS-1, CS-2

GRAPHIC SCALE

0 75 150 300

SCALE IN FEET
1"=150'

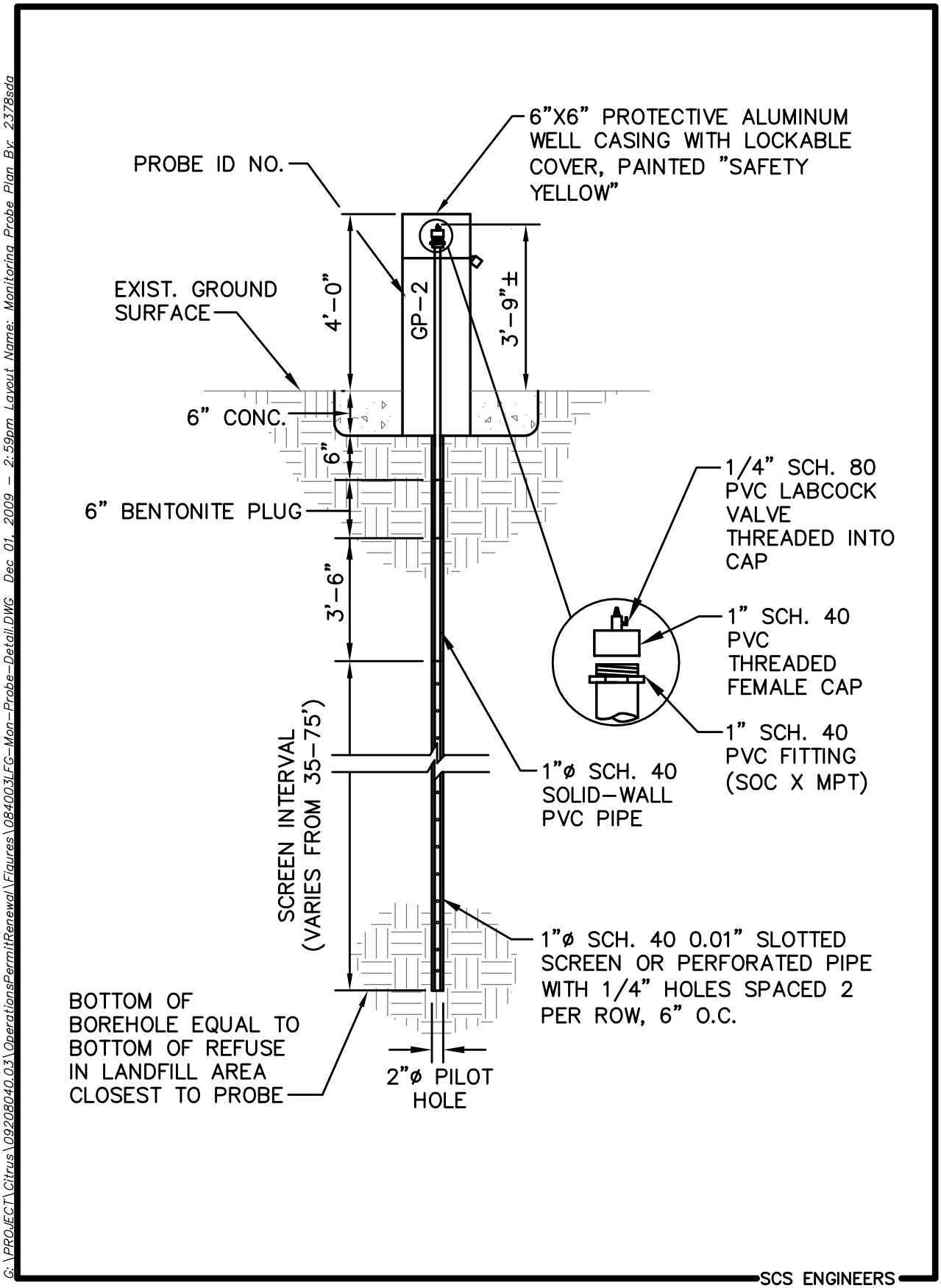
LEGEND

EW-1, EW-15	LFG EXTRACTION WELL
EW-10	DOWNSLOPE LFG EXTRACTION WELL
EW-8R	REMOTE LFG EXTRACTION WELLHEAD
	HEADER/LATERAL
CS-2	CONDENSATE SUMP
MW-7	BACKGROUND WELLS
MW-13	COMPLIANCE MONITORING WELL
V-33	PASSIVE GAS VENT
GV-06	PASSIVE GAS VENT (INSTALLED 2009)
PZ-1	PIEZOMETERS
MW-9	PIEZOMETERS
GP-1	GAS PROBE
W-7	LEACHATE CLEANOUT RISER WELLHEAD
GP-21	NEW LFG PROBE (2017)
MW-18D	NEW GW MONITORING WELL (2017)
MW-21	DETECTION WELL

NOTES:
1. TOPOGRAPHIC CONTOURS PREPARED BY PICKETT SURVEYING, DATED 09/28/17.
2. EXISTING LFG VENTS MAY NOT BE LABELED AS SHOWN.

FIGURE 9.1
MONITORING NETWORK
CITRUS COUNTY CENTRAL LANDFILL
CITRUS COUNTY, FLORIDA

JonesEdmunds



G:\PROJECT\Citrus\09208040.03\OperationsPermitRenewal\Figures\084003LFG-Mon-Probe-Detail.DWG Dec 01, 2009 - 2:59pm Layout Name: Monitoring Probe Plan By: 2378sda

Figure 9-2. LFG Monitoring Probe Detail, Citrus County Central Landfill

APPENDIX A

LANDFILL GAS MONITORING
CITRUS COUNTY CENTRAL LANDFILL

General Data

Date:		Sampler:	
Time:		Sky Conditions:	
Air Temperature (deg C):		Measuring Device:	

Sampling Data

						Methane		
Station I.D.	Date Sampled	Time Sampled	Depth of Intake (Feet)	O2 %Volume	CO2 %Volume	Peak Recorded Concentration as % LEL	Peak Recorded Concentration as % Volume	Station Type
GP-1			20					Gas Well
GP-1			40					Gas Well
GP-2			20					Gas Well
GP-2			40					Gas Well
GP-3			20					Gas Well
GP-3			40					Gas Well
GP-4			20					Gas Well
GP-4			40					Gas Well
GP-5			20					Gas Well
GP-5			40					Gas Well
GP-6			20					Gas Well
GP-6			40					Gas Well
GP-7			20					Gas Well
GP-7			40					Gas Well
GP-8			20					Gas Well
GP-8			40					Gas Well
GP-9			20					Gas Well
GP-9			40					Gas Well
GP-10			20					Gas Well
GP-10			40					Gas Well
GP-11			20					Gas Well
GP-11			40					Gas Well
GP-12			25					Gas Well
GP-12			50					Gas Well
GP-12			75					Gas Well
GP-13			25					Gas Well
GP-13			50					Gas Well
GP-13			75					Gas Well
GP-14			25					Gas Well
GP-14			50					Gas Well

LANDFILL GAS MONITORING
CITRUS COUNTY CENTRAL LANDFILL

General Data

Date:		Sampler:	
Time:		Sky Conditions:	
Air Temperature (deg C):		Measuring Device:	

Sampling Data

						Methane		
Station I.D.	Date Sampled	Time Sampled	Depth of Intake (Feet)	O2 %Volume	CO2 %Volume	Peak Recorded Concentration as % LEL	Peak Recorded Concentration as % Volume	Station Type
GP-14			75					Gas Well
GP-15			25					Gas Well
GP-15			50					Gas Well
GP-15			75					Gas Well
GP-16			25					Gas Well
GP-16			50					Gas Well
GP-16			75					Gas Well
GP-17			25					Gas Well
GP-17			50					Gas Well
GP-17			75					Gas Well
GP-18			25					Gas Well
GP-18			50					Gas Well
GP-18			75					Gas Well
GP-19			25					Gas Well
GP-19			50					Gas Well
GP-19			75					Gas Well
GP-20			105					Gas Well
GP-21			115					Gas Well
GP-22			70					Gas Well
GP-23			100					Gas Well
GP-24			70					Gas Well
GP-25			100					Gas Well
GP-26			70					Gas Well
GP-27			100					Gas Well
GP-28			70					Gas Well
GP-29			100					Gas Well
GP-30			105					Gas Well
Admin Building			-					Structure
Mod Bldg			-					Structure
Shop			-					Structure

LANDFILL GAS MONITORING
CITRUS COUNTY CENTRAL LANDFILL

General Data

Date:		Sampler:	
Time:		Sky Conditions:	
Air Temperature (deg C):		Measuring Device:	

Sampling Data

						Methane		
Station I.D.	Date Sampled	Time Sampled	Depth of Intake (Feet)	O2 %Volume	CO2 %Volume	Peak Recorded Concentration as % LEL	Peak Recorded Concentration as % Volume	Station Type
Scale House			-					Structure
Treatment Facility			-					Structure
Firing Range			-					7 Structures
Haz Waste Drop off Center			-					4 Structures

LANDFILL GAS MONITORING
CITRUS COUNTY CENTRAL LANDFILL

General Data

Date:	**Sampler:**
Time:	**Sky Conditions:**
Air Temperature (deg C):	**Measuring Device:**

Sampling Data

				Methane		
Station I.D.	Time Sampled	O2 %Volume	CO2 %Volume	Peak Recorded Concentration as % LEL	Peak Recorded Concentration as % Volume	Station Type
MW-1R						GW Well
MW-2						GW Well
MW-3						GW Well
MW-5						GW Well
MW-6						GW Well
MW-7						GW Well
MW-8R						GW Well
MW-9						GW Well
MW-10						GW Well
MW-11						GW Well
MW-12						GW Well
MW-13						GW Well
MW-14						GW Well
MW-15						GW Well
MW-16						GW Well
MW-17						GW Well
MW-18						GW Well
MW-19						GW Well
MW-20						GW Well
MW-21						GW Well
MW-AA						GW Well
MW-B						GW Well
MW-E						GW Well
PZ-1						GW Well
PZ-2						GW Well

Appendix C

Water Quality Monitoring Plan
dated June 28, 2018
(Prepared by Jones Edmunds)

CITRUS COUNTY CENTRAL LANDFILL

WATER QUALITY MONITORING PLAN

WACS FACILITY NO. SWD/09/39859

Prepared for:

Citrus County

230 W. Gulf to Lake Highway

Lecanto, Florida 34461

Prepared by:

Jones Edmunds

730 NE Waldo Road

Gainesville, Florida 32641

PE Certificate of Authorization #1841

PG Certificate of Authorization #133

June 2018

CAROL G SAWYER LICENSE No. 55214 STATE OF FLORIDA PROFESSIONAL ENGINEER

Carol G. Sawyer, PE

Florida License No. 55214

6/28/18

WATER QUALITY MONITORING PLAN FOR THE CITRUS COUNTY CENTRAL LANDFILL

This Water Quality Monitoring Plan (WQMP) details the compliance sampling required at the Citrus Central Landfill. This monitoring plan follows the format of Part L – Water Quality Monitoring Requirements – of the State of Florida Application for a Permit to Construct, Operate, Modify, or Close a Solid Waste Management Facility.

The only change to this WQMP from the previous plan (dated March 2016) is the addition of the three new groundwater assessment wells to the semiannual assessment sampling events. Wells MW-18D, MW-19D, and MW-22 will be sampled semiannually for the assessment monitoring parameters listed in Table e(2)(b).

Attachment 1 is a site map that shows the groundwater monitoring network with the addition of the three new assessment wells.

WATER QUALITY MONITORING PLAN

a. Sign and Seal

   The water quality monitoring plan has been signed, dated, and sealed in accordance with Chapter 62-701.510(2)(a), FAC.

b. Sampling and Analysis

   All sampling and analysis have been performed in accordance with Chapter 62-160, FAC; 62-701.510(2)(b), FAC; the FDEP Standard Operating Procedures 001/01; and the current Permit No. 21375-018-SO/01.

c. Groundwater Monitoring Requirements

   (1) The existing monitoring network has one detection well – MW-21.

   (2) The existing monitoring network has nine compliance wells – MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, MW-17, MW-20, and MW-22.

   (3) The existing monitoring network has two background wells – MW-3 and MW-7.

   (4) Attachment 1 shows the locations of each groundwater monitoring well in the proposed monitoring network. Attachment 2 is a table that provides well construction information for all existing wells.

   With the inclusion of the three new wells, four assessment wells – MW-18, MW-18D, MW-19, and MW-19D – are in the monitoring network.

(5) Well spacing is less than 500 feet across the downgradient direction of groundwater flow and approximately 1,500 feet apart across the upgradient direction of groundwater flow in the uppermost aquifer –the Floridan aquifer – within the zone of discharge.

(6) The screened intervals of the monitoring wells were positioned to encounter the water table of the unconfined Floridan aquifer throughout normal seasonal fluctuation.

(7) The wells are constructed to provide representative groundwater samples from the zones monitored. Attachment 2 provides well construction information for all wells.

(8) Unused wells and piezometers will be abandoned properly, as specified in Rule 40D-3.531, FAC, and the rules of the Southwest Florida Water Management District.

(9) The site has no detection sensors.

d. Surface Water Monitoring Requirements

Surface water is only required to be sampled if a discharge off the Citrus County Central Landfill property occurs. The sample will be collected from the body of water from which the discharge occurred.

e. Sampling Frequency and Requirements

(1) Newly installed wells and replacement wells will be sampled for the parameters listed in Rules 62-701.510(7)(a) and (7)(c), FAC, within 2 weeks of well completion and development.

(2) Routine monitoring well sampling and analysis requirements:

(a) Water samples from all monitoring wells (background and compliance) will be sampled semiannually for the parameters listed in Section 62-701.510(7)(a), FAC, as tabulated in Table e(2)(a).

Table e(2)(a) Monitoring Well Sampling Parameters

Field Parameters	Laboratory Parameters
Static Water Levels	Total Ammonia -N
Specific Conductivity	Chlorides
pH	Iron
Dissolved Oxygen	Mercury
Turbidity	Nitrate
Temperature	Sodium
Colors and Sheens (by observation)	Total Dissolved Solids (TDS)
	Those parameters listed in 40 CFR Part 258, Appendix I.

(b) Assessment wells – MW-18, MW-18D, MW-19, MW-19D, and MW-22 – will be sampled semiannually for the parameters listed in Table e(2)(b).

Table e(2)(b) Assessment Well Sampling Parameters

Field Parameters	Laboratory Parameters
Static Water Levels	Benzene
Specific Conductivity	Methylene Chloride
pH	Vinyl Chloride
Dissolved Oxygen	
Turbidity	
Temperature	
Colors and Sheens (by observation)	

(3) Surface water is only required to be sampled if a discharge off the Citrus County Central Landfill property occurs. If discharge off the property occurs, samples will be collected for the parameters listed in Section 62-701.510(7)(b), as tabulated in Table e(3).

Table e(3) Surface Water Sampling Parameters

Field Parameters	Laboratory Parameters
Specific Conductivity	Unionized Ammonia
pH	Total Hardness
	Biochemical Oxygen Demand (BOD5)
Dissolved Oxygen	Iron
Turbidity	Mercury
Temperature	Nitrate
Colors and Sheens (by observation)	Total Dissolved Solids (TDS)
	Total Organic Carbon (TOC)
	Fecal Coliform
	Total Phosphorus
	Chlorophyll A
	Total Nitrogen
	Chemical Oxygen Demand (COD)
	Total Suspended Solids (TSS)
	Those parameters listed in 40 CFR Part 258, Appendix I.

f. Evaluation Monitoring, Prevention Measures, and Corrective Action

(1) Groundwater Corrective Actions

If monitoring parameters are detected in wells at concentrations that are significantly above background water quality or that are at concentrations above FDEP's water quality standards or criteria specified in Rule 62-520, FAC, the well will be re-sampled within 30 days after the initial analytical data are received to confirm the data. If the data are confirmed or the well is not re-sampled, FDEP will be notified in writing within 14 days of the finding. Upon notification by FDEP, evaluation monitoring will be initiated in accordance with Chapter 62-701.510(6), FAC.

(2) Surface Water Corrective Actions

Surface water is only sampled on a per-discharge event. FDEP will be notified within 24 hours of discovery of a discharge event.

g. Water Quality Monitoring Report Requirements

Groundwater monitoring reporting is required and has been completed in accordance with Chapter 62-701.510(8), FAC.

(1) Groundwater compliance monitoring reports are submitted to FDEP semiannually in accordance with the current permit (FDEP Permit No. 21375-018-SO/01). Additionally, these reports are submitted in accordance with the requirements of Section 62-701.510(8)(a), FAC.

(2) Water quality data will be provided electronically in a format consistent with requirements for importing into FDEP databases and in compliance with the permit.

(3) A technical report signed, sealed, and dated by a PG or PE will be submitted to FDEP every 2.5 years in accordance with the requirements of Chapter 62-701.510(8)(b), FAC. The most recent report dated March 2018 summarized data from the First Semiannual 2015 through the First Semiannual 2017 sampling events. The report summarizes and interprets the water quality and water level measurements collected during the past 2.5 years. The report included the following:

a) Tabular display of data showing all detected parameters.

b) Graphical display of any leachate key indicator parameters.

c) Hydrographs for all monitoring wells.

d) Trend analysis of any monitoring parameter consistently detected.

e) Comparisons between shallow-, medium-, and deep-zone wells.

f) Comparisons between background water quality and the water quality in detection and compliance wells.

g) Correlations between related parameters such as total dissolved solids and specific conductance.

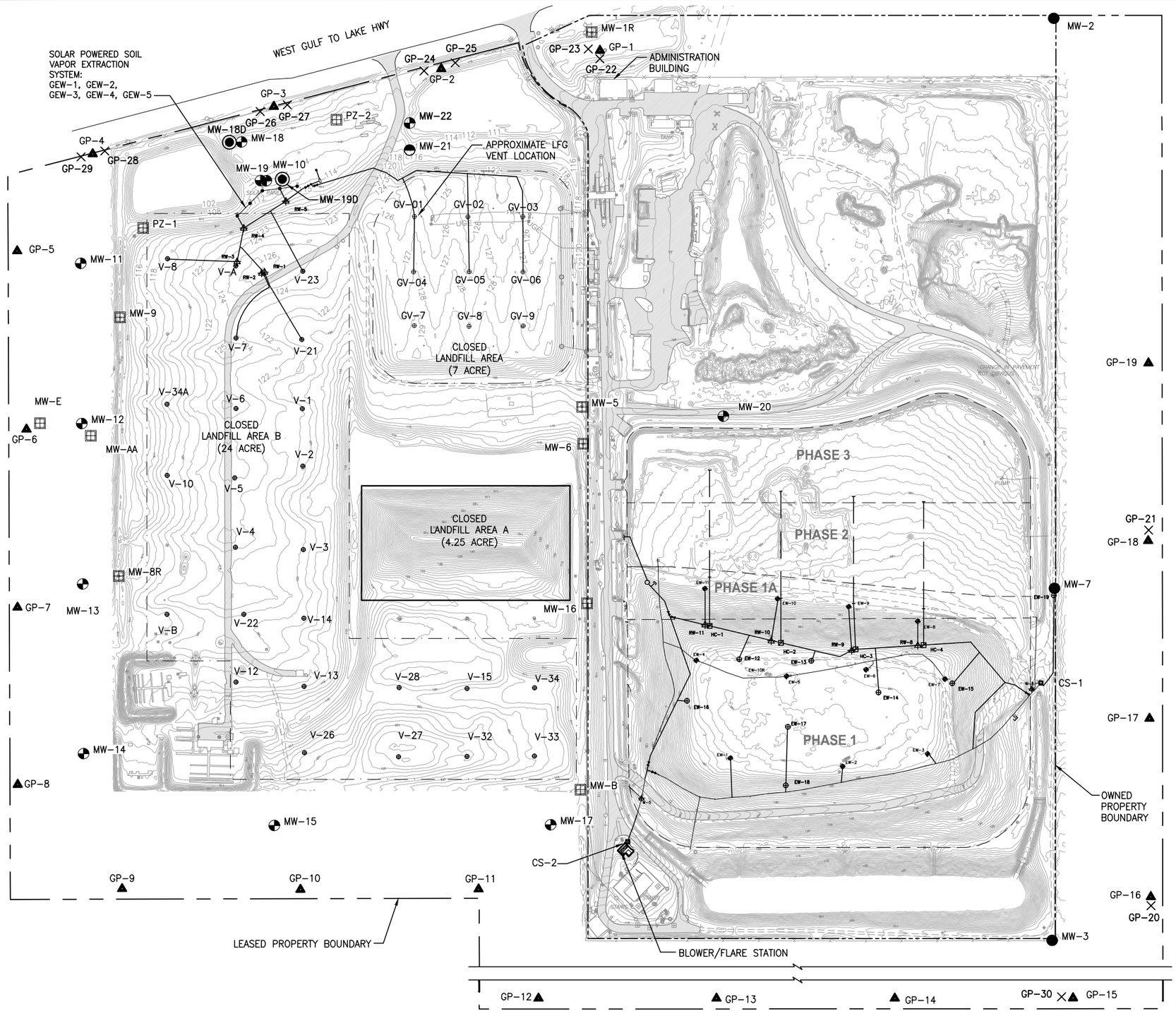
h) Discussions of erratic and/or poorly correlated data.

i) Interpretation of groundwater contour maps including an evaluation of groundwater flow rates.

j) An evaluation of the adequacy of the water quality monitoring frequency and sampling locations based on site conditions.

Attachment 1

Site Map



N

GRAPHIC SCALE

0 75 150 300

SCALE IN FEET
1"=150'

LEGEND

EW-1 / EW-15	LFG EXTRACTION WELL
EW-10	DOWNSLOPE LFG EXTRACTION WELL
EW-8R	REMOTE LFG EXTRACTION WELLHEAD
	HEADER/LATERAL
CS-2	CONDENSATE SUMP
MW-7	BACKGROUND WELLS
MW-13	COMPLIANCE MONITORING WELL
V-33	PASSIVE GAS VENT
GV-06	PASSIVE GAS VENT (INSTALLED 2009)
PZ-1	PIEZOMETERS
MW-9	PIEZOMETERS
GP-1	GAS PROBE
W-7	LEACHATE CLEANOUT RISER WELLHEAD
GP-21	NEW LFG PROBE (2017)
MW-18D	NEW GW MONITORING WELL (2017)
MW-21	DETECTION WELL

NOTES:
1. TOPOGRAPHIC CONTOURS PREPARED BY PICKETT SURVEYING, DATED 09/28/17.
2. EXISTING LFG VENTS MAY NOT BE LABELED AS SHOWN.

MONITORING NETWORK
CITRUS COUNTY CENTRAL LANDFILL
CITRUS COUNTY, FLORIDA

JonesEdmunds

LAST SAVED:6/29/2018 1:45 PMBY:JALLEN PATH=\\EACAD\DRAFTING\03860 CITRUS COUNTY\059 GCCS\FIGURES\03860059FIG-MON-NET.DWGPLOTTED:6/29/2018 01:50 PMBY:JON ALLEN

ATTACHMENT 2

Well Construction Information

Well Name	Well Designation	Date Installed	Top of Casing Elevation (ft NGVD)	Screen Details							Filter Pack (Silica Sand)	Well Location	
				Total Depth (Ft. BLS)	Total Depth (ft BTOC)	Length (ft)	Depth (Ft. BLS)		Elevation (Ft. NGVD)			Easting (Ft.)	Northing (Ft.)
							Top	Bottom	Top	Bottom			
MW-AA	Piezometer	NR	105.85	116	117.4	10	106	116	-1.6	-11.6	NR	514330.1915	1642944.6946
MW-B	Piezometer	NR	113.30	128	128.8	20	108	128	4.5	-15.5	NR	515703.188	1641952.201
MW-E	Piezometer	NR	109.36	118	120.9	20	98	118	8.5	-11.5	NR	514187.411	1642978.872
MW-1R	Piezometer	NR	118.07	125	127.8	10	115	125	0.3	-9.7	NR	515734.4675	1644075.0314
MW-2	Piezometer	NR	136.05	161	163.8	15	146	161	-12.8	-27.8	NR	517016.947	1644134.012
MW-3	Background	NR	120.31	119	119.8	15	104	119	15.5	0.5	NR	517026.689	1641528.493
MW-5	Piezometer	NR	120.98	120	122.5	10	110	120	8.5	-1.5	NR	515706.7199	1643027.5870
MW-6	Piezometer	NR	118.27	122	124.7	10	112	122	3.6	-6.4	NR	515710.8712	1642921.8127
MW-7	Background	NR	128.47	137	139.06	20	117	137	9.4	-10.6	NR	517032.495	1642518.150
MW-8R	Piezometer	NR	117.96	128	127.98	20	108	128	10.0	-10.0	NR	514408.379	1642551.088
MW-9	Piezometer	NR	113.29	121	120.96	20	101	121	12.3	-7.7	NR	514411.959	1643276.437
MW-10	Compliance	11/2/05	113.37	120.5	120.0	20	100.5	120.5	13.4	-6.6	20/30	514808.4751	1643659.0352
MW-11	Compliance	11/2/05	104.69	112.0	111.7	20	92.0	112.0	13.0	-7.0	Gravel	514299.5523	1643424.8999
MW-12	Compliance	11/2/05	103.36	110.0	109.5	20	90.0	110.0	13.9	-6.1	20/30	514306.5574	1642972.8677
MW-13	Compliance	11/10/05	111.92	120.0	119.5	20	100.0	120.0	12.4	-7.6	20/30	514299.7062	1642543.8233
MW-14	Compliance	11/10/05	108.50	116.0	115.5	20	96.0	116.0	13.0	-7.0	20/30	514302.3733	1642085.7341
MW-15	Compliance	11/10/05	123.58	130.0	129.6	20	110.0	130.0	14.0	-6.0	20/30	514845.7153	1641844.4367
MW-16	Piezometer	10/31/05	119.64	127.0	126.6	20	107.0	127.0	13.0	-7.0	20/30	515765.2792	1642292.6040
MW-17	Compliance	11/3/05	110.85	118.0	117.5	20	98.0	118.0	13.4	-6.7	20/30	515619.9611	1641846.2474
MW-18	Assessment	1/23/07	115.82	120.0	119.7	20	100.0	120.0	16.1	-3.9	20/30	514730.9420	1643746.0676
MW-19	Assessment	1/22/07	113.50	140.0	139.6	10	130.0	140.0	-16.1	-26.1	20/30	514816.3731	1643660.2048
MW-20	Compliance	1/12/11	119.76	125.70	125.0	20	105.0	125.0	14.76	-5.24	20/30	516104.004	1642999.189
MW-21	Detection	1/12/11	115.63	125.40	125.0	20	105.0	125.0	10.63	-9.37	20/30	515259.800	1643743.909
MW-18D	Assessment	7/31/17	115.68	140.00	139.6	10	130.0	140.0	-13.92	-23.92	20/30	514743.728	1643744.784
MW-19D	Assessment	7/29/17	113.59	160.00	159.6	5	155.0	160.0	-41.01	-46.01	20/30	514825.267	1643661.619
MW-22	Compliance	8/1/17	113.79	125.00	124.5	20	105.0	125.0	9.29	-10.71	20/30	515212.968	1643815.567
PZ-1 A	Piezometer	1/26/07	110.97	120.0	119.7	20	100.0	120.0	11.3	-8.7	20/30	514454.2759	1643505.5893
PZ-2 A	Piezometer	1/24/07	116.82	120.0	119.8	20	100.0	120.0	17.0	-3.0	20/30	515020.7612	1643833.4593

Updated with County survey information dated September 14, 2017.
BTOC = Below Top of Casing
ft = Feet
BLS = Below Land Surface
NR = Not recorded
NGVD = National Geodetic Vertical Datum