Guerra Development Corporation
Civil & Structural Engineering

May 20, 2013 12-03 03.ltr

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DEP Central District

Kimberly Rush, P.E.
Solid Waste Permitting
Florida DEP
3319 Maguire Blvd, Suite 232
Orlando, FL 32803-3767

SUBJECT: **Friends Recycling LLC - Permit Renewal** **JN 12-03**
Permit Application No. 0019600-008-SO-24

Ms. Rush,

Please accept this as our ~~draft~~ KMR response to the department's 2nd RFI.

Response to Item 3.

Section 4.2.3.4 of the report has been modified to contain the following language.

4.2.3.4 Friends Recycling, LLC personnel shall be instructed by the operator of these restrictions, of methods to help identify and handle suspect material, by making available to them the "Guidance for the Management and Disposal of CCA-Treated Wood". This guidance document is made required reading by new personnel and is made part of this report by reference and as an attachment.

4.2.3.4.1 Incoming trucks should be visually inspected to look for dedicated loads of treated wood, specially from contractors specializing in the demolition of fences, decks and docks. The name of the company may help identify contractors who would be likely to have a dedicated load. For additional information, the scale operator shall ask the driver what they are hauling. All dedicated loads shall be diverted at the scale house for disposal at a lined facility.

4.2.3.4.2 A trained operator or spotter must inspect the load and pull out suspect pieces of treated wood. Separated wood should be placed in a roll-off container for disposal at a lined disposal facility.

4.2.3.4.3 Trained operators and spotters shall identify suspect wood by looking for smells, coloring, dimensional lumber, posts, loads of wood associated with hardware related to fences, decks, docks and piers.

Response to Item 4.

The paragraph will be removed from the report, as requested.

Response to Item 5.

Section 5.6.1.3 will be deleted as requested. Section 5.6.1.2 has been modified as follows.
" Phase One shall be allowed to work for a period of 6-12 months, after which period the department may make the determination as to whether or not implementation of Phase Two is warranted."

Response to Item 6.a.

All proposed conditions to the permit listed on this part of the RFI are agreed to. The Closure Cost Estimate now includes a correct amount ($229,300) for waste relocation on the sub-cells of concerned to FDEP (1B, 2B, 2C). Please see our response to items #8.a.ii and #8.a.iii.

Response to Item 8.a.i.

The costs for "Slope and Fill" are no longer included because the slope work they were intended to cover was completed. Please refer to the topographic survey attached to the report, which shows that all waste footprint (north boundary) is now contained within the approved boundary for the C&D landfill.

Response to Item 8.a.ii.

On item (1) there is no need for additional professional fees. On Item (2), the const estimate was revised to replace the $75,000 figure with the correct amount of $229,300. This results in an increase to the total cost for closure.

Response to Item 8.a.iii.

Our explanation for this item is that because the waste relocation cost is included, that means a third party had to relocated the waste. By relocating the waste, the third party created three pits which are large enough to retain site runoff, thus rendering the DRA redundant, thus its excavation would not be needed.

Technically, upon relocation of the waste by Friends Recycling LLC, the cost estimate would need revision to increase the need for excavation of the DRA and reduce the cost of relocating the waste. We accept conditions requiring the update in the estimate as each subcell is developed.

As requested, the term "larger pieces" was changed to "suspect pieces", and our response to Item 6.a. is more appropriate.

Included please find a revised (May 20, 2013) report, which includes the Operations Plan, a revised and executed Closure and Long Term Care cost estimates, as well as a new Attachment - 9, Guidance for the Management and Disposal of CCA-Treated Wood. These documents are being sent to you as one hard-copy and an electronic copy. Documents which did not change were not re-submitted.

I thank you again for your kind assistance during this application process. If you have any questions, please feel free to contact me at (352) 629-8060 or at jcg@guerracorp.net.

Sincerely,

Juan C. Guerra, P.E.
President
Guerra Development Corp.

Copies: Gerald Lourenco, Operating Manager, Friends Recycling LLC

COMPREHENSIVE ENGINEER'S REPORT

For

PERMIT RENEWAL OF C & D DEBRIS DISPOSAL FACILITY

Operated By

FRIENDS RECYCLING, L.L.C.

JN 12-03

January 28, 2013
Revised March 27, 2013
Revised May 20, 2013

Ocala, Marion County, Florida

GUERRA DEVELOPMENT CORPORATION

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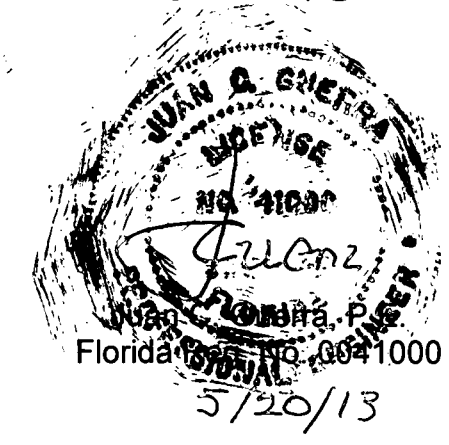

Juan C. Guerra, P.E.
Florida License No. 0041000
5/20/13

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ATTACHMENTS

1 GENERAL INFORMATION

1.1 Location and Access

The Friends Recycling C & D disposal site is located off NW 27th Avenue, just north on NW 21st Street, in Ocala, Marion County, Florida. The project property is located in section 2, Township 15, Range 21 East.

Access to the site can be made from I-75, exiting at US 27, heading east on US 27 to NW 27th Avenue, then north along NW 27th Avenue, approximately 1/4 mile north of NW 21st Street. The site's entrance is located on the west side on NW 27th Avenue.

1.2 Background

The Friends Recycling Landfill for C & D disposal (FRC&D) was permitted on November 1, 2002, permit number **SO42-0019600-005**. Subsequently, a 5-year permit renewal was issued by the Florida Department of Environmental Protection (FDEP), signed by Vivian F. Garfein, dated July 30, 2008, as described below:

WACS Facility: 21012
Permit Number: SO42-0019600-007
Expiration Date: 4/4/2013

This report along with attached and referenced supporting documentation is prepared for the purpose of renewal of the permit described above.

For the purpose of permit renewal, a pre-application meeting was held at the offices of the FDEP in Orlando, on January 15, 2013. Present at the meetings were, representing the applicant, Gerald Lourenco, Nick Giumarelli, Juan Guerra; and representing FDEP, Tom Lubozynski, Laxsamee Levin, Marjorie Heidorn, Gloria-Jean Depradine.

1.3 Site Information

Friends Recycling owns a total of 56.65 acres, as described below. See the Area Breakdown Map included in this Report.

1.3.1 **Ownership Area**: This area, **56.65 acres**, includes the total contiguous land owned or controlled by Friends Recycling LLC. Only a portion of this Ownership Area (see below) is permitted to receive C & D waste. Disclosure of this total area controlled by the owner is necessary for water management district permits and it is included for information purposes only.

The Ownership Area shown in this application for renewal is slightly less than on previous permits (56.65 acres versus 57.2 acres) due to a land dedication made by Friends Recycling LLC to the City of Ocala. Said dedication was made as right-of-way for an existing city street.

1.3.2 **Facility Area**: This area, **41.65 acres**, refers to the total area dedicated to the Friends Recycling facility and it includes driveways, buffers, buildings, the C&D disposal cells and portion of the property dedicated as a Drainage Retention Area (DRA), as required by the Saint Johns River Water Management District permit. This area was also reduced due to the right-of-way dedication discussed above, from 42.2 to 41.65 acres.

1.3.3 **Disposal Area**: This area, **26.8 acres**, remains unchanged from the previous permit; it represents the footprint of areas approved for disposal of C&D waste, or total area of approved cells (14.5 + 12.3 = 28.8 acres). The disposal area proposed under this permit renewal has not changed from the 2008 permit.

1.4 Permitting

1.4.1 The Friends Recycling facility provides a substantial service to the Ocala/Marion County community by accepting waste in a facility which is nearby and which is regulated.

1.4.2 The facility has been operating continuously since the original permit approval in 2002. Periodic inspections by FDEP representatives of the facility operations and of the mandated sampling of the monitoring wells indicates that the facility has been operating within the parameters set forth by the permit – This facility is in compliance.

1.4.3 The owners of the facility would like to continue operations and as required by permit conditions, are applying for a 10 year permit renewal.

2 ENGINEERING, SURVEYING AND SCIENTIFIC DATA

In accordance with 62-701.730(2)(a), this report and enclosures includes the following documentation:

2.1 Site Plan, 62-701.730(2)(a)1

2.1.1 A complete set of certified engineering drawings accompanies this submittal and per rule requirements include the following information:

- Site Plan prepare to a scale not greater than 200 feet to the inch.
- Project location map.
- Location and label identifying disposal units.
- Total area of the property, area of the site and of disposal units.
- Other relevant information:
  - Drainage, berms, access driveways, location of fences, gates, office and storage buildings, monitoring wells.

2.1.2 Potable water wells within 500 feet of the site, and community water systems within 1000 feet of the site were identified. The drawings included in this report show a shaded area representing required well setbacks with respect to the disposal facility.

2.2 Geotechnical Investigation

Geotechnical reports in accordance with Rule 62-701-420 were prepared for the original permit application. The following reports are still applicable and are included herewith by reference only.

2.2.1 "Subsurface Exploration, Ocala Recycling Addition, Marion County, Florida", CTL Project No. 0187151.200," dated October 2, 2001, prepared for Ocala Recycling c/o Guerra Development Corporation, prepared by Central Testing Laboratory, signed by Curtis M. Karr, P.E. This report is included in "Engineer's Report for Ocala Recycling, L.L.C., dated October 29, 2001, prepared by Guerra Development Corporation.

2.2.2 "Proposed Ocala Recycling 20 Acre Expansion Geotechnical Site Exploration," dated December 27, 2001, prepared for Ocala Recycling LLC, prepared by Geo-Tech, Inc., signed by William E. Smith, P.E.

2.3 Hydrogeological Investigation

2.3.1 Hydrogeological reports were prepared and accepted during the previous permitting cycle. These are still applicable and are included herewith by reference only.

2.3.1.1 A Phase I and Limited Phase II Environmental Site Assessment report was prepared as part of the original permit application. "Phase I and Limited Phase II Environmental Site of the property known as Commercial Property in the Vicinity of NW 27th Avenue and NW 21st Street, Ocala, Florida," dated August 6, 2001, prepared for Friends Recycling, prepared by Hydrologic Associates U.S.A., Inc. is still applicable and is being included by reference.

2.3.1.2 A revised monitoring plan is included as an attachment to this report, titled "Proposed revised groundwater monitoring program, Friends Landfill, Ocala,

Florida", addressed to Mr. F. Thomas Lubozynski, P.E., dated October 3, 2007, prepared by Hydrologic Associates U.S.A., Inc., signed by Bradley G. Waller, Principal Hydrologist.

2.3.2 Also included in this submittal for permit renewal are water quality monitoring reports, as described below.

2.3.2.1 Four Period Techical Report
Second Half 2011 through First Half 2013
Friends Recycling (FKA Big D Roofing, Inc.)
Robert M Couch, III, PE, Enviro-tech, Inc.
January 20, 2013

2.3.2.2 Semi-annual monitoring report
First Half 2013
Friends Recycling (FKA Big D Roofing, Inc.)
Robert M Couch, III, PE, Enviro-tech, Inc.
January 20, 2013

2.4 Facility and Cell Design

2.4.1 Design Life

2.4.1.1 The actual life depends on the amount of debris being accepted, which is closely related to economic activity. During the aftermath of hurricanes in 2005, this site proved to be a valuable asset to the community and the disposal rate increased significantly, although for a short period of time.

The economic downturn after 2008 drastically reduced the amount of waste being received, thus making an impact on the estimated life of the facility.

2.4.1.2 Available Volume Calculations: The facility has been in operation for several years, including operation under Big D Roofing and Ocala Recycling. Disposal has taken place on Cell #1 and Cell #2. In order to determine the remaining volume available for fill, GDC used 3-dimensional digital terrain models (DTM).

DTM #1 was created from the topographic survey prepared by REC, titled "A Topographic Survey for Friends Recycling, L.L.C.", dated 12-21-12, representing the existing topography (benchmark surface), and modified to have a proposed flat bottom for Cell 2 at elevation 64.00 NGVD . DTM 2 was created from the proposed topography shown in the Closure Plan, prepared by GDC, included in this report.

Using AutoDesk's Land Desktop software, both surfaces were subtracted to obtain the remaining volume available for disposal, VAD = 478,000 cubic yards (CY).

2.4.1.3 Waste Disposal and Compaction Rates: The average delivery of waste to the facility is 600 cubic yards (CY) per day, 5 days/week, or 3,000 CY/week. Normal compaction rate for waste is 3:1, but Friends Recycling is experiencing 4:1, most likely due to their recycling operations and the type of waste they are receiving. Recycling operations involve delivery of non-permitted waste to the county landfill (approx. 30 CY/week) and metal recycling (approx. 200 CY/week). The net amount of waste placed in the cells is computed as 3,000 / 4 = 750 CY/week.

2.4.1.4 The design life was then calculated as follows:

478,000 / 750 = 637 weeks / 52 = 12.25 ~ 12 years from today at current rate.

2.4.2 Disposal Area

2.4.2.1 The triangular configuration of the two primary cells (Cell #1 and Cell #2) was made necessary by the presence of a gas transmission pipeline and its associated easement.

2.4.2.2 After the original permit dated November 1, 2002, the overall cell design and distribution was changed due to the elimination of the gas main easement which divided both Cells, and also due to new setback requirements for disposal cells. The old gas easement through the property was replaced by a new 30-foot easement along the west and south property boundary.

2.4.2.3 Approval of the 1st renewal permit dated July 30, 2008, required changes to the disposal units layout. Primary cells #1 and #2 were further divided into sub-cells to differentiate the type of waste allowed. Due to off-site potable water well setback requirements, sub-cells 1B, 2B and 2C are not permitted to receive regular C&D waste, only clean debris as defined by DEP permit conditions, to include concrete, rubble.

2.4.2.4 The application for permit renewal for Friends Recycling, LLC, does not seek changes to previously approved cell layout, nor additional construction.

2.4.2.5 Topographic surveys and water management district permit referenced later on this report, indicated that this facility is not located within a 100-year flood plain.

2.4.2.6 This C&D disposal cell layout remains unchanged from the active permit for which renewal is sought. The setbacks shown are previously approved, which represent a mix of old and more current setback requirements, which were base in part on significant "historical waste" disposed under previous permits. No change is sought from the previously approved setbacks and cell layout.

2.4.2.7 Cell #1

Located east and north of the old gas easement, showing no significant change from the last permitting cycle. Cell #1 is divided into sub-cells 1A and 1B, of which only Cell #1A is currently permitted to receive waste. As of this application for permit renewal, no waste is being disposed within Cell #1A.

Cell #1 (including 1A & 1B) serves as access and a staging area for waste to be sorted and disposed off in Cell #2.

2.4.2.8 Cell #2

Cell #2 is located south and west of the old gas easement, generally south of Cell #1. Cell #2 is made up is sub-cells 2A, 2B and 2C. Sub-cells #2B and 2C may only receive clean debris and are no permitted to receive waste at this time.

Only Cell #2A is receiving waste as of this application for permit renewal. No changes are proposed at this time.

2.4.3 Currently Permitted Areas

2.4.3.1 At the time of this application for permit renewal of the Friends recycling, LLC C&D Debris Disposal facility, the following cells have been permitted to receive waste.

SUMMARY OF PERMITTED DISPOSAL UNITS AS OF JANUARY 28, 2013			
UNIT	**PERMITTED TO START RECEIVING WASTE**	**ACTIVE**	**DEP RESTRICTIONS**
CELL #1A	YES	NO	None. May receive regular waste.
CELL #1B	YES	NO	Yes. May only receive clean debris.
CELL #2A	YES	YES	None. May receive regular waste.
CELL #2B	NO	NO	Yes. May only receive clean debris.
CELL #2C	NO	NO	Yes. May only receive clean debris.

2.4.4 Sequence of Work

2.4.4.1 Cell #1 is to be partially filled to a maximum elevation 112.00 NGVD before proceeding to Cell 2. This elevation allows access to Cell #2 through Cell #1, and it allows Cell #1 to serve as a staging area for disposal operations in cell #2.

2.4.4.2 Cell #2A shall continue to receive waste until it matches the elevation of Cell #1, not to exceed 112.00 NGVD.

2.4.4.3 Friends Recycling, LLC shall apply for a construction permit to prepare Cells #1B, #2B and #2C to receive waste. These sub-cells shall be filled to reach parity with Cells #2A and #1A.

2.4.4.4 At the time all cells reach an elevation of 100.00 feet NGVD partial construction of the proposed drainage plan, contained in the Closure Plan, shall be constructed to manage storm water runoff from the site. This may take place sooner depending on actual site conditions.

A Florida licensed professional engineer shall be retained to establish the specific requirements for the partial implementation of the final drainage plan, in order to suit the field conditions at the time the threshold described above is reached.

2.4.4.5 The attached Cell Layout Drawing contains a waste boundary line indicating the approximate limits of the existing waste as of the date of this application for permit renewal.

2.4.5 Design Height

The target height of the landfill is sixty (60) feet above the lowest original surface level along the property perimeter. Based on the survey furnished to GDC by the client, the maximum elevation of the site upon closure is 130 feet NGVD. This maximum elevation remains unchanged from the last permitting cycle.

2.5 Wells

Friends Recycling, LLC, contracted with Robert L. Rogers Engineering Company to locate all private wells within 500 feet and all public wells within 1000 feet from the disposal areas. The result of their survey is shown on the 8.5'x11" drawings labeled "A Well Survey", dated 12-11-07, included by reference only. Guerra Development Corporation (GDC) has taken that drawing and augmented the information by adding a table showing more information for each specific well and showing relevant project features; this is shown in the drawing titled "Well Map", dated 1-10-08, included by reference only.

2.5.1 On-site Wells

2.5.1.1 Monitoring Wells

At the time of the previous application for permit renewal (for permit SO42-0019600-007, dated July 30, 2008), DEP required the closure of monitoring wells located within the waste footprint. As of this application for permit renewal, there are no open monitoring wells located within the waste footprint.

Current monitoring wells are described below, per survey by Robert L. Rogers Engineering, dated December 21, 2012.

MONITORING WELLS (December 21, 2012) Friends Recycling, LLC		
WELL NAME	**WACS**	**TOP ELEV.**
MW-1	18811	74.66
MW-5	22912	88.01
MW-6	22913	78.05
MW-7	22914	88.67
MW-8	22915	71.17
MW-9S	22916	68.64
MW-9D		68.58

2.5.1.2 Other

In addition to monitoring wells, there is a water well labeled well #19 (Per "Well Map" drawings prepared by GDC, dated 1/10/08, included by reference only), which is not used for drinking but for washing equipment, flushing toilets and other non-potable uses.

The operator is hereby required to label this well and all water outlets from this well as "Not For Drinking Water" or similar sign.

2.5.2 Off-site Wells

Well discussed in this section were located on the drawings titled "A Well Survey", prepared by Robert L. Rogers, Engineering, dated 12/11/07, included here by reference only.

2.5.2.1 Wells #1, 2, 3, 15

Tese wells is a private well, located 500 feet or more from the nearest portion of the disposal cells #1 or #2. These wells meet requirements from Rule 62-701.300(2)(b).

2.5.2.2 Wells #4 Through #14, #16 and #18

2.5.2.2.1 Wells #4 through #14 and #16 are private wells, located within the 500 foot setback from the nearest point of Cells #1 and #2, and their setbacks are shown in the setback envelope. Only clean waste will be placed in cells within the well setback envelope.

2.5.2.2.2 Well #18 is a community water system owned and operated by Marion Utilities, (352) 622-1171, serving a portion of the Golden Holiday mobile home park.

The 1000' setback affects both cells as they converge at a point on the southeast corner of Friends Recycling. Sub-cells 1B and 2C have been created to allow only clean waste within the well setback for #18.

2.5.3 Well Setback Discussion

As a result of requirements set forth by DEP during the previous permit renewal cycle, sub-cells 1B, 2B and 2C were created to address the encroachment of these cells into well setbacks. These cells have been designated to receive "Clean Debris" only.

As discussed earlier in this report, monitoring wells which were located within the limits of waste have been abandoned on accordance with requirements set forth by DEP. New monitoring wells (6, 7, 8, 9s, 9d) were installed so that all monitoring wells are located outside of the waste boundaries.

3 SURVEYS

A survey of the parcels comprising the project has been made by Robert L. Rogers Engineering, in accordance with Rule 62-701-730(2). The information provided by said survey was the basis for the engineering design and report for this project. The surveys have been depicted on the following documents:

- "A Boundary Survey For Friends Recycling, L.L.C.," dated 12 / 21 / 12, prepared by Rogers Engineering, Inc., included in this report.
- "A Topographic Survey For Friends Recycling, L.L.C.," dated 12 / 21 / 12, prepared by Rogers Engineering, Inc., included in this report.
- "A Well Survey for Friends Recycling, L.L.C.", dated 12-11-07, prepared by Robert L. Rogers Engineering, included by reference only.

4 OPERATION PLAN

4.1 General

This plan has been prepared to meet requirements set forth by Rule 62-701.730(7). Upon approval by FDEP, a copy of this document shall be issued to the owner / operator. This document shall be kept at the facility at all times and shall be made available for inspection by agencies having jurisdiction over this facility.

4.2 Facility Operations

The facility is allowed to operate during normal business hours, 7:00 a.m. to 6:00 p.m., Monday-Friday. Disposal of waste shall be done in a manner consistent with section 2.4.3, Sequence of Work.

The active cell may be excavated to a depth **not lower than elevation 64.0 NVGD**. The excavated fill may be used for berms and to fill depressions which may be lower than elevation 64.00 NGVD. Excavated clays may be stored in an inactive area of the site. Part of the excavated material shall be reserved for "closing" of the facility, which involves a 24" soil cap. The operator is hereby required to exercise care during excavation to ensure that excavation does not breach any clay layer which may separates the perched water table from the Floridan aquifer below the depth of 64.00 NGVD.

The incoming debris shall be dumped on the cell itself, or on an adjacent permitted cell, designated also as roving sorting area, where it shall then be spread with the tracked dozer or front-end loader. Once the debris has been spread, segregation of the material is done by hand by one (1) trained spotter per each independent dumping area. The trained spotter duties may also be discharged by an interim spotter or trained operator or interim operator, as described in the Definitions subsection of the Training Section in this report.

The material shall be segregated into three categories, namely -- non-permitted putrescible, non-permitted non-putrescible and permitted C & D waste to be disposed off on-site. Non-permitted waste shall be placed in the dumpsters dedicated for each type of waste. The two (2) dumpsters for non-permitted waste shall be handled as described in section "Temporary Storage" of this report. Waste leaving the site shall be delivered only to facilities approved to handle the specific type of waste being delivered.

After segregation of non-permitted waste, the allowed waste is pushed to the final disposal area and compacted by the tracked loader.

A small area, near on-site non-potable well #19 has been dedicated for recycling operations by an independent operator, Waste Pro, Inc. No waste from this stream is disposed of in Friends Recycling, LLC cells or handled by their personnel.

4.2.1 Prohibitions (Rule 62-701.300)

The storage, processing and disposal of waste within this facility shall be in accordance with conditions set forth by all permitting regulatory agencies, including the Florida Department of Environmental Protection (FDEP), the Saint Johns River Water Management District (SJRWMD). Operations must comply with applicable sections of FDEP rule 62-701, "Solid Waste Management Facilities".

4.2.1.1 Open burning of solid waste is prohibited except in accordance with rule 62-701.300(3).

4.2.1.2 Hazardous waste, Bio-hazardous waste and or liquids containing polychlorinated biphenyl (PCB) are specifically prohibited from acceptance and/or disposal.

4.2.1.3 The following items and/or materials shall not be disposed-of on this site:

- Buckets or cans containing tar, paint, solvents, glue, or other liquids
- Lead-acid batteries
- Used oil
- White goods
- Whole waste tires
- Noncontainerized liquids
- Containerized liquids
- Containers or tanks 20 gallons or larger in capacity, unless these have one end removed or punctured enough to ensure that they are not holding any liquids.
- Other materials which are not listed here may be listed in the Rule 62-701, or related rules.
- Pressure treated or creosote-treated or CCA-treated wood and/or products.
- Gypsum Wallboard

4.2.1.4 Hazardous materials, fuels, solvents, lubricants, etc. and other maintenance materials, shall be stored in a secured area near the office, away from the disposal and sorting areas.

4.2.1.5 Friends Recycling, LLC has voluntarily removed Gypsum Wallboard from the list of materials to be disposed-of on-site as part of the Odor Management Plan. Small amounts of Gypsum Wallboard which may be embedded in C & D waste which may be unpractical to remove and sort out, may still be disposed-of "un-shredded" on-site.

4.2.1.6 The Operator shall comply with the treated wood section of this report, which specifies the management and disposal of such materials.

4.2.1.7 Cells 1B, 2B, and 2C are not permitted to receive normal C & D waste. Only clean debris consisting of rubble, brick, glass and concrete is allowed until DEP issues a permit modification to receive normal waste.

4.2.1.8 Waste material from a waste processing facility which is mixed with Class I or Class III waste, either before or after processing, is not considered construction and demolition debris and may not be accepted for disposal at a construction and demolition debris disposal facility

4.2.2 Materials Allowed

Only inert waste generated by construction and demolition activities, generally considered to be not water soluble and non-hazardous in nature shall be accepted for disposal in this site. These materials include:

- Steel
- Glass
- Brick
- Concrete

- Asphalt material
- Pipe
- Lumber
- Carpet remnant material from C & D activities or from carpet manufacturers
- Rocks, Soils, Vegetative cover, trees and tree remains.

Carpet remnants which are from a construction or demolition project may be accepted at the facility. Plastic buckets which are empty at the time of delivery to the site may be accepted for disposal at the facility.

4.2.3 Management of CCA And Other Treated Wood

4.2.3.1 Friends Recycling, LLC, shall not accept waste containing woods treated with CCA, Creosote or Pressure Treated wood ("Treated Wood").

4.2.3.2 Friends Recycling, LLC, shall notify their established clients that this facility does not accept Treated Wood. Notification shall take place in the form of a certified form letter, copy of receipts kept on-file at the offices for Friends Recycling, LLC.

4.2.3.3 New clients shall be notified of these restrictions by copy of the form letter indicating so.

4.2.3.4 Friends Recycling, LLC personnel shall be instructed by the operator of these restrictions, of methods to help identify and handle suspect material, by making available to them the "Guidance for the Management and Disposal of CCA-Treated Wood" (Attachment - 9). This guidance document is made required reading by new personnel and is made part of this report by reference and as an attachment.

4.2.3.4.1 Incoming trucks should be visually inspected to look for dedicated loads of treated wood, specially from contractors specializing in the demolition of fences, decks and docks. The name of the company may help identify contractors who would be likely to have a dedicated load. For additional information, the scale operator shall ask the driver what they are hauling. All dedicated loads shall be diverted at the scale house for disposal at a lined facility.

4.2.3.4.2 A trained operator or spotter must inspect the load and pull out suspect pieces of treated wood. Separated wood should be placed in a roll-off container for disposal at a lined disposal facility.

4.2.3.4.3 Trained operators and spotters shall identify suspect wood by looking for smells, coloring, dimensional lumber, posts, loads of wood associated with hardware related to fences, decks, docks and piers.

4.2.3.5 These instructions for handling of treated wood shall be construed to ONLY apply when handling small amounts of Treated Wood inadvertently received among other C&D waste. Large amounts shall be mechanically reloaded onto the originator's vehicles.

4.2.3.6 When spotting, sorting and storing (for disposal offsite) Treated Woods, personnel shall be equipped with chemical-resistant gloves adequate for CCA, Creosote and other chemicals used in treating pressure-treated wood.

4.2.3.7 When handling Treated Wood, personnel shall wear sufficient clothing to prevent skin contact. In case of skin contact, the area coming in contact shall be washed thoroughly with soap and water.

4.2.3.8 Spotters shall sort out wood identified as Treated Wood, to be stored separately from other recyclable materials, and to be hauled for disposal off-site at a facility authorized to receive this waste.

4.3 Emergency and Contingency Plan

4.3.1 Fire

Accidental fires, although unlikely, are possible. However, the most likely type of fire is one which is deliberately set. The following guidelines have been developed to minimize the potential for fires and the spreading of said fires to surrounding properties.

4.3.1.1 An earth embankment generally six (6) foot in height, as shown in the drawings, shall be constructed along the perimeter of the parcels used for disposal. The space between the property line and the top of the berm shall be used as a buffer around the property in order to retard any eventual incendiary occurrence. The buffer zone shall be kept free of vegetation and debris at all times (except sod and mowed grass).

4.3.1.2 The vegetative screen, provided to buffer surrounding properties from noise, and visual pollution, shall be located on top of the berm.

4.3.1.3 Equipment capable of moving large amounts of dirt shall be maintained on-site and in working condition for use in putting fires out or creating new fire break lanes. The same front-end loader used for spreading and compacting the waste may be used for this purpose.

4.3.1.4 A chainlink fence shall be provided as shown in the drawings to supplement the barrier effect provided by the berms. The gates to the site shall be kept locked at all times when the facility is not being operated.

4.3.1.5 The owner / operator shall post outside the portable office and inside by the telephone, the telephone numbers for applicable emergency agencies having jurisdiction over the facility, such as 911, police, fire department. See Section 4.3.4 of this report.

4.3.1.6 A working telephone shall be available at all times during operation of the facility. Additionally, at least one working cellular telephone shall be available outside the office building, to be used by the trained operators or trained spotters in the event line telephone service at the office is down.

4.3.1.7 Within 24 hours of a fire affecting the facility, the Operator shall contact DEP by phone call, e-mail, or facsimile. Additionally, a letter must be submitted within five days to the Department describing how the fire began, what was done to extinguish it, and what will be done to prevent future fires.

4.3.2 Health and Injury

The operator shall be responsible for conducting the operation of this site at all times in accordance with OSHA and other applicable safety provisions.

The following minimum safety measures shall be taken:

4.3.2.1 The equipment operator (spotter, driver and or front end loader operator) shall have access within the site to two-way communication with the main office. Cellular telephones or other type of radio telephone would be acceptable.

4.3.2.2 A First Aid Kit shall be available at the site during operations. The first aid kit can be placed in the front end loader and or the vehicle used to travel to the site. A more comprehensive First Aid Kit shall be located inside the project office.

4.3.2.3 A written notification shall be sent by the Owner and/or Operator of the facility to emergency management entities, such as Police, 911, Fire Department. The notification shall include as a minimum, the telephone number, address, name of business, contact person, directions for access to the site and the type of work conducted within the site.

4.3.3 Sinkhole Formation

Upon the discovery of a sinkhole, the permitted owner / operator for the facility shall notify the following entities:

- Engineer of Record: Guerra Development Corp.	(352) 629-8060
- St. Johns River Water Management District	(386) 329-4500
- Department of Environmental Protection, Solid Waste	(407)-897-4100

4.3.4 Emergency Contacts

The Operator shall post in a conspicuous place within the facility office a list of emergency contacts, which shall be updated on a monthly basis, containing as a minimum, the following contacts:

- DEP Receptionist - Central District	(407) 897-4100
- City of Ocala Fire Department	911 Emergency or 629-8513 Non-emergency
- City of Ocala Police Department	911 Emergency or 369-7070 Non-emergency
- Guerra Development Corp.	(352) 629-8060
- St. Johns River WMD	(386) 329-4500
- Gerald Lourenco, Operator	(352) 266-9497

4.3.5 Severe Weather

4.3.5.1 This section applies to approaching weather such as hurricanes and tropical storms, as well as, the aftermath of tornados and design-level rainfall events (100-year 24-hour storms).

4.3.5.2 Within 72-hours of an expected hit by severe weather:

4.3.5.2.1 Emergency numbers shall be verified.
4.3.5.2.2 Communication tools such as land lines and cellular phones shall be checked.
4.3.5.2.3 Essential supplies (equipment fuel, spares, bottled water) shall be topped off.
4.3.5.2.4 The Facility Operator/Manager shall hold a meeting with facility personnel to discuss actions to be taken.

4.3.5.3 Within 48 hours of an expected hit by severe weather:

4.3.5.3.1 Dumpsters for recyclable material and for non-C&D waste shall be lawfully emptied.
4.3.5.3.2 All waste which may become airborne shall be promptly covered with dirt.
4.3.5.3.3 All equipment, parts, tools, etc. which may become airborne shall be properly secured.
4.3.5.3.4 All components for the drainage system (ditches, swales, pipes, inlets, etc.) shall be verified to be in proper working conditions.

4.3.5.4 Within 24 hours of an expected hit by severe weather:

4.3.5.4.1 Mr. Gerald Lourenco, Facility Operator/Manager shall make the determination for shutting down.
4.3.5.4.2 Upon shutting down, no additional waste shall be received.
4.3.5.4.3 Fuel tank shall be secured, shed access shall be locked and power to the fuel pump disconnected.
4.3.5.4.4 All gates to the facility shall be locked.
4.3.5.4.5 Emergency contact information, visible from outside of the facility shall be verified.

4.3.5.5 After severe weather has passed:

4.3.5.5.1 Mr. Gerald Lourenco, Facility Operator/Manager shall make the determination for re-opening the facility.
4.3.5.5.2 An inspection of the facility shall be made under Mr. Lourenco's direction.
4.3.5.5.3 If any significant damage is observed Friends Recycling shall retain a licensed professional engineer to assess if the damage may affect permit conditions, and to take appropriate action.
4.3.5.5.4 In the event of damage which may affect permit conditions, either Mr. Lourenco or by delegation, the retained licensed professional engineer shall notify DEP of the damage and remedial actions to be taken. This notification to DEP shall be made within 72 hours (or as soon as practical) of the event.

4.4 Site Resources List

4.4.1 Personnel

The owner / operator of the facility intends to continue with the operational practices used in the currently permitted facility.

- A secretary at the portable office.

- Owner / operator, facility manager.
- Two (2) trained operators using the heavy equipment (dozer or front-end loader).
- Two (2) trained spotters.

The trained operator using the heavy equipment to spread the waste once is received may act as a trained spotter upon spreading the waste. Operators and spotters shall be trained as described in this report, per chapter 62-701-730(8).

4.4.2 Equipment

Three Rex compactors, one 4-wheeler, two front-end loaders, one excavator 330 LC, one skeet steer 252B Caterpillar, one D25D off-road truck John Deere, top grinder for trees and branches, one 4000-gallon water truck.

4.5 Compaction, Grading Schedule, and Maintenance

Waste shall only be placed on each cell after it has been spread, visually spotted for non-permitted material and segregated (if applicable). Acceptable waste shall be placed in the cells in 12-inch layers. Then it shall be compacted by at least two (2) passes with the front-end loader or two (2) passes with the tracked bulldozer.

Slope of waste disposal shall be kept at a maximum slope of 3:1 (horizontal:vertical) and any erosion shall be promptly fixed.

The drainage swales, berms and other storm drainage system elements shall be kept free of debris, graded in accordance to approved plans and covered with grass or sod to minimize erosion. Failure to maintain the storm drainage system may result in flooding and damage to outside property.

Refer to the Closure & Grading Plan, dated 1-10-08, for final grading for each cell.

4.6 Site Access Control

The facility shall be surrounded by an access barrier, as indicated on the drawings, made up of earth berm and/or chain link fence. The entrance to the facility shall be gated, and the gate shall be locked when the facility is not open for business or unsupervised. The entrance gate shall have a sign showing the name of the facility and a telephone number for normal and off (emergencies) business hours. The drainage retention area (DRA) shall be enclosed with chainlink fence in its entirety. Upon facility closure, install an uninterrupted 6-foot high chainlink fence along the entire perimeter of the facility.

4.7 Minimum Waste Inspection

As described on Rule 62-701.730(7)(d), at least one spotter must be on duty to inspect the waste as it is delivered prior to final placement in the cell. See Operation Plan for additional information.

4.8 Nuisance Control

Proposed location and size of the cells minimize the potential for nuisance to the surrounding areas.

4.8.1 Odors

The type of waste being received at the site, construction debris, minimizes the potential for foul odors as well as animal life nuisance. However, C&D facilities have the potential for the generation of odors.

Primary sources for odor are non-permitted waste, gypsum wallboard, decomposing organic material such mulch, grass, branches, and other yard waste.

Friends Recycling, LLC, has been made aware by DEP of complaints regarding nuisance odors. The management of the facility has been unable to confirm the severity and frequency of the odors as reported.

Friends Recycling, LLC, operates the C&D facility in a responsible manner and in compliance with the C&D Solid waste permit. Friends Recycling, LLC, will undertake additional measures to mitigate and manage odors which may be emanating from the facility.

Refer to the Odor Management Plan, contained in a subsequent section of this report.

4.8.2 Noise

Operations will continue as they have, with working hours from seven (7) a.m. to six (6) p.m., Monday through Friday. The proposed berm is intended to provide visual as well as noise protection.

4.8.3 Litter

The engineering drawings call for the site to be surrounded by a six (6) foot high berm and a fence. This will minimize the potential for debris such as paper or other like light-weight items to be blown to surrounding properties; The only source for such debris will be the sorting area.

During cell operations above original ground level, the operator shall inspect the surrounding areas outside the project on a monthly basis to ensure that debris and litter is not being blown beyond the project. Any project litter found must be collected by the operator.

The operator is hereby required to maintain a clean project site free of litter. Periodic clean up runs, not to exceed one month (or sooner if needed) are required as a measure of good management practice, and it should encompass the entire site. Daily pick-up of minor litter items is encouraged.

4.9 Storage of Petroleum and other Maintenance Materials

The increase in operating equipment has required the installation of on-site fuel storage. A single 500-gallon above-ground tank is housed inside a secured shed. This shed shall be kept locked during non-operating hours.

4.10 Regulated Hazardous Waste

Upon discovery of regulated hazardous waste in the Friends Recycling facility, the operator shall undertake the following actions.

- Notify the department of the material and estimated quantity found.
- Notify the person and/or entity responsible for shipping the waste, if the identity can be ascertained.
- Notify the generator of the waste, if the identity can be ascertained.
- Cordon off the area where the waste is deposited.
- Undertake the work to cleanup, transport and dispose of the waste at a permitted hazardous waste management facility.
- Notify the department when the cleanup and disposal operations have been completed

4.11 Recycling

Recycling of materials contained in the construction and demolition debris waste stream is allowed under this permit [62-701.730(13)]. The following materials may be recycled: Aluminum, dimensional lumber, plastics, concrete and masonry, steel, gypsum wallboard.

No soil, recovered fines or screened materials shall be accepted for recycling under this permit at this facility. These materials may be disposed of in this facility so long as they are placed in the cells in accordance with the conditions of this permit and so long as they are placed under at least two (2) feet of cover material.

The recycling operation consists of a spotter inspecting the waste as it is being spread by the dozer or front end loader. Material to be recycled is segregated by the spotter and then deposited in bins or recycling dumspters in accordance with type of material.

Trees and other wood debris originating from the construction and demolition debris waste stream are passed through the top grinder and converted into mulch. This area is mobile and it is relocated as needed to allow the disposal operation to take place.

4.12 Reporting

The owner or operator of the facility shall submit a report to the Florida Department of Environmental Protection, per Chapter 62-701.730(12) F.A.C.

The report shall be submitted on form 62-701.900(7) (enclosed) annually no later than April 1 of each year, and it shall cover the previous calendar year (January 1st to December 31st).

It shall be the responsibility of the owner/operator to verify with the DEP any changes to the form, frequency or other aspects of the reporting requirements for this facility.

The report shall contain information which includes a summary of the amount and types of waste disposed of or recycled, the county of origin of materials which are recycled or a statement that the county of origin is unknown.

5 ODOR MANAGEMENT PLAN

5.1 BACKGROUND

5.1.1 The original Engineer's Report for Friends Recycling, LLC (Friends), contained provisions for Nuisance Control, including section 4.8.1, which specifically addressed nuisance odors.

5.1.2 After the 2008 permit was issued, Friends was made aware of odor-related complaints filed with DEP by nearby residents and/or their representatives, after which several visits and discussions held between DEP representatives and the owner/operators for Friends Recycling, LLC.

5.1.3 This culminated in a letter from DEP, dated May 18, 2010, signed by Mr. Thomas Lubozynski, P.E., Waste Program Administrator, on which specific actions were required of Friends, one of which was the preparation of a more detailed odor control program.

5.1.4 On behalf of Friends, Guerra Development Corp. (GDC) prepared a draft Odor Control Plan, dated August 17, 2010, which was submitted to DEP.

5.1.5 Odor complaints were referred to the City of Ocala and this got city officials involved in monitoring complaints, conducting site visits and meetings with residents, the Operator and DEP.

5.2 STATEMENT OF FACT

5.2.1 Friends Recycling, LLC is currently in compliance with permit requirements, as set forth in the permit conditions for permit #SO42-0019600-007.

5.2.2 Friends Recycling, LLC is a responsible operator for the permitted C&D debris disposal facility and it has been demonstrably responsive to rules, regulations and the welfare of the adjacent residents. For example, odor complaints have been acted upon, Friends has caused the installation of central City of Ocala water for residents on their west side, measures have been implemented to minimize impact to residents from nuisance sources such as dust, noise and odors.

5.2.3 Following odor complaints, multiple site visits and inspections by DEP officials, City of Ocala representatives and from Friend's personnel, have not been able to confirm the severity and frequency of the odor problems as stated in the complaints. Friends has not construed this to mean that no odor ever reaches the adjacent properties under certain climatic and atmospheric conditions.

5.2.4 From recent historical evidence, DEP and members of the C&D industry have realized that practices previously thought to mitigate odors may indeed increase their potential, such as crushing and pulverizing gypsum wallboard prior to disposal.

5.2.5 Recent anecdotal evidence from C&D facility operators in the central Florida area suggests that expensive and complex systems for odor control are no more effective than simpler and more cost efficient methods such as additional soil cover.

5.3 FOCUS OF THE ODOR MANAGEMENT PLAN

5.3.1 GDC has identified three primary potential sources of nuisance odors at Friends. This Odor Management Plan will focus on these which could make the most difference in mitigating odors:

5.3.1.1 Old Waste
5.3.1.2 New Waste
5.3.1.3 Temporary Storage of non-permitted waste

5.3.2 Old Waste: Waste previously deposited in cells at Friends may be causing occasional odor emissions. Application of additional soil cover is one of the methods used with success.

As example of this procedure, a couple of locations were identified as minor sources of on-site odors where older waste was deposited. These areas were provided with an additional 12 inches of soil cover and the odor has ceased.

5.3.3 New Waste: Friends is voluntarily removing certain items form the approved materials list. The old practice of mulching vegetation and using the mulch for cover has been stopped; decomposing mulch was generating odors.

Gypsum wallboard, which in its decomposing state is believed to be the primary source of odors in old and new waste, will no longer be disposed of at Friends. The gypsum wallboard will be sorted out and stored for hauling offsite. This shall not be interpreted to mean that Friends will be in violation of the Odor Management Plan if small and sporadic pieces of gypsum wallboard embedded in the waste stream and which are impractical to remove, make it to the disposal cell.

5.3.4 Temporary Storage: Although not believed to be the source of odors generating the complaints, temporary storage of non-permitted waste, such as putrescibles, new gypsum wallboard, has the potential to generate odors.

This Odor Management Plan sets forth procedures to ensure that the residency time for such waste is short enough to prevent nuisance odor generation.

5.3.5 Complaint Management Protocol: As a good neighbor, Friends interprets verified complaints as opportunities to better manage and operate their facility, and as helpful outside indicators of areas which need additional attention. This Odor Management Plan sets forth procedures to ensure that surrounding community concerns are addressed by Friends in a timely and effective manner, and that complaints are utilized to assess the effectiveness of procedures already in place.

5.4 ODOR MANAGEMENT PLAN PHASING

5.4.1 Implementation of the Odor Management Plan has been arranged to start with the most effective and simple procedures, then if needed, progressively advance to more complex and expensive methodologies.

5.4.2 Phase One, shall be implemented by Friends upon approval by FDEP of this application for permit renewal. This initial phase presents the greatest potential for reduction of future nuisance odors and mitigates current nuisance odors.

5.4.3 Phase Two, a more involved, time-consuming and expensive approach, shall be put into action in the event that Phase One has been demonstrated inadequate by the FDEP.

5.5 PHASE ONE OF THE ODOR MANAGEMENT PLAN

5.5.1 Actions listed on this plan shall be implemented no later than two (2) weeks after receipt of a permit renewal for Friends Recycling, LLC by FDEP.

5.5.2 OPERATING PROCEDURES FOR ODOR MANAGEMENT

5.5.2.1 **Non-permitted waste**, including putrescible material, shall be removed from the site on a daily basis.

5.5.2.2 **Mulch** shall not be accepted as waste unless it is disposed of immediately and covered with 12" of waste, or alternatively with 2-4 inches of soil.

5.5.2.3 **The practice of mulching vegetative waste**, storing and using the mulch as partial cover, shall be stopped. Mulch in the premises shall be handled as described above.

5.5.2.4 **Gypsum wallboard** has been identified by DEP as one of the primary sources of nuisance odors in C & D disposal facilities. Friends has voluntarily decided to stop disposing of gypsum wallboard on-site. Gypsum wallboard shall be sorted out like non-permitted waste, stored away from the disposal cell and hauled off site on a weekly basis.

No section of this Odor Management Plan shall be interpreted as preventing Friends from disposing on-site of minor, smaller pieces of gypsum wallboard which may be embedded in the waste stream and which may be impractical to remove.

5.5.2.5 **Compaction:** Material placed in the disposal cells shall be thoroughly compacted to eliminate voids and to enhance water runoff from the surface of the compacted waste.

5.5.2.6 **Interim Storm Water Runoff Management:** Temporary drainage improvements shall be constructed to minimize runoff from coming into contact with the waste stream.

5.5.2.6.1 Berms and/or swales shall be constructed to prevent runoff to flow into uncapped cells. Runoff flowing from the higher portions of Cell #1 currently flow south into the active cells #2A. Berms and swales shall be constructed to convey runoff around Cell #2A.

5.5.2.6.2 Disposal cells which trap water, such as depressed pits, shall be graded temporarily so that the bottom slopes away from the active area of the cell. Temporary ditches and depressions may be excavated at the bottom of the cell to accumulate runoff away from under the waste mound.

5.5.2.6.3 Friends shall retain the services of Florida Registered Professional Engineer to prepare Interim Drainage Plans, and to make monthly inspections to ensure that Interim Drainage meets the performance criteria set forth by this Odor Management Plan.

5.5.2.7 **Nuisance Odor Survey:** Implementation of this Odor Management Plan includes conducting regularly scheduled nuisance odor surveys as described in a subsequent section of this report

5.5.2.8 **Odor Complaint Management Protocol:** Upon receipt of the approved permit renewal, Friends shall implement the Complaint Management Protocol described in a subsequent section of this report.

5.5.2.9 **Interim Soil Cap:** Upon detection of nuisance odors, weather by random detection, or from the regularly scheduled Nuisance Odor Survey, or from a complaint, the source area should be identified and provided with a 6" thick soil cap. If 48 hours later it is found that this cover was inadequate, an additional 6" soil cap shall be installed over nuisance odor the source area.

5.5.3 NUISANCE ODOR SURVEY

5.5.3.1 ON-SITE FOR ACTIVE CELLS

5.5.3.1.1 WHEN: Once in the early morning, at the start of operations, AND, once in the evening, at closing time.

5.5.3.1.2 WHERE: A designated employee from Friends Recycling shall walk the perimeter of the active cell, and, walk in a serpentine pattern across the top of the active cell.

5.5.3.1.3 PURPOSE: To identify the presence and source area of nuisance odors.

5.5.3.1.4 ACTION: Areas identified during the survey walk as nuisance odor generators shall be provided with additional waste cover until the odor ceases. If the odor does not cease with the placement of additional waste, an interim soil cap shall be provided as described in the Operating Procedures for Odor Management.

5.5.3.2 ON-SITE FOR INACTIVE CELLS

5.5.3.2.1 WHEN: Once in the evening , at closing time on Friday or the last work day of the week. When verified active complaints are received, the schedule of Nuisance Odor Surveys for inactive cells shall be the same as the one for active cells, as described above.

5.5.3.2.2 WHERE: A designated employee from Friends Recycling shall walk in a serpentine pattern across the top of the inactive cell.

5.5.3.2.3 PURPOSE: To identify the presence and source area of nuisance odors.

5.5.3.2.4 ACTION: Areas identified during the survey walk as nuisance odor generators shall be provided with an interim soil cap as described in the Operating Procedures for Odor Management. If the 12" soil cover does not satisfactorily control the nuisance odor, the engineer of record shall be contacted for further evaluation.

5.5.3.3 OFF-SITE

5.5.3.3.1 WHEN: Once in the early morning, at the start of operations, AND, once in the evening, at closing time.

5.5.3.3.2 WHERE: A designated employee from Friends Recycling shall

conduct an odor survey of the perimeter of the Friends Recycling facility. Additionally, the western boundary of the facility shall be inspected by foot.

5.5.3.3.3 PURPOSE: To identify the presence and source area of nuisance odors.

5.5.3.3.4 ACTION: Upon discovery of nuisance odors, the source location shall be identified taking into account actual wind conditions. Nuisance odor source areas shall be provided with additional cover waste until the odor ceases. In the event that odor does not cease with the placement of additional waste, a soil cover of 12" shall be placed over the problem areas.

5.5.3.4 NUISANCE ODOR SURVEY LOG

5.5.3.4.1 Friends Recycling shall create a log document to be kept at the facility at all times. Monitoring of nuisance odors shall be logged by recording, as a minimum, the following information:

5.5.3.4.1.1 Date and time of the inspection
5.5.3.4.1.2 Name and signature of employee conducting the survey.
5.5.3.4.1.3 Environmental conditions, such as estimated wind direction and speed, rain or clear skies.
5.5.3.4.1.4 Areas surveyed, as a minimum, active cell number, inactive cell number, offsite and offsite along west boundary of the facility.
5.5.3.4.1.5 Results of the inspection denoting whether or not nuisance odors were detected.
5.5.3.4.1.6 If nuisance odors were detected, note the location and relative strength.
5.5.3.4.1.7 Note the source area of the odor
5.5.3.4.1.8 Note the action taken to mitigate the nuisance odor.

5.5.3.4.2 An official Inspection Log Book shall be maintained at the on-site offices of Friends Recycling, LLC, and shall be available to DEP representatives for inspection during regular business hours.

5.5.4 ODOR COMPLAINT MANAGEMENT PROTOCOL

5.5.4.1 Friends Recycling, LLC (Friends) shall prepare and maintain a log for odor complaints. This log shall be available at the offices of Friends during regular business hours.

5.5.4.2 It shall be the facility operator's responsibility to prepare, maintain and make appropriate entries into the log. The Operator may designate an employee of Friends to keep the log, but it shall ultimately be the operator's responsibility to keep the log in accordance with ths protocol.

5.5.4.3 Complaints shall be categorized in to three (3) groups:

5.5.4.3.1 Verified Complaints are hereby defined as those for which:

5.5.4.3.1.1 The complainant provides name, address or other means of contacting the complainant back.

5.5.4.3.1.2 The complainant provides credible and sufficient data to adequately investigate the complaint.

5.5.4.3.1.3 The nature of the complaint has been verified by either personnel from Friends, FDEP representatives or City of Ocala officials.

5.5.4.3.2 Unverified Complaints are hereby defined as those which do not meet the prerequisites of a Verified Complaint as described above.

5.5.4.3.2.1 Anonymous complainants.
5.5.4.3.2.2 Not enough information to investigate the claims.
5.5.4.3.2.3 The claims could not verified by either employees of Friends, FDEP representatives or City of Ocala officials.

5.5.4.3.3 Ignored Complaints are hereby defined as those unverified complaint on which the complainant uses vulgar or abusive language, or make threats or allege false accusations against Friends personnel or their subcontractors.

5.5.4.4 Verified Complaints

5.5.4.4.1 Upon receipt of a verified complaint, the complainant's information shall be entered in the log.

5.5.4.4.2 A Friends employee (Inspector) shall immediately drive to the location identified by the complaint, and offer to meet the complainant at said location to confirm the nature of the complaint.

5.5.4.4.3 The Inspector shall remain in public property unless invited by the owner to enter the property of the complainant.

5.5.4.4.4 The Inspector shall walk the area of the complaint for at least 10 minutes to account for momentary atmospheric variations (wind direction shift, wind speed change), and check for the presence of nuisance by means of smelling.

5.5.4.4.5 If the presence of nuisance odors is detected:

5.5.4.4.5.1 The Inspector shall attempt to identify the source location (old waste, new waste, temporary storage, etc.)

5.5.4.4.6 Upon identification of the source location for the nuisance odor, Friends shall take immediate action to mitigate the odors by using methods outlined in this Odor Management Plan, such as installing an Interim Soil Cap.

5.5.4.4.7 The Inspector shall enter the results of the inspection and any action taken in the log.

5.5.4.4.8 Friends shall respond to the complainant in writing, email or other methods which leaves a paper trail, and advise the complainant of the results of the inspection, actions taken or future measures to be implemented.

5.5.4.5 Unverified Complaints

5.5.4.5.1 If not enough information was received to identify the general direction of the alleged odor problem, a Friends employee (inspector) shall walk the perimeter of the waste within the Friends property.

5.5.4.5.2 If no odors are detected by the Inspector by means of smelling, an entry shall be made in the log to document the event.

5.5.4.5.3 If an odor is detected by the Inspector by means of smelling, then the same procedures shall be taken as for a verified complaint, including log entry.

5.5.4.6 Ignored Complaints

5.5.4.6.1 No action taken other than making an entry in the log stating that an Ignored Complaint was received on the date and time applicable, and the reasons why it was deemed an Ignored Complaint.

5.5.5 REPORTING

5.5.5.1 The landfill operator will prepare a quarterly report detailing the Phase One Odor Management Plan actions. The report will be submitted for each calendar quarter, not later than the 15th day of the following month (that is, April 15, July 15, October 15, and January 15). The report can be submitted electronically to DEP_CD@dep.state.fl.us. The report will include:

- A summary of odor complaints received by landfill personnel including date, time, and location of the complainant (if applicable);
- A summary of actions taken to confirm the odor complaint (if applicable);
- A summary of actions taken to mitigate the odor complaint (if applicable);
- Copies of correspondence sent by the landfill operator to the complainant, addressing their concerns and actions taken by landfill personnel to mitigate the source of odor (if applicable).

5.6 PHASE TWO OF THE ODOR MANAGEMENT PLAN

5.6.1 Implementation

5.6.1.1 Phase Two of the Odor Management Plan shall be considered as an incremental program. All requirements set forth by the Phase One of the Odor Management Plan shall continue to be implemented in addition to those described below.

5.6.1.2 Phase One shall be allowed to work for a period of 6-12 months, after which period the department may make the determination as to whether or not implementation of Phase Two is warranted.

5.6.1.3 This section intentionally left open.

5.6.1.4 The Phase Two Implementation Plan shall consist of a study, design and schedule for implementation of Phase Two, prepared by a Florida licensed professional.

5.6.1.5 Elements listed below make part of Phase Two of the Odor Management Plan, and may be implemented in part if said part alone is believed to be sufficient to address pertinent issues.

5.6.2 Detailed Interim Drainage Plan

5.6.2.1 Friends Recycling, LLC shall retain Guerra development Corp, or other Florida Licensed professional engineering firm with experience in C & D landfills and drainage, to prepare a detailed interim drainage plan to provide flow routes, conveyance and management of runoff with the express goal of reducing the potential for infiltration of rainwater into the waste areas.

5.6.3 Excavate interim cell runoff storage

5.6.3.1 This may be implemented as part of the above item, Detailed Interim Drainage Plan, or on its own.

5.6.3.2 Interim cell runoff storage shall consist of grading the bottom of the remainder of the active cell away from the waste area, and providing specific storage volume determined by the engineer of record for the project. The express goal of this action is to allow infiltrated rain water to seep to the bottom of the waste mound and then flow away from the waste to an interim runoff storage depression.

5.6.4 Landfill Gas Vents

5.6.4.1 If off-site verified nuisance odor complains continue to be received by FDEP and Friends Recycling, LLC, supported by nuisance odors surveys as described earlier in this plan, Friends Recycling, LLC, will prepare a gas monitoring plan and present it to FDEP for review and approval.

5.6.4.2 Gas monitoring plan may consist of the installation of three (3) 2" PVC vents with valves, to be used as a program to sample the gas at each vent at quarterly intervals.

5.6.4.3 In the event the sampling of vents reveals a significant amount of gas, most likely hydrogen sulfide (H_2S), the plan shall be amended to determine the gas mitigation procedure – Venting at times of desirable atmospheric conditions or by the installation of vent flares.

5.6.5 REPORTING

5.6.5.1 The landfill operator will prepare a monthly report detailing the Phase Two Odor Management Plan actions. The report will be submitted for each month, not later than the 15th day of the month following the reporting month. The report can be submitted electronically to DEP_CD@dep.state.fl.us. The report will include the following:

- A summary of odor complaints received by landfill personnel including date, time, and location of the complainant (if applicable);
- A summary of actions taken to confirm the odor complaint (if applicable);
- A summary of actions taken to mitigate the odor complaint (if applicable);

• Copies of correspondence sent by the landfill operator to the complainant, addressing their concerns and actions taken by landfill personnel to mitigate the source of odor (if applicable).
• A description of Phase Two actions taken during the previous month and an assessment whether they were effective
• A description of Phase Two actions that are planned for the next three months.

6 CLOSURE PLAN

6.1 Closure of the facility will involve capping the remaining landfill cell areas, grading the site, seeding/grassing and providing the drainage facilities as indicated on the Closure and Grading Plan, prepared by GDC, dated 1-10-01, updated January 28, 2013, submitted as part of the engineering drawings.

6.2 At least 90 days prior to the date when waste will no longer be accepted, the owner or operator of Friends Recycling, LLC, shall submit an updated closure plan to DEP to reflect any changes in the closure plan due to actual operational conditions at the facility.

6.3 Final cover and seeding or planting or vegetative cover shall be placed on each disposal cell within 180 days after it has reached its final grade. The final cover shall consist of a 24-inch thick soil layer , the upper 6 inches of it shall be capable of supporting vegetation.

6.4 The landfill side slopes shall have a maximum slope of 3:1 (H:V) and shall be capped as described above. Side slopes shall be sodded.

6.5 Temporary closure of this facility is not anticipated. If this should change in the future, temporary closing shall be done in accordance with 62-701.730(9)©).

6.6 The owner or operator shall retain the services of a Florida licensed professional engineer to oversee construction and implementation of the Closure Plan. This is necessary in order for said professional to certify closure construction completion.

6.7 The owner or operator shall provide a certification of closure construction completion to the DEP within 30 days after closing, covering and seeding the disposal unit. Prior to that, a Florida licensed professional engineer shall be retained to review the approved proposed closure plan for applicability and to inspect the closure activities for certification.

6.8 The owner or operator shall provide a final survey report prepared by a Florida licensed professional land surveyor and mapper, in accordance with Rule 62-701.601(3), F.A.C..

7 FINANCIAL ASSURANCE

Financial assurance in accordance with Rule 62-701.730(11), is enclosed via separate cover.

8 PROOF OF OWNERSHIP OR CONTROL

The construction and demolition debris facility is owned and operated by Friends Recycling, LLC. The property affected by cells #1 and #2 are represented by two (2) deeds.

Deed 1: Labeled as Parcel One (Current Permit) as an attachment to the "Engineer's Report", dated October 29, 2001, prepared by GDC, on file at DEP. It is a warranty deed dated April 25, 1988, from Donald E. Rose to Ocala Limerock Corporation.

Deed 2: This deed is attached to the revised Report from GDC, it includes property to the south of Deed 1, containing Cell #2 in its entirety.

Proof of ownership remains valid as originally submitted for permit . These are included by reference to the original permit No. SO42-0019600-005 for the Ocala Recycling, LLC, C&D Disposal and Recycling (later changed to Friends Recycling, LLC), issued on November 1, 2002.

9 STORM WATER MANAGEMENT

The storm drainage system for this site has been designed to meet applicable criteria from the Saint Johns River Water Management District (SJRWMD). The system consists of a single retention pond, sized to manage the pre-post difference for a 100-year 24-hour event, with 11.5 inches of rainfall, to minimize damage to downstream properties.

The design shown in the drawings are for the closure state of the facility. During the operation of the facility, prior to closure, partial construction of the drainage facilities are allowed so long as no runoff exits the facility's property for up to a 25-year 24-hour storm.

The approved permit from the SJRWMD is No. 40-083-43631-2, Issued April 26, 2002, authorized by Kenneth A. John.

10 TEMPORARY STORAGE

The spotter for the project is charged with inspecting and sorting the waste. All non-permitted waste shall be segregated away prior to final placement and compaction in the cell.

Two (2) dumpsters (minimum) shall be provided within 100' of the active cell. One will receive the putrescible material, which must be emptied within 48 hours of receiving waste. The other will receive non-putrescible waste, and will be emptied as needed, but not to exceed 30 days after receiving waste.

The dumpsters shall be placed adjacent to the stabilized driveway to permit the garbage truck to have access. These dumpsters shall be relocated as needed, as the project progresses.

11 TRAINING PLAN

11.1 General

This section is included as required by Chapter 62-701.320(15) to ensure adequate training of personnel operating the construction and demolition debris disposal facility. It shall be the responsibility of the facility operator, as identified on the permit, to comply with all applicable provisions from chapter 62-701.320(15), as augmented and supplemented in this report.

The owner and/or operator of the Friends Recycling LLC construction and demolition debris disposal facility shall not employ a person to perform, nor may any person perform, the duties of an operator or spotter at such facility unless that person is a trained operator or a trained spotter, or an interim operator or interim spotter.

11.2 Definitions

11.2.1 **"Operator":** Any person, including the owner, who is principally engaged in, and is in charge of, the actual operation, supervision, and maintenance of a solid waste management facility and includes the on-site person in charge of a shift or period of operation during any part of the day, such as facility managers, supervisors and equipment operators. A trained "operator" may perform the duties of a trained "spotter".

11.2.2 **"Interim Operator":** Any person who has, in the opinion of the facility manager, shown competency in his chosen occupation through a combination of work experience , education and training and who has at least one year of experience at that facility or similar facility.

11.2.3 **"Spotter":** Any person employed at a solid waste management facility whose job is to inspect incoming waste and to identify and properly manage any hazardous or prohibited materials which are received at the facility. "Spotters" shall be stationed where they can thoroughly inspect each shipment of waste for prohibited materials.

11.2.4 **"Interim Spotter":** Any person who has, in the opinion of the facility manager, shown competency in his chosen occupation through a combination of work experience , education and training. An "Interim Spotter" may perform the duties of a "Spotter", but only under the supervision of a trained "operator" or a trained "spotter".

11.3 Training Requirements

11.3.1 In order to be considered trained, operators and spotters of the Friends Recycling LLC Construction and Demolitions Debris Disposal facility shall complete the following training requirements at courses described in the facility's Operating Plan.

11.3.2 **Operators:** Shall complete 24 hours of initial training, and shall pass an examination as part of that training. Within three (3) years after passing the examination, and every three (3) years thereafter, operators shall complete an additional 16 hours of continued training.

11.3.3 **Spotters:** Shall complete 8 hours of initial training. Within three (3) years after attending the initial training, and every three (3) years thereafter, spotters shall complete an additional 4 hours of continued training.

11.4 Approved Training

11.4.1 All training courses, whether public or in-house, shall be approved by the DEP in accordance with Section 403.716, F.S.. A third party must administer any examination required by this sub-section for an in house operator-training program.

11.4.2 Any other in-house operator-training program must be administered by a trained operator. The Training Plan, along with records documenting how the Training Plan is being implemented, shall be kept at the Facility at all times and be made available for inspection by DEP staff.

11.4.3 The owner and/or operator for the Friends Recycling LLC construction and demolition debris disposal facility shall obtain bi-annually a list of approved relevant training courses from the Department of Environmental Protection, 3319 Maguire Boulevard, Suite 232, Orlando, Florida 32803-3767.

11.4.4 Until a more current list is obtained, training for personnel on this site will take place through the University of Florida TREEO Center, at the Construction and Demolition Debris Landfills: Short Course for Operators and spotters. Date and location of seminars may be found at the following address:

University of Florida
TREEO Center (E-Mail: train@treeo.doce.ufl.edu)
3900 SW 63rd Blvd.
Gainesville, FL 32608-3848

11.4.5 Proof of training shall be sent to DEP - Central District office in Orlando, on behalf of Friends recycling, LLC, within 15 days of any employee completing the required training. A copy of the proof of training, such as a Certificate of Completion, shall be kept on file at Friends Recycling and shall be made available for inspection by DEP staff upon request.

11.4.6 The following employees of Friends Recycling have received required training. Copies of certificates are attached to this report:

- Gerald Lourenco, Operations Manager, spotter: "24-hour Intitial Course for Landfill Operators (Class I, II, III, and C&D)", February 22-24, 2006. Retake same class for renewal not later than January 2009. Spotter Training for Solid Waste Facilities, dated January 30, 2009.

- Nick Giumarelli, Manager, Spotter, "24-hour Intitial Course for Landfill Operators (Class I, II, III, and C&D)", February 22-24, 2006. Retake same class for renewal not later than January 2009. Initial Training Course for Landfill Operators and C&D Sites, 24 hour, February 25, 2009.

- Sonny Gilbert, Spotter, "8-Hour Training Course for Spotters at Landfills, C&D Sites and Transfer Stations", November 17, 2010.

- Neyro Briones, Spotter, "8-Hour Training Course for Spotters at Landfills, C&D Sites and Transfer Stations", November 17, 2010.

12 LONG TERM CARE PROVISIONS

12.1 General

These provisions shall be construed as a minimum and it should not supersede any conditions set forth by permitting agencies such as DEP or the WMD. Every effort must be made to keep the site in accordance with design plans and approved permit conditions and special provisions.

12.2 Vegetative Cover

The project area shall be monitored on a bi-annual basis for erosion. Ensure that a good vegetative cover is in place over the closed cells to minimize erosion. The sod planted on the side slopes for the drainage retention area and ditches shall be mowed regularly. Any areas which have been washed out and eroded shall be re-graded and re-sodded as needed.

12.3 Erosion

Eroded areas shall be repaired promptly to minimize further damage. Re-grade and replace vegetative cover. Accumulated silts from normal drainage flow or from erosion shall be removed from ditches and DRA on a yearly basis.

12.4 Fences

The perimeter fences and gates shall be inspected on a monthly basis and repairs be effected promptly to secure the project site from unauthorized entry.

12.5 Tree Buffer Zones

Proposed perimeter tree buffer zone shall be monitored on an annual basis to ensure the normal progress of planted material. The long leaf pine planted shall be replaced as needed to maintain a continuous barrier along the project perimeter. Alternate plants may be used so long as they are of species which are expected to do well in the climate of the project site and provide similar buffering.

12.6 Cell Caps

Routine inspections should help minimize the potential for damage to the cell soil cap. However, if erosion occurs to the point that the cap has been removed or reduced in specific areas, it must be promptly returned to its design characteristics. Upon making repairs, a cap of soil suitable for vegetative growth shall be placed, to sustain a vegetative cover.

12.7 Regrading

Re-grade as necessary to maintain the final topography of the site as shown in the Closure Plan. This may be necessary due to erosion damage, settlement of the cells due to consolidation of the buried debris, etc. If sinkholes are found or develop, the project engineer and/or the water management district must be notified immediately.

12.8 Groundwater Monitoring

According to Rule 62-701.730(10), F.A.C., ground water monitoring shall be extended for a five (5) year period starting at the date of closing for the C&D disposal facility.

---------- END OF MAIN BODY OF REPORT ----------

ATTACHMENT 1

RESPONSE TO RULE 62-701.730 F.A.C.

RESPONSE TO C&D DEBRIS RULE 62-701.730 F.A.C.
FRIENDS RECYCLING, LLC
January 28, 2013

The intent of this part of the report is to aid the reviewer by addressing each section of the rule and stating what actions where taken or are being proposed by the applicant in order to met the requirements set forth by the rule.

62-701.730 Construction and Demolition Debris Disposal and Recycling.

(1) Applicability.

(a) No person shall construct, operate or close an off-site construction and demolition debris disposal facility without a permit issued by the Department. All holders of construction or operation permits issued prior to January 6, 2010, that contain conditions not in conformance with this chapter shall apply for modification of the permit to conform to this chapter to the District Office of the Department that issued the permit. The submission shall occur at the time of application for renewal of an existing permit, or before July 5, 2010, whichever is earlier. For purposes of this paragraph, a permit issued prior to January 6, 2010, is deemed to include a completed permit application received by the Department prior to January 6, 2010. However, the provisions of paragraph (4)(h) of this section will not apply to any disposal units of a facility that have received a Department permit authorizing construction or operation prior to January 6, 2010.

Response to (1)(a): Friends Recycling LLC received a FDEP permit on July 30, 2008, which is prior to January 6, 2010. As such, prior approved setbacks less than 100 feet remain.

(b) After the applicable compliance deadline specified above, facilities shall operate only in accordance with the provisions of this section. However, any disposal unit that received a significant amount of waste in accordance with the conditions of its permit prior to the applicable compliance deadline is not required to comply with any siting or construction design requirements of this chapter that were not in effect prior to the applicable compliance deadline. For purposes of this subsection:

1. A "significant amount of waste" means that the disposal unit has received sufficient waste for disposal, in accordance with its normal operational plan, so that it is impractical to remove that waste or to relocate or reconstruct the disposal unit.

Response to (1)(b)1.: Friends Recycling LLC received a FDEP permit on July 30, 2008, which is prior to January 6, 2010. As such, prior approved setbacks less than 100 feet remain. These historical waste disposals are considered "siginificant amount of waste".

2. "Siting or construction design requirements" do not include the hydrogeological investigation required by subparagraph 62-701.730(2)(a)3., F.A.C., or the ground water monitoring plan required by paragraph 62-701.730(4)(b), F.A.C.

Response to (1)(b)2.: Hydrogeological investigation for Friends Recycling is per latest requirements set forth by paragraph 62-701.730(4)(b), F.A.C.

(2) Application. A permit application for an off-site construction and demolition debris disposal facility, disposal unit, or lateral expansion shall be submitted on Form 62-701.900(6), Application to Construct, Operate, or Modify a Construction and Demolition Debris Disposal or Disposal with Recycling Facility, http://www.flrules.org/Gateway/reference.asp?No=Ref-01485, effective date August, 2012, hereby adopted and incorporated by reference. Copies of this form are available from a local District Office or by writing to the Department of Environmental Protection, Solid Waste Section, MS 4565, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. The application shall be in conformance with the requirements of subsections 62-701.320(5), (6), (7), and paragraph (8)(a), F.A.C. All applications shall include the information in paragraphs (b) through (f) of

this subsection, and applications to construct or laterally expand a disposal unit shall also include the information in paragraph (a) of this subsection.

Response to (2).: A permit application is being submitted on Form 62-701.900(6). Additionally, the application is NOT for lateral expansion or construction, thus section (2)(a) does not apply, however, some of this information is being included to centralize and update previously submitted information.

(a) An engineering report, signed and sealed by a professional engineer, that includes:

1. A site plan, of a scale not greater than 200 feet to the inch, which shows the project location and identifies the proposed disposal units, total acreage of the site and of the proposed disposal units, and any other relevant features such as water bodies or wetlands on or within 200 feet of the site, and potable water wells on or within 500 feet of the site;

Response to (2)(a)1.: An updated site plan as described above is included although not required.

2. A geotechnical investigation which meets the criteria of Rule 62-701.410, F.A.C.

Response to (2)(a)2.: Geotechnical investigation report is included by reference only

3. A hydrogeological investigation which meets the criteria of paragraphs 62-701.410(1)(a) and (c), F.A.C.;

Response to (2)(a)3.: A hydrogeological report is included by reference only.

4. An estimate of the planned active life of the facility, the design of the disposal areas, the final design height of the facility, and the maximum height of the facility during its operation;

Response to (2)(a)4.: The above information is included in the revised report and supporting drawings.

5. Documentation that the facility location will comply with the requirements of paragraphs 62-701.730(4)(g) and (h), F.A.C.

Response to (2)(a)5.: As discussed above, the setback requirements per 62-701.730(4)(h) do not apply to this C&D facility's "historical waste", placed under approved permits prior to January 6, 2010 and with volumes considered "significant waste". Regarding 62-701.730(4)(g), 100-year Flood plain requirements were met by the original designs approved by permits dated November 1, 2002 and July 30, 2008. Physical characteristics of the off-site drainage basin have not changed, and the 100-year flood plain has not changed.

(b) A boundary survey, legal description, and topographic survey of the property;

Response to (2)(b): The required boundary survey, legal description and topographic survey are included.

(c) An operation plan which describes how the applicant will comply with subsection 62-701.730(7), F.A.C., which must include procedures for emergency preparedness and response as required in subsection 62-701.320(16), F.A.C.;

Response to (2)(c): An updated operation plan, made part of the Engineer's Report, is included with this renewal application.

(d) A closure plan that describes how the applicant will comply with subsections 62-701.730(9) and (10), F.A.C.;

Response to (2)(d): An updated Closure Plan has been included in this submittal for a premit renewal.

(e) The financial assurance documentation required by subsection 62-701.730(11), F.A.C.; and

Response to (2)(e): An new cost estimate has been prepared for this renewal application and financial assurance documents will be revised to reflect this cost estimate upon approval of the permit renewal.

(f) The CCA treated wood management plan as required in subsection 62-701.730(20), F.A.C.

Response to (2)(f): An updated Operation Plan includes a section titled "CCA Treated Wood Management" to address the requirements of this section.

(3) Certification. Certification of construction completion shall be done in accordance with paragraph 62-701.320(9)(b), F.A.C.

Response to (3): N/A This application for renewal DOES NOT include lateral expansion or construction.

(4) Other requirements. Except as specified in this section, the requirements of Rules 62-701.330 through 62-701.630, F.A.C., do not apply to construction and demolition debris disposal facilities.

(a) The Department shall not require liners and leachate collection systems at individual facilities unless it demonstrates based upon the types of waste received, methods for controlling the types of waste disposed of, the proximity of ground water and surface water, and the results of the hydrogeological and geotechnical investigations that operation of the facility is reasonably expected to result in violations of ground water standards and criteria otherwise. If the Department determines that a liner and leachate control system may be required, it shall notify the applicant within 30 days of receipt of the information which forms the basis for such a determination. The applicant may either submit additional information, redesign the facility to include a liner and leachate collection system, or demand that the Department process the application without such additional information or redesign.

Response to (4)(a): A full technical report on water quality monitoring was prepared for this renewal application. According to this report, Friends Recycling, LLC is in compliance with ground water standards, thus section 62-701.730(4)(a) is not applicable at this time.

(b) A water quality monitoring plan that meets the criteria set forth in Rule 62-701.510 and Chapter 62-520, F.A.C., shall be included with the permit application, and shall be implemented and maintained by the owner or operator, with the following exceptions:

Response to (4)(b): A full technical report on water quality monitoring was prepared for this renewal application.

1. If no disposal unit is constructed with a liner and leachate collection system, then leachate sampling is not required.

Response to (4)(b)1.: There are no cells with liners in this facility and based on results of the sampling results, requirements of liners in not expected , thus leachate sampling is not performed.

2. Unless a disposal unit is constructed or operated within 200 feet of a surface water body, or unless site-specific conditions could reasonably be expected to result in contaminants entering a surface water body, surface water sampling is not required. For purposes of this subparagraph, a surface water body does not include a body of water contained completely within the property boundaries of the disposal site that does not discharge from the site to surface waters.

Response to (4)(b)2.: There are no surface water bodies within 200 feet of the cells for this facility and there is no indication at this time that contaminants from this site may enter a surface water body outside of the 200 foot radius. Thus, sampling of surface water bodies does not apply.

3. The well spacing requirements of subparagraph 62-701.510(3)(d)3., F.A.C., do not apply. A minimum of one upgradient and two downgradient wells is required, as specified in Chapter 62-520, F.A.C.

Response to (4)(b)3.: The well spacing for this facility was set forth during the previous permit renewal process, permit approved July 30, 2008. The drawings and topographic surveys included in this permit renewal application identify the location of approved active wells.

4. Detection wells shall be sampled and analyzed at least semi-annually for the following parameters:

Field Parameters	Laboratory Parameters
pH	Aluminum
Turbidity	Chlorides
Temperature	Nitrate
Specific conductivity	Sulfate

Dissolved oxygen	Total dissolved solids
Water elevations	Iron
Colors and sheens	Sodium
(by observation)	Arsenic
	Cadmium
	Chromium
	Lead
	Mercury
	Total ammonia – N
	Xylenes
	Those parameters listed in
	EPA Methods 601 and 602

Response to (4)(b)4.: The included Technical Report indicates results of sampling of the above requitrements.

5. Background water quality shall be established in accordance with the provisions of paragraph 62-701.510(5)(b), F.A.C., except that the analysis shall also include sulfate and aluminum. In addition, all background and detection wells shall be sampled and analyzed at least once every five years for those parameters listed in paragraph 62-701.510(7)(a), F.A.C., as well as sulfate and aluminum.

Response to (4)(b)5.: Please refer to the included Technical Report.

6. The owner or operator of the facility may request a permit modification from the appropriate District Office of the Department to delete specific laboratory parameters or field parameters from routine analyses of detection wells and surface water. The Department will grant a request for a permit modification upon a demonstration that these parameters are not reasonably expected to be in or derived from the waste which was received or disposed of at the facility.

Response to (4)(b)6.: Noted.

(c) If monitoring parameters are detected in monitoring wells in concentrations which are significantly above background water quality, or which are at levels above the Department's water quality standards or criteria specified in Chapter 62-520, F.A.C., the provisions of subsection 62-701.510(6), F.A.C., shall apply.

Response to (4)(c).: Noted. Latest sampling indicates that there are NO levels which require implementation of this section.

(d) No solid waste other than construction and demolition debris shall be disposed of at a construction and demolition debris disposal facility.

Response to (4)(d).: Noted. The Engineer's Report lists additional waste which this facility has voluntarily decided not to accept. Please refer to the list of Prohibitions and materials Allowed in Section 4 of the Engineer's Report.

(e) Waste material from a waste processing facility which is mixed with Class I or Class III waste, either before or after processing, is not considered construction and demolition debris and may not be accepted for disposal at a construction and demolition debris disposal facility.

Response to (4)(e).: The type of waste describe above is not accepted for disposal at Friends Recycling, LLC. Please refer to the list of Prohibitions on Section 4 of the Engineer's Report.

(f) If a facility is constructed with a liner system, it shall consist of at least a single 60-mil minimum average thickness HDPE geomembrane. In the sumps located inside the disposal facility footprint and in the leachate collection trenches, the geomembrane shall be placed on a GCL with a saturated hydraulic conductivity of less than or equal to 1×10^{-7} cm/sec, or on a compacted clay liner which is a minimum six inches thick with a saturated hydraulic conductivity of less than or equal to 1×10^{-7} cm/sec. The liner shall be placed on a prepared subgrade that will not damage the geomembrane liner or the GCL. A primary leachate collection and removal system and a

drainage layer shall be installed above the geomembrane liner. Except in sumps and leachate collection trenches, the system shall be designed to limit leachate head above the liner during routine facility operation after placement of initial cover to no greater than 12 inches. The liner system must be constructed in accordance with the requirements of paragraphs 62-701.400(3)(a), (d), (e), and (f), and subsections 62-701.400(4), (7), and (8), F.A.C. Any alternative liner system shall be approved only in accordance with the provisions of Rule 62-701.310, F.A.C.

Response to (4)(f).: Not Applicable because there are no liners in this facility.

(g) No solid waste disposal unit shall be located in the 100-year floodplain where it will restrict the flow of the 100-year flood, reduce the temporary water storage capacity of the floodplain unless compensating storage is provided, or result in a ***washout of solid waste.***

Response to (4)(g).: The cells for this facility are not located in a 100-year flood plain. This issue was reviewed and approved by FDEP during the previous renewal process. Please refer to the FDEP approved permit No. SO42-0019600-007, dated July 30, 2008.

(h) For an above-grade disposal facility, the minimum horizontal separation between the waste disposal area and the site property boundary shall be 100 feet, measured from the toe of the proposed final cover slope.

Response to (4)(h).: This facility has "Historical Waste" with setback less than 100 feet, in volume amounts which classify it as "Significant Waste", making its relocation or removal impractical. Setbacks less than 100 feet were reviewed and approved during the previous permit renewal process (permit No. SO42-0019600-007, July 30, 2008). From that date on, waste has been placed within approved setbacks.

(i) The horizontal boundaries of the waste disposal area authorized in the construction or operation permit shall be clearly delineated with permanent or semi-permanent markers, such as bollards, posts, fencing, or signs, so that the operators can determine on a daily basis whether or not the facility is exceeding its permitted dimensions.

Response to (4)(i).: Cell and sub-cell markers have been installed prior to this application for renewal, as shown in the enclosed drawings (topographic survey). These markers consist of a 4" x 4" post painted red protruding at least 48" above ground. These markers have been placed at certain locations and where practical to help identify the limits of permitted work space.

(5) Stormwater. For aboveground disposal units, the design of any features intended to convey stormwater to a permitted or exempted treatment system shall be included in the solid waste construction permit.

Response to (5): This application for renewal, without lateral expansion or construction, does not seek to modify the previously approved storm water conveyance and storage. Please refer to approved permit No. SO42-0019600-007, July 30, 2008.

(6) Temporary storage. 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 solid waste, other than construction and demolition debris, that is inadvertently accepted by the facility. Such solid waste that is accepted by the facility shall be segregated and disposed of in accordance with Department rules. 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. Any hazardous waste that is received by the facility shall be managed in accordance with the provisions of Chapter 62-730, F.A.C.

Response to (6): Friends Recycling, LLC, has the necessary equipment and operators to handle solid waste other than C & D debris. Said waste is placed in dumpsters which are emptied within 48 hours.

(7) Operation requirements. Owners and operators of construction and demolition debris disposal facilities shall comply with the following requirements:

(a) An operation plan describing the facility operations and maintenance, emergency and contingency plans, and types of equipment that will be used shall be kept at the facility at all times and made available for inspection. The operation plan shall describe the method and sequence of filling waste and shall state the maximum allowed lift depth. Lift depth shall not exceed 10 feet unless authorized in the operation plan. Lift depths greater than 10 feet may be allowed depending on specific operations, daily volume of waste, width of working face, and good safety practices. All activities at the facility shall be performed in accordance with this plan and the permit conditions. The plan shall be updated as operations change but no less frequently than every five years. The operation permit shall be modified to reflect any substantive changes to the plan, other than those required for routine maintenance.

Response to (7)(a): The required Operation Plan has been included as a section in the Engineer's Report.

(b) Construction and demolition debris shall be compacted and sloped during the life of the facility to assure that the requirements of subsection (9) of this section can be met. A schedule for compaction and grading shall be included in the operation plan. The external slopes of all disposal units shall be no greater than three feet horizontal to one foot vertical rise. The working face and internal slopes of all disposal units shall not be greater than three feet horizontal to one foot vertical rise unless reasonable assurance is provided in the operation plan that fires can be controlled in steeply sloped areas.

Response to (7)(b): The Operation Plan and other included drawings depict external slopes as 3:1 (H:V) and the Operation Plan calls for working face slopes not to exceed 3:1 (H:V).

(c) Access to the disposal facility shall be controlled during the design period of the facility by fencing or other effective barriers to prevent disposal of solid waste other than construction and demolition debris. Signs indicating the name of the operating authority, traffic flow, hours of operations and restrictions or conditions of disposal shall be posted.

Response to (7)©): The Friends Recycling ,LLC has controlled access by means of chainlink fence and gates. Required information signs are located at the gated entrance.

(d) A trained operator shall be on duty at the facility at all times that the facility is operating. In addition, a sufficient number of spotters shall be on duty at the working face to inspect the incoming waste at all times waste is being accepted at the site. Waste shall be inspected after it is removed from the transport vehicle and prior to placement for final disposal. Any unauthorized waste shall be removed from the waste stream and placed into appropriate containers or secure storage areas for disposal or recycling at a facility authorized by the Department to receive such waste.

Response to (7)(d): Trained operators are on duty when the facility is operating. Friends Recycling, LLC has recycle bins for waste segregated prior to final disposal, and dumpsters for prohibited waste which is inadvertently received.

(e) The facility shall be operated to control objectionable odors in accordance with subsection 62-296.320(2), F.A.C. If objectionable odors are detected off-site, the owner or operator shall comply with the requirements of paragraph 62-701.530(3)(b), F.A.C.

Response to (7)(e): An updated Odor Management Plan has been included as a section in the Engineer's Report.

(f) Fuels, solvents, lubricants, and other maintenance materials shall be stored in secure areas separate from the disposal or sorting areas.

Response to (7)(f): Friends Recycling, LLC has a dedicated area where equipment fluids and fuel are stored away from the disposal and sorting areas.

(g) Plastic buckets may be accepted at the facility unless they contain liquids other than water when they arrive; however, they may contain hardened paint, tar, cement or similar non-hazardous materials.

Response to (7)(g): Noted. The Operation Plan lists these items and restriction in the Allowed Materials section.

(h) Carpet remnants that are from a construction or demolition project or from a carpet manufacturer may be accepted at the facility.

Response to (7)(h): Noted. The Operation Plan lists these items and restriction in the Allowed Materials section.

(i) CCA treated wood shall be managed as provided in subsection (20) of this section.

Response to (7)(i): Noted. The Operation Plan includes a section for the management of CCA treated woods.

(j) If any regulated hazardous wastes are discovered to be improperly deposited at the facility, the facility operator shall promptly notify the Department, the person responsible for shipping the wastes to the facility, 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 facility operator shall assure the cleanup, transportation, and disposal of the waste at a permitted hazardous waste management facility.

Response to (7)(j): Noted. The Operation Plan lists these requirements.

(8) Training. Operators and spotters employed at the facility shall be properly trained in accordance with subsection 62-701.320(15), F.A.C.

Response to (8): Noted. Certificates for completion of training have been included in this application for renewal..

(9) Closure.

(a) At least 90 days prior to the date when wastes will no longer be accepted, the owner or operator of the construction and demolition debris disposal facility shall submit an updated closure plan to the Department to reflect any changes in the closure plan due to actual operational conditions at the facility. If unforeseen circumstances do not allow the notification within 90 days prior to ceasing to receive wastes, then notice shall be provided as soon as the need to close the facility becomes apparent. The updated and approved closure plan shall be incorporated into and made part of the permit.

Response to (9)(a): Noted. Please refer to the enclosed Closure Plan.

(b) Final cover and seeding or planting of vegetative cover shall be placed on each disposal unit within 180 days after it has reached its final grade or ceased receiving wastes. Final cover shall consist of a 24-inch-thick soil layer, or a 30-inch thick layer consisting of approximately 50 percent soil and 50 percent ground or chipped yard trash by volume, the upper six inches of which shall be capable of supporting vegetation, and shall be graded and compacted as necessary to eliminate ponding, promote drainage, and minimize erosion. The side slopes of all above-grade disposal units shall be no greater than three feet horizontal to one foot vertical rise. If the disposal unit is lined, the closure design shall include a barrier layer or other measures to ensure that the design leachate head over the liner is not exceeded after closure. The final cover shall be vegetated to control erosion. Disposal units that are aboveground shall be designed to control the flow of stormwater, such as building reverse sloping benches or terraces into the side slopes of the disposal units and shall contain down slope drainage ways with water flow energy dissipaters unless reasonable assurance is provided that adequate erosion control will be achieved in the absence of such measures.

Response to (9)(b): Noted. Please refer to the enclosed Closure Plan.

(c) Placement of final cover may be delayed if additional waste will be deposited on the disposal unit within five years, but only if the disposal unit is temporarily closed in accordance with an approved closure plan. Conditions of temporary closure shall include:

1. The disposal unit was constructed in compliance with its permit conditions;
2. A schedule for temporary and final closure is shown in the closure plan;
3. Final cover is installed on side slopes of each completed disposal unit which will not receive additional waste;

4. Odors and runoff are controlled;

5. The closure cost estimate takes into account the costs of temporary closure as well as the costs of the final closure; and

6. An intermediate cover is installed on the disposal unit within 30 days after the unit stops accepting waste. The intermediate cover may be removed before placing additional waste or installing final cover.

Response to (9)(c): Noted. Please refer to the enclosed Closure Plan.

(d) The owner or operator shall provide a certification of closure construction completion to the Department within 30 days after closing, covering, and seeding the disposal unit. The owner or operator shall also provide a final survey report done by a professional surveyor, in accordance with paragraph 62-701.600(6)(b), F.A.C., if disposal operations have raised the final elevations higher than 20 feet above the natural land surface.

Response to (9)(d): Noted. Please refer to the enclosed Closure Plan.

(e) Upon receipt and approval of the documents required in paragraph (d) of this subsection, the Department shall, within 30 days, acknowledge by letter that notice of termination of operations and closing of the facility has been received. The date of this letter shall be the official date of closing for the purpose of determining the long-term care period, in accordance with subsection 62-701.600(8), F.A.C.

Response to (9)(e): Noted. Please refer to the enclosed Closure Plan.

(f) Declaration to the public. After closing operations are approved by the Department, the facility owner or operator shall file a declaration to the public in the deed records in the office of the county clerk of the county in which the facility is located. The declaration shall include a legal description of the property on which the facility is located and a site plan specifying the area actually filled with construction and demolition debris. The declaration shall also include a notice that any future owner or user of the site should consult with the Department prior to planning or initiating any activity involving the disturbance of the facility's cover, monitoring system or other control structures. A certified copy of the declaration shall be filed with the Department.

Response to (9)(f): Noted. Please refer to the enclosed Closure Plan.

(10) Long-term care. The owner or operator of the construction and demolition debris disposal facility shall continue to monitor and maintain the integrity and effectiveness of the final cover as well as other appurtenances of the facility, control erosion, fill subsidences, comply with the ground water monitoring plan, and maintain the stormwater system pursuant to a Department permit for five years from the date of closing. Before the expiration of the long-term care monitoring and maintenance period, the Department may extend the time period if the ground water monitoring system indicates that the facility continues to impact ground water at concentrations which may be expected to result in violations of Department water quality standards or criteria; if site-specific conditions make it likely that any contamination which may emanate from the disposal area would not be detected within five years; if the final cover does not have well established vegetation or is showing signs of continuing significant erosion problems; or if the permittee has not performed all required monitoring or maintenance.

Response to (10): Noted.

(11) Financial assurance.

(a) As a condition for issuance of an off-site construction and demolition debris disposal facility permit, or permit modification authorizing expansion, the owner or operator shall provide the Department with closure cost estimates for the permitted portions of the facility as part of the application. Proof of financial assurance issued in favor of the Florida Department of Environmental Protection in the amount of the closing and long-term care cost estimates for each permitted disposal unit shall be provided at least 60 days prior to the initial receipt of waste at such unit. No solid waste shall be stored or disposed of at a solid waste disposal unit until the permittee has received written approval of the financial assurance mechanism from the Department. The financial mechanism shall either be:

1. For facilities owned or operated by a local government, an escrow account pursuant to subsection 62-701.630(5), F.A.C. or an alternate financial mechanism pursuant to subsection 62-701.630(6), F.A.C.; or

2. For facilities not owned or operated by a local government, an alternate financial mechanism pursuant to subsection 62-701.630(6), F.A.C.

Response to (11)(a): Friends Recycling, LLC is a privately owned facility; as such (11)(a)2. applies. For the purpose of this permit renewal, the same instrument previously on file will be used, except that the amounts will be updated to reflect the new cost estimate prepared for this permit renewal cycle.

(b) Closure cost estimates and annual updates thereof shall comply with the provisions of subsection 62-701.630(3) and paragraphs 62-701.630(4)(a) through (d), F.A.C., except that the cost of long-term care shall be based upon a five-year period, and the costs shall be based upon compliance with this section.

Response to (11(b): Noted. Please refer to the enclosed Closure Plan and costs estimates.

(c) If a local government requires financial assurance for closure, which is at least as stringent as that required by this rule, the Department will attempt to establish a cooperative mechanism with the local government and thereby avoid duplicative financial requirements.

Response to (11)(c): Noted.

(d) Owners or operators of facilities that are required to undertake a corrective action program in accordance with paragraph 62-701.730(4)(c), F.A.C., shall submit proof of financial assurance to the Department in accordance with subsection 62-701.630(7), F.A.C., no later than 120 days after the corrective action remedy has been selected.

Response to (11)(d): Noted.

(e) If long-term care is extended because the permittee has failed to perform all required monitoring and maintenance, during the long-term care period, financial assurance shall continue to be required during the extended long-term care. If the long-term care is extended for any other reason, financial assurance is not required during the extended long-term care period, except as may be required in paragraph (d) of this subsection.

Response to (11)(e): Noted.

(12) Annual Reports. The owner or operator of the facility shall submit an annual report to the Department on Form 62-701.900(7). This report shall include a summary of the amounts and types of wastes disposed of or recycled. The county of origin of materials that are recycled, or a statement that the county of origin is unknown, shall be included in the report. The report shall be submitted no later than February 1 of each year and shall cover the preceding calendar year.

Response to (12): Noted.

(13) Recycling.

(a) The owner or operator of a facility that accepts construction and demolition debris for disposal and that also recovers materials from the construction and demolition debris waste stream for purposes of recycling shall meet the requirements of this section as well as the requirements of Rule 62-701.710, F.A.C. If there is a conflict between this section and Rule 62-701.710, F.A.C., this section shall govern. It is not necessary for the owner or operator to apply for a separate permit as a waste processing facility or to pay an additional fee.

Response to (13)(a): Noted. This applies to Friends Recycling, LLC operations.

(b) The owner or operator of a facility that recovers materials from the construction and demolition debris waste stream for purposes of recycling but that does not dispose of any wastes on-site shall apply for a permit on Form 62-701.900(4), and shall comply with the provisions of Rule 62-701.710, F.A.C.

Response to (13)(b): Noted. This is NOT applicable to Friends Recycling, LLC operations.

(c) In order to reuse recovered screened material other than clean debris from the construction and demolition debris waste stream, an owner or operator shall demonstrate that this material will be managed and reused in a

manner that will pose no significant threat to public health or the environment. In making this demonstration, the owner or operator may consider background levels of receiving soils, whether the material will be blended with other materials, and the likelihood that the material may have unlimited distribution or come into direct contact with the public. Examples of management practices which would not require analysis for health-based criteria include permanent encapsulation, use as initial or intermediate cover or subsurface construction at a permitted landfill, or use under at least two feet of clean cover material.

Response to (13)(c): Noted.

(d) Metal, paper, glass, plastic, textile, or rubber materials that have been diverted and source separated or have been removed from the construction and demolition debris waste stream for sale, use, or reuse as raw materials may be managed as recovered materials. Other materials that have been diverted and source separated or have been removed from the construction and demolition debris waste stream may be sold, used, or reused as raw materials upon a demonstration that the material will pose no significant threat to public health or the environment.

Response to (13)(c): Noted.

(14) Incineration. A facility that employs an air curtain incinerator and that also stores or disposes of construction and demolition debris at the site shall meet the permitting requirements of Rule 62-256.500, F.A.C., as well as this section.

Response to (14): Not applicable to this facility.

(15) Clean debris. Clean debris may be used as fill or raw material in any area, including waters of the State, subject to receipt of an environmental resource permit from the Department where applicable. Clean debris used as fill material is not solid waste, and such use does not require a solid waste permit under this rule.

Response to (15): Noted.

(16) Landfill disposal. Construction and demolition debris may be disposed of in a permitted landfill. However, each county must maintain segregated disposal areas for construction and demolition debris. The cover requirements for a segregated construction and demolition debris disposal area within a permitted landfill shall be those in subsection (9) of this section. Landfills permitted in accordance with Rule 62-701.330, F.A.C., which have construction and demolition debris disposal units or recycling facilities included as part of their permit conditions, are not required to submit separate permit applications or financial assurance documents under this section.

Response to (16): Noted.

(17) On-site disposal. Construction and demolition debris that is disposed of on the property where it is generated, or on property that is adjacent or contiguous to and under common ownership and control as that property where the waste is generated, is exempt from the requirements of this section and Rule 62-701.330, F.A.C. However, such disposal is subject to the prohibitions of Rule 62-701.300, F.A.C. All waste shall be inspected by the generator or a spotter prior to disposal, either at the point of generation or at the disposal site, to ensure that any unauthorized waste is removed from the waste stream prior to disposal and managed in accordance with Department rules. Final cover and seeding or planting of vegetative cover shall be placed on each disposal unit within 180 days after final receipt of waste. Final cover shall consist of a 24-inch-thick soil layer, the upper six inches of which shall be capable of supporting vegetation, and shall be graded and compacted as necessary to eliminate ponding, promote drainage, and minimize erosion. The side slopes of all above-grade disposal areas shall be no greater than three feet horizontal to one foot vertical rise.

Response to (17): Not applicable to this facility.

(18) Disposal restrictions. Construction and demolition debris may be disposed of only in accordance with one of the methods authorized above. In addition, disposal areas shall be operated so that adverse environmental and public health impacts, such as blowing litter and vectors, are minimized. Upon discovery that a permitted facility has disposed of solid waste outside of its permitted dimensions, the owner or operator shall notify the Department within three working days of this discovery. If all waste is not relocated within the permitted dimensions of the facility within 30 days of discovery, upon order of the Department the facility shall not accept any waste until the facility is in compliance with its permitted dimensions.

Response to (18): Noted.

(19) Asbestos waste disposal. Asbestos-containing waste materials regulated pursuant to 40 C.F.R. Part 61, Subpart M, shall not be disposed of in a construction and demolition debris disposal unit.

Response to (19): Noted. This is listed under the Prohibitions list of Section 4 of the Engineer's Report.

(20) CCA treated wood. The owner or operator of a facility, except for a disposal facility with a constructed liner system, shall design and implement a CCA treated wood management plan. The plan shall be designed to minimize the amount of CCA treated wood that is delivered to the facility, and must describe procedures the operator will use to make a reasonable effort to separate any CCA treated wood from other wastes at the facility. CCA treated wood that is separated from other wastes at the facility shall not be disposed of at an unlined solid waste disposal facility.

Response to (20): Noted. CCA treated wood is listed under the Prohibitions list of Section 4 of the Engineer's Report. Additionally, the Operation Plan section of the Engineer's Report, contains a section for management of CCA treated wood which may have been received at the facility.

(21) Alternate procedures. The owner or operator of a facility may request alternate procedures and requirements in accordance with Rule 62-701.310, F.A.C. However, if such request is based upon the nature of the construction and demolition debris accepted at the facility (for example, if a facility accepts only segregated wastes which are expected to have a minimal environmental impact), the request will be submitted to and acted on by the appropriate District office of the Department, and need not be accompanied by any additional fee.

Response to (21): Noted.

ATTACHMENT 2

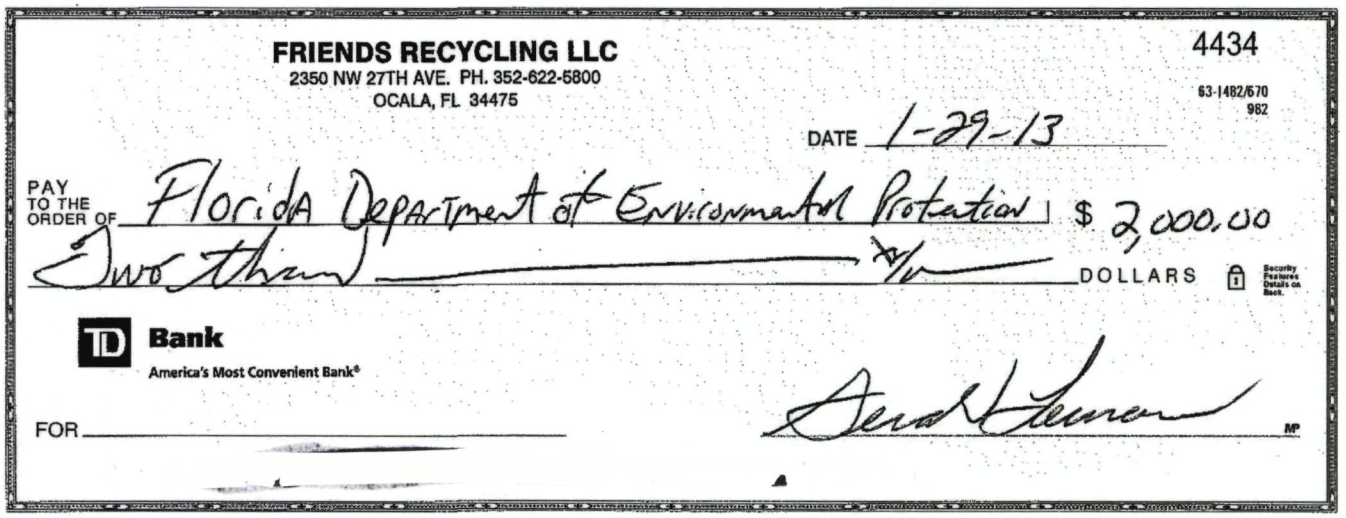
PERMIT RENEWAL APPLICATION FORM

ATTACHMENT 3

COPY OF CHECK FOR APPLICATION FEE

COPY OF CHECK FOR APPLICATION FEE

Check made out to Florida Department of Environmental Protection in the amount of $2,000.00 to cover the application fee for a renewal term of ten (10) years.



FRIENDS RECYCLING LLC
2350 NW 27TH AVE. PH. 352-622-5800
OCALA, FL 34475

4434

63-1482/670
982

DATE 1-29-13

PAY TO THE ORDER OF Florida Department of Environmental Protection $ 2,000.00

Two thousand and 00/100 DOLLARS

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ATTACHMENT 4

COST ESTIMATE FOR CLOSURE AND LONG-TERM CARE

Print Form | Reset Form

Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

DEP Form # 62-701.900(28), F.A.C.
Form Title: Closure Cost Estimating Form For Solid Waste Facilities
Effective Date: January 6, 2010
Incorporated in Rule 62-701.630(3), F.A.C.

CLOSURE COST ESTIMATING FORM FOR SOLID WASTE FACILITIES

Date of DEP Approval: _____

I. GENERAL INFORMATION:

Facility Name: Friends Recycling, LLC WACS ID: 21012
Permit Application or Consent Order No.: SO42-0019600-007 Expiration Date: 04/04/2013
Facility Address: 2350 NW 27th Avenue, Ocala, Florida 34475
Permittee or Owner/Operator: Friends Recycling, LLC
Mailing Address: 2350 NW 27th Avenue, Ocala, Florida 34475

Latitude: 29 ° 12 ' 42.02 " Longitude: 82 ° 10 ' 07.01 "
Coordinate Method: Digital Aerial Photograp Datum: NAD83
Collected by: Juan C Guerra Company/Affiliation: Guerra Development Corp.

Solid Waste Disposal Units Included in Estimate:

Phase / Cell	Acres	Date Unit Began Accepting Waste	Active Life of Unit From Date of Initial Receipt of Waste	If active: Remaining life of unit	If closed: Date last waste received	If closed: Official date of closing
Cell 1A	14.1	1980	30 yrs	6 yrs	n/a	n/a
Cell 1B	0.4	2005	5 yrs	2 yrs	n/a	n/a
Cell 2A	7.0	2005	6 yrs	8 yrs	n/a	n/a
Cell 2B	4.4	2005	6 yrs	11 yrs	n/a	n/a
Cell 2C	0.9	2005	6 yrs	11 yrs	n/a	n/a

Total disposal unit acreage included in this estimate: Closure: 26.8 Long-Term Care: 26.8

Facility type: ☐ Class I ☐ Class III ☒ C&D Debris Disposal
(Check all that apply) ☐ Other: _____

II. TYPE OF FINANCIAL ASSURANCE DOCUMENT (Check type)

☐ Letter of Credit* ☒ Insurance Certificate ☐ Escrow Account
☐ Performance Bond* ☐ Financial Test ☐ Form 29 (FA Deferral)
☐ Guarantee Bond* ☐ Trust Fund Agreement

* - Indicates mechanisms that require the use of a Standby Trust Fund Agreement

Northwest District
160 Government Center
Pensacola, FL 32502-5794
850-595-8360

Northeast District
7825 Baymeadows Way, Ste. B200
Jacksonville, FL 32256-7590
904-807-3300

Central District
3319 Maguire Blvd., Ste. 232
Orlando, FL 32803-3767
407-894-7555

Southwest District
13051 N. Telecom Pky.
Temple Terrace, FL 33637
813-632-7600

South District
2295 Victoria Ave., Ste. 364
Fort Myers, FL 33901-3881
239-332-6975

Southeast District
400 N. Congress Ave., Ste. 200
West Palm Beach, FL 33401
561-681-6600

III. ESTIMATE ADJUSTMENT

40 CFR Part 264 Subpart H as adopted by reference in Rule 62-701.630, Florida Administrative Code, (F.A.C.) sets forth the method of annual cost estimate adjustment. Cost estimates may be adjusted by using an inflation factor or by recalculating the maximum costs of closure in current dollars. Select one of the methods of cost estimate ajustment below.

☐ **(a) Inflation Factor Adjustment** ☒ **(b) Recalculated or New Cost Estimates**

Inflation adjustment using an inflation factor may only be made when a Department approved closure cost estimate exists and no changes have occurred in the facility operation which would necessitate modification to the closure plan. The inflation factor is derived from the most recent Implicit Price Deflator for Gross National Product published by the U.S. Department of Commerce in its survey of Current Business. The inflation factor is the result of dividing the latest published annual Deflatory by the Deflator for the previous year. The inflation factor may also be obtained from the Solid Waste website www.dep.state.fl.us/waste/categories/swfr or call the Financial Coordinator at (850) 245-8706.

This adjustment is based on the Department approved closing cost estimate dated: N/A

Latest Department Approved **Closing Cost** Estimate:		Current Year Inflation Factor, ***e.g. 1.02***		Inflation Adjusted Closing Cost Estimate:
_____	×	_____	=	_____

This adjustment is based on the Department approved long-term care cost estimate dated: N/A

Latest Department Approved Annual **Long-Term Care** Cost Estimate:		Current Year Inflation Factor, ***e.g. 1.02***		Inflation Adjusted Annual Long-Term Care Cost Estimate:
_____	×	_____	=	_____

Number of Years of Long Term Care Remaining: × _____

Inflation Adjusted Long-Term Care Cost Estimate: = _____

Signature by: ☑ **Owner/Operator** ☐ **Engineer** (check what applies)

Gerald Lourenco for
Signature

Gerald Lourenco, Operating Manager
Name & Title

May, 20, 2013
Date

(352) 266-9497
Telephone Number

2350 NW 27th Avenue
Address

Ocala, Florida 34475
City, State, Zip Code

aws97@aol.com
E-Mail Address

IV. ESTIMATED CLOSING COST (check what applies)

☒ **Recalculated Cost Estimate** ☐ **New Facility Cost Estimate**

Notes: 1. Cost estimates for the time period when the extent and manner of landfill operation makes closing most ex
2. Cost estimate must be certified by a professional engineer.
3. Cost estimates based on third party suppliers of material, equipment and labor at fair market value.
4. In some cases, a price quote in support of individual item estimates may be required.

Description	Unit	Number of Units	Cost / Unit	Total Cost
1. Proposed Monitoring Wells	**(Do not include wells already in existence.)**			
	EA			
			Subtotal Proposed Monitoring Wells:	
2. Slope and Fill (bedding layer between waste and barrier layer):				
Excavation	CY			
Placement and Spreading	CY			
Compaction	CY			
Off-Site Material	CY			
Delivery	CY			
			Subtotal Slope and Fill:	
3. Cover Material (Barrier Layer):				
Off-Site Clay	CY			
Synthetics - 40 mil	SY			
Synthetics - GCL	SY			
Synthetics - Geonet	SY			
Synthetics - Other (explain)				
			Subtotal Cover Material:	
4. Top Soil Cover:				
Off-Site Material	CY	60,466	$2.25	$136,048.50
Delivery	CY	86,356	$1.95	$168,394.20
Spread	CY	86,356	$0.75	$64,767.00
			Subtotal Top Soil Cover:	$369,209.70
5. Vegetative Layer				
Sodding	SY	101,958	$2.00	$203,916.00
Hydroseeding	AC	12	$4,100.00	$49,200.00
Fertilizer	AC	12	$1,200.00	$14,400.00
Mulch	AC			
Other (explain)				
			Subtotal Vegetative Layer:	$267,516.00
6. Stormwater Control System:				
Earthwork	CY			
Grading	SY			
Piping	LF	2,020	$26.50	$53,530.00
Ditches	LF	4,470	$8.25	$36,877.50
Berms	LF			
Control Structures	EA	21	$1,500.00	$31,500.00
Other (explain)				
			Subtotal Stormwater Control System:	$121,907.50

Description	Unit	Number of Units	Cost / Unit	Total Cost
7. Passive Gas Control:				
Wells	EA			
Pipe and Fittings	LF			
Monitoring Probes	EA			
NSPS/Title V requirements	LS	1		
			Subtotal Passive Gas Control:	
8. Active Gas Extraction Control:				
Traps	EA			
Sumps	EA			
Flare Assembly	EA			
Flame Arrestor	EA			
Mist Eliminator	EA			
Flow Meter	EA			
Blowers	EA			
Collection System	LF			
Other (explain)				
			Subtotal Active Gas Extraction Control:	
9. Security System:				
Fencing	LF	400	$12.50	$5,000.00
Gate(s)	EA			
Sign(s)	EA			
			Subtotal Security System:	$5,000.00
10. Engineering:				
Closure Plan Report	LS	1	$7,500.00	$7,500.00
Certified Engineering Drawings	LS	1	$8,500.00	$8,500.00
NSPS/Title V Air Permit	LS	1	$0.00	
Final Survey	LS	1	$6,500.00	$6,500.00
Certification of Closure	LS	1	$2,500.00	$2,500.00
Other (explain)				
			Subtotal Engineering:	$25,000.00

Description	Hours	Cost / Hour	Hours	Cost / Hour	Total Cost
11. Professional Services					
	Contract Management		Quality Assurance		
P.E. Supervisor	16	$150.0(	8	$125.0(	$3,400.00
On-Site Engineer	40	$120.0(	4	$120.0(	$5,280.00
Office Engineer	24	$120.0(	4	$120.0(	$3,360.00
On-Site Technician	16	$75.00	16	$75.00	$2,400.00
Other (explain)					

Description	Unit	Number of Units	Cost / Unit	Total Cost
Quality Assurance Testing	LS	1	$8,500.00	$8,500.00
			Subtotal Professional Services:	$22,940.00

	Subtotal of 1-11 Above:	$811,573.20
12. Contingency 10 % of Subtotal of 1-11 Above		$81,157.32
	Subtotal Contingency:	$81,157.32
	Estimated Closing Cost Subtotal:	$892,730.52

Description	Total Cost
13. Site Specific Costs	
Mobilization	$12,000.00
Waste Tire Facility	
Materials Recovery Facility	
Special Wastes	
Leachate Management System Modification	
Other (explain) Waste Relocation	$229,300.00
Subtotal Site Specific Costs:	$241,300.00

TOTAL ESTIMATED CLOSING COSTS ($): $1,134,030.52

V. ANNUAL COST FOR LONG-TERM CARE

See 62-701.600(1)a.1., 62-701.620(1), 62-701.630(3)a. and 62-701.730(11)b. F.A.C. for required term length. For landfills certified closed and Department accepted, enter the remaining long-term care length as "Other" and provide years remaining.

(Check Term Length) ☒ 5 Years ☐ 20 Years ☐ 30 Years ☐ Other, ___ Years

Notes: 1. Cost estimates must be certified by a professional engineer.

2. Cost estimates based on third party suppliers of material, equipment and labor at fair market value.

3. In some cases, a price quote in support of individual item estimates may be required.

All items must be addressed. Attach a detailed explanation for all entries left blank.

Description	Sampling Frequency (Events / Year)	Number of Wells	(Cost / Well) / Event	Annual Cost
1. Groundwater Monitoring [62-701.510(6), and (8)(a)]				
Monthly	12			
Quarterly	4			
Semi-Annually	2	8	$400.00	$6,400.00
Annually	1			
			Subtotal Groundwater Monitoring:	$6,400.00
2. Surface Water Monitoring [62-701.510(4), and (8)(b)]				
Monthly	12			
Quarterly	4			
Semi-Annually	2			
Annually	1			
			Subtotal Surface Water Monitoring:	
3. Gas Monitoring [62-701.400(10)]				
Monthly	12			
Quarterly	4	4	$400.00	$6,400.00
Semi-Annually	2			
Annually	1			
			Subtotal Gas Monitoring:	$6,400.00
4. Leachate Monitoring [62-701.510(5), (6)(b) and 62-701.510(8)c]				
Monthly	12			
Quarterly	4			
Semi-Annually	2			
Annually	1			
Other (explain) _____	____			
_____			Subtotal Leachate Monitoring:	

Description	Unit	Number of Units / Year	Cost / Unit	Annual Cost
5. Leachate Collection/Treatment Systems Maintenance				
Maintenance				
Collection Pipes	LF			
Sumps, Traps	EA			
Lift Stations	EA			
Cleaning	LS	1		
Tanks	EA			

Description	Unit	Number of Units / Year	Cost / Unit	Annual Cost
5. (continued)				
Impoundments				
Liner Repair	SY			
Sludge Removal	CY			
Aeration Systems				
Floating Aerators	EA			
Spray Aerators	EA			
Disposal				
Off-site (Includes transportation and disposal)	1000 gallon			
			Subtotal Leachate Collection / Treatment Systems Maintenance:	
6. Groundwater Monitoring Well Maintenance				
Monitoring Wells	LF	8	$150.00	$1,200.00
Replacement	EA	0.5	$2,500.00	$1,250.00
Abandonment	EA	0.5	$850.00	$425.00
			Subtotal Groundwater Monitoring Well Maintenance:	$2,875.00
7. Gas System Maintenance				
Piping, Vents	LF	220	$20.00	$4,400.00
Blowers	EA			
Flaring Units	EA			
Meters, Valves	EA			
Compressors	EA			
Flame Arrestors	EA			
Operation	LS	1	$1,500.00	$1,500.00
			Subtotal Gas System Maintenance:	$5,900.00
8. Landscape Maintenance				
Mowing	AC	35	$250.00	$8,750.00
Fertilizer	AC	20	$85.00	$1,700.00
			Subtotal Landscape Maintenance:	$10,450.00
9. Erosion Control and Cover Maintenance				
Sodding	SY	1,000	$1.95	$1,950.00
Regrading	AC	5	$1,500.00	$7,500.00
Liner Repair	SY			
Clay	CY	400	$6.00	$2,400.00
			Subtotal Erosion Control and Cover Maintenance:	$11,850.00
10. Storm Water Management System Maintenance				
Conveyance Maintenance	LS	1	$7,500.00	$7,500.00
			Subtotal Storm Water Management System Maintenance:	$7,500.00
11. Security System Maintenance				
Fences	LS	1	$2,500.00	$2,500.00
Gate(s)	EA	1	$100.00	$100.00
Sign(s)	EA	1	$100.00	$100.00
			Subtotal Security System Maintenance:	$2,700.00

Description	Unit	Number of Units / Year	Cost / Unit	Annual Cost
12. Utilities	LS	1	$500.00	$500.00
			Subtotal Utilities:	$500.00
13. Leachate Collection/Treatment Systems Operation				
Operation				
P.E. Supervisor	HR			
On-Site Engineer	HR			
Office Engineer	HR			
OnSite Technician	HR			
Materials	LS	1		
	Subtotal Leachate Collection/Treatment Systems Operation:			
14. Administrative				
P.E. Supervisor	HR	6	$150.00	$900.00
On-Site Engineer	HR	10	$120.00	$1,200.00
Office Engineer	HR	20	$100.00	$2,000.00
OnSite Technician	HR	20	$85.00	$1,700.00
Other				
			Subtotal Administrative:	$5,800.00
			Subtotal of 1-14 Above:	$60,375.00
15. Contingency	10	% of Subtotal of 1-14 Above		$6,037.50
			Subtotal Contingency:	$6,037.50

Description	Unit	Number of Units / Year	Cost / Unit	Annual Cost
16. Site Specific Costs				
			Subtotal Site Specific Costs:	
			ANNUAL LONG-TERM CARE COST ($ / YEAR):	$66,412.50
			Number of Years of Long-Term Care:	5
			TOTAL LONG-TERM CARE COST ($):	$332,062.50

VI. CERTIFICATION BY ENGINEER

This is to certify that the Cost Estimates pertaining to the engineering features of this solid waste management facility have been examined by me and found to conform to engineering principles applicable to such facilities. In my professional judgment, the Cost Estimates are a true, correct and complete representation of the financial liabilities for closing and/or long-term care of the facility and comply with the requirements of Rule 62-701.630 F.A.C. and all other Department of Environmental Protection rules, and statutes of the State of Florida. It is understood that the Cost Estimates shall be submitted to the Department annually, revised or adjusted as required by Rule 62-701.630(4), F.A.C.

Signature	2817 NE 3rd Street Mailing Address
Juan C. Guerra, P.E., President Name and Title (please type)	Ocala, Florida, 34470 City, State, Zip Code
May 20, 2013	guerracorp@att.net E-Mail address (if available)
0043000 Florida Registration Number (Affix seal)	(352) 629-8060 Telephone Number

VII. SIGNATURE BY OWNER/OPERATOR

for Signature of Applicant	2350 NW 27th Avenue Mailing Address
Gerald Lourenco, Operating Manager Name and Title (please type)	Ocala, Florida 34475 City, State, Zip Code
aws97@aol.com E-Mail address (if available)	(352) 266-9497 Telephone Number

ATTACHMENT 5

CERTIFICATES OF TRAINING

ATTACHMENT 6

PROOF OF OWNERSHIP

ATTACHMENT 7

REPORTING FORMS

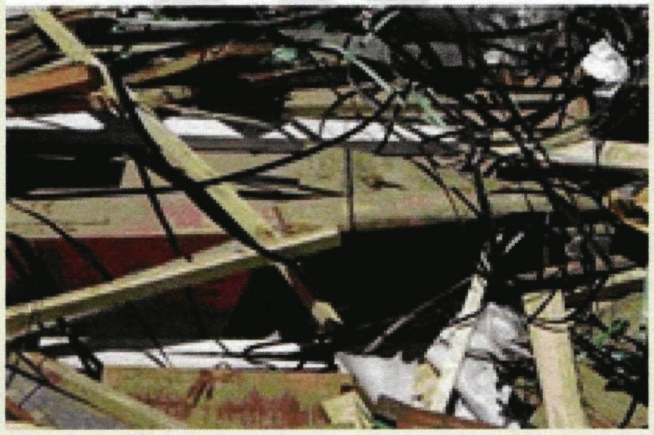
ATTACHMENT 8

DRAWINGS

ATTACHMENT 9

GUIDANCE FOR THE MANAGEMENT AND DISPOSAL OF CCA-TREATED WOOD

GUIDANCE FOR THE MANAGEMENT AND DISPOSAL OF CCA-TREATED WOOD



Top: This load is almost solely CCA-treated wood. It came from a marine construction contractor.

Bottom: This load is from a construction company that builds trusses and floor joists. It contains treated wood. Green colored sawn boards are treated. Other sawn boards may be untreated. Additional testing may be needed to confirm treatment.

Prepared by:

Florida Center for Solid and Hazardous Waste Management and Florida Department of Environmental Protection

with assistance from:

University of Florida College of Engineering and University of Miami College of Engineering

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BACKGROUND

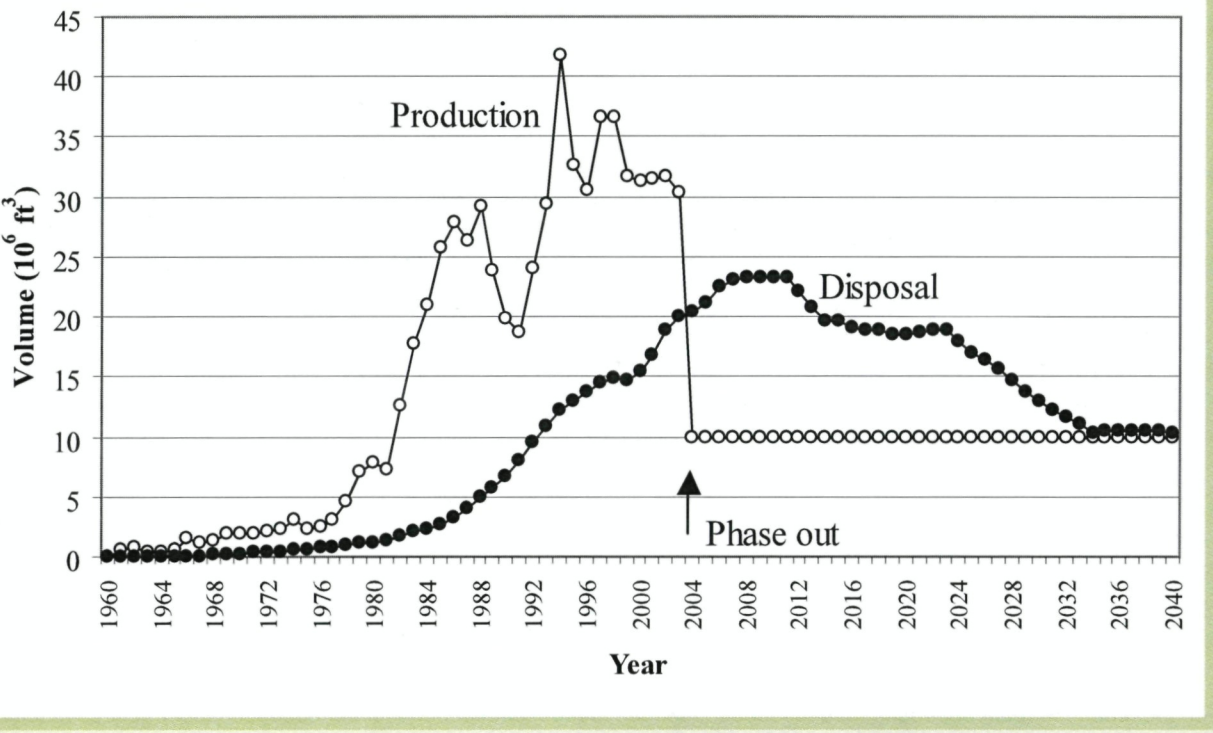
Chromated Copper Arsenate (CCA) is a chemical wood preservative containing chromium, copper and arsenic. These chemicals protect the wood from rotting due to insects and microbial agents. As a result, the use of CCA to pressure treat wood can prolong the service life of the wood 20 to 40 years beyond that without the preservative.

CCA has been used to treat wood since the 1940s, and since the 1970s CCA-treated wood has been used extensively in residential applications. Wood treated with CCA produces no odors or vapors, and you can paint or seal its surface easily. Wood products treated with CCA include lumber, timber, utility poles, posts and plywood. Because of its ease of use and the effectiveness of its treatment, CCA-treated wood was the most widely used type of treated wood in the country and represented about 80 percent of the wood preservation market through 2002.

In the late 1990s the Department became concerned about the large quantity of arsenic that was being imported into the state in the CCA chemicals and the CCA-treated wood. Due to population growth, this wood was needed to supply the high demand for residential housing in Florida. The Department was also concerned about how this CCA-treated wood might be managed when it is removed from service. Research conducted by Dr. Helena Solo-Gabriele, University of Miami, showed that the amount of this wood being disposed of after it reached the end of its service life was expected to increase significantly in the near future (Solo-Gabriele, et al, 2003a, Solo-Gabriele, 2003b). In addition, while not clearly confirmed by ground water data from Florida's unlined disposal facilities, research by Dr. Tim Townsend from the University of Florida indicated that CCA-treated wood and ash from burning this wood could pose a significant leaching threat to ground water if disposed of in unlined disposal facilities in Florida (Townsend, et al., 2001 and 2004). The research also showed that the ash from burning wood waste containing as little as five percent CCA-treated wood could be considered a characteristic hazardous waste due to the high arsenic concentrations in the ash.

These concerns led to communications by the Department with regulatory agencies in other states, with members of the wood treating industry in Florida and with the US Environmental Protection Agency (EPA). On March 17, 2003, the EPA signed an order in response to a voluntary request by wood preservative pesticide producers for cancellation of registration and termination of uses of certain CCA-treated wood products. This agreement required that use of CCA-treated wood for most identified residential uses cease by December 31, 2003. EPA published this notice of cancellation order on April 9, 2003 (EPA, 2003).

The Department is still faced with the problem that the amount of CCA-treated wood being disposed of will continue to increase in the years to come, and may pose an increasing environmental risk if disposed of in unlined facilities. If treated wood is made into mulch and then used in a residential setting, it may also pose unacceptable human health or environmental risks. Consequently, in 2003 the Department convened two Technical Advisory Groups (TAGs) to help study these issues. One TAG focused on potential ground water impacts and the other focused on operational issues. The TAGs consisted of voluntary members from the scientific, engineering and regulated communities who were familiar with the management problems associated with CCA-treated wood in Florida. One of the recommendations of the Operation TAG was for the



The projected amount of CCA-treated wood that will be disposed of in year 2010 is much greater than what it was in the year 2000.

Department to develop a guidance document on the management and disposal of CCA-treated wood.

PURPOSE

The purpose of this document is to develop guidance for the regulated community and the Department on the management and disposal of CCA-treated wood in Florida. It contains recommendations, which are of an advisory nature, for the collecting and recycling of treated wood. It also contains specific Best Management Practices (BMPs) that are designed to reduce the amount of treated wood disposed of at unlined facilities and to minimize the processing of treated wood into mulch at processing facilities. If the owner/operator of a facility employs and properly implements the BMPs contained in this document, the Department will presume that the owner/operator is making a reasonable effort to prevent significant quantities of CCA-treated wood from being disposed of or processed at the facility and will not take enforcement action should disposal or processing of some CCA-treated wood at the facility actually occur.

OVERVIEW AND APPLICABILITY

Solid waste disposal facilities in Florida are regulated by the Solid Waste Management Facilities rule, Chapter 62-701, Florida Administrative Code (F.A.C.). This rule currently allows CCA-treated wood to be disposed of in permitted Class I, II or III landfills and in permitted construction and demolition (C&D) debris disposal facilities. However, the studies cited above, as well as advice from EPA (EPA 2004b), have prompted the Department to initiate rulemaking to amend Chapter 62-701, F.A.C., in coordination with the development of this guidance document, to require that operators of unlined facilities implement a program to remove CCA-treated wood from the waste stream

prior to final disposal or use. Currently Florida's unlined disposal facilities would include most of the Class III landfills and C&D debris disposal sites in the state. Use of this guidance as part of such a program will help owners and operators comply with Department rules as well as minimize future liability for pollution or injury.

In addition, both the Department (DEP, 2002) and the EPA (EPA, 2004a) have determined that CCA-treated wood should not be recycled as mulch or used as fuel in a wood-fired boiler unless that wood-fired facility is specifically authorized by the Department to accept CCA-treated wood. The Department is also modifying Chapter 62-701, F.A.C. to specifically prohibit the use of CCA-treated wood as mulch, compost, or a soil amendment. Owner/operators of facilities that process wood wastes for disposal or use should follow this guidance to reduce any future liability for injury to people or the environment, as well as to comply with Department rules regarding CCA.

Finally, as is explained in the following section of this guidance, the Department recognizes the difficulty of identifying CCA-treated wood separately from other forms of wood treated with copper-containing preservatives. At this time there is no cost effective and efficient method to specifically identify arsenic in treated wood. The only practical solution to this dilemma at this time is to require the separation of wood waste which can be reasonably assumed to be treated with preservatives which might contain arsenic. Consequently, the advisory recommendations and the BMPs in this document will focus on managing all those forms of treated wood.[1]

HOW TO IDENTIFY TREATED WOOD

There are several types of wood preservative chemicals. The most common ones that have been or are used today in residential applications are CCA, alkaline copper quaternary (ACQ), and copper boron azole (CBA). Some wood in residential applications is also treated with borate alone. Other chemicals have also been used to treat wood for industrial applications. For example, pentachlorophenol (PCP) has been used in the past for telephone poles, but is becoming less popular today. Creosote is used to treat railroad ties and some construction pilings.

Treated industrial wood products can typically be identified based upon their large dimensions (e.g., railroad ties and utility poles). Thus, they are easier to visually identify and then remove from the waste stream. Treated wood used in residential applications, however, is largely composed of lumber, timbers and plywood in varying sizes and can be found in both treated and untreated forms. So how does one determine if these materials are treated?

The most common method for identifying treated wood among lumber, timber and plywood is to look at the color of the wood. Untreated wood and borate-treated wood typically have a light yellow color. The yellow color is the natural color of Southern Yellow Pine, the most common wood species used for building construction in Florida. Wood treated with copper, which includes CCA-, ACQ- and CBA-treated wood, varies in color from a very light green to an intense green color depending upon the amount of chemical impregnated into the wood. The figure to the left shows the color variations in wood resulting from different chemical treatment levels using CCA.

For CCA-, ACQ- and CBA-treated wood, a lower amount of chemical is added to wood intended for above ground and ground contact applications. A higher amount of chemical is added for wood intended for marine applications or serving as a load-bearing support for structures. The majority of the wood produced is treated using the lower amounts of chemical which imparts a light green color to the wood.

Once wood treated with copper has been in-service and has weathered, the green color is generally converted to a silver color. Unfortunately, untreated wood generally weathers to nearly the same silver color. This change in color

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[1] *Wood treated with other chemicals such as pentachlorophenol and creosote, while perhaps posing different environmental concerns, is not addressed by this guidance document.*

for treated wood occurs for wood containing the lower concentrations of chemical after only a year or two of weathering. As a result, sorting out CCA-treated wood from the waste stream based on the green color alone cannot ensure that all the treated wood is identified and removed.

Because of the difficulty in identifying treated wood based on its color alone, researchers are developing or have developed other methods to assist with this identification. Some of these methods may be useful to owner/operators who seek to improve their separation processes for treated wood. The rest of this Section will describe four of these methods and discuss the advantages and disadvantages associated with using them. A description of waste loads that typically contain treated wood is shown in the photos at the end of this guide.

◂ *Chemical Stains*

Chemical stains refer to specially designed chemicals that can be applied directly to treated wood and show the appearance of a particular chemical in the wood by changing color, i.e., "staining" the wood. These stains can be easily used in the field to sort treated wood but are labor intensive since stain has to be applied to each piece of wood to be identified. The color change will usually occur within a few seconds and the costs of individual tests are low, on the order of a few cents per sample.

There are several stains that can be used to identify copper-treated wood. They were developed by the wood treatment industry to check the depth of penetration of the CCA preservative into wood. These stains include chrome azurol, PAN indicator[2] and rubeanic acid. They result in a distinctive color change where the stain is applied if copper is present in wood. PAN indicator is the preferred stain for sorting wood within the waste stream due to its short reaction time of about 12 seconds. When it reacts, it produces a color ranging from magenta to red. Untreated wood turns orange in color.

It is important to note, however, that these stains will also test positive if the wood is treated with the new copper-based alternatives, such as ACQ and CBA. Thus a positive result using PAN indicator will indicate that the wood is copper-treated but not necessarily arsenic-treated. Research is currently on-going to develop a stain specifically for arsenic.

While the PAN indicator is copper specific rather than arsenic specific,

Stain effects on untreated wood (left) and treated wood (right).

because of its low cost and ease of use it is currently the method of choice for assisting owner/operators to sort out treated wood. More information about the PAN stain indicator can be found on page 12.

◂ *Arsenic Test Kits*

These tests refer to test kits developed for the analysis of arsenic in drinking water that have been modified for the analysis of arsenic in wood. The method requires the collection of a sawdust sample of the wood which is immersed in water. A series of chemicals are added to the wood/water mixture which convert arsenic dissolved in the water to arsine gas. This gas then reacts with a test strip to produce a distinctive color change on the strip. The method requires 45 minutes per sample for processing. Because the use of strong reagents and the formation of arsine gas (a highly poisonous form of arsenic that is dangerous to inhale), this test is not recommended for use by those who are inexperienced with the handling of chemicals.

◂ *X-Ray Technologies*

The use of X-ray technologies for sorting wood waste has been evaluated at the pilot scale showing very promising results. These technologies, such as the hand-held XFR units by Innov-X and NITON, were found to identify the presence of arsenic in treated wood within a fraction of a second. Moisture and coatings on the wood did not interfere with the ability of the X-ray systems to identify arsenic in the wood, and they are safe when properly used.

X-ray technologies come in both hand-held and on-line configurations. The widespread use of these technologies, however, is limited because of the high capital costs of the equipment. For example, Innov-X currently sells a hand-held unit for $21,000, but they can also be rented from NITON (www.niton.com) or Innov-X (www.innov-xsys.com).

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[2] *PAN stands for the chemical name of 1-(2-pyridylazo)-2-naphthol, an orange-red solid with molecular formula* $C_{15}H_{11}N_3O$.

◂ *Laser Technologies*

Like X-ray technologies, laser systems, such as the laser induced breakdown spectroscopy (LIBS), have been evaluated at the pilot scale with very promising results. An experimental LIBS system has been tested for sorting wood waste by determining how well it can detect chromium in CCA-treated wood. However, the effectiveness of the system to identify treated wood was hampered by high moisture content in the wood and the presence of coatings on the wood. It is believed that such interferences can be overcome with the use of more powerful lasers which are available.

Since the LIBS system measures chemicals at the surface of the wood, it was able to identify the presence of coatings during testing. Thus, this system may be helpful if separation of painted wood from a waste stream is required. Since this technology is still under development, it is not yet ready for widespread use as a tool for sorting treated wood.

RECOMMENDATIONS FOR GENERATING, COLLECTING AND RECYCLING TREATED WOOD WASTE

As described previously, the Department recognizes that it may be very difficult to selectively remove CCA-treated wood from other forms of treated wood. Consequently, the following recommendations are designed to address all treated wood, as much as is practical. These recommendations are also advisory in nature and are separate from the BMPs described in the section, "Best Management Practices for Treated Wood."

◂ *Generation and Collection*

The best location to separate treated wood waste for proper management is at the generating source. Generators will be more knowledgeable of the type of wood that is being handled, and separation at the source is much more effective than trying to separate treated wood later at a disposal or processing facility.

The Department recommends the following guidelines be followed for the generation and collection of treated wood waste.

•**Dedicated roll-offs:** Dedicated, separate roll-offs should be used at job sites involving the construction or demolition of wooden decks, stairs, fences, play ground equipment, landscaping materials, docks and for any other large-scale uses of treated wood. Generators should place all treated wood scraps in these roll-offs for later disposal at permitted lined landfills or other facilities permitted to receive treated wood. As much as is practical, sawdust generated from cutting the treated wood should also be bagged and disposed of at a lined landfill. Bags of sawdust can be placed in the dedicated roll-offs for treated wood.

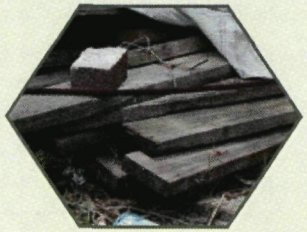
•**No on-site burning of treated wood:** Treated wood should not be burned at demolition or construction sites as part of the site cleanup efforts. The burning of CCA-treated wood releases toxic fumes and produces a residual ash which is toxic.

•**No on-site mulching of treated wood:** Treated wood, especially CCA-treated wood, should not be ground up on-site and used as landscaping mulch or soil amendment.

•**Curbside collection:** When feasible, local governments should ensure that treated wood from renovations of fences and decks by homeowners that is collected through a curbside pickup program is not mixed with vegetative wastes, but is instead taken to a lined landfill for disposal.

◂ *Recycling*

At this time, there are no acceptable recycling alternatives for CCA-treated wood, other than reuse of discarded lumber, timbers and poles through reuse and salvage centers.



BEST MANAGEMENT PRACTICE (BMP) FOR TREATED WOOD

As is described in the section, "How to Identify Treated Wood," the Department recognizes that it may be very difficult to selectively separate CCA-treated wood from other forms of treated wood. Consequently, this BMP is designed to maximize the removal of all treated wood from the waste stream. By following this guidance document, the Department will assume that all reasonable measures are being taken by the owner/operator to prevent the disposal or processing of CCA-treated wood at the facility.

◂ *Materials Recovery Facilities (MRFs)*

This Section applies to MRFs regulated under Rule 62-701.710, F.A.C. and C&D MRFs regulated under Rule 62-701.730(13), F.A.C. Typically, wood is separated from the waste stream at these facilities, size reduced, and used as landscaping mulch, boiler fuel or, when mixed with soil, initial cover at Class I landfills. In other cases the wood is disposed of in either Class III landfills or C&D debris disposal facilities. To ensure that significant quantities of treated wood are not managed in these ways at MRFs, the Department recommends that the following procedures be implemented by the owner/operator of the facility.

Initial scale house inspection/driver interview: Incoming trucks should be inspected visually to look for dedicated loads[3] of treated wood, especially from contractors specializing in the demolition and construction of fences, decks and docks. The name of the company may help identify contractors who would be likely to have a dedicated load. For additional information, the scale house operator may also ask the drivers what they are hauling. All dedicated loads should be diverted at the scale house for disposal at a lined disposal facility or properly managed at the MRF before disposal at a lined disposal facility.

Floor spotters and picking line workers: By rule, the MRF must have at least one trained spotter on duty whenever waste is being received. It is recommended that the MRF employ at least one floor spotter per sorting train at the facility. The floor spotter should observe loads as they are tipped onto the tipping floor and pull out larger pieces of treated wood that are listed in the table below. The picking line workers should pull out the smaller pieces of treated wood listed in the table not removed by the floor spotters. Separated treated wood should be placed in a roll-off container for disposal at a lined disposal facility.

Training requirements: The owner/operator should implement a training plan designed to help floor spotters and picking line workers identify treated wood. This training plan is in addition to the trained spotter requirements contained in Rule 62-701.710(4)(c), F.A.C. Teaching aids like those shown in the photos of typical waste loads (page 14) may be used. A teaching tool "example board" like that shown on page 13 should be posted near the picking line.

Spot-checking program: If wood is mulched at the MRF, the owner/operator must implement a monthly spot-checking program to evaluate how effectively treated wood is being removed from the recovered wood waste stream. This program can include the PAN indicator test (page 12) to identify the presence of copper-treated wood. The program can also include more sophisticated testing procedures to look for arsenic-treated wood. The details of any spot-checking program will have to be developed case-by-case, with the purpose of helping the owner/operator improve operations. The results of the spot-checking program need not be reviewed by Department staff for compliance purposes, and detections of treated wood in the mulch will not in themselves be indicative of a violation of Department standards.

Types of Wood That Are Typically Treated With CCA

Lumber, timber and plywood with a green color
Wood and wood posts from fences
Wood and wood posts from docks
Wood and wood posts from decks and outdoor stairs
Wood 4 inches by 4 inches or larger in diameter
Dimensional lumber labeled (with end tags) as treated wood
Wood from playground equipment
Lumber used in landscaping flower beds, gardens, etc.

3 "Dedicated loads" are defined as loads of predominantly or exclusively treated wood that would typically be generated by deck, dock and fence contractors.

Recordkeeping: The owner/operator should maintain records of the following: (1) volumes or weights of treated wood removed and disposed of in a lined disposal facility; (2) the name of the facility used for disposal; (3) treated wood training records for the floor spotter and picking line workers; and (4) results of the monthly spot-checking program, if required. These records must be kept with the other operational records of the facility and maintained as required by Rule 62-701.710(9), F.A.C.

◂ *Yard Trash Processors and Other Authorized Mulching Operations*

Yard trash processing facilities that receive and process only yard trash as defined in Rule 62-701.200(143), F.A.C. need not follow this Guide for their operations. The Department recommends that facilities that mulch or compost any clean wood[4] as defined in Rule 62-701.200(16), F.A.C., including yard trash processing facilities and mulching facilities at landfills, implement the following procedures.

No mulching of treated wood: The owner/operator (or spotter in the case of a landfill mulching operation) must make reasonable efforts to remove any treated wood listed in the table on page 7 from the wood waste stream prior to processing. Because of the difficulty of identifying it after-the-fact, extra care should be taken to assure that decorative wood mulches are free of treated wood. Any removed treated wood should be placed directly into a separate container and taken for disposal to a lined disposal facility.

No burning: Treated wood must not be burned in open piles, air curtain incinerators or other uncontrolled conditions.

Recordkeeping: The owner/operator must maintain records of the volumes or weights of treated wood removed and disposed of and the name of the landfill used for disposal. These records must be kept with the other operational records of the facility and maintained as required by the facility's permit or applicable rules.

◂ *Class I Landfills, Lined Class III Landfills, and Lined C&D Facilities*

The Department recommends that owners and operators of Class I landfills, lined Class III landfills, and lined C&D facilities implement the following:

No mulching of treated wood: If mulching occurs at the facility, the operator should take adequate steps to ensure that treated wood is not being processed into mulch for off-site uses or for on-site uses outside of the lined disposal area. Because of the potential to increase leaching rates, the Department does not recommend size reduction of treated wood. However, treated wood may be processed and used as initial cover at the disposal area provided it is only used on interior slopes and meets the other requirements for initial cover contained in Chapter 62-701, F.A.C.

No burning: Treated wood must not be burned in open piles, air curtain incinerators or other uncontrolled conditions.

Management of treated wood: Treated wood which is separated from yard trash or other clean wood should be stored in a separate container or directly disposed of in a lined area. If the lined disposal facility is co-located with other unlined facilities, the owner/operator should include specific conditions in its operation plan to assure that the treated wood is disposed of only in lined areas.

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[4] *Clean wood means wood, including lumber, tree and shrub trunks, branches, and limbs, which is free of paint, glue, filler, pentachlorophenol, creosote, tar asphalt, other wood preservatives or treatments. While this definition specifically excludes treated wood, the Department expects that a facility that accepts clean wood will inadvertently accept some treated wood that will need to be properly managed.*

◂ *Unlined Class III Landfills and C&D Debris Disposal Facilities*

To ensure that significant quantities of treated wood are not improperly managed at unlined Class III landfills and C&D debris disposal facilities, the Department recommends that the following procedures be implemented. However, if a Class III landfill or a C&D debris disposal facility is lined, then it may manage treated wood in accordance with the section on "Class I Landfills, Lined Class III Landfills, and Lined C&D Facilities" of this document.

Initial scale house inspection/driver interview: Incoming trucks should be visually inspected to look for dedicated loads[5] of treated wood, especially from contractors specializing in the demolition and construction of fences, decks and docks. The name of the company may help identify contractors who would be likely to have a dedicated load. For additional information, the scale house operator may also ask the drivers what they are hauling. All dedicated loads should be diverted at the scale house for disposal at a lined facility or properly managed at the unlined facility before disposal at a lined facility.

No burning: Treated wood must not be burned in open piles, air curtain incinerators or other uncontrolled conditions.

Signage: Facilities must install signs in the area of incoming traffic flow notifying customers that treated wood will not be accepted for disposal at the facilities, and that the only approved method of disposal is at a lined disposal facility.

Spotters: A trained operator or spotter must inspect the load and pull out larger pieces of treated wood that are listed in the table on page 7. In some cases the load may need to be spread out with compaction equipment or bulldozers in order for adequate spotting to occur. Separated treated wood should be placed in a roll-off container for disposal at a lined disposal facility.

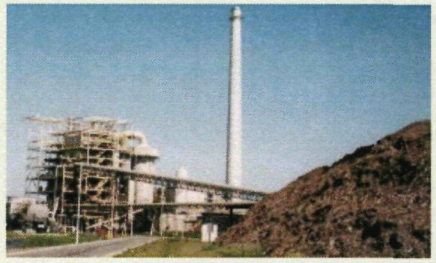
Training requirements: The owner/operator should implement a training plan designed to help operators and spotters identify treated wood. This training plan is in addition to the trained operator and spotter requirements contained in Chapter 62-701, F.A.C. Teaching aids such as that shown on page 13 may be used.

Spot-checking program: If wood is mulched at the facility, the owner/operator must implement a monthly spot-checking program to evaluate how effectively treated wood is being removed from the wood waste stream. This program can include the PAN indicator test described on page 12 to identify the presence of copper-treated wood. The program can also include more sophisticated testing procedures to look for arsenic-treated wood. The details of any spot-checking program will have to be developed case-by-case, with the purpose of helping the owner/operator improve operations. The results of the spot-checking program need not be reviewed by the Department staff for compliance purposes, and detections of treated wood in the mulch will not in themsleves be indicative of a violation of Department standards.

Record Keeping: The owner/operator should maintain records of the following: (1) volumes or weights of treated wood removed and disposed of at a lined disposal facility; (2) the name of the facility used for disposal; (3) treated wood training records for the operator and spotter; and (4) results of the monthly spot-checking program, if required. These records must be kept with the other operational records of the facility and maintained as required by the facility's permit or applicable rules.

◂ *Waste-to-Energy (WTE) Facilities*

Generally, little treated wood goes to WTE facilities. The emissions from the de minimis amounts in the waste stream are believed to be adequately handled by each facility's air pollution control equipment. However, the impacts from large-scale burning of treated wood in WTE facilities have not been tested, and it is not known how much treated wood can be safely burned. Therefore, the use of WTE facilities for large-scale bulk disposal of treated wood is not recommended.



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5 "Dedicated loads" are defined as loads of predominantly treated wood that would typically be generated by deck, dock and fence contractors.

FREQUENTLY ASKED QUESTIONS

Q1. What do those labels/end tags mean? Can I use them when I sort?

A1. Yes. There is a lot of useful information on the labels attached to the end of dimensional wood. Labels identify the type of chemical that was used to treat the wood (CCA, ACQ, CBA, etc.), the level of treatment (pounds of chemical per cubic foot of wood, for example 0.25, 0.40, 0.80, 2.5, etc.) and the location of the treating plant. If the wood has a label then it is probably treated and according to this guidance should be separated out for disposal at a lined disposal facility.

Q2. Are pallets ever made from treated wood?

A2. Pallets are very rarely made from treated wood. For the most part, pallets can be safely ground up into wood chips for use as mulch or as fuel in a wood-fired boiler. As with other types of wood, inspection of pallets should follow the recommended guidelines.

Q3. Do I need to remove the arsenic-free treated wood products? Is there any harm from them?

A3. Compared with CCA, these other products pose little or no significant risk to the environment or to human health[6]. However, because of the difficulty in differentiating CCA-treated wood from other types of treated wood, this guidance recommends you remove all treated wood from the waste stream.

Q4. What precautions do I need to take when handling treated wood? Should my pickers who handle this type of material take more precautions than others?

A4. All pickers should wear eye protection, dust masks and gloves. Workers handling wood preserved with CCA should be sure to wash their hands before eating or smoking. CCA-treated wood splinters in the hands and fingers of workers are reported to be very problematic and should be removed as soon as possible. It is important to make sure that the entire splinter is removed. Removal may require medical attention.

Q5. How do I store this material?

A5. Treated wood, including CCA-treated wood, should be placed directly into a separate container for storage prior to disposal in a lined disposal facility. Simply storing the treated wood in a pile outdoors could continue to pose an environmental threat.

Q6. How do I find out where the lined disposal facilities are?

A6. The waste program staff at your District office of the Florida Department of Environmental Protection will know where the lined disposal facilities are located in your part of the state. See the contact information on page 16.

Q7. Can I refuse to accept loads of CCA-treated wood or any other treated wood?

A7. There is nothing in Florida state laws or rules that would require you to accept any particular kind of waste. Unless you are contractually obligated to accept this waste stream by your haulers or local government, you can refuse to accept loads of treated wood.

[6] The new copper-based arsenic-free wood products (ACQ and Copper Azole) do leach about twice as much copper as CCA-treated wood. However, the higher levels of copper that leach out of ACQ and Copper Azole are not nearly as toxic as the arsenic that leaches out of CCA-treated wood. There is some concern about how much copper the new preservatives like ACQ and Copper Azole may leach into aquatic systems.

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Solo-Gabriele, H., Sakura-Lemessy, D., Townsend, T., Dubey, B., and Jambeck, J., 2003a, "Quantities of Arsenic Within the State of Florida," Florida Center for Solid and Hazardous Waste Management Report #03-06, Gainesville, Florida.

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Townsend, T., Stook, K., Tolaymat, T., Song, J. K., Solo-Gabriele, H., Hosein, N. and Khan, B., 2001, "New Lines of CCA-Treated Wood Research: In-Service and Disposal Issues," Florida Center for Solid and Hazardous Waste Management Report #00-12, Gainesville, Florida.

Townsend, T. G., Dubey, B., and Solo-Gabriele, H., 2004, "Assessing Potential Waste Disposal Impact From Preservative Treated Wood Products," Environmental Impacts of Preservative Treated Wood, Florida Center For Environmental Solutions, Orlando, Florida, February 8-9, pp. 169-188.

PAN STAIN INDICATOR

Principle: PAN stands for the chemical name of 1-(2-pyridylazo)-2-naphthol, an orange-red solid with a molecular formula $C_{15}H_{11}N_3O$. It is used to determine the presence of almost all metals excluding alkali metals. The reaction with the metals in CCA-treated wood produces a magenta to red color. Untreated wood turns orange in color. It is important to note that the stain is not specific to arsenic within CCA. It reacts with the copper, so that wood treated with any copper-based preservative (such as ACQ and Copper Azole) will also test positive using this stain.

Safety: Gloves and safety goggles should be used during the application of the stain. The stain should be applied in a fashion that would prevent inhalation. The stain should not be ingested and should be kept in a safe place that would prevent children or animals from ingesting the solution. A material safety data sheet (MSDS) is also available on this product that supplies additional safety information. You may also want to contact the chemical supplier of the stain for additional safety instructions. Receipt of the stain kit normally requires that the recipient sign a liability waiver.

Reagents: The PAN Indicator solution (a.k.a."stain") can be purchased as a pre-mixed solution or the basic chemical ingredients can be purchased and mixed at a laboratory. The pre-mixed solution is more convenient but usually more expensive, in particular if large quantities of the stain are needed. If large quantities of stain are needed, a more economical option would involve purchasing the basic chemical ingredients and mixing these ingredients in a laboratory. The pre-mixed solution can be purchased from Spectrum Chemicals. More information on obtaining these ingredients is shown in the following table.

Company	Phone Number	Cat. # for PAN	Cat. # for Methanol	Solution
Spectrum	*800-813-1514*	*P1000-04 (25g)*	*M1240 (20L)*	P-358-51
Sigma	800-325-3010	*01036-25G (25 g)*	*179337-20L*	
Fisher Acros	800-766-7000	*AC14631-0100 (10g)*	*A411-20 P-358-51*	

Procedure for Use

1. Using a dropper bottle, apply the stain to the wood. If the wood is relatively clean, the stain can be added directly to the wood. If the wood is soiled we recommend that a small area of the wood be carefully cut away to expose a clean area (approx 1 square centimeter). The stain works best if the wood is dry.

2. If testing mulch, it may be easiest to use a spray bottle. When using a spray bottle, be careful to spray the solution downwind to avoid inhalation.

3. Wait for color development (about 15 seconds). Color development is faster if applied to the transverse direction of the wood instead of the radial direction.

4. Note the color. If the sample turns a magenta color, then the wood is positive for copper. If the wood turns orange in color, then the wood is negative for most metals and is considered untreated.

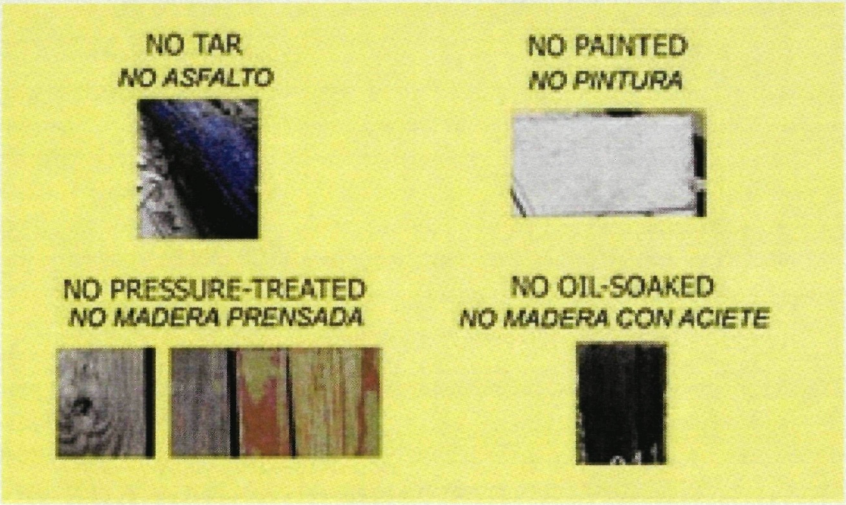
Interferences

1. Stain will not work properly on colored mulches or mulches that are very soiled.

2. Stain will sometimes react as positive with paint and nails on wood, even though the wood may be untreated.

TEACHING TOOLS FOR SORTING WITHOUT CHEMICAL TESTING

Materials Recycling Facilities (MRFs) and other facilities that will sort their waste wood can use signs like these to help sorters distinguish between wood that can be recycled and wood that should be sent to a lined disposal facility. Signs include Spanish and English text.



The top example can be used to explain how to sort wood based on its treatment.

This example can be used to explain how to sort wood based on the structure in which it was used.

PICTURES OF TYPICAL WASTE LOADS THAT CONTAIN TREATED WOOD

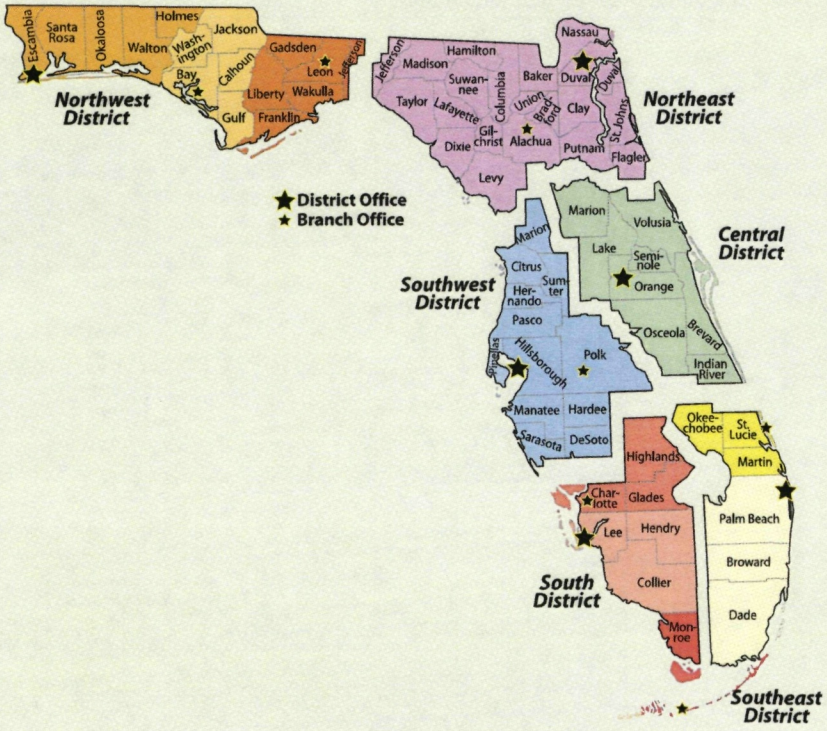
Top: Loads of yard waste may contain CCA-treated wood from fencing, fence posts or landscaping timbers. This piece of wood is likely treated due to its green hue and large dimensions.

Bottom: This load is a mix of yard waste, CCA-treated fencing and CCA-treated landscaping timbers. Treated wood can be identified based on the fact that it is sawn and is characterized by a green hue. The dimensional lumber in the bottom is obviously treated. It is difficult to tell for the highly weathered sawn boards.

Top: Loads from the demolition of outdoor structures will typically contain CCA-treated wood. Pole at the upper left is treated. Complete recovery of untreated wood from this pile will likely require testing in addition to visual separation.

Bottom: The green colored pole in the front of this pile is treated. Complete recovery of untreated wood from this pile will likely require testing in addition to visual separation.

Florida Department of Environmental Protection District Offices



This book is dedicated to the memory of William W. (Bill) Hinkley 1945-2005

WHERE CAN I GET MORE INFORMATION?

The waste program staff at your District office of the Florida Department of Environmental Protection can provide additional information including a list of lined disposal facilities that are located in your area of the state. The appropriate contacts and District boundaries are shown below.

FDEP Information Line,
Phone: (800) 741-4DEP
Fax: (850) 245-8810

FDEP Headquaters
2600 Blair Stone Road
Tallahassee, Fl 32399-2400
http://www.dep.state.fl.us/waste/

FDEP District Offices:

Northwest District Office
160 Governmental Center, Room 308
Pensacola, Fl 32502
(850) 595-8300

Southwest District Office
13051 N. Telecom Parkway
Temple Terrace, Fl 33637
(813) 632-7600

South District Office
P.O. Box 2549
2295 Victoria Avenue,
Suite 364
Fort Myers, Fl 33901
(239) 332-6975

Northeast District Office
7825 Baymeadows Way Suite 200B
Jacksonville, Fl 32256
(904) 807-3300

Central District Office
3319 Maguire Boulevard, Suite 232
Orlando, Fl 32803
(407) 894-7555

Southeast District Office
400 North Congress Avenue
Suite 200
West Palm Beach, Fl 33401
(561) 681-6600

Additional information on CCA-treated wood can be found at the Florida Center for Solid and Hazardous Waste Management's website for CCA research: www.ccaresearch.org.