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OPERATIONS MANUAL

ABBAY GREEN RECYCLING CENTER
5030 OVERDALE ROAD
WINSTON-SALEM, NORTH CAROLINA

ABBAY GREEN, INC.
Permit 34-24
December 31, 2015



ABBAY GREEN RECYCLING CENTER
OPERATIONS MANUAL

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Figure 1 Site Plan

Appendix A Letter of Approval for Asbestos Screening Plan

Appendix B NPDES Permit

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Applicability Determination

1.0 GENERAL FACILITY OPERATIONS

1.1 Overview

This Operations Manual was prepared for operations of the Abbey Green Recycling Center facility (Permit No. 34-24) located at 5030 Overdale Road in Winston-Salem, North Carolina. This document discusses the operation of the recycling facility and other solid waste management activities. The facility has been designed to accept construction and demolition (C&D) materials as well as new construction debris. The facility has also been designed to accept limited amounts of yard trimmings and vegetative clearing debris and process these into compost. Refer to the attached site plan for the general layout of the facility.

All personnel involved with the management or supervision of the facility shall review and update the documents as needed. A copy of this Operations Manual will be maintained at the facility and will be available for use at all times.

1.2 Contact Information

All correspondence and questions concerning the operation of the Abbey Green Recycling Center should be directed to the contact listed below. For fire or police emergencies, dial 911.

Abbey Green, Inc. (Operator)
5030 Overdale Road
Post Office Box 12339
Winston-Salem, North Carolina 27117
Phone: 336.785 2130
Contact: Mr. John Randall Baker, Jr., VP & General Manager
Email: RBaker@AbbeyGreen.com

1.3 Facility Operating Hours

Proposed hours of operation will be 5:00 AM to 11:00 PM Monday through Friday and Saturday 7:00 AM to 4:00 PM. The facility will normally receive C&D debris from haulers and construction sites from 7:00 AM to 6:00 PM Monday through Friday and 8:00 AM to 12:00 PM on Saturday. The facility will typically be closed for normal operation on Sundays. Maintenance and other activities may be performed on any day or time. In the event of disaster or other emergency

situations, the supervisor may request approval from the DWM regional office to allow additional temporary operating hours.

1.4 Access Control

Access to process and storage areas of the facility will be controlled by a combination of fences, gates, and natural barriers and strictly enforced operating hours. An attendant will be on duty at all times when the facility is open for public use to enforce access restrictions.

1.4.1 Physical Restraints

The site will be accessed by an entrance from the private road to the northwest of Overdale Road. Waste will be screened at the scales by the scale house operator. All waste will have been weighed prior to being processed on the site. The entrance will have a gate which will be securely locked during non-operating hours.

1.4.2 Security

Haulers will be stopped at the scale house for scanning and photographic documentation of open loads. Drivers will be required to identify the contents of the load and origin. Incoming loads on closed trailers or trucks will be inspected upon unloading at the tipping floor. Unacceptable materials will leave the facility in the vehicle that brought them. Frequent inspections of gates and fences will be performed by facility personnel. Evidence of trespassing, vandalism, or illegal activities will be reported to the Owner. The facility will be securely locked during non-operating hours.

1.5 Signage

Prominent signage containing the information required by the North Carolina Division of Waste Management (DWM) and Health Hazards Control Unit will be placed at the main facility entrance. The signs will provide information as follows;

- operating hours
- emergency contact information
- permit number

- operating procedures for customers and, or visitors
- list of acceptable debris
- list of unacceptable wastes
- traffic directional signs for vehicles which are tipping and are picking up recycled products

Service and maintenance roads for use by operations personnel will be clearly marked and barriers (e.g., traffic cones, barrels, etc.) will be provided as required.

1.6 Personnel Requirements

The anticipated personnel requirements for operation and maintenance of the facility are listed in the following table:

DESCRIPTION	PRIMARY FUNCTION (ALLOCATION)
1) General Manager & Office Staff (5)	Overall management of the facility
2) Scale house attendant (1)	Receiving and weight for incoming loads, identification of load content and screening for prohibited waste
3) Operators (5)	Management of tipping floor and recycling areas and screening for prohibited waste. Operation of the composting and soil production areas
4) Commercial Drivers (4) *	Transfer of processed C&D material and product sales
5) Labor (12)	General labor and operational staff around the site

* All positions subject to change in response to actual volume of debris received.

One member of the supervisory staff or a lead operator, trained and certified in facility operations, will be on site at all times during all operating hours of the facility in accordance with G.S. 130 A-309.25 of the North Carolina Code. Each facility employee will participate in an annual training course (led by supervisory staff). As part of this training, personnel learn to recognize loads which may contain prohibited wastes.

All personnel will receive a minimum of two-hour asbestos awareness training. A minimum number of personnel will be required to operate the facility efficiently. A scale house attendant, laborers to work on the tipping floor and processing line(s), equipment operators, and a site supervisor are anticipated to be employed for the daily operation of the facility.

1.7 Health and Safety

All aspects of the operation of the facility were developed with the health and safety of operations staff, customers, and neighbors in mind. Prior to commencement of operation of the facility, a member of the operating staff will be designated as the site safety officer. This individual, together with the facility's management will modify the site safety and emergency response program to remain consistent with National Solid Waste Management Association and Occupational Safety and Health Administration (OSHA) guidance. All personnel will receive a minimum of two-hour asbestos awareness training.

Processing equipment will be appointed with protection from moving parts, pinching, electrical connections, and sharp objects. Automated and/or manual emergency shut-off controls will also be provided. Safety devices for mobile equipment will include equipment rollover protective cabs, seat belts, audible reverse warning devices, hard hats, safety shoes, and first aid kits. Equipment exhaust should be vented at an appropriate height in excess of the breathing zone. Other personal protective equipment (gloves, hearing protection, coveralls, or boots) will be required based on an employee's duties. Management and lead personnel will be encouraged to complete the American Red Cross Basic First Aid course to aid on site in case of an emergency. All personnel should be familiar with the equipment and duties of their position such that they will be able to identify potential hazards.

Each facility employee will participate in monthly safety meetings with topics relevant to worker safety at the Abbey Green facility. Each facility employee will participate in an annual training course in health and safety (led by supervisory staff). All training shall be documented and attested to by signatures of the trainer and trainee.

Each employee of Abbey Green will be required to submit to random drug and alcohol tests by a third party testing company.

The following are some general requirements for the health and safety of workers at the Abbey Green Recycling Center.

1.7.1 Personal Hygiene

The following items are recommended as a minimum of practice:

- ◆ Wash hands before eating, drinking, or smoking.
- ◆ Wear appropriate personal protective equipment.
- ◆ Wash, disinfect, and bandage any cuts, no matter how small. Any break in the skin can become a source of infection.
- ◆ Maintain fingernails closely trimmed and clean (dirty nails can harbor pathogens).

1.7.2 Personal Protective Equipment

Prior to the issuance of personal protective equipment (PPE) a job hazard analysis will be performed by a qualified industrial hygienist. PPE must be evaluated as to the level of protection necessary for particular operating conditions and then made available to facility employees. The list below includes PPE typically used and/or required in a solid waste management facility workplace.

- ◆ Safety shoes with steel toes.
- ◆ Safety glasses
- ◆ Hearing protection should be used in areas where exposure to high decibel noise levels is expected.
- ◆ Hard hat.
- ◆ Gloves.
- ◆ High-visibility vest and/or other clothing.

Following use, PPE should be disposed of or adequately cleaned, dried, or readied for reuse.

1.7.3 Mechanical Equipment Hazard Prevention

The loaders and other equipment should be operated with care and caution. All safety equipment such as horns, backup alarms, and lights shall be functional or taken out of service until repaired. A Lockout-Tagout program shall be used to identify equipment in need of or under repair and ensure that operation is “off-limits” prior to maintenance or repair. All operators shall be trained in the proper operation of equipment.

1.7.4 Employee Health and Safety

Review the following periodically with each employee:

- ◆ Consider safety first when planning and conducting activities.
- ◆ Post emergency contact phone numbers.
- ◆ Post route to nearest emergency medical facility.
- ◆ Post evacuation plan.
- ◆ Provide easy and visible access to the Right to Know materials.
- ◆ Provide easy and visible access to the first aid kits and fire extinguishers.

1.7.5 Physical Exposure

Facility personnel may come in contact with fluids, solids, and airborne constituents found at the recycling center or at the composting and soils production areas. Routine training should be conducted regarding the individual and collective materials used in the recycling or composting processes and their associated hazards. Training concerning safe work practices around these potential exposures should include use of PPE and proper disposal procedures. All personnel will receive a minimum of two-hour asbestos awareness training.

The tipping floor, sorting areas, and unloading areas must be maintained in a clean, sanitary condition.

1.8 Communications

The scale house, and office have telephones in case of emergency and to conduct day-to-day business. The scale house and office will communicate with lead personnel, equipment operators and supervisors at the facility by radio.

In an emergency the facility will make an announcement over the radio and employees will be trained to congregate at a rally point. Emergency telephone numbers will be displayed in the scale house and office.

Fires and non-conforming waste incidents shall be reported to the Regional Waste Management Specialist within twenty-four hours followed by a written notification to be submitted within fifteen days.

1.9 Utilities

Electrical power, water, and telephone will be provided at the scale house and office. Water will also be available at the tipping floor and processing equipment in the event that asbestos containing materials are identified. Restrooms will be provided at the site.

1.10 Litter Control

The perimeter fence and other interior netting will act as a barrier to keep litter contained within the site. Facility operators will inspect materials entering the facility. If unacceptable materials are delivered to the facility, the operators will deny the load or unacceptable materials will be returned on the same truck. De minimus litter sorted out during processing will be contained in an appropriate receptacle for delivery to an approved disposal facility. Windblown materials within the facility borders must be collected by the end of the day. Reasonable effort will be made so that no windblown material may be allowed to leave the facility boundary. The material will be collected in the event that this happens

1.11 Fire Prevention and Control

Due to the risk of fire and health and safety of personnel, incentives will be in place to discourage smoking on the premises. However, smoking is

limited to personnel breaks and only in designated areas screened and located well away from the tipping floor, the processing line, the storage of processed materials and composting and soil production areas. Fire lanes will be maintained and passable at all times.

The possibility of fire within the facility or a piece of equipment must be anticipated in the daily operation of the facility. Fire suppression equipment shall be provided to control accidental fires and arrangements have been made with the local fire protection agency to ensure any incident at the facility will be handled with the appropriate equipment. A combination of factory installed fire suppression systems and/or portable fire extinguishers will be operational on all heavy pieces of equipment at all times. For larger or more serious outbreaks, local fire and emergency agencies will be called (dial 911).

In the compost and soil production areas, compost fires are usually caused by spontaneous combustion of the materials in the compost pile, but can also be caused by a carelessly-tossed cigarette, welding sparks or by lightning. Compost fires are smoldering ember-type fires that can often be detected in their early stages by careful temperature monitoring.

Abbey Green staff will monitor compost pile temperatures to minimize the possibility of fires and follow the procedures noted above.

Abbey Green will verbally notify the DWM within 24 hours of discovery of a fire. Additionally, written documentation describing the fire, the actions carried out to extinguish the fire, and a strategy for preventing future occurrences will be provided to the DWM within fifteen days following any such occurrence.

1.12 Severe Weather Conditions

Unusual weather conditions can directly affect the operation of the facility. Some of these weather conditions and recommended operational responses are as follows:

1.12.1 Ice Storms

An ice storm can make access to the facility dangerous, prevent movement and, thus, may require closure of the facility until any ice deemed unsafe is removed or has melted.

1.12.2 Electrical Storms

The open recycling areas of the facility are susceptible to the hazards associated with lightning. If necessary, recycling activities will be temporarily suspended during severe lightning. All personnel will be removed to a safe area

1.12.3 Windy Conditions

Facility operations during a particularly windy period may require that the active tipping area and sorting operations be temporarily suspended.

1.12.4 Violent Storms

In the event of hurricane, tornado, or severe summer and/or winter storm warning issued by the National Weather Service, facility operations may be temporarily suspended.

1.13 Record Keeping Program

The Owner will maintain the following information in an operating record at the site:

- 1) Debris inspection records;
- 2) Tonnage records including source of generation and scale certifications;
- 3) List of generators and haulers that have attempted to dispose of restricted wastes;
- 4) Employee training procedures and records of training completed;
- 5) Annual facility reports (to be submitted by August 1 of each year for the previous July 1 through June 30); and

- 6) Reports of asbestos testing, sampling data, analytical results, and acceptance or refusal of the materials.
- 7) Reports of compost pile temperatures

Operating records will be presented, upon request, to the DWM for inspection. A copy of the current Operations Manual will be available at the facility for use at all times.

1.14 Financial Assurance

A closure cost estimate equal to the cost to hire a third party to remove and clean up a week's worth of waste from the facility has been provided below. A bond in this amount is held for financial assurance. This amount will be escalated annually based on criteria established by NC DENR

Closure Cost Estimate:

Assumptions

- 110,000 tons of debris per year potential
- Closure based on 110,000 tons or 2,115 tons of Unprocessed Mixed Debris per week
- 2115 divided by 20.5 tons/load = 103 loads
- \$102.5 /load cost to load and haul
- 24 man-hours @ \$15/hr cleanup = \$360
- 24 man-hours @ \$30/hr broom tip floor = \$720

Summary of Costs for Unprocessed Debris

Disposal costs	2,115 tons x \$30/ton = \$63,450.00
Load and Hauling costs	103 loads x \$102.5/load = \$10,557.50
Clean up and broom floor costs	\$360 + \$720 = <u>\$1,080.00</u>
Total Estimated Cost of Closure	= \$75,087.50

2.0 DEBRIS HANDLING OPERATIONS

2.1 Overview & Definitions

This section describes the required debris handling operations for the Abbey Green Recycling Center facility. In addition to the C&D debris received at this facility, the facility also processes new construction debris such as lumber, ferrous and non-ferrous metals, and yard trimmings and vegetative debris. The list of acceptable debris is shown below. Debris may be received from industrial sources if the material is 100% recyclable or the unrecyclable residual from industrial sources is kept physically separated from residual to be taken to approved C&D landfills.

The following definitions are specific to the Abbey Green site and are used in that context throughout this plan:

2.1.1 Unprocessed Mixed Debris – all mixed debris approved for receipt at Abbey Green at the point where the debris is deposited on the tipping floor. This material has not yet undergone floor waste screening, floor presort activities, and line processing

2.1.2 Inerts – clean concrete, block, brick, stone, and soil

2.1.3 Clean Wood – wood that is not treated, not painted, not stained and not glued

2.1.4 Engineered Wood – wood with glues (at Abbey Green this is typically OSB and plywood) as defined by EPA's Non Hazardous Secondary Materials Ruling as Resinated Wood as part of their guidance for Incineration Units. The final ruling was signed by LP Jackson dated December 20, 2012. The definition is found in Section III C. 3. B. "Resinated Wood"

2.1.5 Recyclable Materials – all material recovered from Unprocessed Mixed Debris during recycling activities. Recyclable Materials to be sold or used on the Abbey Green site

2.1.6 Processed Residual – the material remaining after all recycling activities are complete. This material will be shipped to an approved landfill or other approved facility. Processed Residual is approximately 25% by weight of Unprocessed Mixed Debris since 75% has been removed as Recyclable Material during the recycling process. Processed Residual has been waste screened

on the tipping floor, de-watered, presorted, size reduced, and sorted on the processing line.

2.1.7 Trommel Overs – Material mostly consisting of small pieces of wood, cellulose materials, and inerts. Trommel Overs are generated from the processing line with two screening activities. Most of the material making up Trommel Overs ranges in size from ½” to 2-1/2”. Trommel Overs are used as a feedstock for the production of Engineered Soil.

2.1.8 Soil Amendment – Sandy loam (approximately 66% sand, 25% silt, 9% clay) is used as the major feedstock in the production of Engineered Soil. Soil Amendment is generated from the processing line with two screening activities. Grain size ranges from fines to ½” maximum. A large portion of the material making up Soil Amendment is produced by the active screen which chips concrete, gypsum, wood and other cellulose feedstock into fine particles.

2.1.9 Engineered Soil – manufactured from aged Soil Amendment mixed with compost.

2.1.10 Subsurface Drill Cuttings- consists of virgin and uncontaminated soil mixed with potable water generated from directional drilling

2.2 Acceptable Debris

The following debris may be recycled at the facility:

- ◆ Wood (Clean Wood (including pallets), Engineered Wood, and other woods);
- ◆ aggregates and Inerts;
- ◆ yard trimmings (brush, leaves, grass);
- ◆ vegetative brush from land clearing operations;
- ◆ drywall;
- ◆ roofing shingles;
- ◆ metals;
- ◆ white goods;
- ◆ plastics
- ◆ cardboard and paper;
- ◆ carpet and padding;

- ◆ Subsurface Drill Cuttings when accompanied with a TCLP test for heavy metals for each project;
- ◆ modular buildings, mobile home buildings, trailer campers; and
- ◆ other wastes as approved by the Solid Waste Section of the Division of Waste Management.

2.3 Prohibited Wastes

Only wastes, as defined in Section 2.2 above or approved by the DWM may be accepted. No other wastes may be accepted. Asbestos containing materials will not be accepted. Suspect asbestos-containing materials will not be accepted.

Abbey Green will not accept the following wastes as part of the feedstock for its composting operations:

- ◆ Source-separated organic wastes such as food wastes
- ◆ Industrial sludges
- ◆ Biosolids and/or septage
- ◆ Petroleum-containing materials or wastes

2.4 Debris Screening Program & Tipping Locations

In order to assure that prohibited wastes are not entering the facility, a screening program will be implemented. Debris entering the facility will be screened by trained personnel. These individuals have been trained to recognize indications of suspicious wastes, including: hazardous placards or markings; liquids, powders, or dusts; asbestos containing materials; sludge; bright or unusual colors; drums or commercial size containers; and “chemical” odors. The screening program for visual and olfactory characteristics of prohibited wastes is an ongoing part of the facility operation.

All vehicles must stop at the scale house located at the entrance of the facility and visitors are required to sign-in. All debris transportation vehicles are weighed and the content of the load assessed by the scale

attendant's inquiry, photographic equipment, and scanners. The scale attendant requests from the driver of the vehicle a description of the debris it is carrying to ensure that unacceptable waste is not allowed into the facility. The attendant then visually checks the vehicle as it crosses the scale. Signs informing users of the acceptable and unacceptable types of waste are posted at the scale house. Once passing the scales, the vehicles are routed to the appropriate tipping area.

In accordance with the requirements from the State of North Carolina, Division of Epidemiology, a facility representative or outside contractor who has successfully completed an approved asbestos contractor / supervisor training class will be readily available to the facility during hours of operation. Any incoming waste including recognizable suspect asbestos containing material must be accompanied by a report from an accredited asbestos inspector indicating the materials do not contain asbestos. Recognizable suspect asbestos-containing materials will not be unloaded without proper documentation. If unacceptable waste is found upon unloading on the tipping floor, the load will be isolated, wetted, and covered until it can be determined whether the material contains asbestos. Water will be available throughout the facility to eliminate dust production and migration. Sampling suspect material will be completed by a North Carolina accredited asbestos inspector. If asbestos-containing material is found to have entered the waste stream, the area around the material should be properly marked and the material wetted and covered. North Carolina accredited personnel will be required to clean-up the contaminated site in accordance with applicable regulations and transport the asbestos-containing waste to a proper disposal facility. The facility will have an accredited inspector and abatement contractor respond should a suspect load be received. If asbestos containing materials have contaminated the staging area or pick line, all work will stop and the Health Hazards Control Unit will be notified. A letter from Pat Wylie of the Division of Epidemiology has been included in Appendix A indicating the division's approval of the asbestos screening plan.

If the debris received comes from a transfer station, which is also permitted to receive C&D debris, Abbey Green will work with the

personnel at that transfer station to assure that the incoming inspection criteria is substantially equivalent to that used at Abbey Green.

2.4.1 Waste Screening at the Tipping Location

Refer to the attached site plan which shows tipping locations.

An Abbey Green employee trained in waste screening will meet every truck at the tipping location to evaluate the load after the door on the container or truck bed is opened prior to tipping. The debris will be visually inspected again, once the door to the container is opened.

For loads received on the covered tipping floor:

if unacceptable waste (other than asbestos) is found upon unloading on the tipping floor, the load will be isolated, reloaded, the load will be entered into the waste screening log. Periodically, minor wastes may be encountered while sorting and processing (i.e. random bag of household waste, litter, etc.). Containers will be staged on-site such that these minor wastes will be placed in a container to be disposed at an appropriate licensed facility.

For loads not received on the covered tipping floor:

if previously-unseen unwanted or non-uniform material is detected or if the load has sufficient quantities of mixed debris to be of concern, then Abbey Green personnel will:

1. redirect the load to the covered tipping floor,
2. reject the load, record the rejection in the waste screening log.

or 3. if the unwanted or non-uniform material are of small enough quantity and manageable, the unwanted or non-uniform material will be immediately removed and moved to the covered tipping floor.

De minimus amounts of unwanted or non-uniform material on "clean" loads is to be expected and small amounts of unwanted or non-uniform

material may remain in clean material until such time as that material is processed.

Tipping Locations:

- 1) Unprocessed Mixed Debris – must be received on the covered tipping floor.
- 2) Clean and Engineered Woods – If the truck driver and Abbey Green screening personnel are confident there is no moisture present in the bottom of the load, the load may be received on the concrete area outside the covered tipping floor.
- 3) Inerts –may be received in the concrete processing areas near the LCID landfill
- 4) Yard Trimmings and Vegetative Brush – will be received near the compost processing area.
- 5) Subsurface Directional Drill Cuttings - will be received at the discharge dewater tipping area as per drawing dated March 17, 2014 attached. This location is noted on the attached site plan.

2.5 GENERAL FACILITY OPERATIONS

2.5.1 Operating Capacity

The Operating Capacity for the recycling facility is estimated to be approximately 450 tons per day of C&D debris. Summarized below is the design capacity which is projected to be attained in 2020. This shows the proportions of recycled materials received as mixed debris. Data was taken from nationally published figures on C&D debris and adjusted based on specific studies completed at the Old Salisbury Road Landfill and Abbey Green’s experience in the last five years of operation.

The first column (% Total) is our projected expectation of the percentages of the material we will find in the debris stream measured by weight. The second column (2015-2020 Diversion Rate) is the percentage of that

stream that we project we will recover for sale by presorting or on the picking line.

2015 – 2020 Recycling Rates – Abbey Green

Material	%	Tons – Permitted to 110,000
Metals	3%	3,300
Inerts including soil	38%	52,800
Wood	28%	30,800
Cardboard	3%	3,300
Drywall	6%	6,600
Plastic	1%	1,100
TOTAL	79%	86,900

It is the intent that processed materials will not be stored on site for more than 90 days, however:

- some materials have lower volume (such as vinyl siding and PVC pipe) which may require longer storage time to acquire enough material to sell in bulk
- and some materials (such as gypsum, soils, compost, and boiler fuel) which are seasonal in their markets may be stored longer to meet a seasonal demand

2.5.2 Service Area

The anticipated service area for the facility is generally anticipated to be concentrated in Forsyth County and its surrounding counties. Debris will not be accepted from out-of-state. Specifically, the facility will service the following counties:

Alexander, Alamance, Cabarrus, Catawba, Davidson, Davie, Forsyth, Guilford, Iredell, Mecklenburg, Randolph, Rockingham, Rowan, Stokes, Surry, Union, Yadkin, Wilkes

2.5.3 Disposal Facilities

Most Processed Residual will be disposed in-state. The disposal facilities for residual C&D debris will be the Forsyth County facility located at Old Salisbury Road, Winston Salem, NC (Permit 34-12), the Gold Hill Rd. Landfill located at 385 Gold Hill Rd. Asheboro, NC (Permit 76-06), A-1 Sandrock Landfill located at 2091 Bishop Rd, Greensboro, NC (Permit 41-17), the Waste Industries Landfill at 5830 Riverdale Dr, Jamestown, NC (Permit 41-16), the Rowan County Landfill at 789 Campbell Rd, Woodleaf, NC (Permit 80-03), the Surry County Landfill at 237 Landfill Rd., Mt. Airy NC 27030 (Permit 86-03), the Davidson County Landfill at 220 Landfill Rd, Lexington, NC 27292 (Permit 29-06), the Republic Uwharrie Landfill at 500 Landfill Rd, Mount Gilead, NC 27306-8935 (Permit 62-04), and the Republic Service's transfer station on Overdale Road, Winston Salem, NC (Permit 34-16).

The US Green Building Council allows the incineration of Processed Residual, if used in waste-to-energy plants, to be credited toward the requirements of Platinum LEED certification. The most convenient and economical facilities which are permitted to burn C&D Processed Residual are in nearby states. In some projects Abbey Green may elect to ship Processed Residual out-of-state to comply with LEED requirements. These facilities are The Wheelabrator Waste-to-energy plant, 3809 Elm AV, Portsmouth, VA (VA Permit #TRO61018); the Pratt Waste-to energy facility 1800A Sarasota Parkway, Conyers, GA (GA permit # 2631-247-0037-V-03-0),

Residual Municipal Solid Waste generated by the facility will be disposed of at the Hanes Mill Road MSW Landfill, Winston Salem, NC (Permit 34-02) or Republic Service's transfer station mentioned above.

A portion of the recycled inert and aggregate-like material and soils may be retained on site as beneficial fill to improve the site topography and to maintain and build roads.

2.5.4 Mobile Equipment Requirements

The Owner will maintain on-site equipment required to perform the necessary recycling activities. Periodic maintenance of all equipment and minor and major repair work will be performed within designated maintenance zones or off-site. Generally, loading, hauling, dumping, mixing, and lift equipment may be used for various tasks at the facility.

The anticipated equipment requirements for operation and maintenance of the site are listed in the following

- ◆ Excavators – Loading and sorting
- ◆ Front End Loaders Loading, recycling, storage, and site cleanup
- ◆ Transfer Trucks - Collection and transfer of products and Processed Residual
- ◆ Grinders – Processing wood into boiler fuel and feedstock for compost
- ◆ Screens - Processing soil and compost

2.6 Recycling Operations

The facility's recycling area is used to store, separate, and contain co-mingled recyclable materials or pre-sorted materials such as new construction materials. The facility will utilize equipment as defined in Section 2.5.4 to facilitate hand sorting of materials and bins for storage.

2.6.1 General Procedures

The transfer operations will be conducted in accordance with the approved Operation Plan and conditions of the Solid Waste Permit issued by the DWM.

Facility operations are anticipated as follows:

- 1) Collection vehicles delivering debris to the facility will enter through the main entrance;

- 2) Log in, screening for prohibited wastes, and weighed by the scale house attendant;
- 3) Continue along the access road until reaching the tipping floor;
- 4) Facility staff will direct the vehicle to the proper discharge location, and the debris load will be screened for prohibited waste while being discharged;
- 5) The tipping floor and loading areas must be maintained in a clean, sanitary condition at all times and must be cleaned at least daily. Waste stored on the tipping floor will typically not exceed 480 tons under normal operating conditions . This is the equivalent of twelve hours of production. This debris will be pushed up and tarped at the end of the day if required to contain wind blow. However on rare occasions when Abbey Green is servicing large projects, the debris on the floor will not exceed 3 days of production or 1200 tons. The Unprocessed Mixed Debris will not exceed the limits of the covered tipping floor except that all debris will be stored behind the trench drain leading to the sanitary sewer. Unprocessed Mixed Debris may be stored on-site a maximum of 5 working days. Storage of Unprocessed Mixed Debris will placed in trucks or containers and stored under a weather proof cover or tarped if exposed to the weather. Storage of Unprocessed Mixed Debris will be handled in a manner not to cause any nuisance, such as odor or attraction of vectors.
- 6) In the event the sorting process is not operational , then debris may not be deposited on the tipping floor and must be diverted directly to a landfill;

- 7) Except for wood, gypsum, plastics, concrete, aggregates and other inerts, recoverable materials will be placed in containers;
- 8) During recycling operations Processed Residual will be stored on the concrete pad open to the weather. Processed Residual must be loaded into transfer trailers and tarped by the end of the day or moved to the covered tipping floor for storage overnight. Processed Residual will be removed within a maximum of 5 days.
- 9) Inert brick, block, concrete and other separated recyclable materials moved to the LCID landfill from sorting operations or received directly into the LCID (and not on the tipping floor) will be subject to the North Carolina Operational Requirements for Land Clearing and Inert Debris Landfills 15A NCAC 13B and the requirements of Permit # N01044. Materials in the LCID landfill shall be in accordance with these requirements and not be subject to storage limitations for separated recycled material volumes as mentioned in other areas of this operating plan

2.6.2 Recycling/Source Separation

As a means of capturing recyclable materials and/or debris screening, source separation will be conducted as follows:

- 1) The track hoe, loader, or laborers will separate materials to be recycled, processed, and manufactured
- 2) All materials to be recycled and/or processed may stay on the tipping floor under the weather cover. All debris left at the end of the day on the tipping floor will be pushed up and tarped if required to contain wind blow.
- 3) Concrete (cement and asphaltic/bituminous): will be received in the LCID landfill area. The concrete debris will be crushed and subsequently stockpiled in this same area until it is removed from the site for sale as fill, aggregate, etc. as markets allow.

- 4) Source separated wood, wood pallets and cardboard may be unloaded directly onto the sorted clean wood pile and cardboard containers, respectively.

2.6.3 Containers

Containers (cans), generally 8'x20' or 8'x15', used for holding recyclables and unacceptable waste will be stored in the recycling area. The containers will be removed from the processing area to designated storage areas as they are filled. Cans containing Unprocessed Mixed Debris will be tarped at the end of each day or during rain events or windy conditions. Cans with sorted sheetrock will be tarped, if not processed within 14 calendar days. Cans containing sorted metals (ferrous, aluminum, copper, etc), sorted clean and resonated wood, sorted cardboard, recovered soil and fines, sorted inerts such as brick and block may be stored uncovered before shipment to end markets or moving to storage locations for further processing on site

2.6.4 Markets and Down-stream processing

1) The final destination of the recyclable materials may vary depending upon market demand and prices for such materials. In general, materials which have valid markets will be recycled; however, markets shall fluctuate. In any case, no more than one week design volume of Unprocessed Mixed Debris, shall be stored at the recycling facility. Should Abbey Green require larger storage capacity for Unprocessed Mixed Debris based on increased business demand, then Abbey Green will be required to increase its closure bond. Generally no more than two month's of finished product should be stored on site, however some finished products, such as gypsum, engineered soils, crushed concrete, and boiler fuel can be seasonal in demand. Recycled materials sensitive to moisture and/or likely to generate leachate shall be covered with tarpaulins.

End markets for the recyclable materials are as follows:

Metals	Delivered to local metals recycling facility. Example Customer: DH Griffin Wrecking Co /
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4700 Hilltop / Greensboro, NC

Wood	Facility near site for boiler fuel Customer: Corn Products, 4501 Overdale Rd / Winston Salem, NC
Concrete, Aggregates, and Inerts	Concrete, brick and block will be crushed and stockpiled until it is removed from the site for sale as fill, aggregate, crusher run, ABC, etc. as markets allow
Soils & Compost	Example Customer: LARCO Construction, 4130 North Glenn Ave / Winston-Salem, NC. Soils and compost are sold to homeowners, landscape contractors, City Departments, Landscape retail stores and outlets
Drywall	Gypsum is purchased by local farmers who use gypsum to amend soils
Carpeting and Padding	Carpet will be separated and sent unprocessed to a plastics recycling center. Example: Wellman Plastics Johnsonville, SC
Plastic	Delivered to local recycled plastics company Example Customer: Sonoco Recycling, 3004 Holts Chapel Rd, Greensboro, NC 27401
Cardboard	Sale in local market for recycled paper products Example Customer: Sonoco Recycling, contact and address above
Shingles	If certified as asbestos-free, will be ground on-site or sold whole for use in asphalt manufacturing.. Example Customer: APAC Paving Winston Salem NC

2) Down-stream processing and storage. The site drawings show where these activities occur on the Abbey Green site

- ◆ Wood will be shredded with a slow speed shredder, a tub grinder, or a horizontal grinder and screened for boiler fuel. Shredded wood will generally be removed from the site within 30 days

- ◆ Drywall will be broken up by an excavator with a thumb attachment and pulverized with the tracks of a track loader and screened. Moisture will be added to the material while being processed to minimize dust and to improve the gypsum end product.. Storage on site will not exceed 800 tons of separated drywall and 800 tons of processed drywall. Sorted sheetrock stored in containers or in the bunker under the tipping floor roof awaiting processing will be processed within 14 days. Screened paper from drywall will be stored on site until shipped to markets for composting or as use as chicken bedding. Storage of finished gypsum product will be under an open side storage building with cover or will be stored on a raised pad and covered at the end of each day or during rain events with a tarp. The raised pad shall be impervious by using a non-pervious membrane liner such as clay or polyurethane. The pad shall be raised at 12 inches from the native or natural storm water elevation to prevent storm water encroaching to the top of the pad.

- ◆ Plastics will be shredded with a slow speed shredder or granulized or sold loose and unprocessed. This activity will take place on the main site, the LCID landfill area, or the north or south storage site

- ◆ Asphalt shingles will be shredded with a slow speed shredder or sold loose and unprocessed after sorting. This activity will take place on the main site, the LCID landfill area, or the north or south storage site.

- ◆ Concrete and other inerts will be pulverized and screened.

- ◆ Soils recovered by screening will be tested periodically for heavy metals and asbestos. Soil will also be screened to recover stone. This activity will take place on the main site, the LCID landfill area, or the north or south storage site.

- ◆ Cardboard will be baled or transported loose in containers. This activity will take place on the main site.

- ◆ Modular buildings, mobile home buildings and trailer campers will be deconstructed on the tipping floor and the debris processed by hand or on the sort line. Abbey Green will have no more than two manufactured buildings on site at any one time.
- ◆ Subsurface Directional Drill Cuttings will be dewatered and recovered for mixing with Engineered Soil. Abbey Green uses a retention area that allows for dewatering and recovery of soils. See drawing dated March 17, 2014 attached. Soils will be regularly removed and mixed with the feedstock for Engineered Soil production
- ◆ Engineered Soils are produced by the following process:
 - a. Soil Amendment will be aged for 6 months. Please refer to the attached site plan to see areas designated for storage of Soil Amendment. This will take place on Abbey Green owned property and contiguous leased property managed by Abbey Green
 - b. Trommel Overs will be aged for 6 months. After aging, Trommel Overs will be screened at ½” to produce additional Soil Amendment and at Abbey Green’s discretion could be processed in a de-stoner. Stored Trommel Overs will be consolidated to prevent wind blow. Storage on site of of unscreened Trommel Overs will not exceed more than 2000 tons. This is the expected maximum volume of Trommel Overs generated in 6 months. Any remaining unrecyclable material will be removed to an approved landfill within 5 days of screening. Please refer to the attached site plan to see areas designated for aging, screening, and de-stoner operations.
 - c. Engineered Soil will be produced by mixing Soil Amendment and compost. Please refer to the attached site plan to see areas designated for mixing of Engineered Soil. This will take place on Abbey Green owned property and contiguous leased property managed by Abbey Green

2.7 Composting Operations

The Compost Operation will be limited to a maximum of 1,000 Cubic Yards (CY) receipt of feedstock per calendar quarter and shall process or store no more than 6,000 CY of

material per quarter, The Composting Operation will accept the following acceptable debris:

- ◆ yard trimmings (brush, leaves, grass);
- ◆ vegetative brush from land clearing operations;
- ◆ wood chips ground from Clean Wood
- ◆ paper derived from screened unpainted drywall from within Abbey Green's operations
- ◆ clean soil

2.7.1. Compost Recipe

The composting process will be guided by a compost recipe, which seeks to balance four process design criteria: carbon-to-nitrogen (C:N) ratio, moisture content, volatile solids and predicted (based on density) free air space. During seasons of high carbon material receipt it may be necessary to "spike" to recipe with high nitrogen additives (for example fertilizer).

2.7.2. Windrow Formation

Maximum dimensions of windrows will be 12 feet in height and 20 feet in width.

All compost feedstocks will be periodically ground and mixed together in that process. Ground materials will be formed into windrows with a loader.

After the required temperature has been reached, windrows are turned as needed to maintain aerobic conditions while temperatures stay above 131° F. for three consecutive days to achieve good pathogen inactivation and comply with the NC Solid Waste Composting Rules at 15A NCAC 13B.1406(10). Windrows that do not meet the minimum temperature requirements will be broken down, remixed with fresh incoming ground yard waste materials and recomposted.

After 45 days in the composting area, materials will be moved to the curing site to mature for 75 more days (during winter conditions). Compost on the composting pad will be tested for stability and lack of pathogens (see process monitoring section) before being moved to the curing site, which may occur in less than 45 days in summer conditions. Curing windrows will be turned every other week with the loader to maintain aerobic conditions.

2.7.3 Windrow Irrigation

Composting is a process that operates most efficiently when mixed compostables have a moisture content of between 50-55%. If moisture

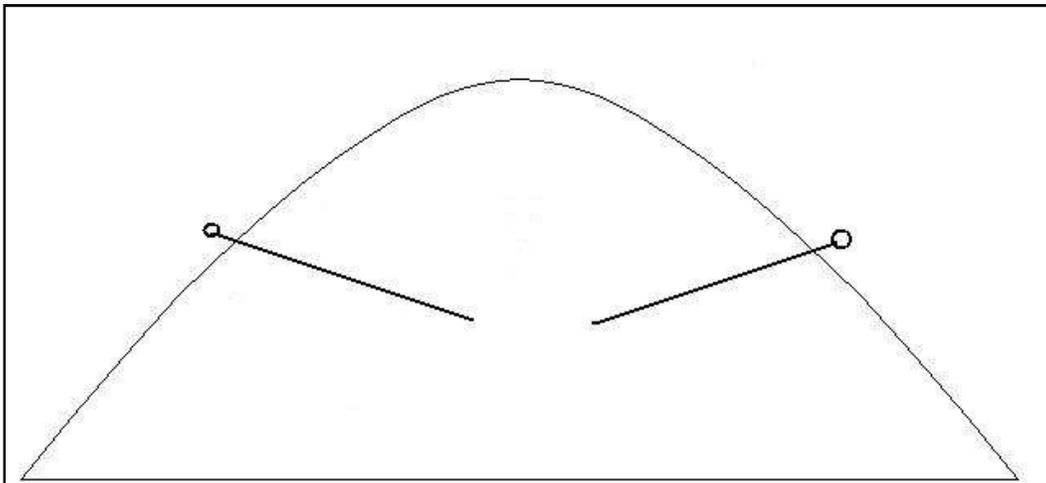
monitoring shows the windrows to be too dry, water will be added by use of irrigation guns or a truck will be used to spray water out over the windrows prior to turning.

2.7.4 Process Monitoring

The main composting process control parameters to be monitored are temperature, moisture content and oxygen content (or its surrogate, carbon dioxide content). Finished compost monitoring includes stability testing, pathogen inactivation testing, and horticultural parameters.

Temperature

Temperature will be monitored at least every third day with a 36" dial-type thermometer. Typical locations where temperatures will be monitored are shown below.



Temperatures will be recorded on a permanent basis, using a logbook form similar to the attached Yard Waste Compost Facility - **Compost Process Control Sheet**

Moisture Content

Moisture content of a compost mix is important because the microorganisms responsible for biodegradation of the waste need water to survive and grow. The desired moisture content of a compost mix is between 50% and 55%. Moisture will be monitored with two methods; the "squeeze" test in the field, and the microwave oven method in the Abbey Green offices. All moisture monitoring results (either by squeeze test or by weight test) will be recorded on the Daily Operations Log.

O₂ Content

Oxygen content of the windrows will be checked primarily by smell, but AG may elect to use an oxygen monitor. When moisture content samples are taken for a “squeeze” test, the operator will check the odor of the sample to see if trace anaerobic odors can be detected. If they are detected, that windrow will be turned promptly to dissipate the anaerobic odors and to re-introduce oxygen to the windrow. If oxygen content is monitored with a measurement tool, then windrows will be turned whenever oxygen content drops below 8% (by volume).

2.7.5. Compost Product Testing

Finished compost will be tested in accordance with the requirements of 15A NCAC 13B.1407, Classification/Distribution of Solid Waste Compost Products”. In summary testing will include testing for the heavy metals listed in Table 1 and will occur at a frequency of one test per calendar quarter unless experience indicates that additional frequency is required.

2.7.6. Recordkeeping

All pertinent process information will be collected on the Daily Compost Process Control Sheet shown on the next page. These records will include: temperature readings, moisture determinations, windrow watering activities, ambient weather, and other pertinent operational details.

ABBHEY GREEN YARD WASTE COMPOST FACILITY
Compost Process Control Sheet

Windrow No: _____

Started on: _____

Notes: _____

#	DATE	TEMP F	TEMP F	O ₂	O ₂	TURNED (Y/N)	WATERED (Y/N)	REMARKS
		BEFORE	AFTER	BEFORE	AFTER			
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								

2.8 Processing Area Legend

The various process locations on the Abbey Green site are shown in the following table:

Process Type	Tipping Floor & Process Line	Main Site concrete pad	North Site	South Site	LCID area	Leased Area
Yard Waste, Compost, Soil Amendment, Soil						
- Tipping (Yard Debris)	Alternate	Alternate	Preferred	Alternate	Alternate	
- Grinding		Alternate	Preferred	Alternate	Alternate	
- Composting			Preferred	Alternate		
- Mixing & curing			Alternate	Alternate	Alternate	Preferred
- Product storage			Alternate	Alternate	Alternate	Preferred
Concrete and Inerts						
- Tipping	Alternate		Alternate	Alternate	Preferred	
- Crushing			Alternate	Alternate	Preferred	
- Product storage			Alternate	Alternate	Preferred	Alternate
Clean and Engineered Wood / Boiler Fuel						
- Tipping	Alternate	Preferred	Alternate	Alternate		
- Grinding			Preferred	Alternate		
- Product storage			Preferred	Alternate		
Unprocessed Mixed Debris						
- Tipping	Required					
- Sorting	Required					
Processed Mixed Debris						
- Staging of Processed Residual prior to shipment to landfill	Alternate	Preferred				
- Aging of Trommel Overs			Alternate	Preferred	Alternate	
- Destoning	Preferred		Alternate	Alternate	Alternate	
Drywall / Gypsum						
- Tipping	Preferred	Alternate in dry weather				
- Processing, screening	Preferred	Alternate	Alternate	Alternate	Alternate	
- Storage of Gypsum *			Alternate	Alternate	Preferred*	Alternate
- Storage of Paper * derived from drywall			Alternate	Alternate	Preferred*	Alternate
Subsurface Drill Cuttings						
- Tipping			Alternate	Alternate	Preferred	
- Dewatering			Alternate	Alternate	Preferred	

3.0 ENVIRONMENTAL MANAGEMENT

3.1 Overview

This section reviews the overall environmental management tasks required for the successful operation of the facility.

3.2 Surface Water Control

As used herein, the definition of “surface water” is water which results from precipitation or site run-on that has not contacted the debris.

Proper control of surface water will accomplish the following goals:

- ◆ Prevent run-on of surface water into debris handling areas;
- ◆ Prevent the run-off of surface water that has come into contact with the debris (i.e. leachate);
- ◆ Limit the erosion caused by surface waters; and
- ◆ Limit sediments carried off-site by surface waters.

An erosion and sedimentation control plan has been approved for the site by Forsyth County. This plan describes both short and long term engineered features and practices for preventing erosion and controlling sedimentation at this site. Sedimentation and erosion control activities must be conducted in accordance with the Sedimentation Control Act (NCGS 113A-50, et seq.) and rules promulgated thereunder (15A NCAC 4).

Erosion control measures have been designed/engineered within the drainage channels and at points of stormwater discharge. The erosion control maintenance plan includes the following:

- 1) Inspect all sedimentation and erosion control devices for stability and function each week and following each rainfall event.
- 2) Remove silt/sediment from sediment traps and stormwater pond when accumulated volume has reached 50% of capacity.
- 3) Remove accumulated silt/sediment from behind temporary sediment fence when depth exceeds approximately 0.5 feet. Repair and replace silt fence as necessary.

3.3 Leachate Management

The facility will have a roof covering the tipping floor. All Unprocessed Mixed Debris will be unloaded on the tipping floor beneath the roof. The tipping floor will be sloped to a sump. The sump will be plumbed to the sanitary sewer. Pre-sorting activities and staged materials for the picking line will be covered by the roof. The loading/staging area for the sort line will be covered with a tarp system will drain to the main tipping floor. The picking line will also be covered.

Unprocessed Mixed Debris can be containerized if stored in areas not on the covered tipping floor. The containers will be covered at the end of each day and during the day during wet weather and windy conditions.

3.4 Vector Control

Control of insects, rodents, and other vermin will be accomplished by periodic cleaning of the facility. Spilled or wind-blown debris along the access road will be cleaned up daily. The facility will be cleaned, as necessary, each day to maintain a sanitary operation. Effective vector control measures must be applied at all times.

3.5 Dust Control

A letter from the Forsyth County Environmental Affairs Department dated November 19, 2008 indicates that an air quality permit is not required for the facility as planned. A copy of the letter is included in Appendix C.

Dust related to debris hauler traffic on the access roads will be minimized by using a water truck, a sprinkler system or a street sweeper to limit dust on the gravel portion of the road, if necessary. Fugitive dust emissions are prohibited.

Contractors on-site to process concrete, brick, block, and sheetrock are required to comply with all applicable air quality requirements including 40 CFR Part 63, Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants.

Permit No.	Scan Date	DIN
3424-TRANSFER-2010	February 19, 2016	25646

RECEIVED
January 4, 2016
Solid Waste Section
Asheville Regional Office



APPROVED DOCUMENT
Division of Waste Management
Solid Waste Section
Date **April 13, 2016** By *Larry Frost*

Digitally signed by LYF
DN: cn=LYF, o=DWM,
ou=SWS,
email=larry.frost@ncdenr.gov,
c=US
Date: 2016.04.14 10:32:10
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December 31, 2015

North Carolina Department of Environment and Natural Resources
Division of Waste Management
Solid Waste Section

Asheville Regional Office
2090 US Highway 70
Swannanoa, NC 28778

Attention: Mr. Larry Frost
Environmental Engineer

Subject: Abbey Green, Inc.
Transfer, Recycle, Resource Recovery and Processing Facility
Permit 34-24
Response to November 3rd, 2015 letter

Dear Mr. Frost,

This letter will respond to your November 3rd request. I have modified the Operation Plan based on your comments. The latest draft dated December 31st, 2015 is attached.

Your comments are in *italics and highlighted in yellow*. Our responses follow each point

1. *Provide the Section with a letter specifying between this, the current approved facility plan DIN 19456, entitled, and the revised plan DIN 24007 (dated March 3, 2015)*

Abbey Green has now been in operation for five years and we have realized significant growth in our operations. We continue to see improvements to our recycle rate and have refined our processes to better recover materials from the debris stream. Additionally we trust we have a good record with the Section as to be responsible in the way we have approached our operations.

As such we see several areas where we would like to modify/amend in our Operations Manual.

The changes requested are summarized below. The balance of the modification is minor wording changes to better describe our existing operation procedures and practices, which I think you will find self-explanatory. All changes were provided in a red-lined version with our permit renewal application. A new red lined version of the Operations Plan dated December 31st, 2015 is attached

Abbey Green requests the following changes:

- A. Abbey Green requests approval of a small type 1 composting facility with volumes of less than 1000 CY per calendar quarter. Most of these changes are in shown in 2.7 “Composting Operations”
- B. Definitions and receipt and processing of material. (Sections 2.1, 2.4.1, 2.6.1, 2.6.2) Abbey Green is now receiving and processing a number of different types of debris and presorted recyclable materials. Additionally Abbey Green has developed new products. The definitions help better define which debris must be received and processed under cover, which debris can be received in areas other than the tipping floor (i.e. clean wood loads, yard trimmings, concrete), and which debris / product can be processed or stored in the weather. Since the facility handles much of its material outdoors in the weather, the new definitions allows for clarity in debris handling and post processing of material based on the definitions.
- C. Receiving locations and waste screening changes. (Section 2.4.1) With the addition of the Composting Operations Abbey Green may receive debris in five locations, the covered tipping floor, the clean wood tipping area, the concrete tipping area, the subsurface drill cutting pit, and the yard waste tipping area. The Operation Manual describes the procedure to screen the debris at the scale house, identify which debris should be received in which locations and how these loads should be handled at the receiving location.
- D. Changes were made to the Recycling Rates (Section 2.5.1) to reflect our five year experience
- E. The addition of out of state incineration facilities to the approved Disposal Facilities (Section 2.5.3) in case these would be required to meet LEED certification
- F. Changes to the storage and processing of finished products (Section 2.6.4) for example Engineered Soils, compost, drywall and gypsum.

2. **1.10 Litter Control:** States “Loose windblown materials within the facility borders will be collected by the end of the day except that in windy weather, deminimus amounts of windblown material will be collected weekly” The Plan is contradictory to what is approved under General Facility Permit Condition #19(e)(ii). Please correct or explain the contradiction.

Abbey Green has corrected the Operations Plan to reflect the exact wording of the General Facility Permit Condition #19(e)(ii)

3. **2.1 Overview and Definitions:** States that “some industrial debris” is processed at the facility. This was not included in the previous approved plan. Explain why this change is necessary and specify the industrial debris to be received

This was not meant to expand our acceptable debris list, and since it appears to be confusing, Abbey Green has eliminated the change to the Operations Plan. However, Industrial Debris that meets our acceptable debris list has always been part of Abbey Green’s permit and Operational Plan. For example Abbey Green accepts pallets from whatever sources as part of the wood category of acceptable debris.

4. **2.4.1 Resinated Wood:** This type of waste would also be classified as “engineered wood” Change the referenced term and definition wherever used in the Plan to engineered wood

The changes are made as requested

5. 2.4.1 Waste Screening at the Tipping Location: Under the subsection entitled; For loads not received on the tipping floor: the word “contamination” is used. Clearly define what is meant by this term.

It is common to receive loads that have small amounts of a material that are unwanted in an otherwise “clean load”. For example Abbey Green often receives small quantities of plastic strapping or packing material as part of otherwise clean wood loads of pallets. Another example would be to receive clean concrete loads with some small parts of wooden formwork used in construction.

If this unwanted material is de minimus to the load, it is much more practical to accept the load in the “clean” area rather than mixing this load on the tipping floor. The Section has also been aware our sort line picked material also includes some quantity of unwanted material. In all cases it is Abbey Green’s operational process to hand sort unwanted material from the as received load or the pile prior to further processing. It is possible to see this material mixed in the pile awaiting post sort processing such as crushing or grinding. However, it is not always possible to eliminate all unwanted material. In the application of recycled products such as crushed concrete and boiler fuel, Abbey Green’s customers do allow small amounts of non-uniform material as a necessary part of using feedstock from construction sources.

For example in the EPA’s direction to include C&D material as a source for wood for boiler fuel in its December 2012 Non-Hazardous Secondary Materials ruling the Agency allows and gives direction on small amounts of “contamination” inherent in boiler fuel ground from C&D material.

The term “contamination” was not meant to imply material that is not part of the Abbey Green acceptable debris list. It may however include material that has no recycled value and will eventually be sent to a landfill or in smaller quantities may become part of Abbey Green’s final products such as crushed concrete or boiler fuel. Perhaps “unwanted or non-uniform material” is a term that is a better descriptor. We have changed the Operations Plan to use this term and are open to suggestions as to how to address the Section’s concern for this language.

6. 2.5.2 Service Area: Stokes County is misspelled. Correct this error.

Corrected

7. 2.6.1 General Procedures 5) the waste proposed to be left on the tipping floor overnight has increased from 128 tons to 480 tons. Also a comment that during servicing of “large projects” the debris on the floor will not exceed 3 days production or 1200 tons. Explain the increase. Explain why this material should be allowed to be let on the floor overnight. Explain how the material will be protected to prevent windblown material and scavenging

The sort facility is staffed and sized to a daily average production. C&D receipts vary widely on an hour-to-hour basis and a day-to-day basis depending on the weather and projects which are being executed. We have found that the timing of receipt of material is very difficult to anticipate. Production schedules are by their very nature difficult to adjust in the short term.

Leaving material on the floor overnight allows the sort line to have material staged for sorting early in the morning, since it is common to receive a small number of trucks in the morning and a larger number of trucks late in the day.

Also large demo projects that run sometimes for days at a much higher than average tonnage receipt rate are common. Using the excess floor space under cover allows the receipt of material one day and processing the next.

Abbey Green generates most of the windblown from debris handling operations. We have not experienced windblown material generated from the pile left overnight.

We have not experienced a problem with scavenging. We do not anticipate any changes to our procedures more than the vector control measures we now employ.

8. 2.6.1 General Procedures 6) The first sentence has been modified to include language "more than one day". Explain the change to the Plan

The revised Operations Plan now includes the original language. No change is requested

9. 2.6.1 General Procedures 8) This item has been modified to state that Processed Residual (non-recyclable materials) will be stored on the concrete pad open to the weather. However it must be loaded into transfer trailers and tarped by the end of the day or moved to the covered tipping floor for storage overnight. What about periods of rain.

It is Abbey Green's intent to leave this material in the weather during rain events. Processed Residual has been waste screened on the tipping floor, de-watered, pre-sorted, size reduced and sorted on the processing line. We have 5 years of history in testing screened fines removed from the same source material coming across our sort line. We have good history monitoring our storm water pond. We believe that Processed Waste should not be treated with the same concern as incoming Mixed C&D and hope the Section will agree.

10. 2.6.4 Markets and Down Stream processing 2) Drywall: the revised Plan has increased the storage on site from 400 tons of separated drywall and 400 tons of processed drywall to 800 tons of each. Is there a timetable by which the open side storage building will be constructed

Market conditions for recycling have greatly deteriorated since our application, mainly in the revenue generated from scrap ferrous metals. Our current plan is to tarp the gypsum stored outside. We will advise once cash is available to build the storage building.

11. Composting Operations: This section needs to list the feedstocks which will be composted.

The Operation Plan has been revised

12. 2.7 Composting Operations: The Section generally recommends that windrows not exceed 12' in height and 20' in width. Minimum dimensions would be 6' in height and 9' in width. What will be the maximum size of the windrows.

Abbey Green agrees that 12' in height and 20' in width should be the maximum size for windrows. The Operation Plan has been modified to include this addition.

13. 2.7.1 Compost Recipe: The Operation Plan needs to describe what is meant by the term "nitrogenous additives" found in the last sentence.

During seasons of high carbon material receipt it may be necessary to "spike" the recipe with high nitrogen additives such as fertilizer. The Operation Plan has been modified to better describe the intent of this term.

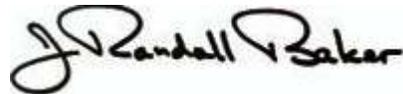
14. The Section has not received

- a. Revised Schedule A within the Standby Trust with Bryn Mawr Trust Company
- b. Organization Chart for Abbey Green
- c. Compliance Questionnaire for Abbey Green for the past five years

I will check on the progress of a. and respond to b. and c. in a separate letter.

Thanks you for the opportunity to address these points. For questions or concerns, I can be reached on my cell at 215 962 0353 or at the office at 336 785 2130.

Sincerely,



J.R. Baker
Vice President & General Manager
Abbey Green, Inc.