RICHARDSON SMITH GARDNER & ASSOCIATES
Engineering and Geological Services

February 2, 2009

Ms. Patricia Backus, P.E.
Environmental Engineer
NCDENR - Solid Waste Section
1646 Mail Service Center
Raleigh, North Carolina 27699-1646

RE: Response to Comments - Application for Permit Amendment
Durham Land Clearing and Inert Debris (LCID) Landfill
NC Solid Waste Permit No. 32-J

Dear Ms. Backus:

On behalf of Waste Industries USA, Inc. and the Durham LCID facility, Richardson Smith Gardner & Associates (RSG) is hereby submitting revised documents supporting the application[1] to renew the permit for the existing Durham LCID Landfill facility in Durham, North Carolina.

The review comments presented in NCDENR correspondence dated December 18, 2008 (**attached**) are presented below in italicized type, followed by RSG's responses.

Comment 1:
The application should include the signature of the applicant. I have enclosed a signature page for that purpose.

Response:
The signature page has been signed by the applicant and is **attached**.

Comment 2:
Open burning of solid waste is prohibited. Please change "should not" in the last sentence of the fourth paragraph in Section 1.0 to "shall not."

Response:
Section 1.0 of the Operations Manual has been revised as indicated. The revised Operations manual is **attached**.

Comment 3:
Section 2.2 lists drywall and shingles as acceptable wastes. These are not included in the definitions of land clearing waste or inert debris. Please explain why these are included as acceptable waste. What do you do with them?

---

[1] Permit Renewal Application, Durham LCID Landfill, Durham, North Carolina, NC Solid Waste Permit No. 32-J prepared by Richardson Smith Gardner & Associates, Inc. dated July 2008.

Response:
Section 2.2 has been revised to delete references to drywall and shingles as acceptable wastes. The revised Operations Manual is **attached**. Drywall and shingles will not be accepted.

Comment 4:
In Section 2.2, clean wood, including engineered wood products, is listed as a recyclable material that the Durham LCID plans to process and temporarily store. This is the only place that engineered wood products are mentioned. Engineered wood products are not the same as untreated or unpainted wood due to the adhesives used to make these products. If ground engineered wood products are used to make compost, the compost must be tested for formaldehyde. If it is used for boiler fuel, the receiving facility must be permitted to accept these materials. Please specifically address the processing and disposition of this product in your operations plan. Include documentation from the receiving facility if applicable.

Response:
Engineered wood products will be separated, temporarily stored and then disposed at a permitted site. They will not be processed on site. Section 2.2 of the Operations Plan has been revised accordingly. The revised Operations Manual is **attached**.

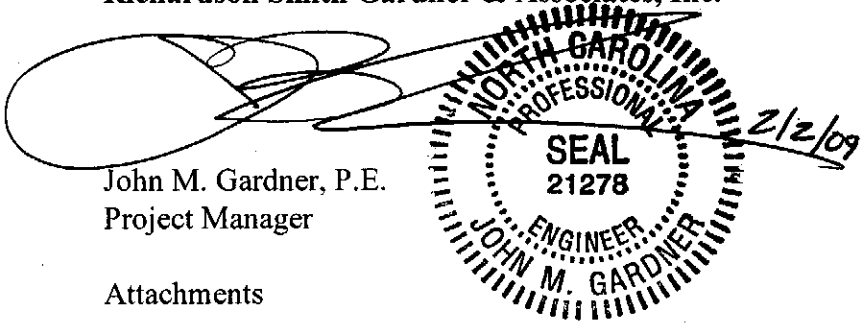
Comment 5:
What is your current market for recyclables?

Response:
Wood, concrete and steel that are separated at the site are sold for recycling. The buyers vary.

We trust that these responses and attached revised documents adequately address your review comments. We are prepared to respond to any questions or concerns regarding this application. Please feel free to contact me by phone at (919) 828-0577, ext. 126.

Sincerely,

Richardson Smith Gardner & Associates, Inc.



John M. Gardner, P.E.
Project Manager

Attachments

Cc: Jerry Johnson, Waste Industries, USA, Inc.

North Carolina Department of Environment and Natural Resources
Dexter R. Matthews, Director **Division of Waste Management** Michael F. Easley, Governor
William G. Ross Jr., Secretary

December 18, 2008

Mr. Richard Johnson
General Manager
Waste Industries USA, Inc.
148 Stone Park Court
Durham, NC 27703

Re: Application for Permit Amendment
Durham Land Clearing and Inert Debris Landfill (LCID)
Durham County, Permit No. 32-J, Doc ID No. 6487

Dear Mr. Johnson:

The Division of Waste Management, Solid Waste Section has completed a technical review of your application for a 5-yr permit amendment for the Durham LCID. The following comments and requests are offered.

1. The application should include the signature of the applicant. I have enclosed a signature page for that purpose.
2. Open burning of solid waste is prohibited. Please change "should not" in the last sentence of the fourth paragraph in Section 1.0 to "shall not".
3. Section 2.2 lists drywall and shingles as acceptable wastes. These are not included in the definitions of landing clearing waste or inert debris. Please explain why they are included as acceptable wastes. What do you do with them?
4. In section 2.2, clean wood, including engineered wood products, is listed as a recyclable material that the Durham LCID plans to process and temporarily store. This is the only place that engineered wood products are mentioned. Engineered wood products are not the same as untreated or unpainted wood due to the adhesives used to make these products. If ground engineered wood products are used to make compost, the compost must be tested for formaldehyde. If it is used for boiler fuel, the receiving facility must be permitted to accept these materials. Please specifically address the processing and disposition of this product in your operations plan. Include documentation from the receiving facility if applicable.
5. What is your current market for recyclables?

Please submit revisions to application as replacement pages or sections to the application already submitted. Revisions to the application should be clearly identified with a revision date in either the header or the footer. One paper copy plus one electronic copy will suffice.

If you have any questions, please contact me at (919) 508-8542, or by email at pat.backus@ncmail.net .

Sincerely,

Pat Backus

Patricia Backus, P.E.
Environmental Engineer

Encl:

cc: John Gardner, P.E., RSG Associates
Jason Watkins, DWM
Chris Marriott, DWM
Ed Mussler, DWM

Signature page of applicant –

Name of facility Durham LCID Landfill

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision and that the information provided in this application is true, accurate, and complete to the best of my knowledge.

I understand that North Carolina General Statute 130A-22 provides for administrative penalties of up to fifteen thousand dollars ($15,000.00) per day per each violation of the Solid Waste Management Rules. I further understand that the Solid Waste Management Rules may be revised or amended in the future and that the facility siting and operations of this solid waste management facility will be required to comply with all such revisions or amendments.

Signature | Jerry Johnson (Print Name) | 2/2/09 (Date)

Vice President
Title

Waste Industries LLC
Business or organization name

DURHAM LCID LANDFILL

OPERATIONS MANUAL

TABLE OF CONTENTS

SECTION 1.0
GENERAL FACILITY OPERATIONS

1.1 OVERVIEW

This Operations Manual was prepared for the Durham LCID Landfill located within the Stone Road Industrial Park in Durham, North Carolina (see **Figure 1**). The Durham LCID facility, located at 148 Stone Park Court, Durham, North Carolina is currently operated as the Phase III portion of the Durham District Campus facility. The District Campus is a solid waste management facility located on approximately 37 acres within the Stone Road Industrial Park, within Durham County, North Carolina, and is permitted by Durham County to operate through June 30, 2013 (see **Attachment E** of the Permit Renewal Application). The LCID landfill is located on approximately 12 acres within the westernmost portion of the property. In general, this (LCID) site is situated within the prior, abandoned Borden Brick Mine. This operation is generally considered a reclamation project that converted the abandoned mine into a useable industrial site. The current use includes the controlled disposal of land clearing and inert debris, with some recycling. This industrial site development also contains administrative offices and trucking terminal (Phase I) and a transfer station (Phase II) within the facility property.

The closure of the landfill will be a continued function of the development with each area receiving a one foot (minimum) layer of cover material. Each completed area shall be graded to provide uniform side slopes and top grades as shown on the plans (see **Attachment F** of the Permit Renewal Application). As a protection of the side slopes, a top berm shall be constructed along the perimeter and diversion ditches installed to direct surface flow to a series of slope drains. A ditch is proposed along the slope toe to convey the runoff to the on-site sediment/stormwater basin. A "closure" bond has been posted for landscaping, seeding and plant materials.

The final development of the property is anticipated to be incorporated into the Durham District Campus plans as outdoor storage areas and a possible future building site. In order for the area to be used as a building site, the fill operation and materials will be monitored to insure beneficial fill only and controlled placement and compaction.

Solid waste shall be restricted to the smallest area feasible and compacted as densely as practical into cells. Adequate soil cover shall be applied monthly, or when the active area reaches one acre in size, whichever occurs first. At the completion of any phase, or upon revocation of a permit, the disposal area must be covered with a minimum of one foot of suitable soil cover sloped to allow surface water runoff in a controlled manner. This must occur within 120 days. There shall be no burning of solid waste.

The information contained herein was prepared to provide facility personnel with a clear understanding of how the Design Engineer assumed that the completed facility would be operated. While deviations from the operations outlined here may be acceptable, they should be reviewed and approved by the Design Engineer.

1.1.1 Processing Overview

The processing at the site generally involves gross sorting of materials, grinding of land clearing debris materials, and screening of the material into three (3) products as follows:

- Mulch
- Mulch and Soil Combination (Amended Soil)
- Soil

1.2 CONTACT INFORMATION

All correspondence and questions concerning the operation of the Durham LCID Landfill should be directed to the appropriate contact personnel, Engineer, and State personnel listed below. For fire or police emergencies dial 911.

1.2.1 Owner/Operator

Waste Industries USA, Inc.
Attn: Richard Johnson, General Manager
148 Stone Park Court
Durham, NC 27703
Phone: (919) 596-1363

1.2.2 Engineer

Richardson Smith Gardner & Associates, Inc.
Attn: John M. Gardner, P.E.
14 N. Boylan Avenue
Raleigh NC 27603
Phone: (919) 828-0577
Fax: (919) 828-3899
email: john@rsgengineers.com

1.2.3 North Carolina Department of Environment and Natural Resources

North Carolina Department of Environment and Natural Resources
401 Oberlin Road, Suite 150
Raleigh, NC 27605
Phone: (919) 508-8400
Fax: (919) 733-4810

Division of Waste Management (DWM) - Solid Waste Section:

Branch Head: Ed Mussler, III, P.E.

Division of Land Resources - Land Quality Section:

Raleigh Office: 3800 Barrett Drive, P.O. Box 27687
Raleigh, NC 27611
Phone: (919) 571-4700

1.3 ACCESS CONTROL

Limiting access to the Durham LCID Landfill is important for the following reasons:

- Unauthorized and illegal dumping of waste materials is prevented.
- Trespassing, and injury resulting therefrom, is discouraged.
- The risk of vandalism is greatly reduced.

The facility attendant will be on duty at all times when the facility is open for public use to enforce access restrictions.

1.3.1 Physical Restraints

The site will be accessed by Stone Court. A guard house (trailer) is provided at the entrance. Access to the landfill includes an all-weather access road. The entrance off of Stone Court is securely locked during non-operating hours.

1.3.2 Security

Frequent inspections of gates and fences is performed by facility personnel. Evidence of trespassing, vandalism, or illegal operation are reported to the Owner.

1.4 SIGNAGE

A prominent sign containing the information required by the DWM will be placed just inside the main gate. This sign will provide information on the facility's name, operating hours, emergency contact information, and permit number. 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.

1.5 COMMUNICATIONS

Due to the close proximity of the processing area and the guard house, communication will be maintained between the guard house and the processing areas verbally. The guard house will have a telephone (land or cell) in case of emergency and for the conduct of day-to-day business. Emergency telephone numbers are displayed in the guard house.

1.6 FIRE SAFETY

The possibility of fire at the landfill must be anticipated in the daily operation of the facility. 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, the local fire department will respond. A 25 foot clear perimeter will maintained around the processing area and between storage piles to allow access by fire department personnel.

Potential fire hazards at the landfill are created from the build-up of fine dry dust particles on and around operational motors and control panels. The presence of these build-ups can cause overheating and potential fire if periodic equipment cleaning and maintenance are not practiced. Portable fire extinguishers should be maintained in a state of readiness at the screen location and on each piece of moving equipment.

1.7 EQUIPMENT REQUIREMENTS

The facility will maintain on-site equipment required to perform the necessary landfill activities. Periodic maintenance of all facility equipment, and minor and major repair work will be performed at designated maintenance zones on-site. Refer to equipment specific O&M Manuals for recommended equipment maintenance schedules.

1.8 PERSONNEL REQUIREMENTS

At least one (1) member of the supervisory staff will be trained in the equipment operations. Each facility employee will go through an annual training course (led by supervisory staff).

1.9 HEALTH AND SAFETY

All aspects of the landfill operations were developed with the health and safety of the operating staff, customers, and neighbors in mind. Prior to commencement of operations of the facility, a member of the operating staff will be designated 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.

Safety equipment provided includes equipment rollover protective cabs, seat belts, audible reverse warning devices, hard hats, safety shoes, and first aid kits. Facility personnel will be encouraged to complete the American Red Cross Basic First Aid Course. Other safety requirements as designated by the Owner will also be implemented.

Each facility employee will go through 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. The following are some general recommendations for the health and safety of workers at the Durham LCID Landfill.

1.9.1 Personal Hygiene

The following items are recommended as a minimum of practice:

- Wash hands before eating, drinking, or smoking.
- Wear personal protective equipment as described in **Section 1.9.2.**
- Wash, disinfect, and bandage ANY cut, no matter how small it is. Any break in the skin can become a source of infection.
- Keep fingernails closely trimmed and clean (dirty nails can harbor pathogens).

1.9.2 Personal Protective Equipment

Personal Protective Equipment (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 the PPE typically used and/or required in a compost facility workplace.

- Safety shoes with steel toes.
- Noise reduction protection should be used in areas where extended exposure to continuous high decibel levels are expected.
- Disposable rubber latex or chemical resistant gloves for handling and/or sampling of waste materials.
- Dust filter masks

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

1.9.3 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 should be functional. A Lockout-Tagout program shall be used to identify equipment in need or under repair and insure that operation is "off-limits" prior to maintenance or repair. All operators shall be trained in the proper operation of equipment.

1.9.4 Employee Health and Safety

Some general safety rules are:

- Consider safety first when planning and conducting activities.
- Review the equipment O&M Manual prior to attempting repairs/changes.
- Remember the buddy system in case of repair of mechanical equipment.
- Post emergency contact phone numbers.
- Provide easy and visible access to the Right to Know materials.
- Provide easy and visible access to the first aid kit and fire extinguishers.

1.9.5 Physical Exposure

Facility personnel may come in contact with the fluids, solids, and airborne constituents found at the landfill. Routine training should be conducted regarding the individual and collective materials used in the recycling process and their associated hazards. Training concerning safe work practices around these potential exposures should use equipment and proper disposal procedures.

1.9.6 Material Safety Data Sheets

Material Safety Data Sheets (MSDS) shall be collected on every waste (if available) that enters the facility. Information shall also be made available for all chemicals stored on site for use by the Site. MSDS sheets shall be stored in a location with all other Right to Know information for the site.

1.10 UTILITIES

Electrical power, water, telephone, and portable restrooms will be provided at the guard house (trailer).

1.11 RECORD KEEPING PROGRAM

The facility shall maintain the following documents in an operating record at the facility. The operating record will be kept up to date by the Site Manager or his designee. It will be presented upon request to DWM for inspection. A copy of this Operations Manual will be kept at the facility and will be available for use at all times.

SECTION 2.0
PROCESSING OPERATIONS

2.1 OVERVIEW

This section describes the processing operations for the Durham LCID Landfill.

2.2 ACCEPTABLE WASTES

The Durham LCID Landfill will accept the following wastes: stumps, trees, limbs, brush, grass and other naturally occurring vegetative material as well as concrete, brick, concrete block, used asphalt or used asphalt mixed with dirt, sand, uncontaminated soils, gravel, untreated/unpainted wood, yard trash, and other items approved by the N.C. Solid Waste Division.

The Durham LCID Landfill also plans to process and temporarily store selected, recyclable materials within the LCID cell limits. These materials include the following:

1. Concrete (including reinforced and painted as long as the paint is not lead-based[1]);
2. Asphalt/bituminous concrete pavement;
3. Clean wood (including pallets, lumber and wood products that are not treated, painted, or stained); and
4. Engineered wood products, which will be temporarily stored and disposed at a permitted facility but not processed on site.

2.3 WASTE ACCEPTANCE

It is anticipated that the source of waste will be from public and private sources in the Triangle Area including, but not limited to, Durham County, Wake County, Orange County and RTP. Although historically the Durham LCID Landfill processed (on average) about 250 cubic yards per day, since 2003 this rate has dramatically reduced and is anticipated to remain relatively low. The operating hours of the facility are anticipated to be from 6:30 a.m. to 7:00 p.m. Monday through Friday.

2.3.1 Site Capacity

An estimate of site capacity is summarized below:

Remaining Capacity	
Phase I (Cells 1,2 and 3):	150,000 CY (Gross, to Elevation 384')

[1] Based on Title X of the Housing and Community Development Act and the Toxic Substances Control Act as paint that contains less than 0.5% lead by weight (or 5,000 parts per million) or 1 mg/cm^2

Remaining Capacity Phase I (Cells 4 & 5):	225,725 CY (Gross, to Elevation 384')
Total Site Capacity (Gross):	625,000 CY (to Elevation 420')
Remaining Capacity Cells 1,2 and 3:	190,000 CY (Gross, to Elevation 420')
Capacity Cells 4 & 5	319,000 CY (Gross, to Elevation 420')
Total Remaining Capacity	509,000 CY (to Elevation 420')

It is noted that the current, final permit grades, as originally permitted in 1999 reflect maximum final cover grades to Elevation 384'. Site capacities (potential) summarized above reflect final cover grades peaking at about Elevation 420'. This represents final grades that are about 36 feet higher than currently approved final cover grades, which will require a permit modification through NCDENR as well as review and approval by Durham City-County prior to implementing this higher grades/volumes.

2.4 WASTE SCREENING

In order to assure that prohibited wastes are not processed, waste screening programs will be implemented. A spotter will be used to monitor the incoming waste and identify any non-acceptable wastes. If any non-acceptable wastes are identified, these wastes will be placed into a stockpile or container and removed from the site for disposal at a solid waste facility permitted to accept the particular waste. All records and receipts for this disposal shall be kept in the operating record for the site. It is anticipated that unacceptable wastes will either be generally classified as construction and demolition debris (C&D), white goods, or recyclable materials (i.e. plastic, steel, etc.) The individual spotters and operators will be trained on identifying non-conforming/non-acceptable wastes.

2.5 PROCESSING OPERATIONS

Wood pallets will be delivered and stockpiled within the limits of the LCID cell area as shown in **Figure 2**. Pallets will be shredded along with limbs, logs, stumps, and clean lumber. The processed material will subsequently be stockpiled in this same area until it is removed from the site for sale as fuel, compostable material, etc. The material will be stockpiled at the site for a maximum of 60 days. The final destination of the recyclable materials separated from the waste may vary depending on market prices for such materials.

Concrete (cement and asphaltic/bituminous) will be delivered and stockpiled within the limits of the LCID cell area as shown in **Figure 2**. The concrete waste 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.

2.5.1 Operating Capacity

The Operating Capacity for the Durham LCID Landfill is estimated to be as much as 250 CY, and as little as a few CY of material undergoing disposal and/or processing per day (on average). Actual site quantities may vary from this.

2.5.2 Equipment Requirements

The anticipated equipment requirements for operation and maintenance of the LCID site are listed in the following table. Actual pieces of equipment used at the site may vary from this.

Description	Primary Function (Allocation)
1) Excavator	as required; LCID landfill sorting
2) Front End Loader	as required; loading and mixing
3) Grinder	as required; grinding/shredding of bulky wastes, stumps, limbs, etc.
4) Screening Equipment	as required; processing material to uniform consistency and sorting of various gradations.
5) Dump Truck	as required; hauling material around site.

2.5.3 Grinding/Chipping

Grinding and/or chipping will be conducted at the site from time to time on an as-needed basis. The grinding/chipping operations will be conducted as needed to facilitate the landfill operations. It is anticipated that grinding and chipping will be conducted on a continual basis. Grinders and chippers pose both maintenance and safety hazards. Therefore, please refer to the manufacturer's safety and or maintenance literature prior to operating equipment at the site.

2.5.4 Screening

Screening will be conducted on an as-needed basis, just beyond the grinding area centrally on the site. Screening is conducted after the grinding/chipping has been completed to provide a uniform material for distribution/sale. The screening process removes remaining large materials for a uniform product. The finished product will be stored on site in a loading area until ready for delivery.

During the screening process additional non-conforming wastes may be identified. Once identified, these wastes will be removed and placed in the stockpiles or containers for disposal off-site. Screening machines pose both maintenance and safety hazards. Therefore, please refer to the manufacturer's safety and or maintenance literature prior to operating equipment at the site.

2.5.5 Access and Roadways

The site has been designed to provide all-weather access to the disposal area and will be properly maintained.

SECTION 3.0
ENVIRONMENTAL MANAGEMENT

3.1 OVERVIEW

This section reviews the overall environmental management tasks required for the successful operation of the Durham LCID Landfill. Emphasis is given to the supplemental tasks required for the new facility. The definition of "surface water" as used herein is water which results from precipitation or site run-on that has not contacted the waste.

3.2 SURFACE WATER CONTROL

Solid Waste shall not be disposed of in water. Proper control of surface water at the landfill will accomplish the following goals:

- Limit accelerated erosion caused by surface waters, and
- Limit sediments carried off-site by surface waters.

The following is a brief discussion of some of the site's surface water control features and practices.

3.2.1 Erosion Control

Erosion control provisions incorporated in and around the disposal area include the following:

- Drainage swales are provided to gather surface water from entire site.
- Water collected by each drainage swale is routed to the sediment basin.
- Areas that reach final grade and that are not included in the processing areas must be seeded immediately.
- A ground cover sufficient to restrain erosion must be in place within 30 working days or 120 calendar days upon the complection of any phase.

All areas should be inspected regularly for erosion damage and promptly repaired.

3.2.2 Sedimentation Control

Stormwater run-off from the landfill facility is conveyed to the existing sediment basin. The basin is inspected regularly for sediment build-up or erosion damage and shall be cleaned out when sediments fill the lower half of the basin.

3.3 DUST CONTROL

Dust related to equipment operations and traffic on the access roads will be minimized by using a water truck to limit dust on the gravel portion of the road, as needed.

3.4 SEVERE WEATHER CONDITIONS

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

3.4.1 Ice Storms

An ice storm can make access to the site dangerous, prevent movement or placement of materials, and, thus, may require closure of the landfill until the ice is removed or has melted.

3.4.2 Heavy Rains

Intermediate cover soil, final cover soil, and exposed stockpiles of unprocessed (recyclable) materials can be eroded during rainy periods. After heavy rain events, inspection by facility personnel will be initiated and corrective measures taken to repair any damage found before the next rainfall.

3.4.3 Electrical Storms

In electrical storms, landfilling activities will be temporarily suspended. To guarantee the safety of all field personnel, refuge will be taken in the on-site guard house or in rubber-tired vehicles, or shelter in the transfer station.

3.4.4 Windy Conditions

Windy conditions may increase the risk of blown debris or an increase in dust. As applicable, dusty areas will be watered to minimize exposure.

3.4.5 Violent Storms

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