

**LOWDER RECYCLING AND DISPOSAL, LLC**  
**2810 GRIFFITH ROAD**  
**WINSTON-SALEM, NC 27103**  
**OFFICE - (336) 760-0477**  
**FAX - (336) 760-6640**

September 25, 2014



21890

Mr. John Murray  
Permitting Engineer  
DWM/Solid Waste Section  
610 E. Center Avenue, Suite 301  
Mooresville, NC 28115

Dear Mr. Murray,

Attached is an updated Operations Plan for Lowder Recycling and Disposal, LLC for use in renewing our Permit to Operate No. 34-19, which expires on December 11, 2014.

We will look forward to working with your staff on any questions related to this request for renewal. You may call me or Roger Mayhew at the above number on any questions.

Sincerely,

A handwritten signature in black ink that reads "Gene Lowder".

Gene Lowder  
President

# LOWDER RECYCLING & DISPOSAL, LLC

## OPERATIONS PLAN

July 2014

### A. Introduction

Lowder Recycling & Disposal is located at 2840 Griffith Road, Winston-Salem, North Carolina and operates on a thirteen acre site zoned GI (General Industrial). The facility is owned and operated by Gene Lowder, doing business as Lowder Recycling & Disposal, LLC. The office phone and fax numbers are 336-760-3868 and 336-760-6640 respectively.

### B. Materials Received

Lowder Recycling & Disposal will be receiving land-clearing waste. "Land clearing waste" means solid waste which is generated solely from land clearing activities such as stumps, trees, limbs, brush, grass, and other naturally occurring vegetative material. Also, untreated and unpainted wood waste including pallets and other construction wood waste will also be received. Yard waste is also permitted, but must have a high C:N ratio. Bulk grass clippings, bulk leaves, and bulk bush trimmings are not allowed.

### C. Handling and Storage of Materials

1. Lowder Recycling & Disposal has controlled access and operating hours which are 7:00 a.m. to 5:00 p.m., Monday through Friday and 8:00 a.m. to 1:00 p.m. on Saturday. We are closed on Sunday. The Yard Foreman's mobile phone number has been posted at the yard entrance gate to allow customer contact with the Foreman. Upon arrival, all customer vehicles will be inspected prior to off-load. The customer will be instructed on which area to off load. Stumps may be stored in an area separate from smaller debris. Likewise, debris with a minimum or no amount of dirt will be unloaded in a different area of the stockpile. Although the stockpile will be continuous, areas within the stockpile may be of different consistencies. (More dirt and less brush, clean brush with no dirt, and stumps, etc.) This will allow Lowder Recycling & Disposal to extract soil and stockpile the soils separately for future screening. By stockpiling large stumps in a specific location, we will be more successful in separating the dirt ball from the wood product.
2. Prior to dumping, should trash such as cups, bottles, plant containers and plastic, etc. be observed, the driver will remove these items and place within one of the several trash cans Lowder Recycling & Disposal will have available. Should metals be present, the driver will remove from his load and place in large metal dumpster can. This can is furnished by Atlantic Scrap Metal of Kernersville and is emptied on a will call basis. The trash cans will be emptied into a trash dumpster located on the adjacent property and will be picked up weekly by Waste Industries. In general, all materials received which are not of land clearing debris nature will be disposed of or recycled; dependent upon the material. Should a load enter Lowder Recycling & Disposal and be heavily contaminated with foreign materials, the load will be turned away.
3. After off-loading, the load will again be inspected by our on-site Foreman. Should any foreign material be present, the items will be picked up and properly disposed of as previously described.

4. For recording purposes, an individual ticket is given to the customer for each load. This ticket serves two purposes. The first is for customer invoicing and for internal accounting. Second is to record and maintain a detailed quantity of each type of material disposed at this facility. Lowder Recycling & Disposal is currently converting land clearing debris as 1000 pounds (0.5 ton) per cubic yard and clean yard waste as 400 pounds (0.2 tons) per cubic yard.
5. Truck loads are being monitored daily. All reporting to North Carolina Department of Natural Resources will be in tons. Business activity at Lowder Recycling & Disposal is directly a function of weather and economic activities. We are expecting 40 cubic yards (8 tons) on a slow day and 200 cubic yards (100 tons) of stumps and brush on our busier days. Average daily intake is estimated at 25 tons per day. As records are generated, Lowder Recycling & Disposal will have better data in the future.

As previously discussed, materials received will be stockpiled according to the amount of soils included and size of stumps, etc. The majority of soil will be removed in an effort to minimize wear on the grinder.

#### **D. Siting Criteria**

The following set backs shall be maintained at all times.

- a) 50' to property lines (includes all materials)
- b) 50' to surface waters
- c) 200' to residential dwellings or commercial buildings not occupied by Lowder.
- d) 100' from wells

#### **E. Processing of Material**

Lowder Recycling & Disposal subcontracts the grinding of the land clearing debris. Actual grinding takes place twice a year. The grinding equipment will be set up at the northwest corner of the stockpile and as the grinding progresses, the equipment (grinder, track loader with rake, excavator with grapple) moves parallel to the stock pile in a southeastern direction. A pile of "first grinds" (mulch) continue to be windrowed by a wheel loader (Deere 624K) behind the grinding equipment. When the grinding starts, there are several machines working with the actual grinder. Typically, a track loader with a root rake assists along with a large excavator with a grapple. The two machines feed the grinder with debris free of foreign materials including soils. Once the wood has been ground, the grindings exit the machine via a conveyor. The grindings are then relocated to windrows using a rubber tire wheel loader. If site conditions are somewhat wet, this relocation of grindings may be accomplished using a track loader (CAT 953). The CAT 953 causes less rutting of the grade and therefore is more favorable in wet conditions. The windrows, 10 feet high with a base of 20 feet wide, are placed parallel to each other. An eight (8) foot drive lane is maintained at all times.

Dependent upon the screener and grate sizes and the type of wood grinder, the wood product may need to be ground twice. The "first grinds" after being placed in the windrows will be periodically rotated. Rotation of the "first grinds" is a function of moisture and temperature. When rotation time occurs, typically 2 to 3 times every six months, the Deere 624K or CAT 953 are used. Should a "second grind" be necessary,

the grinding equipment is remobilized and progresses parallel to the existing windrows. The "second grinds" are again windrowed approximately 10 feet high by 20 feet wide (conical). Rotating of the windrows over the next six months will result in a uniform product. These "second grinds" are now a marketable mulch. The mulch is once again moved from the back windrow to the closed windrow along Griffith Road for marketing. This entire process: the first grinding, windrowing, rotating, the second grindings, windrowing, and selling requires twenty months.

**F. Standing Water**

Should sub grade rutting occur due to daily operations or stock piling of materials, the area shall be back bladed and leveled to prevent vectors. Future site improvements shall assure positive drainage.

**G. Products from Grinding Process**

The grinding process generates two products. First, with the initial grinding, there remains a large amount of soil and organic mixture. This mixture is transported to the Power Screen 620 Trommell via tandem/triaxle dump truck and Deere 624K loader. The mixture is then loaded into the Trommell using the CAT 953 to separate the organic material from the soil. The resulting soil is a high-grade topsoil. Secondly, the actual rotating of the windrows and "decomposition" of the mulch results in a high-organic soil mixture. The mixture contains a high content of organics. This mixture is transported via a dump truck and/or loader to the Trommell Screen. At that time, the CAT 953 loads the Trommell and the Trommell separates most of the organics from the soil. The material generated is a soil amendment. The soil amendment can be used for planting.

**H. Screener**

The Power Screen Trommell is a mobile unit and is often moved within the facility. Because of the area needed to operate the Trommell efficiently, the Trommell remains in proximity to the western entrance. This is the same area used to "spread out" materials for drying. As soil materials dry, they are screened to become a marketable product as topsoil or soil amendment.

**I. Daily Intake**

We estimate a daily intake of fifteen (15) tons of land clearing debris. Grinding will occur two times a year and should generate 1,800 tons per year. Based on economic conditions, daily tonnage received will fluctuate/vary.

**J. Equipment to be utilized**

A list of all equipment to be utilized is as follows:

Tub grinder  
CAT 963 loader with rake  
CAT 325 excavator  
John Deere 624K wheel loader  
CAT 953 track loader  
Komatsu WA 200-6 wheel loader  
Ford tandem dump trucks  
Mack triaxle dump trucks  
Power Screen 620 Trommell  
Ford F750 dump truck  
Isuzu 5500 dump truck

**K. Contingency Plans**

1. Gene Lowder owns Lowder Recycling & Disposal as well as the adjoining business, Lowder, Inc. Should any equipment fail, Lowder Recycling & Disposal could obtain machines from Lowder, Inc. to aid in the processing of materials. Should poor product market conditions persist, Lowder Recycling & Disposal would stop receiving materials and increase advertising via radio. We would offer two for one sales and/or free delivery. This would promote sales of the mulch product.
2. A fire department is within 1.5 miles and Forsyth Medical Center is within 4.0 miles of our facility. Should a fire or medical emergency occur, we would call 911.

**L. Records for Inflow and Outflow**

Record keeping will be established to show cubic yards of yard waste and land clearing debris received. We will use conversion of 0.2 tons per cubic yard for yard waste and 0.5 tons per cubic yard for land clearing waste. This inflow and outflow will be recorded in tons weekly.