

FACILITY COMPLIANCE INSPECTION REPORT
Division of Waste Management
Solid Waste Section

UNIT TYPE:											
Lined MSWLF		LCID		YW		Transfer		Compost	<input checked="" type="checkbox"/>	SLAS	COUNTY: Chatham PERMIT NO.: 19-06 FILE TYPE: COMPLIANCE
Closed MSWLF		HHW		White goods		Incineration		T&P		FIRM	
CDLF		Tire T&P / Collection		Tire Monofill		Industrial Landfill		DEMO		SDTF	

Date of Site Inspection: January 31, 2012 **Date of Last Inspection:** April 13&14, 2011

FACILITY NAME AND ADDRESS:

M^cGill Environmental Systems of NC, Inc. – Merry Oaks Facility Large, Type 4 SWC Facility
 634 Christian Chapel Church Road
 New Hill, NC 27562

GPS COORDINATES: N: 35.63591 E: -79.00802

FACILITY CONTACT NAME AND PHONE NUMBER:

Steve Cockman, Operations Manager
 w. 919-362-1161
 c. 919-542-8903
 f. 919-362-1141
scockman@mcgillcompost.com

FACILITY CONTACT ADDRESS:

Steve Cockman, Operations Manager
 M^cGill Environmental Systems of NC, Inc. – Merry Oaks Facility
 634 Christian Chapel Church Road
 New Hill, NC 27562

PARTICIPANTS

John Patrone, NCDENR - Solid Waste Section (SWS)
 Tony Gallagher, NCDENR - SWS
 Donna Wilson, NCDENR – SWS
 Noel Lyons, President - M^cGill Environmental Systems
 Steve Cockman, Operations Manager - M^cGill Environmental Systems of NC, Inc. – Merry Oaks Facility

STATUS OF PERMIT:

Permit To Operate (PTO) issued December 8, 2010
 PTO expiration date December 8, 2015

PURPOSE OF SITE VISIT:

Comprehensive Audit

STATUS OF PAST NOTED VIOLATIONS:

None

FACILITY COMPLIANCE INSPECTION REPORT
Division of Waste Management
Solid Waste Section

Page 2 of 5

OBSERVED VIOLATIONS

None

The item(s) listed above were observed by Section staff and require action on behalf of the facility in order to come into or maintain compliance with the Statutes, Rules, and/or other regulatory requirements applicable to this facility. Be advised that pursuant to N.C.G.S. 130A-22, an administrative penalty of up to \$15,000 per day may be assessed for each violation of the Solid Waste Laws, Regulations, Conditions of a Permit, or Order under Article 9 of Chapter 130A of the N.C. General Statutes. Further, the facility and/or all responsible parties may be subject to enforcement actions including penalties, injunction from operation of a solid waste management facility or a solid waste collection service and any such further relief as may be necessary to achieve compliance with the North Carolina Solid Waste Management Act and Rules.

ADDITIONAL COMMENTS

On January 31, 2012, John Patrone, Tony Gallagher, and Donna Wilson met with Noel Lyons and Steve Cockman to conduct a comprehensive audit of the M^cGill Environmental Systems of NC, Inc. – Merry Oaks Facility Large, Type 4 SWC Facility on Christian Chapel Church Road in New Hill, Chatham County.

1. The facility is a Large, Type 4 Solid Waste Compost (SWC) Facility. It produces compost from industrial and municipal residuals and sludges, grease trap waste, and food and agribusiness wastes. And from a variety of amendments: ash, yard trash, wood mulch (primarily from pallets and yard waste), tobacco waste, and sawdust.
2. Approval from the DWM shall be obtained prior to acceptance of additional materials. Ensure that drywall (gypsum) is permitted to be accepted.
3. Compost is sold in bulk to landscape supply businesses and grading companies and to the agribusiness community.
4. Material is received from counties within North Carolina.
5. Compost operation is conducted on ~ 16 acres of ~ 46 acre site.
6. The facility is in operation Monday through Friday 8:00 am to 5:00 pm.
7. Active compost operation is conducted within an enclosed building. Compost curing, screening, and finished storage is conducted outside. High carbon bulking materials are stockpiled on the lot, ground into mulch ~ every 2 months, and added to the active compost process.
8. The enclosed building is ~ 112,500 ft². Currently, the structural element of the building is undergoing repair and much of the building is open to the outdoors. Mr. Lyons stated that the facility has reduced the amount of material accepted to reflect the limited workspace and expects repairs to be completed by March 1, 2012. And that sawdust is used to absorb rainwater entering the building (during this period) after which it is incorporated into the active compost process.
9. Mr. Lyons stated that the building, when repaired, will for 1 or 2 years utilize 10 of the previous 20 active compost bays and 3 new curing bays (hence 10 bays will not be reconstructed nor will the area be under cover). And that the area previously allotted for the 10 bays will be used for product storage. Mr. Lyons stated that a tarp-like fabric will be placed over the open end of the active compost bays to limit odors emitting directly into the atmosphere and to stop rainwater from entering.
10. Areas of structural distress, cracks, localized failures, or expansion joint deterioration shall be documented and repaired immediately.
11. The building is divided into three sections. The first section is where trucks off-load dry waste material and semi-wet sludge into a mixing and bulking pit. Liquid sludge, when received, is stored in a 110,000 gallon aboveground storage tank (AST) and added to the mixing and bulking pit as needed. The mixing and bulking pit is self-contained. A small amount of bulking material is stored, for immediate use, in an area adjacent to the mixing and bulking pit (within the building). After waste material is mixed accordingly, it is transported over to the second section of the building comprised of bays used for active composting. Active compost is complete in 20 days, meeting vector and pathogen requirements. After 20 days some of the compost is brought over to the third section of the building where it is left to cure and, afterward, screened.
12. Waste material is placed in the active compost bays in 100'x30'x7' piles. The active compost process piles are aerated using positive aeration/forced air. Each active compost bay has a blower, controlled by variable frequency drive control unit that adjusts according to active compost pile temperature.

FACILITY COMPLIANCE INSPECTION REPORT
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Solid Waste Section

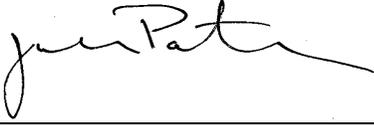
Page 3 of 5

13. The odors from each bay are drawn from the active compost process, via duct, through a horizontal biofilter located outside of the building. The biofilter consists of a bedding material of cured compost topped with wood mulch. Odors drawn from the active compost bays filter upwards, from the ducts (perforated, incorporated within the biofilter), through the media to the atmosphere. New/fresh media for the biofilter is routinely added and/or changed-out.
14. The active compost process is operated such that leachate does not accumulate but is utilized in the procedure.
15. The majority of compost is brought outside of the building to cure and placed in windrows, commonly 175'x12'x6'. The curing process is complete in 30 days, turned 4 or 5 times. Compost is turned with a windrow turning machine and is screened once or twice prior to sale.
16. Stockpiling of finished product shall be limited to a height of 30 feet.
17. The facility operational capacity is limited to 151,200 tons of (all) materials composted per year.
18. The facility maintains records of the amount and type of material received. The amount of material received was verified for August 1 through December 31, 2011. The facility received 16,240.67 tons.
19. The facility annual report (FAR) was received by SWS on August 1, 2011. Facility throughput for July 2010 through June 2011 is 72,467.10 tons. And the amount of compost produced is 42,787.24 tons.
20. The facility produces Grade A compost and provides an information pamphlet attached to the customer bill of lading and has various information brochures on its website: www.mcgillcompost.com.
21. The facility uses Iconics, Inc. compost monitoring software to regulate the forced aeration and biofilter operations. It also provides active compost temperature and hold-time measurements.
22. Temperature and active compost hold-time measurements were verified for January 2011 through January 2012. The facility processes five or six active compost piles a month. If vector and pathogen requirements are not met, the compost pile is relocated and temperature and hold-time measurements begin anew.
23. The facility uses a program from the University of Maine to monitor active compost pile moisture and C:N ratio. Facility staff verifies moisture content by hand. Records were verified.
24. Bulk density measurements are conducted monthly by (Soil) Control Laboratories, Inc. Records were verified. Ensure that bulk density measurements are conducted every 14 days.
25. Ensure that temperature probes are routinely calibrated.
26. The facility conducts Toxicity Characteristic Leaching Procedure (TCLP) tests, analyzed by Pace Analytical Services, Inc. Records were verified for metals conducted May 2 and December 20, 2011.
27. The facility conducts fecal coliform and manmade inert materials tests, analyzed by (Soil) Control Laboratories, Inc. Records were verified for tests conducted June 3, July 14, August 22, and November 14, 2011. Mr. Lyons stated that tests are conducted frequently in order to maintain compliance with US Composting Council Seal of Testing Assurance (STA) approval parameters.
28. The facility has a 20,000 gallon water tank available for yard maintenance and dust control.
29. There was no odor detected at the facility boundary. Mr. Lyons stated that the nearest neighbor is ~ 1,500 feet away. And that curing compost windrows are turned when the wind is not blowing in the neighbor's direction (facility uses a windsock to determine wind direction).
30. There was no indication of erosion or runoff.
31. The facility has three stormwater ponds. The stormwater ponds appeared to function appropriately; baled hay and absorbent socks were recently replaced. Ensure that stormwater pond maintenance is conducted such that retention capacity is maintained and that visual inspection is easily conducted.
32. Appropriate fire lanes were maintained. The Moncure Fire Department will be contacted to address an emergency situation.
33. The facility has proper signage.
34. Access roads are of all weather construction.
35. The facility is secured by locked gate.
36. The PTO expiration date is December 8, 2015.
37. The PTO renewal application shall be submitted to the SWS at least 90 days prior to permit expiration.

FACILITY COMPLIANCE INSPECTION REPORT
Division of Waste Management
Solid Waste Section

Page 4 of 5

Please contact me if you have any questions or concerns regarding this inspection report.



Phone: 336-771-5095 Fax: 336-771-4631

John Patrone
Environmental Senior Specialist
Regional Representative

Sent on: <u>February 3, 2012</u>	<input checked="" type="checkbox"/>	Email	<input type="checkbox"/>	Hand delivery	<input type="checkbox"/>	US Mail	<input type="checkbox"/>	Certified No. []
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Copies: Dennis Shackelford, Eastern District Supervisor
Shawn McKee, Environmental Senior Specialist
Tony Gallagher, Environmental Supervisor
Donna Wilson, Environmental Engineer
Noel Lyons, President - M^cGill Environmental Systems, nlyons@mcgillcompost.com

FACILITY COMPLIANCE INSPECTION REPORT
Division of Waste Management
Solid Waste Section

Page 5 of 5

Digital photographs taken January 31, 2012
by John Patrone, DWM – SWS

Building repair, view of truck off-load ramp/bay (entire building in similar state of repair)



110,000 gallon liquid sludge AST



Rear of building, view of biofilters



Curing compost windrows, adjacent to building

