



FACILITY COMPLIANCE INSPECTION REPORT
Division of Waste Management
Solid Waste Section

UNIT TYPE:											
Lined MSWLF		LCID		YW		Transfer		Compost	X	SLAS	COUNTY: Chatham PERMIT NO.: 19-06 SWC FILE TYPE: COMPLIANCE
Closed MSWLF		HHW		White goods		Incin		T&P		FIRM	
CDLF		Tire T&P / Collection		Tire Monofill		Industrial Landfill		DEMO		SDTF	

Date of Site Inspection: February 24, 2014

Date of Last Inspection: January 17, 2013

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, Environmental Senior Specialist - Solid Waste Section (SWS)
 Donna Wilson, Permitting Engineer – SWS
 M. Noel Lyons, President - M^cGill Environmental Systems of NC, Inc.
 Steve Cockman, Operations Manager - M^cGill Environmental Systems of NC, Inc. – Merry Oaks Facility

STATUS OF PERMIT:

Permit To Operate (PTO) issued February 24, 2014
 PTO expiration date December 8, 2015

PURPOSE OF SITE VISIT:

Comprehensive Inspection

STATUS OF PAST NOTED VIOLATIONS:

None

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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 February 24, 2014, John Patrone and Donna Wilson met with Noel Lyons and Steve Cockman to conduct a comprehensive inspection 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 bulking agents: ash, yard waste, wood mulch, tobacco waste, and sawdust.
2. Approval from the SWS – Permitting Branch shall be obtained prior to acceptance of additional materials.
3. Ensure that the facility has obtained approval to accept gypsum. Mr. Cockman stated that the facility receives ~ 20 tons of gypsum a month.
4. Material is received from counties within North Carolina.
5. The facility permit, site map, operations plan, and contingency plan were discussed.
6. Compost is sold in bulk to landscape supply businesses, grading companies, and to the agribusiness community.
7. The facility is in operation Monday through Friday 8:00 am to 5:00 pm and Saturday 8:00 am to noon.
8. Active composting and curing operations are conducted within the facility building. Feedstocks are off-loaded into a mixing and bulking pit. Bulking material is brought into the pit from outside via adjacent bay door. Mixed material is stockpiled within the pit area until enough is on-hand to create an active compost row. The material is placed into positive aeration active compost bays to meet process for further reducing pathogens (PFRP). Afterwards, material is screened via dedicated screener (conveyor located in building, material deposited outside of building) and placed in a triple-wide bay (maximum pile height: 10') to meet vector attraction reduction (VAR).
9. Material removed from the active compost bays awaiting VAR, that has not been screened, is stockpiled in the building in an area open to the weather/not under cover. This area can store a maximum of 10,000 yd³ of material (maximum pile height: 15'). Screened material, to be placed in the VAR area is stored outside until moved into the building. Mr. Cockman stated that ~ 50 percent of the material awaiting VAR is returned to the mixing and bulking pit to aid in the PFRP process. Overs from this screening process are stockpiled in the building open to the weather/not under cover area to be added to the mixing and bulking pit.
10. Material is considered cured after achieving VAR. Cured product is screened outside (via dedicated screener). The screened compost is finished product. Finished product is stockpiled outside in storage bays constructed of large cement block.
11. The facility has 10 individual active compost bays (Nos.: 1,3,5,7,9,11,13,15,17, and 19) and a curing area constituting what would be three bays (Nos.: 21, 23, and 25).
12. Each bay has a dedicated positive aeration fan (three fans in the curing area).
13. An active compost bay row is constructed with a layer of wood chip, seven feet of material to be composted, and one foot of finished compost along the front of the pile, facing the open end of the bay.
14. A front end loader works in the mixing and bulking pit. It also loads material into the active compost bays. When material has met PFRP it is removed by a second front end loader. The material is then screened and readied for the VAR process/stored/returned to the mixing and bulking pit.
15. Mr. Cockman stated that each front end loader is dedicated to a prescribed operation and if secondary use is required the bucket is decontaminated.

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16. Each active compost bay is enclosed on three sides and has a reinforced polyethylene laminate tarp that remains in-place across the open portion of the bay. The mixing and bulking pit bay door and entranceway to the corridor, from the mixing and bulking pit to the active compost bays, have the same reinforced polyethylene laminate tarps; which are raised-up during facility operation and drawn-down afterhours.
17. Mr. Cockman stated that the facility has ordered six new reinforced polyethylene laminate tarps for the active compost bays.
18. The mixing and bulking pit, active compost bays, and curing area exhaust fans route to a biofilter located outside, adjacent to the building.
19. There are six biofilters, each containing five twelve-inch perforated plastic pipes. The biofilters are constructed atop a clay ash pad followed by an initial layer of wood chip, perforated pipe, a layer of compost, and a second layer of wood chip. The area allotted for the biofilter is ~ 400' x 110' x 3.5'.
20. Maintenance pathways (ground layer/no filter material) stretch throughout the biofilter. Each biofilter is ~ 40' wide and each maintenance pathway is ~ 40' wide. The total biofilter area is ~ 26,400 ft² and the total maintenance pathway area is ~ 17,600 ft². The biofilter volume is ~ 92,400 ft³ or 3,422.2 yd³.
21. Each active compost bay group, Nos.: 1, 3 and 5, Nos.: 7 and 9, Nos.: 11 and 13, and Nos.: 15, 17, and 19, exhausts through a manifold to one of four biofilter units. The mixing and bulking pit exhausts to a dedicated biofilter unit. And the curing area exhausts through a manifold to a dedicated biofilter unit.
22. Mr. Cockman stated that the biofilter media for the PFRP bays was replaced in August 2013 and the biofilter media for the VAR bays and the mixing and bulking pit was replaced in May/June 2012.
23. There are a total of 19 fans: 13 positive aeration fans and 6 biofilter fans.
24. High carbon bulking material is stored outside, behind the building. Wood and yard waste are ground routinely. A portable grinder unit is brought on site to grind material. During the inspection the portable grinder was being readied to grind material.
25. The facility building is ~ 112,500 ft². Rainwater that enters the building via the open to the weather/not under cover storage area is absorbed by the stockpile of material awaiting VAR. The vehicle corridor is covered with a layer of mulch/compost to absorb leachate. The mulch/compost is removed and incorporated into the mixing and bulking pit.
26. The facility has a 110,000 gallon sludge aboveground storage tank (AST). Absorbent material is on-hand in case of emergency. Mr. Cockman stated that bagged sand and hydrated lime is kept in a shipping container stored on site. And that the facility no longer pumps sludge into the AST, it only removes it. He estimates that the AST will be empty in ~ 1.5 years. At that time the AST will no longer be used. Sludge is off-loaded directly into the mixing and bulking pit.
27. Stockpiling of feedstocks and finished product shall be limited to 50' in width x 30' in height.
28. The facility operational capacity is limited to 151,200 tons of materials composted per year. The tonnage limit includes all feedstocks, amendments, and recycled material.
29. Vehicle scale test and calibration was conducted by Central Carolina Scale, Inc. on May 24, 2013. Zero error is noted. The facility has an external scale display unit.
30. The facility maintains records of the amount and type of material received. The amount of material received was verified for July through December 2013. The facility received 88,540.63 tons of material: 62,480.92 tons of feedstock and 26,059.71 tons of bulking material. The amount of compost created is 31,033.47 tons and the amount sold is ~ 46,000 yd³. The amount of cured compost on site is ~ 12,000 yd³. And the amount of all materials on site is ~ 38,000 yd³.
31. The facility annual report (FAR) was received by the SWS on July 24, 2013. Facility throughput for July 2012 through June 2013 is 85,508.75 tons. The amount of compost produced is 24,377.30 tons.
32. The facility produces Grade A compost. An information pamphlet is provided for customers in the office and on-line material is available at the facility website: www.mcgillcompost.com. The customer product manifest has a caution note for proper use.
33. Compost bay temperature records for PFRP and VAR were verified for January 5 through December 28, 2013. The PFRP finish dates were reviewed for June 11 through December 31, 2013 and the VAR finish dates for July 5 through December 17, 2013. Mr. Cockman stated three of four PFRP rows equal one VAR row.

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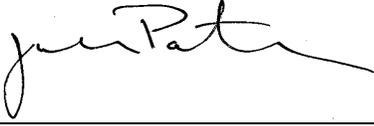
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34. The facility uses a program from the University of Maine to monitor bulk density and C:N ratio. Moisture content is verified by hand per the facility operating manual, page 32. Weekly data for 2013 was verified.
35. The facility has the total metals analysis conducted by Pace Analytical Services, Inc. in Eden, NC. Records were reviewed for material collected on June 4 and December 10, 2013.
36. The facility obtains samples for analysis from cured compost (after screening), ready to be stockpiled. It is suggested that samples be obtained from cured compost prior to screening to avoid cross contamination of the screener and cured compost stockpile. The sample lot should be kept separate from stockpiled compost until results are obtained.
37. The facility has monthly total metals, pathogen (fecal coliform and salmonella), and manmade inerts analysis conducted by Soil Control Lab in Watsonville, CA. Records were reviewed for August 7, September 3, October 1, November 5, and December 2, 2013.
38. The facility maintains records of analysis provided to US Composting Council from Soil Control Lab.
39. It is suggested that when samples for analysis are obtained each has a specified identifier.
40. When pathogen analysis is conducted, if fecal coliform and salmonella are tested, both select pathogens must pass/be within respective required limit.
41. If a select pathogen fails/is not within respective required limit a second pathogen analysis must be conducted within seven calendar days. Only compost that passes/is within respective required limit shall be distributed to the public.
42. The facility shall maintain records of additional pathogen analysis conducted for test result verification and a written log tracking the retested product.
43. The facility has a 20,000 gallon water tank available for yard maintenance and fire prevention.
44. The facility has a water tank trailer used for dust control.
45. Mr. Cockman stated that there have not been any odor complaints.
46. During the inspection there was no odor detected at the facility boundary.
47. The facility has a stormwater discharge National Pollutant Discharge Elimination System General Permit NCG240000, Certificate of Coverage NCG240005, effective 08/13/12.
48. The facility has three stormwater ponds. The stormwater ponds appeared in good order.
49. There was no indication of erosion or runoff.
50. Mr. Cockman stated that material awaiting VAR - stored outside absorbs water. And that runoff from the pile(s) of material awaiting VAR is directed to the stormwater pond.
51. All leachate from the compost process shall remain in the building. Ensure facility operations are updated accordingly when the permit is modified or renewed.
52. It is suggested that material awaiting VAR is sufficiently separated from cured compost.
53. The facility roof over the VAR screener collapsed and the roof over the VAR bays is in poor condition. The facility is conducting cleanup operations and plans to have a new roof constructed over the VAR bays and screener in 4 to 6 months.
54. Mr. Cockman stated that when applicable a berm of absorbent material will be placed across construction corridors to prevent leachate from leaving the building footprint. And that if leachate should migrate from the building footprint it would flow to the pile(s) awaiting VAR and or stormwater pond.
55. The facility plans to install positive aeration fans in the area open to the weather/not under cover in bays 2, 4, 6, 8, 10, 12, and 14 to maintain a drier material.
56. Mr. Lyons stated that perhaps in 2015, the facility will amend the building such that the VAR screening operation and storage of material awaiting VAR will be conducted within the building itself.
57. The Moncure Fire Department will be contacted to address an emergency at the facility.
58. The facility has proper signage.
59. Access roads are of all weather construction.
60. The facility is secured by locked gate.
61. The PTO expiration date is December 8, 2015.
62. The PTO renewal application shall be submitted to the SWS by August 8, 2015.

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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>March 4, 2014</u>	X	Email		Hand delivery		US Mail	Certified No. []
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Electronic Copies:

Jason Watkins, Western District Supervisor
Sarah Rice, Compliance Officer
Tony Gallagher, Supervisor - Composting & Land Application Branch
Donna Wilson, Permitting Engineer
Liz Patterson, Composting and Land Application Branch
M. Noel Lyons, President - M^cGill Environmental Systems of NC, Inc.
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Digital pictures taken February 24, 2014
by John Patrone, DWM – SWS

Operations building – right side view



Material awaiting VAR screener – roof damage/removed



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Material awaiting VAR roof damage, rear of building



Damaged roof removal – operations corridor



Mixing and bulking pit



Active compost bays (PFRP) and operations corridor



Cured compost screening



Stormwater pond – rear of operations building



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Operations building – left side view



Biofilters and pallet/wood pile



Yard waste pile



Mixing and bulking pit bay door and bulking material



Sludge AST



Material off load bay door - front of building

