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August 8, 2013

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Waste
Management

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Donna J. Wilson
Environmental Engineer
Solid Waste Section/Division of Waste Management/NC DENR
1646 Mail Service Center
Raleigh NC 27699-1646

RE: **McGill Permit Modification SWC 19-06**

Dear Donna:

Enclosed is a request for a permit modification for our Merry Oaks facility and a drawing of the facility highlighting the affected area.

This request has one significant change from what we discussed at our meeting on July 17th. Instead of replacing the screening plant, we are proposing a major overhaul. This will include a new infeed hopper, electrical improvements, screens, new belting where required, and some anti-corrosion painting.

Please call or email if you have any questions.

Steve Cockman
McGill Environmental Systems of NC Inc
(M) 910-542-8903
scockman@mcgillcompost.com

Enclosures

Proposed changes and improvements for Permit SWC 19-06

Justification

First and foremost we are always seeking opportunities to improve the facility. We feel this is essential if we are to survive and thrive in the competitive world we operate in. These changes amount to a very significant investment but we believe they will make us more efficient, maintain our regulatory record and ensure top quality products for the higher-end markets we depend more and more on. Our screening equipment is aging resulting in gradual increases in maintenance costs and reduced efficiency. The proposed changes will also make us more independent of the ever-changing marketplace for good amendments.

The specific modifications we are proposing are:

- Refurbish existing stationary screen to include the replacement of feed hopper.
- Install fans with variable frequency drives in bays 2, 4, 6, 8, 10, 12 and 14 to further cure and dry compost and amendments. Drier materials will greatly benefit the blending process and facilitate more efficient screening.
- Remove the remainder of the old building and replace with a new building. This is an open-sided metal structure covering curing bays 21, 23 and 25 and the existing trommel screening plant. The replacement building would cover the same footprint as the existing building but would be upgraded with Resolite sheeting and corrosion protection.

Impacts of the upgrades

- The refurbishment of the screening plant should reduce down time and maintenance costs. This will contribute to making daily operations more efficient.
- The existing old building has deteriorated and will eventually become structurally unsound requiring it to be removed. We do not want to wait for this to happen.
- There should be no negative potential for odor generation. We would however expect some benefits from having the ability to keep the material stored in bays 2 to 14 aerated.

Timeline

- Screening plant refurbishment will commence in late August and be completed by mid-October.
- Installation of fans will commence within 30 days of receiving permit amendment.
- Replacement of old building would happen during the 2nd half of 2014.

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NOTES

1. SEE C-101 FOR ALL GENERAL NOTES.

LEGEND

- EXISTING TREE LINE
- DIVERSION DITCH
- (FLOW) SLOPE DIRECTION
- ALL AREA CLASSIFIED AS IMPERVIOUS, INCLUDING STRUCTURES, BUILDINGS, ROADWAYS, PARKING, AND PRODUCT STORAGE. SEE CHART BELOW FOR TOTAL
- RIP-RAP EROSION CONTROL PROTECTION
- STORAGE AREA
- AREA SEPARATION LIMITS LINE
- VEGETATIVE GRASS BUFFER AREA
- GRINDING AREA
- DRAINAGE SWALE (FLOW)
- ADJACENT PROPERTY

EMBANKMENT
3:1 SLOPE
WOODCHIP LIMITS
WOOD STORAGE AND GRINDING AREA
±109.71
95.65
229.51
20'
±91.5'
±36.00
120,000 Gal. Storage Tank
6" Gate Valve @ Tank
Blender Pump
Pump House 14.5'x14.5'
Elev. 110
WASTE TANK
4" Steel Pipe
4" Steel Pipe
WOODCHIP PREP AREA CONC. PAD
20,000 GAL WATER TANK
O.H. DOOR
9' x 9' Pressure Washing Bldg.
Tru-Vapor LF-3 Unit (Fans 1,2,&3)
(2) DOOR 12'x14'
O.H. DOOR
BLENDING BUILDING DUCT
LF-3 Unit Tru-Vapor
FFE=114.5
Concrete Pad for Unloading
14
FFI
O.H. DOOR
FFE=99.5
O.H. DOOR
WET MATERIALS AREA
STAIRWAY
RAMP
GRAVEL DRIVEWAY
FFE=100
DRY STORAGE
FFE=99.5
OFFICE/MAINTENANCE AREA
O.H. Door
FFE=100
Clay Ash Pad Under Bio-Filter
BIOFILTER
12" PERFORATED DRAIN PIPE @ 72" O.C.
30" Header Duct
TEN (10) 30'x100' PRIMARY PROCESSING BAYS WITH CONCRETE DIVIDER WALLS AND ROOF
FAN
AERATION FAN 1
AERATION FAN 3
AERATION FAN 5
AERATION FAN 7
AERATION FAN 9
AERATION FAN 11
AERATION FAN 13
AERATION FAN 15
AERATION FAN 17
AERATION FAN 19
AERATION FAN 21
AERATION FAN 23
AERATION FAN 25
COMPOST FACILITY
AERATION FLOOR (Typ.)
FFE=100
FFE=99.5
FFE=100
COMPOSTING BUILDING
2 AERATION FAN
4 AERATION FAN
6 AERATION FAN
8 AERATION FAN
10 AERATION FAN
12 AERATION FAN
14 AERATION FAN
ELEC. ROOM
Conc. Pad Elev. 100.67
UNCOVERED COMPOST STORAGE AREA
SEWER LIFT PUMP
C P & L Transformer
±41.51
±88.24
±73.53
12" Drain Pipe
±94.96
GRAVEL DRIVEWAY
12" drain pipe
Equipment Storage
Diversion Ditch
WOODED AREA
GRAVEL DRIVEWAY
Diversion Ditch
WOODED AREA
EXISTING BUILDING (TO BE REPLACED)
CURING PAD AREA
ACTIVE CURING BAYS
TRANSLUCENT ROOF PANELS
FFE=99.5
LOADING AREA CONC PAD
SYSTEM SCREEN
RADIAL STACKING CONVEYOR
STORAGE CURING SCREEN
PRIMARY OUTSIDE STORAGE AREA
±62.31
12" Drain Pipe
±91.09
±68.34
24" Drain Pipe
STORAGE BIN
STORAGE BIN
STORAGE BIN
BLOCK WALLS
±196'
283'
STORAGE AREA
Diversion Ditch
WOODED AREA

ENGINEER'S CERTIFICATION:

CURRENT FACILITY DESIGN AND SITE LAYOUT MEET STATE REQUIREMENTS FOR ODOR CONTROL AND SURFACE WATER RUNOFF CONTROL. FACILITY DESIGN AND OPERATION PRACTICES HELP MINIMIZE OUTSIDE STORAGE.

GRAPHIC SCALE: 1" = 30'
0 15 30 60 90

REVISIONS		
NO.	DATE	DESCRIPTION
1	3/30/06	REVISED PER NCDENR REVIEW
2	5/18/06	FINAL REVIEW
3	5/31/06	FINAL SUBMITTAL
4	2/16/09	REVISED PER CLIENT
5	7/12/10	REVISED PER CLIENT
6	12/7/12	REVISED PER SWS
7	7/2/13	REVISED PER CLIENT

PROJECT MANAGER:	PROJECT ENGINEER:
GSM	ZLF
DRAWN BY:	CHECKED BY:
MAE	GSM

DATE: DECEMBER 08, 2005

NORTH CAROLINA PROFESSIONAL SEAL 17069 ENGINEER CARYL S. MacCONNELL 8/9/13

MacCONNELL & Associates, P. C.
1903 NORTH HARRISON AVE., SUITE 102
CARY, NORTH CAROLINA 27513
P. O. BOX 129
MORRISVILLE, NORTH CAROLINA 27560
TEL: (919) 467-1239 FAX: (919) 319-6510

MCGILL ENVIRONMENTAL SYSTEMS

CHATHAM COUNTY FACILITY
CHATHAM COUNTY, NC

COMPOSTING FACILITY BUILDING LAYOUT

PROJECT NUMBER	DRAWING NUMBER
A26704.00	C-105

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A26704.00 – MCGILL ENVIRONMENTAL SYSTEMS – EXISTING SITE CONDITIONS – A26704-BASE.DWG

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