Central File
Permit 19-06
Compost File

McGILL
The McGill Regional Composting Facility at Merry Oaks

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New Hill, NC 27562
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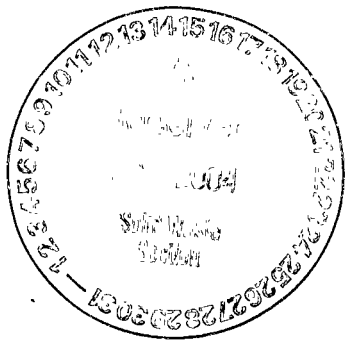

October,14 2004

Dear Mr. Shackelford:

In response to your audit report received by U. S. Mail on October13, 2004, the following steps have been taken regarding the other comments/suggestions section of your report.

1. After consulting with the manufacturer of the Bio-Filter piping it was determined that the cracks are being caused by fine vibrations that occur while the blowers are running. The mastic and sealant originally used seems to fail over time. The recommended solution is to install an engineered metal flange with a coupling that will allow for the fine vibration of the blower. These flanges have been ordered and are due to be installed the week of October,18. In the meantime all of the Bio-Filter pipes have been sealed with rubber gasket material. This work was completed as indicated in the phone message I left on your voice mail on October 13, 2004.

2. The exposed pipes have been cut back and capped with additional media.

3. Rye grass is being used on the few remaining areas to establish ground cover.

4. The portion of the area below the Bio-Filter (approximately 15% of the total area) will be graded to allow better drainage and establishing better ground cover.

Please feel free to contact me if you need any additional information.

Sincerely,

Steve Cockman

Cc: Mark Poindexter, Field operations Branch Head
Ted Lyon, NCDENR
Angela Birchett, CZO Chatham County

McGILL
ENVIRONMENTAL SYSTEMS

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February24, 2004

Mr. Ted Lyon
Supervisor
Composting and Land Application Branch
Solid Waste Section
NCDENR – Div. of Waste Management
1646 Mail Service Center
Raleigh, NC 27699-1646

Re: Permit No. SWC-19-06

Dear Mr. Lyon:

Enclosed, please find our application for renewal of Type IV Solid Waste Composting permit SWC-19-06, the operating permit for the McGill Regional Composting Facility at Merry Oaks.

This application reflects all the changes we have made to the plant since start-up in January 2003; particularly those changes (both structural and non-structural) intended to address the off-site odor concerns that have occurred in the past. In the interests of brevity, in this application we have referred back to our original Permit to Operate application of March, 2003 for those items that have not changed since then.

If you have any questions or need any additional information, please do not hesitate to contact me at (919) 362-1161.

Very Truly Yours,

Steve Cockman

Steve Cockman
Sales Manager

McGILL
ENVIRONMENTAL SYSTEMS

McGill Environmental Systems

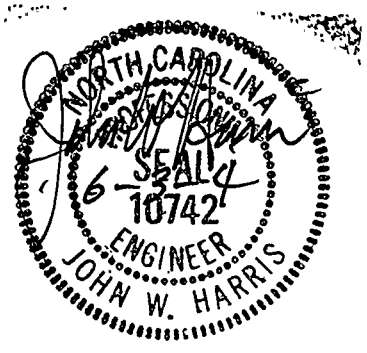
Regional Composting Facility

at Merry Oaks

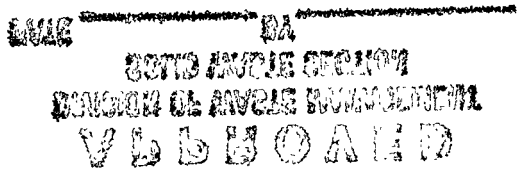
Permit Renewal Application

February 2004

APPROVED
DIVISION OF WASTE MANAGEMENT
SOLID WASTE SECTION
DATE 12/1/04 BY



McGill Environmental Systems of N.C., Inc.
P.O. Box 61, Harrolls, NC 28444 □ TEL: 910-532-2539 □ FAX: 910-532-2542



Section 1 – Design and Operations Overview

1.1 General Information

No change from original permit application submitted in March, 2003.

1.2 Site Characteristics

No change from original permit application submitted in March, 2003.

1.3 Physical Plant

a. Structure – the north end of the building, previously open to facilitate materials handling has been closed in with sheet metal siding for odor control (two sliding doors have been installed for access). In addition, sheet metal siding has been installed above the partitioning concrete walls dividing mixing from composting and composting from curing/screening to isolate the primary composting area. The motorized rollup door (#4) to the amendment storage area has been replaced with a hinged door. The motorized rollup door (#3) on the ramp area has also been replaced with a hinged door. This is shown on the attached As-Built Site Plan.

b. Primary Aeration Area - the aeration blowers supplying air to the compost bays have all been equipped with Variable Frequency Drives (VFDs). These VFDs allow the fans to operate at lower speed/lower air delivery rates constantly, rather than cycle on/off as previously configured. This allows a constant flow of oxygen to the compost piles to reduce the potential for formation of anaerobic odors.

c. Active Curing Area - a ¾" water hose has been added to the discharge belt of the screen to aid in dust control during the summer months.

d. Outdoor Areas and Features - The pad (200"x200') at the northeast end of the building has been amended with ash and is being used as finished product, overs and blend ingredient storage. This is shown on the attached As-Built Site Plan.

e. Biofilter - the ducting distributing building air to the biofilter has been upgraded to include five (5) 10" diameter distribution pipes in addition to the ten (10) 6" distribution pipes originally installed on each of the ten (10) headers. This was done to reduce backpressure on the biofilter blowers and exhaust more odorous air to the biofilter.
An irrigation system consisting of 2" PVC piping and eight 30 gpm sprinklers has been installed on top of the biofilter to maintain proper moisture conditions throughout the biofilter. This is shown on the attached As-Built Site Plan.

f. Intake Air Plenum - Recycle piping has been added to eight aeration zones (Bays 1,4,5,8,13,14,20,21) extracting building process air and delivering it to the respective intake fans (instead of fresh air).

g. The remaining aspects of the physical plant remain the same as in the original permit application.

1.4 Equipment Specifications

NCDENR
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

June 2, 2004

Mr. Craig Coker
McGill Environmental Systems
634 Christian Chapel Church Road
New Hill, North Carolina 27562

Dear Mr. Coker:

The Division of Waste Management, Solid Waste Section, has reviewed your request to pilot test a waste containing paper, cellulose and triacetin to determine the feasibility of composting the material. Our understanding is that the material is common to cigarette filters.

Based on the information you have provided your request is considered approved for the specified quantity of material. If, after testing, you wish to continue to receive this material you will need to request to amend your permit.

If you have any further questions please feel free to contact Ted Lyon at 919-733-0692 ext. 253.

Sincerely,

James C Coffey

James C. Coffey, Chief
Solid Waste Section

H/Compost/Permits/19-chatham/McGill/SWC-19-06_demo#1_06-04

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May 5, 2004

Mr. Ted Lyon
Supervisor
Composting and Land Application Branch
Solid Waste Section
NCDENR – Div. of Waste Management
1646 Mail Service Center
Raleigh, NC 27699-1646

Re: Permit No. SWC-19-06

Dear Mr. Lyon:

McGill Environmental Systems is planning a pilot test of a paper-based solid waste containing paper, cellulose acetate and triacetin (1,2,3 Propanetriol triacetate, a biodegradable plasticizer) at our Merry Oaks (Chatham County) plant. The purpose of the pilot test is to evaluate the compostability of this wastestream. Our proposed procedure is as follows:

Feedstock Delivery

One (1) 40-CY rolloff of the the waste will be delivered to the McGill Composting Facility at Merry Oaks by the generator and/or its contractor at a date of mutual choosing. The waste will be offloaded into the dry amendment storage area at Merry Oaks.

Feedstock Mixing and Composting

Based on the laboratory analyses and the computer model recipe results, the entire 40-CY contents of the dumpster will be bucket-blended by front-end loader with other composting feedstocks currently accepted at McGill-Merry Oaks. The bucket-blend will be further mixed in a live-bottom pug mill mixer. The resulting mix will be placed in part of a compost bay being filled as part of daily operations. The Daily Log Book will note which bay has received the paper-based solid waste. The bay will be composted in the normal way Temperatures in the compost bay will be monitored by the McGill Process Control System, recording temperatures every day. No change will be made to bay aeration protocols from what is normally done at McGill.

Compost Curing

Following active composting, the portion of the bay containing this material will be screened and windrowed seperatly. . The screening process will be closely monitored by the Chief Engineer and the Merry Oaks Plant Manager to determine if the paper-based solid waste has been degraded to the point where it will not affect final product quality. The amount of waste (if any) carried over to the "Overs" pile by the screen will be estimated. . Observations will be made of the compost to see if further degradation has occurred.

Product Analysis

After 90 days of passive curing, the finished compost will be submitted to a laboratory for determination of the amount of cellulose acetate and triacetin remaining in the compost product. The laboratory will receive two representative samples drawn from the separated curing pile. McGill personnel will hand-screen a representative sample to determine if any of the original paper-based waste remains intact and will conduct a seed germination test, using either radishes or cucumbers to ensure no phyto-toxic compounds are present.

Final Report

The Chief Engineer and the Merry Oaks Plant Manager will prepare the final report, to include: issues of mixing this waste with other wastes, composting process performance, screening performance, curing perfomance and final product laboratory, physical and germination analysis. The report will include, as needed, recommendations to McGill management for any operational changes felt needed to improve the compostability of this wastestream.

After review and approval by McGill management, copies of the report will be provided to generator personnel for their review and approval. Following their approval, a copy of the report will be provided to you.

If you have any questions or comments, please contact me at (828) 230-6266 or by email at ccoker@mcgillcompost.com.

Very Truly Yours,

M Mark Lyon President

For Craig Coker.

Craig S. Coker
Chief Engineer

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