



FACILITY COMPLIANCE AUDIT REPORT

Division of Waste Management Solid Waste Section

UNIT TYPE:

Lined MSWLF		LCID		YW		Transfer		Compost	<input checked="" type="checkbox"/>	SLAS		COUNTY: Watauga PERMIT NO.: 95-04 SWC FILE TYPE: COMPLIANCE
Closed MSWLF		HHW		White goods		Incin		T&P		FIRM		
CDFL		Tire T&P / Collection		Tire Monofill		Industrial Landfill		DEMO		SDTF		

Date of Audit: September 2, 2010**Date of Last Audit:** March 9, 2010**FACILITY NAME AND ADDRESS:**

Appalachian State University Small, Type III Solid Waste Compost Facility
 265 Dale Street
 Boone, NC 28608-2105

GPS COORDINATES: **N:** 36.21323 **E:** -81.65750**FACILITY CONTACT NAME AND PHONE NUMBER:**

Jennifer B. Maxwell, Resource Conservation Manager
 w. 828-262-3190 x. 108
 c. 828-406-4090
 f. 828-262-4017
 maxwelljb@appstate.edu

FACILITY CONTACT ADDRESS:

Appalachian State University
 Jennifer Maxwell, Resource Conservation Manager
 265 Dale Street
 Boone, NC 28608-2105

AUDIT PARTICIPANTS:

John Patrone, NCDENR – Solid Waste Section (SWS)
 Michael Scott, NCDENR - SWS
 Greg Taylor, Assistant Director, Campus Services
 Jennifer Maxwell, Resource Conservation Manager
 Jim Bryan, Superintendent, Landscape Services

STATUS OF PERMIT:

Permit To Operate (PTO) issued July 20, 2006
 PTO expires July 1, 2011.

PURPOSE OF AUDIT:

Comprehensive Audit and Site Visit

NOTICE OF VIOLATIONS:

None

You are hereby 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 Statute or Regulations. For the violation(s) noted here, you 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.

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STATUS OF PAST NOTED VIOLATION(S):

None

AREAS OF CONCERN AND COMMENTS:

On September 2, 2010, John Patrone and Michael Scott met with Greg Taylor, Jennifer Maxwell, and Jim Bryan to conduct a comprehensive audit of the Small, Type III Solid Waste Compost Facility and to discuss an alternate compost method and view proposed compost operation locations at the ASU Physical Plant on Dale Street in Boone, Watauga County.

1. The facility's permit expiration date is July 1, 2011.
2. The facility site plan and operations were discussed.
3. The facility is a Small, Type III Solid Waste Compost Facility. It produces compost from pre-consumer fruit and vegetable waste, coffee grounds, cooked meat, and shredded paper that is generated by ASU Food Services. The facility primarily uses wood mulch, provided by New River Light & Power (electric power company serving ASU), as a bulking agent but will also use shredded pine bark and sawdust if available.
4. The compost produced is used by ASU landscape services and the (ASU) Sustainable Development Teaching and Research Farm. Compost is not distributed to individuals or the general public.
5. Wood mulch and food waste is combined in a 50:50 mixture to form a pile of material aerated for compost. The facility uses the static forced aeration compost method. It aerates one pile at a time. The aerated material is covered with finished compost in order to help ensure universal pathogen reduction.
6. There are three storage bins (cement block bay, open at one-end) used to store wood mulch, food waste covered with finished compost (prior to static forced aeration), and finished compost (to cover the compost pile while being aerated and to use in berm construction). The material in the storage bays is covered with a tarp when not in use.
7. Runoff is controlled by berms constructed of wood mulch and finished compost that are placed in front of the storage bins and the material being aerated for compost.
8. The facility ensures that the berms are removed prior to saturation and rebuilt, as per the facility operations plan. Runoff from the compost operation should not flow to the nearby stormwater drain.
9. Used berm material is placed in the food waste storage bin to be incorporated with material to be aerated for compost.
10. The material to be composted is aerated for ~ 20 days. Afterward, the compost pile is brought down the road (~ 500 yards) to a curing area. When cured, the finished compost is picked-up by ASU personnel. The compost cures in ~ 8 months but can be used sooner in non-esthetic applications.
11. Temperature records were verified for four piles of material aerated from March through August 2010. The temperature records demonstrate that the facility obtained $\geq 131^{\circ}$ F for 3 days and $\geq 104^{\circ}$ F for an additional 11 days, with an average temperature of $\geq 113^{\circ}$ F. The facility often aerates one pile of material a month except when classes are not in session. When classes are not in session the aeration of material is conducted over several weeks due to limited food scraps/material to compost.
12. Testing records were verified for fecal coliform (Statesville Analytical), Heavy Metals (NCDA&CS – Agronomic Division), and manmade & inert material (ASU). Records were reviewed for March 2010. Ms. Maxwell stated that testing will be conducted again in September 2010.
13. The facility maintains tonnage records for the materials composted (food waste, wood mulch, and sawdust). The amount of materials composted for fiscal year July 2009 – June 2010 is 103.55 tons. The facility annual report was received by SWS-WSRO on July 16, 2010.
14. The facility has proper signage.
15. The finished compost stored in the compost curing area should be turned, per a schedule, until removed from site.
16. The facility is considering the construction and operation of a static forced aeration compost method designed by Advanced Composting Technologies. The compost operation will be undercover (feed stocks, active compost, and curing) and contain a leachate collection tank.

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17. Two alternative sites for the operation of the aforementioned compost method were observed and discussed. The facility will verify if site requirements meet 15A NCAC 13B .1400, "Solid Waste Compost Facilities" and submit its permit renewal application, containing site specific and process operation information, to SWS in the coming months.

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



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

John Patrone
Environmental Senior Specialist
Regional Representative

Delivered on : <u>September 14, 2010</u> by		Hand delivery/email	X	US Mail		Certified No. []
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cc: Mark Poindexter, Field Operations Branch Supervisor
Jason Watkins, Central Regional Supervisor
Donald Herndon, Compliance Officer
Michael Scott, Composting & Land Application Branch Head