

**DWQ Report to the Compost Operation Stakeholder Advisory Group.**  
**DWQ Report #1: Federal Rules Basis for Water Quality Permitting in the Compost Industry**  
December 18, 2009

**In response to:** The question was raised in our first stakeholder meeting on December 9, 2009, as to the specific rules citations that have been the basis for recent DWQ permitting activity in the composting industry. DWQ accepted the homework assignment of providing this written and specific explanation for the stakeholder group.

We've provided a highly detailed explanation below with respect to the stormwater vs. wastewater question, because that has generated the most interest in the compost community. We've provided an abbreviated explanation for the basis of wastewater permitting, although if the group desires it we can provide a more developed explanation subsequently.

**Summary listing of rules citations: stormwater permitting**

- **40CFR122.26**
- **40CFR122.26(b)(14)(ii)**
- **15A NCAC 2H .0126**
- **40CFR122.2**
- DWQ interpretation: We string these four federal and state rule citations together as the basis for surface water permitting actions in the composting industry.
- Informational note on the form of notation of the rules:
  - **"40CFR122.26"** means, "Title **40**, Code of Federal Regulations, Part **122**, section **.26**"
  - **"15A NCAC 2H .0126"** means, "Title **15A**, North Carolina Administrative Code, Subchapter **2H**, Rule **.0126**."

**Explanation of permitting basis, for stormwater discharge permits**

1. **40CFR122.26. Federal stormwater rules (EPA rules).** This whole section covers the federal requirements for stormwater discharge permitting programs. This is where the bulk of federal requirements on stormwater programs are contained. North Carolina has a delegated program, which means that EPA has agreed by memorandum for NC to administer our own program. EPA retains some oversight of our program, but generally EPA's participation is limited to specific regular programmatic review points that arise.

Within this section, 122.26(a)(1) provides that stormwater permits are required for, "discharges composed entirely of storm water..." DWQ attaches some significance to the appearance of the word, "entirely" in this statement of scope. We think it effectively excludes using stormwater permits to authorize wastewater discharges.

Link:

<http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=8482c71c09ebf1e3a0e0d956c6f345d5&rgn=div8&view=text&node=40:21.0.1.1.12.2.6&idno=40>

2. **40CFR122.26(b)(14)(ii). Federal stormwater rules specifically capturing composting.** Continuing on in 40CFR122.26, this subsection (b)(14) is a convoluted three-column definition of the phrase, "storm water discharge associated with industrial activity." Essentially the federal

stormwater program is intended to regulate the stormwater discharges from certain industrial manufacturing businesses. The specific manufacturing businesses covered are identified in these definitions in subsections (b)(14)(i) – (b)(14)(xi), including (b)(14)(ii) which captures SIC code 28. The OMB’s Standard Industrial Classification Manual, 1987, lists ‘Compost’ as one of three manufacturing businesses categorized as SIC 2875, which is a sub-category of SIC code 28.

DWQ commentary: In partial response to the concern raised over regulating compost beyond the manufacturing location and into the marketplace, please note that as far as stormwater permitting is concerned, these federal regulations are limited to regulating only the businesses or operations that actually manufacture the compost. There is no ability in the stormwater program to regulate beyond the compost manufacturing facility.

Link: as above

3. **15A NCAC 2H .0126.** North Carolina rule adopting the federal stormwater rules. This is a short rule (three sentences) in which North Carolina adopts by reference the whole of the federal regulations at 40CFR122.26 and 40CFR122.21 as the rules for our program.

Link:

[http://reports.oah.state.nc.us/ncac/title\\_15a\\_-\\_environment\\_and\\_natural\\_resources/chapter\\_02\\_-\\_environmental\\_management/subchapter\\_h/subchapter\\_h\\_rules.html](http://reports.oah.state.nc.us/ncac/title_15a_-_environment_and_natural_resources/chapter_02_-_environmental_management/subchapter_h/subchapter_h_rules.html)

4. Summary point as to stormwater permitting: So, we string together items 1, 2, and 3 above to conclude: that NC must have a permitting program for stormwater only discharges; the program will be in accordance with the federal rules; and compost manufacturing operations will be one of the businesses regulated for stormwater discharges, as per those federal rules.
5. **40CFR122.2.** Federal wastewater and stormwater program definitions. These are the federal definitions that apply to both North Carolina’s NPDES wastewater and stormwater programs. Part of this federal regulation reads as follows,

“Process wastewater means any water which, during manufacturing or processing comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.”

Link:

<http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=8482c71c09ebf1e3a0e0d956c6f345d5&rgn=div5&view=text&node=40:21.0.1.1.12&idno=40>

We apply this definition in our stormwater program, and given our understanding of site conditions at most compost sites, it is the key constraint on us that leads us to believe that most flows from most compost sites should be considered *process wastewater*, and should be permitted under a wastewater permit program, not a stormwater program.

We currently apply this definition in a narrow way; narrow in the sense that we only look at water contact with those materials which are intentionally in the manufacturing process as potential sources of wastewater. The narrow application of this definition lies in the fact that we don't consider windblown materials, tracked-out materials, or spilled materials as part of the deliberate manufacturing scheme, and so we conclude that liquids contacting those materials don't generate wastewaters, as defined in the federal rules. Rather, we consider flows from that 'incidental' or 'accidental' contact as stormwater flows. Flows from contact with those not-really-in-the-process materials we can, and have, permitted as stormwater flows (e.g., Wallace Farm).

More broadly, and consistent with our interpretation in other manufacturing industries, we interpret, 'during manufacturing or processing', as indicating the time that materials are received, weighed, staged, handled, mixed, sized, reacted, processed, graded, stored, packaged, and shipped - - i.e., we consider the manufacturing or processing activity as everything deliberately included in on-site activities as the manufacturing activity, up until the material or product leaves the site. Consistent with the quoted federal definition, we view flows generated from material contact in those manufacturing activities as process wastewaters.

#### Explanation of basis for **wastewater permitting**

1. We've provided an abbreviated explanation of the basis for wastewater permitting in this section because a portion of it is already covered above, and because the industry's interest has so far been more in the stormwater vs. wastewater question.
2. Wastewaters generated on a compost facility would most likely fall into one of two programs within DWQ. For wastewater flows that eventually discharge to surface waters, the facility would be subject to the industrial NPDES wastewater permitting program. We have not explored this aspect much, because it appears that treatment costs would be prohibitive: typically a wastewater treatment plant would have to be constructed, a certified operator would be likely, and intensive hands-on operation would be a probable requirement. Based on consistent comments from the industry, this is not an economic possibility for the industry. The regulatory basis for this program to regulate composters is found in federal rule at **40CFR122.1** and following, and as already cited in the **40CFR122.2** definition of **process wastewater**. Additional supporting citations from North Carolina law may be found at **GS 143-215.1**, and **GS 143-213(18)**. Again, however, except in very lucky circumstances, it would be highly unlikely that a compost facility would seek, or could afford, to permit a wastewater treatment plant under the NPDES wastewater discharge permit program.
3. Wastewaters might also be disposed of via a land application system or an infiltration system, i.e., not discharged to surface waters, but effectively infiltrated instead to the groundwater. In this case the permitting unit would be DWQ's Aquifer Protection Section, Land Application Unit. North Carolina rules governing this program may be found at **15A NCAC 2T .0100**, and following. The definition of wastewater found in these North Carolina rules is very close to that found in the federal rules for the federal NPDES industrial wastewater and stormwater programs.

#### "15A NCAC 02T .0103 DEFINITIONS...

(20) 'Industrial wastewater' means all wastewater other than sewage or animal waste and includes:

- (a) wastewater resulting from any process of industry or manufacture, or from the development of any natural resource;
- (b) wastewater resulting from processes of trade or business...
- (c) stormwater that is contaminated with an industrial wastewater..."

Although the wording of the definitions of wastewater vary slightly between federal regulations and North Carolina rule, the intent is pretty much the same. And DWQ's conclusion is that most flows from most composting sites will be considered wastewaters.

#### Additional perspectives on wastewater and stormwater permitting

- Generally, the costs for any type of treatment approach – wastewater treatment plus discharge to surface waters (most expensive), wastewater land application or infiltration (expensive), or stormwater treatment and discharge (least expensive) – will be heavily influenced by how much liquid must be disposed of. The significance of minimizing the amount of liquid should be recognized in the site design of new facilities. For existing facilities, volume minimization opportunities are fewer, but some (like recycling the liquids) may still exist for most sites.
- Apart from the federal and North Carolina regulations that constrain us, DWQ has other concerns in attempting to permit most discharges from most compost facilities as stormwater. Our interpretation is that the limited data in hand, both in-state data, and data from the 2000 study in Washington State suggest that compost facility discharges can contain relatively high levels of pollution as measured by TSS, pH, BOD/COD, nutrients, and bacteriological content. Our perspective is that traditional stormwaters BMPs and traditional stormwater permits are inadequate to address the level of pollutants reported in the limited data available.
- The pollutant concentration data that DWQ has considered to date will be presented in a separate DWQ Report to the Compost Operation Stakeholders Advisory Group.

#### Final DWQ comment

At the last stakeholder meeting several commenters seemed in agreement that changing the rules or the laws would not be our first choice for making the water quality permitting process more effective in the composting industry. Those two routes are labor intensive, and slow. While the existing rule and law are fairly constraining on the industry and on DWQ, we still need to explore together how we can shape the DWQ permitting processes and policies, and still be within the existing rules.

END