South Carolina Compost Regulation Revision
Food Recovery Summit

Charleston, South Carolina
November 17, 2015
R.61-107.4
SWM: YARD TRASH AND LAND-CLEARING DEBRIS; AND COMPOST EFFECTIVE APRIL 23, 1993
Feedstocks
Organics estimated as 20-30% of MSW
Regulation referenced only LCD and YT

Exemptions
Small and on-site exemptions needed

Industry Wants Standards
Expanded feedstocks
Testing requirements
Operating parameters

Streamline Flexibility
General Permits
Regulate according to category/size
BOW permits
2009: FL, GA, KY, MS, USCC

Georgia Compost Regulation Revision (Strawman)

EPA Region IV Template

US Compost Council Model Regulation

South Carolina Notice of Drafting 2004

BACKGROUND
<table>
<thead>
<tr>
<th>USCC MODEL TEMPLATE ISSUES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance based vs. prescriptive (odors, site plans)</td>
</tr>
<tr>
<td>Terminology, i.e. “residuals” vs. “waste” “contact water” vs. “leachate”</td>
</tr>
<tr>
<td>Tiers</td>
</tr>
<tr>
<td>PFRP for all Tiers</td>
</tr>
<tr>
<td>Testing</td>
</tr>
<tr>
<td>Animal mortalities</td>
</tr>
</tbody>
</table>
Expand Feedstocks
- Plate scrapings/Produce residuals
- Fats, oil, greases
- Manures

Expand Exemptions
- E or C/E based on size or feedstocks
- On-site

Establish Testing/Distribution Standards
- Metals
- Pathogens
- Stability
- Physical contaminants

Allow General Permit(s)
- Based on size limits
- Based on feedstock categories
FEEDSTOCK CATEGORIES
Yard trimmings, leaves, grass clippings
Land-clearing debris
Woodchips and sawdust
Crop residuals
Compostable yard bags
Similar items as approved

CATEGORY ONE
HIGH C:N
<table>
<thead>
<tr>
<th>Facility Types</th>
<th>Feedstocks</th>
<th>Sub-types</th>
<th>Permit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type One Facility</strong></td>
<td>Yard trimmings, LCD, Woodchips, Sawdust, Crop residuals, Compostable bags</td>
<td>Type 1 wood-grinding/composting at source</td>
<td>E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Public Utilities Maintenance</td>
<td>E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Seasonal-Grinding/Green</td>
<td>E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Crop Farms</td>
<td>E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Emergency Storm Debris Management</td>
<td>E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Very Small Type 1 Chipper/Composter (&lt;80 CY)</td>
<td>E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Small Type 1 Chipper/Composter (&lt;400 CY)</td>
<td>CE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Large Type 1 Chipper/Composter</td>
<td>P</td>
</tr>
</tbody>
</table>
NON-MEAT FOOD PREP/PROCESSING RESIDUALS
RESTAURANT PLATE SCRAPINGS
WASTE PAPER PRODUCTS
ANIMAL MANURES
SIMilar ITEMS AS APPROVED

CATEGORY TWO
Lower C:N
High Moisture Content
<table>
<thead>
<tr>
<th>Facility Types</th>
<th>Feedstocks</th>
<th>Sub-types</th>
<th>Permit Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type Two Facility</td>
<td>Non-meat food residuals</td>
<td>Off-site Very Small (&lt; 5CY )</td>
<td>E</td>
</tr>
<tr>
<td></td>
<td>Produce Plate scrapings</td>
<td>USDA &quot;certified organic&quot; farm programs</td>
<td>E</td>
</tr>
<tr>
<td></td>
<td>Compostable products</td>
<td>Backyard Composting</td>
<td>E</td>
</tr>
<tr>
<td></td>
<td>Waste paper</td>
<td>Small at source (&lt;400 CY unfinished material)</td>
<td>CE</td>
</tr>
<tr>
<td></td>
<td>Animal manures</td>
<td>Small (&lt;40 CY unfinished material)</td>
<td>CE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Large Type 2 composter</td>
<td>P</td>
</tr>
</tbody>
</table>
CATEGORY THREE

Source Variability
Trace Metals
Physical Contaminants
Pathogens

Items requiring more intensive analysis or monitoring

- Sludges
- Fats, Oils, Greases
- Meat/Animals

Material not classified as Category 1 or 2

May also require BOW permits
<table>
<thead>
<tr>
<th>Facility Types</th>
<th>Feedstocks</th>
<th>Permit Requirements</th>
</tr>
</thead>
</table>
| Type Three Facility | Sludges off-site of treatment facility  
                     Sludges mixed w. SW  
                     FOG  
                     Animal/meat residuals  
                     Other  
                     MSW conditional upon 2 yr. RDD | Permit required; may also require other permits |
Mixed MSW (except under RD&D Permit)
Friable/non-friable asbestos
Biomedical/infectious waste
Hazardous waste
PCBs
Nuclear/Radioactive
Coal Combustion Residue
EXEMPTIONS
<table>
<thead>
<tr>
<th>Exemptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential “backyard” composting</td>
</tr>
<tr>
<td>Unlimited Category One at source</td>
</tr>
<tr>
<td>&lt;80 CY Category 1 from off site</td>
</tr>
<tr>
<td>Public utility and ROW maintenance</td>
</tr>
<tr>
<td>&lt; 5 CY Category 2 from off site</td>
</tr>
<tr>
<td>Emergency storm debris</td>
</tr>
<tr>
<td>On-farm composting</td>
</tr>
<tr>
<td>“Grinding of the Greens”</td>
</tr>
<tr>
<td>USDA National Organic</td>
</tr>
</tbody>
</table>
Permit Exemption
80 Cubic Yards Unground Cat. One feedstocks from off site
Permit exemption
5 CY Category 1&2
from off site
09/18/2013
<400 CY Cat 1 and 2 (on-site generation)
<400 CY Category 1 (off-site generation)
<40 CY Category 2 (off-site generation)

CONDITIONAL EXEMPTIONS
Conditional exemption
40 CY Cat. 1 & 2 from off site
Conditional exemption 400 CY
Cat. 1 generated off site
Cat. 1 & 2 generated on site
Conditions for CE Facilities

Buffers:
• property lines: 50 ft.
• wells: 100 ft.
• residences: 200 ft.

Handle material to manage liquids/odors
Use stormwater BMP
No material in standing water
Fire prevention measures
QA testing for sale of Category 2
Location Criteria
buffers to property lines, waters, wells, airports

Design Criteria
stormwater, groundwater, surface requirements

Operating Criteria
material management, time/temp, reporting, op. plan, certification

Quality Assurance
pollutants, biologicals, stability, frequency

PERMIT REQUIREMENTS
Contains <2% physical contaminants
Stability rating of stable or very stable
Meets Class A pollutant limits
Meets pathogen reduction standards

CATEGORY 2 & 3
TESTING REQUIREMENTS
Pollutant Standards:

Maximum Allowable Concentration (mg/kg dry weight)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Maximum Allowable Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic</td>
<td>41 mg/kg</td>
</tr>
<tr>
<td>Cadmium</td>
<td>39 mg/kg</td>
</tr>
<tr>
<td>Copper</td>
<td>1500 mg/kg</td>
</tr>
<tr>
<td>Lead</td>
<td>300 mg/kg</td>
</tr>
<tr>
<td>Mercury</td>
<td>17 mg/kg</td>
</tr>
<tr>
<td>Nickel</td>
<td>420 mg/kg</td>
</tr>
<tr>
<td>Selenium</td>
<td>100 mg/kg</td>
</tr>
<tr>
<td>Zinc</td>
<td>2800 mg/kg</td>
</tr>
</tbody>
</table>
Physical Contaminants (man-made inerts)
Less than 2 percent dry weight basis

Biological Contaminants (pathogens)
Fecal coliform
Less than 1,000 Most Probable Number (MPN) per gram, dry weight basis

Salmonella
Less than 3 MPN per 4 grams, dry weight basis
### Annual Production

<table>
<thead>
<tr>
<th>Production Range</th>
<th>Testing Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 2,500 tons</td>
<td>1 per quarter</td>
</tr>
<tr>
<td>&lt; 6,250 tons</td>
<td>1 per quarter</td>
</tr>
<tr>
<td>&lt; 17,500 tons</td>
<td>1 per 2 months</td>
</tr>
<tr>
<td>&gt; 17,500 tons</td>
<td>1 per month</td>
</tr>
</tbody>
</table>
Feedstocks
Testing
General Permit
Variances

FLEXIBILITY
GENERAL PERMITS
ABLE TO DEVELOP MULTIPLE GPS FOR SPECIFIC ACTIVITIES

Possible Examples:
- Food Residuals Composting < XX cubic yards
- Category 1 Composting < XX cubic yards
- Category 2 < 1 acre
R.61-107.4
SWM: COMPOST AND MULCH PRODUCTION FROM LAND-CLEARING DEBRIS, YARD TRIMMINGS AND ORGANIC RESIDUALS

EFFECTIVE JUNE 27, 2014
Atlas Organics, Greenville (Twin Chimneys Landfill)
Re-Soil Compost, Elgin
Horry County Solid Waste Authority
City of Rock Hill Community Garden
Medical University of South Carolina
Glen Raven Custom Fabrics
BMW
St. Francis Hospital System Community Garden
Milliken Spartanburg
Charleston County:
  Boeing
  N. Charleston Coliseum (1.5 million visitors)
Fruit of the Loom Palmetto Distribution Center
Contacts

Patrick Brownson
Permitting
brownspd@dhec.sc.gov
(803)898-1367

Jana White
whitejm@dhec.sc.gov
(803)898-1346

Woody Barnes
barneswl@dhec.sc.gov
(803) 898-1345