

Reuse of Solid Wastes in Michigan

Department of Environmental Quality
Waste and Hazardous Materials Division

March 16, 2006

**Part 115,
Solid Waste Management,
of the Natural Resources and
Environmental Protection Act,
1994 PA 451,
as Amended**

History of Solid Waste Regulations

- June 1996 – Under Governor Engler’s Phase II Regulatory Reform Initiative, WHMD is directed to amend the inert criteria to reflect changes in the Part 201 criteria.
- November 1996 – WHMD proposes to amend solid waste regulations. Topics include inert criteria, composting, and technical landfill issues.

History of Solid Waste Regulations (continued)

- April 1997 – WHMD starts working on amendments to Part 115, only addressing technical landfill issues.
- In 1997 the Michigan Compost Council recommends that DEQ develop rules for composting of organic matter.
- October 1999 – Part 115 rules related to technical landfill issues go into effect.

History of Solid Waste Regulations (continued)

- April 2001 – A work group made up of composters, county and township officials, landfill operators, environmental organizations, industry, and DEQ start to draft compost rules. Six meetings were held in 2001. Due to competing interest from all the stakeholders the DEQ and the Work Group could not come to agreement on criteria for finished compost.
- December 2002 – Part 201 Rules go into effect.

History of Solid Waste Regulations (continued)

- November 2003 – WHMD forms work group to develop changes to the inert rules, which were completed in August 2005.
- November 2005 – A public hearing is held. DEQ receives comments indicating that competing interests were all dissatisfied with the rules as proposed.
- February 2006 – DEQ decides to ask the EAC for guidance in balancing beneficial reuse versus environmental protection.

Current Part 115 Regulations

Goals

- Strike balance between environmental protection and beneficial use of wastes
- Do no harm to health or environment during processing, storage, or use
- Do not create site of environmental contamination requiring remediation

Approval Mechanisms

Statutory Exclusions

- Organic waste from the production of livestock and poultry
- Slag from iron or steel
- Clean wood ashes
- Food processing residuals
- Coal ashes when used under certain circumstances

Approval Mechanisms

Rule Authorizations

- **Other Wastes Regulated by Statute**
- **Agricultural Use Approvals**
- **Listed Inert Materials**
- **Inert for General Reuse**
- **Inert for Specific Reuse**
- **Inert for Use Instead of a Virgin Material**
- **Site and Source-Separated Materials**
- **Use of Solid Waste as a Compost**

Typical Wastes that are Land Applied

- **Paper Mill Sludge**
- **Foundry Sands**
- **Tannery Wastes**
- **Dredged Sediments**
- **Food Wastes**
- **Fly Ashes**
- **Mixtures/Composts**
- **Water Softening Limes**
- **Manures, Paunch, and Pen Wastes**
- **Fish Wastes**
- **Cement/Lime Kiln Dust**

Contaminants of Concern

- Volatile Organic Compounds
- Semi-Volatile Organic Compounds
- Metals
- Phenolic Compounds
- PCBs
- Dioxins and Furans
- Nutrients

Type A and B Criteria

- Type A--statewide default background
- Type B--risk-based (1 in a million risk factor)
- Review all relevant pathways
- Based on EPA studies and other applicable information
- Part 115 adopted standards

Real/Perceived Problems and Issues with Current Process

- It is too difficult to comply with the rules to get an exemption.
- DEQ takes too long granting approvals.
- DEQ should adopt the Part 201 Generic Residential Criteria in place of the Act 307 Type B Criteria.

**Proposed
Part 115
Inert Regulations**

Significant Proposed Revisions

- Changing the inert criteria (the Type B criteria from the old Act 307) to be consistent with the Part 201 residential cleanup criteria for noncancer effects and 75 percent of the cleanup criteria for cancer risk.
- Increasing the inert criteria for aluminum, iron, and manganese above the aesthetic standards developed under Part 201.
- Adding a rule related to regulation of dredge material.
- Amending the low-hazard criteria to reflect the Part 201 criteria.

Significant Proposed Revisions (continued)

- Adding a new Part 11 to address the self-implementing beneficial reuse of many industrial wastes.
- Recognize potential Part 201 liability to the Part 115 rules.
- Adding wastes to the list of low-hazard waste to make it easier to reuse these materials in an environmentally sound manner.

Problems/Issues with Proposed Beneficial Reuse Rules to be Resolved

- Who should be held liable if the reuse of material causes an impact to the environment, human health, or wildlife?
- What are the appropriate criteria to use to determine if a waste has the potential to cause an impact?
- What reasonable conditions should we place on the reuse of wastes to minimize impacts?
- Are we creating “facilities”?

Dredging and Dam Removals

- It is estimated that in a typical year over 4 million cubic yards of sediments are dredged in Michigan each year.
- Test results indicate that almost half of the sediments dredged are contaminated.

Dredging and Dam Removals

(continued)

- Under current DEQ procedures, contaminated sediments from nonfederal dredge projects are allowed to be placed upland, on-site, with clean cover and deed restriction.
- Federal projects are reviewed and approved by a committee of the various DEQ divisions.

Dredge Problems/Issues to be Resolved

- Are we creating “facilities” under our dredging procedures?
- Should the state take a more active role in managing contaminated sediments in the state?
- Dam removal projects in Michigan are raising a number of issues.
- Are we consistent with Part 31 during the dredge process or in the manner that dredge spoils are dewatered?

What Other States and EPA are Doing

- There are no national regulations related to the reuse of nonhazardous industrial wastes, which has caused a real hodge-podge of state regulations around the country.
- EPA has recently formed a work group of Region 5 states to discuss issues related to beneficial use of waste material.

Questions to Answer Regarding Land Application

- What criteria should be used when allowing wastes to be placed on the land? Part 201 residential criteria? 40 CFR Part 503 regulations under the federal Clean Water Act, which were developed for the management of municipal WWTP sludge? Concentrations similar to those found in fertilizers and soil conditioners?
- Who should be liable if the beneficial reuse of their waste causes an impact?

Questions (Continued)

- Should there be one set of standards for evaluating land application criteria?
- When developing regulations, how should the state account for the true cost to business and the cost or savings realized with respect to the filling of licensed landfills with industrial by-products?
- How should the DEQ ensure that the reuse of wastes will not cause an impact to the environment or create a future burden on state-funded cleanups?

Questions (Continued)

- Should we maintain a safety factor between the inert standards and the Part 201 criteria?
- What assumptions should be used when developing criteria for land application?
- Should deed restrictions be placed on lands where wastes are used in order to warn potential future owners? Should there be monitoring? Perpetual care?
- Are testing procedures available that better represent how wastes behave in the environment?

Next Steps Related to Part 115

- DEQ will reconvene the Part 115 Inert Rules Work Group and add additional members who may add expertise on unresolved issues.
- We hope to develop a consensus package that both sides can live with.
- We need EAC input on the policy related aspects of the rules.

Next Steps

Related Program Areas

- Composting – Need to resolve beneficial reuse regulations in Part 115 before taking up composting rules.
- Dredge Material – DEQ has started internal meetings to discuss the various issues related to dredge material and dam removals.

Contact Information

Duane Roskoskey

Environmental Quality Specialist

Waste and Hazardous Materials Division

Department of Environmental Quality

E-mail: Roskoskd@michigan.gov

Telephone: 517-335-4712

DEQ Web Site: <http://www.michigan.gov/deq>