



MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

Hazardous Secondary Materials Options and Examples

Jim Ferritto

Materials Management Division

Hazardous Waste Characterization Specialist

231-878-0962 | FerrittoJ@Michigan.gov

Goals

Provide an overview of the hazardous secondary materials (HSM) regulations:

- **2017 rule changes**
- **HSM legitimacy requirements**
- **HSM shipping requirements**
- **Receiving EGLE approval**

Waste Characterization

Is the waste **listed** on lists in the hazardous waste rules?

Does the waste exhibit a **characteristic** that makes it hazardous?

- Ignitable
- Corrosive
- Toxic
- Reactive



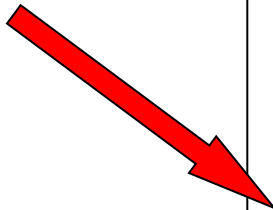
Characteristic Hazardous Waste Codes

Hazardous Waste Codes:

- Ignitable - D001
- Corrosive - D002
- Reactive - D003
- Toxic - D004 – D043

Listed Hazardous Waste Codes

Listed In Part 111 Hazardous Waste Rules



R 299.9220 Table 203a; hazardous waste from nonspecific sources.
 Rule 220. Table 203a reads as follows:

Table 203a		
EPA Hazardous Waste Number	Hazardous Waste From Nonspecific Sources	Hazard Code
F001	The following spent halogenated solvents used in degreasing: tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons; all spent solvent mixtures and blends used in degreasing containing, before use, a total of 10% or more, by volume, of one or more of the above halogenated solvents or those solvents listed in F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures	(T)
F002	The following spent halogenated solvents: tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane and 1,1,2-trichloroethane; all spent solvent mixtures and blends containing, before use, a total of 10% or more, by volume, of one or more of the above halogenated solvents or those solvents listed in F001, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures	(T)

Listed Hazardous Waste Codes

Wastes from non-specific sources like spent solvents & metal treatment sludges

- Table 203a
- F codes

Wastes from specific industries like petroleum refineries and chemical manufacturer

- Table 204a
- K codes

Listed Hazardous Waste Codes

**Commercial chemical products,
off-specification products, container and spill
residues like nicotine formaldehyde, DDT,
xylene**

- **Materials with sole active ingredient**
- **Tables 205 a, b & c**
- **P and U codes**

Characteristic Waste Common Test

- **Flash point – Used for testing Ignitability < 140 F**
Examples: paints, solvents
- **pH – Used for testing corrosivity ≤ 2 or ≥ 12.5**
Examples: acids, bases
- **Reactivity – Test as required for DOT classification for materials that are unstable at normal conditions, reacts violently with water, explode, etc.**
Examples: lithium hydride and trichlorosilane

Characteristic Waste Common Test

- **TCLP (Toxicity Characteristic Leaching Procedure) - Used for testing leaching potential for the 40 Table 201a hazardous constituents**

Examples: Paints or sludges containing metals or MEK, contaminated media

Once the hazardous wastes have been identified, check for exemptions or exclusions, like the HSM management option

Hazardous Secondary Material

Hazardous secondary material rule changes:

- Excludes certain materials from being a waste when recycled
- Adopted by EPA 2015 definition of solid waste (DSW)
- Adopted into Part 111, effective April 5, 2017
- Established legitimate recycling criteria

Hazardous Secondary Material

1. **Generator control** provisions in Rule 204(1)(aa)
2. **Transferred to another person for reclamation** transfer in Rule 204(1)(bb)
3. **Transferred to another person for remanufacturing** in Rule 204(1)(cc)
4. **Exported to another country for reclamation** in a foreign country 204(1)(dd)

Legitimacy Criteria

- Provide a useful contribution to the recycling process or to a product or intermediate of the recycling process
- Produce a valuable product or intermediate
- HSM managed as a valuable commodity
- End result must be comparable to a legitimate product or intermediate
- Rule 202(6) “director may determine” on a “case-by-case” basis

Hazardous Secondary Material

Speculative Accumulation

HSM cannot be speculatively accumulated:

- At least 75 percent of the material (by volume or weight) must be recycled, or transferred to another site meeting the HSM exclusion for recycling within the calendar year
- Must keep inventory records to verify recycled materials are not speculatively accumulated
- See Part 111 “Speculative Accumulation” definition, Rule 107(cc)

Hazardous Secondary Materials

HSM remains subject to Part 121

- Part 121 shipping document requirements
- Report to EGLE by April 30 of each year
- Emergency response plan, training, etc.
- Act 138 credentialed transporters

Hazardous Secondary Materials

Generator Reclamation – Rule 204 (1) (aa)

HSM “under the generator control” is generated and reclaimed in accordance with ANY of the following conditions:

- HSM is reclaimed at the generating facility
- HSM is reclaimed at a different facility but both facilities are controlled by the same person, certification meeting Rule 204(1)(aa)(i)(C) is submitted
- HSM is reclaimed at a different facility controlled by the generator, certification meeting Rule 204(1)(aa)(i)(B) is submitted
- HSM is reclaimed via tolling agreement between generator/manufacturer, certification meeting Rule 204(1)(aa)(i)(D) is submitted

Hazardous Secondary Materials

Generator Reclamation – Rule 204 (1) (aa)

- Containment requirements apply
- Not otherwise be subject to material-specific management conditions
- Cannot be a lead-acid battery
- Documentation showing legitimacy criteria are met
- Emergency preparedness and response planning

Contained Defined

for Hazardous Secondary Materials

"Contained" for HSM means a unit, including land-based units, which are:

- In good condition, designed to prevent releases, and has no leaks or release other than those specifically authorized through a permit**
- Properly labeled or otherwise has a system, such as a log, to immediately identify the HSM in the unit**
- Compatible with other HSM placed in the unit and the materials used to construct the unit**

Hazardous Secondary Materials

Transferred for Reclamation – Rule 204 (1) (bb)

HSM that is generated and then transferred to a verified reclamation facility

- **HSM handled by generator, transporter, intermediate, or reclaimer, and not stored more than 10 days while in transport**
- **HSM handler must maintain documentation showing legitimacy criteria met**

Hazardous Secondary Materials

Transferred for Reclamation – Rule 204 (1) (bb)

HSM generator ensures:

- Containment while on site
- HSM transport to a verified reclamation facility
- Records of HSM off-site shipments maintained for 3 years
- The HSM generator shall maintain confirmation of receipt of each shipment for at least 3 years

Hazardous Secondary Materials

Transferred for Reclamation – Rule 204 (1) (bb)

Reclaimers and intermediate facilities:

- Intermediate must send the HSM to the reclaimer selected by the generator
- Reclaimer must send confirmation of receipt to the generator
- HSM managed in a manner that is at least as protective as that employed for analogous raw material

Hazardous Secondary Materials

Transferred for Reclamation – Rule 204 (1) (bb)

- Residuals shall be managed as a hazardous waste
- Financial assurance requirements
- Variance or operating license issued pursuant to these rules that addresses/authorizes reclaiming and storing the HSM

Hazardous Secondary Materials

Transferred for Remanufacturing Rule 204(1)(cc)

HSM that is transferred to another person for the purpose of remanufacturing:

- Must be spent solvents listed in Rule 204(1)(cc)
- HSM must have originated from reacting, extracting, purifying, or blending chemicals, or for rinsing out the process lines associated with these functions

Hazardous Secondary Materials

Transferred for Remanufacturing – Rule 204 (1) (cc)

- HSM must have been used in pharmaceutical, organic chemical, plastics and resins, or paints and coatings manufacturing
- HSM materials must be reused in these manufacturing processes
- **Remanufactured solvents cannot be used for cleaning or degreasing**
- Must Notify EPA or DEQ every 2 years

Hazardous Secondary Materials

Transferred for Remanufacturing – Rule 204 (1) (cc)

- Develop and maintain up-to-date re-manufacturing plan
- Maintain records of shipment and confirmations of receipt for at least 3 years
- Store HSM solvents in approved, properly labeled containers
- Certify the equipment used meets all Clean Air Act requirements
- Meet requirements prohibiting speculative accumulation

Hazardous Secondary Materials

Exported from US for reclamation – Rule 204 (1) (dd)

- Notify EPA of intent to export
- Notifications must be done electronically using WIETS
- Notify EPA of any changes to original notification
- Send EPA any response by receiving country
- EPA shall provide receiving country and countries of transit a complete notification

Hazardous Secondary Materials

Exported from US for reclamation – Rule 204 (1) (dd)

- Must be approved by receiving country and is voided if rejected by receiving country
- EPA Acknowledgement of Consent to accompany the shipment
- EPA must be notified of changes in the shipment plans
- Records retention schedule
- Annual report to EPA

Hazardous Secondary Materials

Shipping Document Basics

- Log, invoice, bill of lading, or uniform hazardous waste manifest
- Must be readable, readily accessible, and have required information
- May be written or electronic
- Must meet US DOT requirements

Hazardous Secondary Materials

Shipping Document Basics

Required information:

- Name and address of the generator
- Name of the transporter
- Type and volume of by-product shipped
- Date the by-product was shipped
- Name, address and Site ID number of the designated facility

Hazardous Secondary Materials

Shipping Document Basics

Generator or generator representative signs/certifies shipping document stating:

- the shipping document fully and accurately describes the shipment
- the shipment is in proper condition for transport
- the shipping document information is factual

Hazardous Secondary Materials

Shipping Document Basics

Transporter signs/certifies shipping document stating by-product listed on shipping document:

- **was received**
- **will be delivered to the designated facility identified on the shipping document**

Hazardous Secondary Materials

Shipping Document Certification

- Generator retains copy of shipping documents with generator and transporter signature
- Transporter obtains copy of shipping document with both signatures which accompanies the shipment during transport

Hazardous Secondary Materials

Shipping Document Certification

Receiving “designated” facility:

- accepts deliveries accompanied by shipping document listing the designated facility
- provides confirmation of receipt to the generator or generator representative (documented phone call, email, receipt, shipping document or manifest copy)

Hazardous Secondary Materials

Receiving EGLE concurrence on HSM and Legitimacy

- Site Identification EQP 5150 form available at Michigan.gov/HazardousWaste (select “Hazardous Waste and Liquid Industrial By-products Management,” then “Forms” link)
- Box 18 covers HSM notification
- Form addendum used to specify waste codes managed as HSM

Site ID _____

14. Eligible management activity Y

15. Episodic Y

16. LQG Y

17. Notification Y

18. Notification Y

Site ID _____

**ADDENDUM TO THE SITE IDENTIFICATION FORM
NOTIFICATION OF HAZARDOUS SECONDARY MATERIAL ACTIVITY**

ONLY FILL OUT THIS FORM IF:
You are located in a State that allows you to manage excluded hazardous secondary material (HSM) under rule R 299.9204 (1)(aa - dd) of Part 111;

AND

a. You are or will be managing excluded HSM in compliance with rules R 299.9202 (6)(a - f), or R 299.9204 (1)(aa - dd) (or federal equivalent) or have stopped managing excluded HSM in compliance with the exclusion(s) and do not expect to manage any amount of excluded HSM under the exclusion(s) for at least one year. Do not include any information regarding your hazardous waste activities in this section. Note: if your facility was granted a solid waste variance under rules R 299.9202 (6)(a - f) prior to July 13, 2015, your management of HSM under rules R 299.9202 (6)(a - f) is grandfathered under the previous regulations and you are not required to notify for the HWM management activity excluded under rules R 299.9202 (6)(a - f).

Reason for Notification (include dates where requested)

Facility will begin managing excluded HSM as of _____

Facility is still managing excluded HSM/re-notifying, as required, by March 1 of each even-numbered year.

Facility has stopped managing excluded HSM as of _____ and is notifying as required.

Description of Excluded HSM Activity: Please list the appropriate codes (see Code List section of the instructions) and quantities, in short tons, to describe your excluded HSM activity ONLY (do not include any information regarding your hazardous wastes). Use additional pages if more space is needed.

Facility Code	HSM Waste Codes	Est. Short Tons of Excluded HSM Managed Annually	Actual Short Tons of Excluded HSM Managed During the Most Recent Odd-numbered Year	Land-based Unit Code

EGLE Environmental Assistance Center
Phone: 800-662-9278

EGLE Environmental Assistance Center
Phone: 800-662-9278

Page 8 of 10

www.Michigan.gov/EGLE
EQP5150 (12/28/2021)

Hazardous Secondary Materials

Supporting Information

Access the HSM Guide via:

- Link for “Compliance Resources”, then for “Generator Resources”
- Michigan.gov/EHSGuide
- Using QR code in expert/assistance area handout

EGLE MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

HAZARDOUS SECONDARY MATERIAL GUIDANCE

Introduction

Large volumes of hazardous secondary materials (HSMs) are generated across a wide variety of business, manufacturing, and institutional sectors. On January 13, 2015, the federal “[Definition of Solid Waste](#)” regulation was promulgated. The regulation revises several recycling-related provisions associated with the definition of waste used to determine hazardous waste management requirements. The purpose of these revisions is to ensure that the HSM recycling regulations, as implemented, encourage reclamation in a way that does not result in increased risk to human health and the environment from discarded HSM.

Michigan has incorporated these provisions into the [administrative rules](#) promulgated pursuant to [Part 111](#), Hazardous Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, effective August 3, 2020. This publication provides guidance on the management of HSM and should not be considered a substitute for the applicable Part 111 rules.

What is a Hazardous Secondary Material and When is it Eligible for Exclusion?

A HSM is a secondary material such as a spent material, by-product, or sludge that, when discarded, would be identified as a hazardous waste under the Part 111 rules.

The following HSMs are eligible for conditional exclusion under Rule 204(1)(aa)-(dd):

- HSM that is generated and legitimately reclaimed within the United States (U.S.) or its territories and under the control of the generator.
- HSM that is generated and then transferred to another person for the purpose of reclamation.
- HSM that is generated and then transferred to another person for the purpose of remanufacturing.
- HSM that is exported from the United States and reclaimed at a reclamation facility located in a foreign country.

The aforementioned HSMs are not required to be included in the generator status calculation.

800-662-9278

Michigan.gov/EGLEWaste

Rev. 3/2021

HSM Examples

- **Generators of spent solvent cleaners used in manufacturing processes represent nearly the entire number of HSM notifiers**
- **However, HSM can be applied to other materials with a variety of hazardous waste codes**

Questions?



FerrittoJ@Michigan.gov or 231-878-0962