IOWA STATE UNIVERSITY
Department of Environmental Health and Safety

MECC
2018

HAZARDOUS WASTE GENERATOR IMPROVEMENTS RULE:

THE IOWA STATE UNIVERSITY EXPERIENCE

- A. David Inyang, PhD Assistant Vice President
- William Diesslin Associate Director

Objectives

- Introduction
- Important new provisions and changes to the old rule
- Iowa State University's participation in Rule Making
- Iowa State University's experience implementing the New Rule

Iowa State University at a Glance

MECC 2018

ISU at a Glance

MECC 2018

36,660

Total enrollment
2016-2017 school year

5.6 Million

Net assignable square feet

11,472 acres

Land Owned

3.4 Million

Residence Halls
(gross sq. ft.)

ISU at a Glance

MECC 2018

$1.3 Billion

Total budget
2015-2016

$760 Million

Total endowment funds

18.4%

State appropriation

$426 Million

Sponsored funding
2015-2016

Introduction

Resource Conservation and Recovery Act (RCRA)

- RCRA was enacted by Congress in 1976 and regulates the management of solid waste (e.g., garbage), hazardous waste, and underground storage tanks holding petroleum or certain other chemicals.

RCRA Program Goals

- To protect human health and the environment from the potential hazards of waste disposal.
- To conserve energy and natural resources.
- To reduce the amount of waste generated.

History of the Rule

In 2004, EPA conducted an evaluation of the generator program

- ANPRM (April 22, 2004, 69 FR 21800)
- Four public meetings soliciting comment on the effectiveness of the generator program

Comments included:

- Simplify the regulations
  - Eliminate cross-referencing
    - Provide one-pager basic information for contingency planning

History of the Rule

After 2004, EPA took a number of non-regulatory actions to respond to public comments and to improve the generator program:

- Improved website
- Developed online guide “Hazardous Waste Generator Regulations”
- Released “Closed Container” guidance
- Issued a Technical Corrections

Proposed rule on September 25, 2015

- Presented more than 60 proposed changes
- Presented more than 30 technical corrections
- Public comments were due December 24, 2015

History of the Rule

Over 230 public comments were received on the Generator Improvements Proposed Rule

The commenters included:

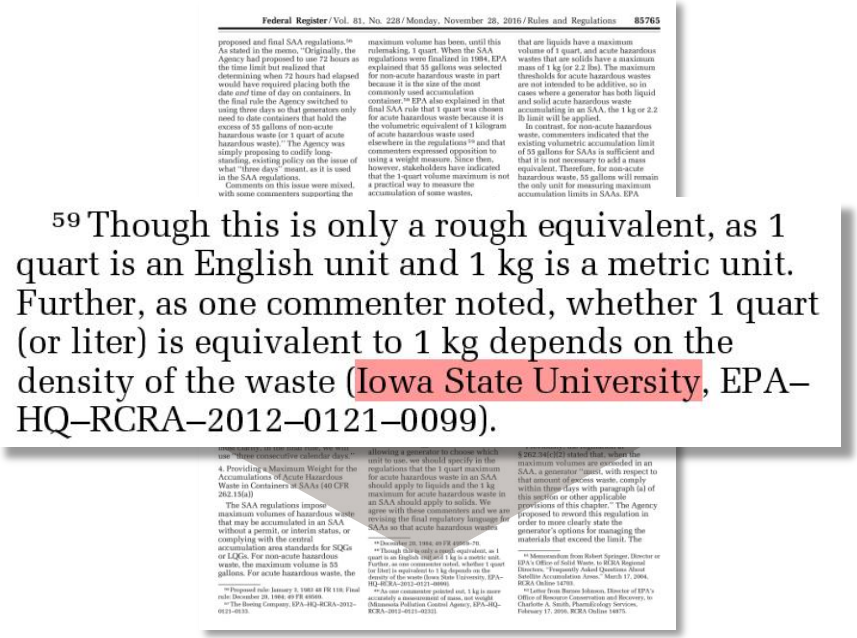
- 25 states
- 10 local governments
- More than 50 from academic institutions
- About a dozen from the energy sector/utilities
- More than 25 from industry and related trade associations
- 10 from the waste management industry

Comments covered all aspects of the rule

- Waste determinations
- Marking and labeling
- Independent requirements and conditions for exemption

History of the Rule

- Final Rule Published November 28, 2016
- Over 60 rule changes
- Over 30 technical edits
- Many “we always meant” comments in preamble
- Iowa State University referenced on page 85765



Federal Register / Vol. 81, No. 228 / Monday, November 28, 2016 / Rules and Regulations 85765

59 Though this is only a rough equivalent, as 1 quart is an English unit and 1 kg is a metric unit. Further, as one commenter noted, whether 1 quart (or liter) is equivalent to 1 kg depends on the density of the waste (Iowa State University, EPA–HQ–RCRA–2012–0121–0099).

FEDERAL REGISTER VOL. 81, NO.228, NOVEMBER 28, 2016

Important New Provisions and Revisions in the Rule

- New Generator Status
  - Reorganized Generator Programs into one location in the Rules – 40 CFR part 262
    - Elaborated on and clarified Hazardous Waste Determinations
      - Revamped Recordkeeping and Reporting Requirements
        - Clarified Markings and Labeling

Rule Implementation on Campus

MECC 2018

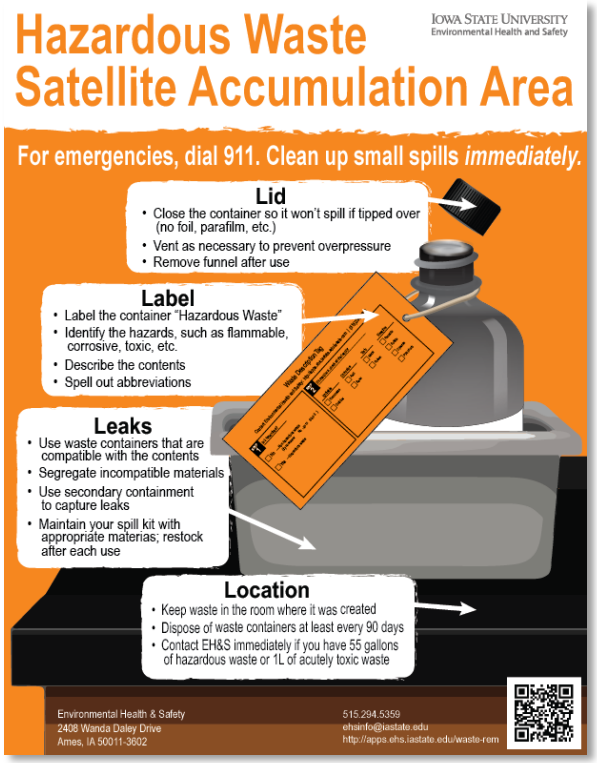
- Reviewed all 369 pages of the new Rule
- Invited EPA Region VII for discussions
- Noted all areas where changes were needed
- Communicated the Plan within EH&S and Campus
- Developed a schedule for making the changes
- Assigned responsibilities for developing materials needed to facilitate the changes
- Implemented Rollout of the New Management Scheme

Updated Hazardous Waste Manual

MECC 2018

The 4 Ls

- Lid
- Label
- Leaks
- Location



Updated Hazardous Waste Manual

MECC 2018

Lid

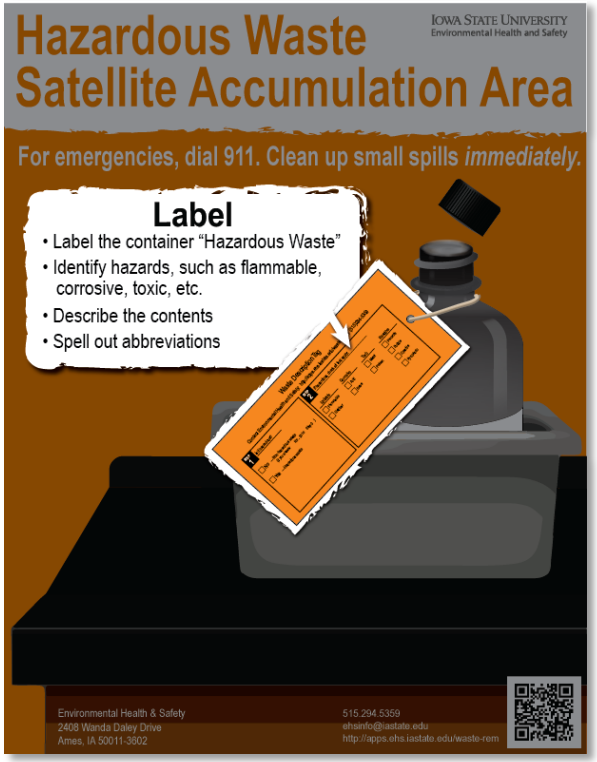
- Ensure container is closed
- Vent container as necessary to avoid over pressurization
- Remove funnel after use

Updated Hazardous Waste Manual

MECC 2018

Label

- Label container
- Identify the hazards
- Describe the contents
- Spell out abbreviations

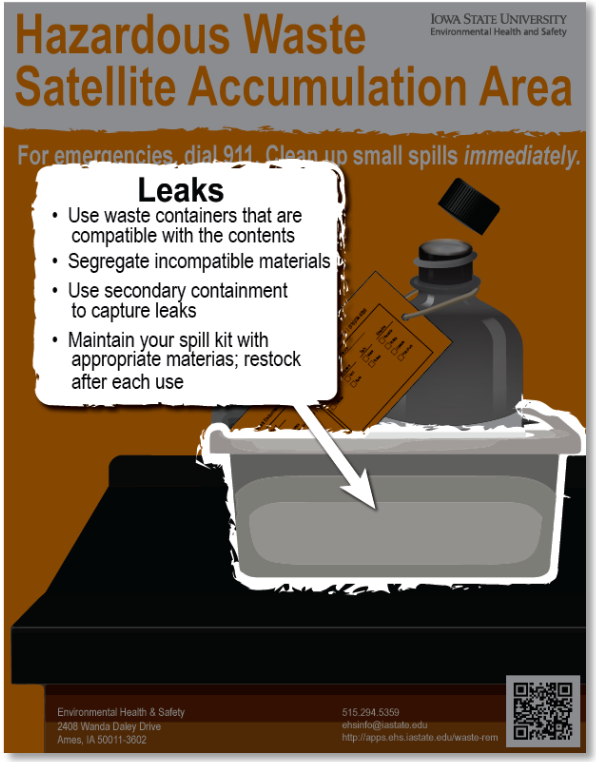


Updated Hazardous Waste Manual

MECC 2018

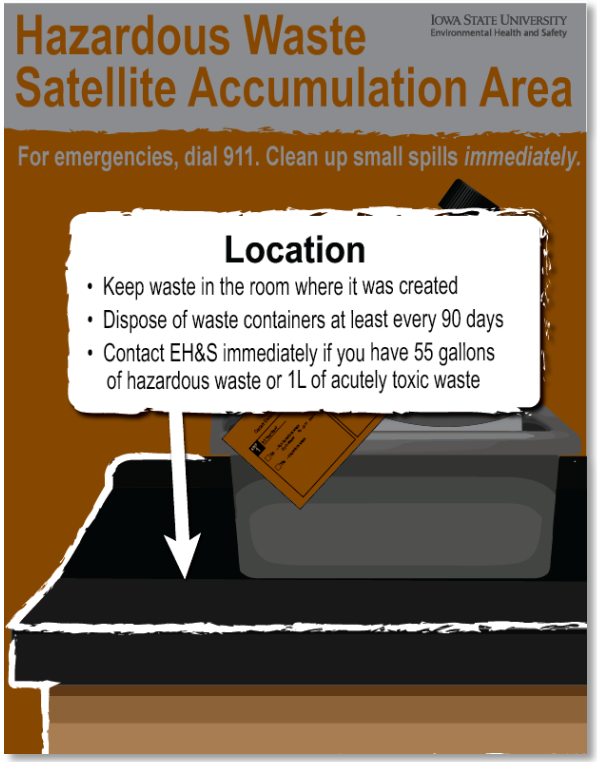
Leaks

- Use containers compatible with contents
- Segregate incompatible materials
- Deploy secondary containment to capture leaks
- Maintain a spill kit in the area



Location

- Keep waste in the room where generated
- Have waste containers removed at least every 90 days
- Contact EH&S immediately if you have 55 gallons of hazardous waste or 1 liter of acutely toxic wastes



ISU Contingency Plan

- EPA Region VII agrees with ISU that there is nothing “quick” about 1,800 “quick reference guides.”
  - ISU Proposed a generic one-page guide for SAAs.
    - EPA requested a list of buildings that have SAAs.
      - Has not been tested in an inspection.

Satellite Accumulation areas

MECC 2018

Quick Reference Guide

- Types of hazardous waste
- Maximum amount of hazardous waste
- Unique hazards
- SAA locations
- Map/Evacuation routes
- Fire hydrants
- On-site notification systems
- Emergency Coordinator

Rollout at ISU

ORANGE is the new GREEN

Out with the **OLD** Tag and SAA Sign

MECC 2018

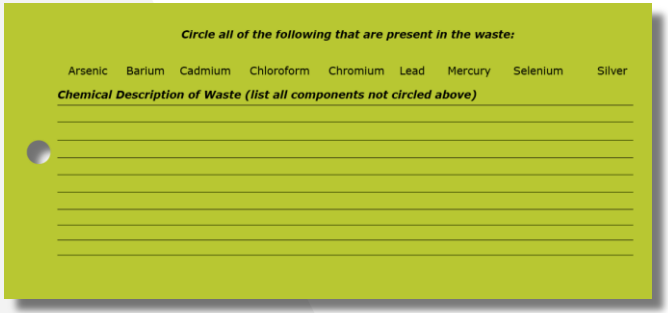
Waste Description Tag
Environmental Health and Safety
(515) 294-5359
www.ehs.iastate.edu

Material Number 1 Quantity (kg or liter) 2L
Start Date 6-15-16 ***Remove by** 9-5-16

ISU policy requires the removal of waste from satellite accumulation areas within 90 days.

Satellite Accumulation Area 12/2
Generator (print name) Jane Smith Department Chemistry
Campus Address 0376 Gilman Campus Phone 5-5555

Please fill out all the information on the reverse side.
Use the information contained on this tag to complete a Waste Removal Form.



Circle all of the following that are present in the waste:

Arsenic Barium Cadmium Chloroform Chromium Lead Mercury Selenium Silver

Chemical Description of Waste (list all components not circled above)

IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

Hazardous Waste Satellite Accumulation Area*

For large chemical spills or emergencies, call 911
For small chemical spills, call EH&S at (515) 294-5359

Accumulation Area Requirements

- Containers must be
  - ***Tightly sealed*** at all times, except during transfers
  - ***Compatible*** with contents
  - In ***good condition***
- Segregate containers by compatibility
  - Use secondary containment trays for segregation.
- No more than 55 gallons of hazardous waste or more than 1 quart of acutely hazardous waste may be accumulated.
- Waste containers must be electronically submitted to and collected by EH&S within 90 days of the waste accumulation start date.

Labeling Requirements

- Complete and attach a green EH&S waste tag.
  - Be sure to include the date when waste was first placed in the container.
- Each container must be labeled with the full name of the chemical contents.
  - Abbreviations or chemical formulas are not acceptable.

Visit EH&S online at www.ehs.iastate.edu to submit your waste for removal.

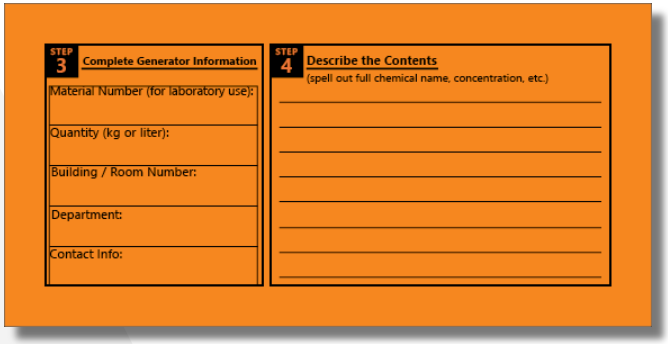
*The Satellite Accumulation Area must be at or near the point of waste generation.
Post this sign in each area where hazardous waste is accumulated.
Do not transfer waste from room to room.
Contact EH&S to establish additional Satellite Accumulation Areas when necessary.

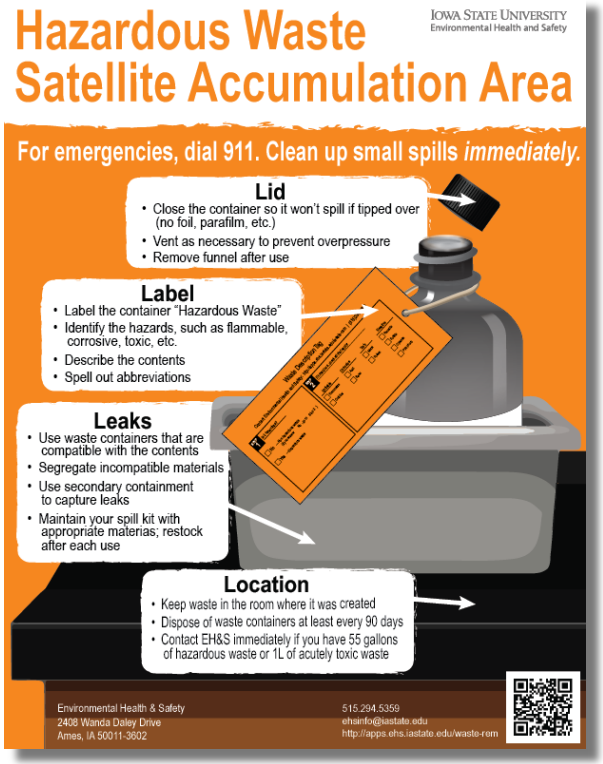
SAA#

Environmental Health and Safety | 2809 Daley Drive | Ames, IA 50011-3660 | Ph: (515) 294-5359 | www.ehs.iastate.edu

In with the **NEW** Tag and SAA Sign

MECC 2018





Rollout

Program development

December 2016 – February 2017

Training of EH&S staff

March – April 2017

Training of waste generators

April – May, 2017 into the future

Program rollout

May 30, 2017

Conclusion

- **No** real issues since roll out
- **No** negative reaction or push back from the campus community
- **No** compliance inspection so far from the EPA
- If all else fails, we will return to **Subpart K**

EPA resources

Main generator website: https://www.epa.gov/hwgenerators

Generator Improvements Rule website: https://www.epa.gov/hwgenerators/final-rule-hazardous-waste-generator-improvements

EPA plans to add FAQs, a map showing when states adopt the new rule, and other implementation materials as needed.

The End

MECC 2018