



HAZARDOUS WASTE & HEALTHCARE: Special Considerations

Minnesota Pollution Control Agency

Industrial Division

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January, 2007



Minnesota Pollution
Control Agency

MPCA; Health Care Industry Webpage

<http://www.pca.state.mn.us/industry/healthcare.html>

Special Considerations For Healthcare

- Dual Waste Issues
- Controlled Substances
- Complex Waste Streams
- Universal & Special Wastes
- Resources

Dual Waste Issues

MPCA #4.45a; Evaluating Pharmaceutical Wastes

<http://www.pca.state.mn.us/publications/w-hw4-45a.pdf>

Dual Waste: What is “Dual Waste”?

≠ not Statute or Rule-defined

= term of convenience used by MPCA to describe waste that is simultaneously



and



Infectious

Hazardous

WA DOE; Infectious and Non-Infectious Waste

<http://www.ecy.wa.gov/programs/hwtr/pharmaceuticals/pages/infect.html>

“Dual Waste” vs. **Mixed Waste**

= Regulation-defined

= regulatory term that defines waste that is simultaneously



and



Radioactive

Hazardous

EPA; Mixed Waste Rule [40 CFR 266.230]

http://www.access.gpo.gov/nara/cfr/waisidx_06/40cfr266_06.html



Dual Waste: Direct Examples

- Blood-soaked gauze used to clean up “blown” chemotherapy IV
- Used syringes containing excess thimerosal-preserved vaccine



Dual Waste: Avoidable Examples

- P-Listed drug ampoule placed into infectious sharps container
- Mislabeling of hazardous/infectious waste containers and accidental mixing



Dual Waste: Storage

- Ensure containers are:
 - closed
 - able to fully contain the waste
 - under observation or inspected weekly

- Label containers for *both* traits:

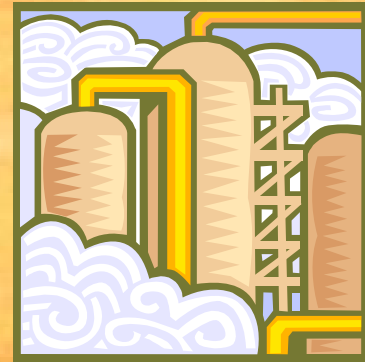


and

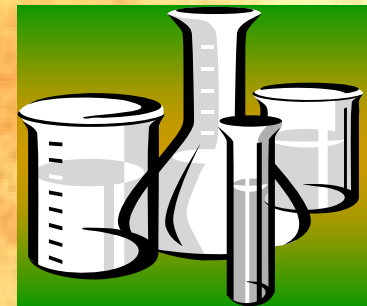
A rectangular yellow label with a red and black diagonal striped border. At the top, "HAZARDOUS WASTE" is printed in bold red letters. Below this, in smaller black text, it reads: "FEDERAL LAWS PROHIBIT IMPROPER DISPOSAL. IF FOUND, CONTACT THE NEAREST POLICE, PUBLIC SAFETY AUTHORITY OR THE U.S. ENVIRONMENTAL PROTECTION AGENCY." The label contains several fields for generator information: "NAME: _____ PHONE: _____", "ADDRESS: _____", "CITY: _____ STATE: _____ ZIP: _____", "EPA ID NO.: _____ EPA WASTE NO.: _____", "ACCUMULATION START DATE: _____", and "MANIFEST DOCUMENT NO.: _____". At the bottom, there is a box for "D.O.T. PROPER SHIPPING NAME AND UN OR NA NO. WITH PREFIX" and the instruction "HANDLE WITH CARE!" in bold red letters.

Dual Waste: Disposal

- State-dependent management *may* require:
 - Transporter registered/licensed for both traits
 - Disposal facility permitted for both traits

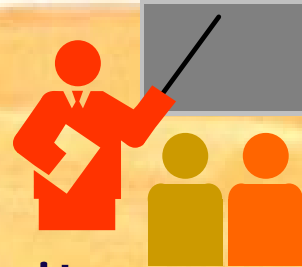


- Decontamination by generator and disposal as hazardous-only waste may be allowed



Dual Waste: Training/Operations

- Train staff in difference between Infectious and Hazardous Wastes



- Review procedures to limit generation whenever possible



- Ensure Housekeeping/Facilities staff utilize proper collection procedures



Dual Waste: Reduce Generation

- Purchase non-thimerosal vaccines and laboratory reagents when available



- ☒ <http://www.fda.gov/cber/vaccine/thimerosal.htm>
- ☒ <http://www.fda.gov/cder/fdama/mercury300.htm>
- ☒ <http://mntap.umn.edu/health/92-Mercury.htm>
- ☒ <http://www.nih.gov/od/ors/ds/nomercurey/reagents.htm>
- ☒ http://www.premierinc.com/all/safety/publications/10-02_downloads/02_HG_drug_list_08-22-02_public.xls

- Purchase unit-dose injectables for Listed waste pharmaceuticals when possible



Controlled Substances

MPCA #4.45a; Evaluating Pharmaceutical Wastes

<http://www.pca.state.mn.us/publications/w-hw4-45a.pdf>

Controlled Substances: Regulation

- Controlled Substance Hazardous Wastes must be managed in accordance with both:
 - U.S. Drug Enforcement Agency (DEA) **AND**



- EPA regulations



DEA; Application of State Law and Other Federal Law

http://www.deaiversion.usdoj.gov/21cfr/cfr/1307/1307_02.htm₁₄

Controlled Substances: Examples

- Excess unused paraldehyde (U182)
- Excess testosterone gel (D001)



MPCA #2.03; U-listed Hazardous Wastes

<http://www.pca.state.mn.us/publications/w-hw2-03.pdf>

Controlled Substances: Disposal

- Determine if your facility generates Controlled Substance hazardous waste
- If currently sewerage for disposal, contact the POTW to determine if allowed
- Contact DEA Field Division Office to approve alternate disposal methods if needed



Complex Waste Streams

MPCA #4.45a; Evaluating Pharmaceutical Wastes

<http://www.pca.state.mn.us/publications/w-hw4-45a.pdf>

Complex Waste Streams: Emergency Department

- Emergent patient treatment may disallow waste segregation



- Generators should review to determine best area-specific waste management



H2E: Waste Reduction Guide; Section VII

<http://www.h2e-online.org/pubs/wrguide/section7.pdf>

Complex Waste Streams: Ambulance Wastes

- Determine if ambulances servicing your facility consign waste

- some States require hospitals to accept infectious waste* from ambulance services

- *not** hazardous waste

- Common practice in ambulances is to place all wastes unsegregated into 'red bags'

- possibly including hazardous wastes



OSHA; Medical personnel exposed to patients contaminated with hazardous waste
http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=20609



Complex Waste Streams: Ambulance Wastes

- Some States **may** allow healthcare facilities to accept hazardous waste from ambulance services; however:
 - Once accepted, hospital is considered the generator
 - Hospital **must** treat **all** ambulance services equally



Universal & Special Wastes

EPA; Universal Waste: Basic Information

<http://www.epa.gov/epaoswer/hazwaste/id/univwast/basic.htm>

Universal Wastes

■ Universal Waste Regulations adopted by all states

□ Batteries



□ Fluorescent/High-Intensity Discharge Lamps



□ Mercury-containing Equipment



Universal Wastes: Management

- Store to prevent damage



- Label

UNIVERSAL WASTE	
CONTENTS	_____
ACCUMULATION START DATE	_____
SHIPPER	_____
ADDRESS	_____
CITY, STATE, ZIP	_____

- Accumulate <1 year



- Ship only for:

- recycling
- consolidation
- proper disposal



EPA; Universal Waste Technical Requirements

<http://www.epa.gov/epaoswer/hazwaste/id/univwast/quickref.htm>



Special Wastes: Electronic Waste

- Hazardous due to heavy metals



- Recycle or manage as hazardous waste



- Store intact



- Label

**Used Electronics
for Recycling**



Special Wastes: PCB Ballasts & Capacitors

- Fluorescent light ballasts & Small capacitors
 - Must be assumed to contain PCBs unless:
 - ☒ Labeled "No PCBs"
 - ☒ Date of manufacture is known to be post-1979
- Manage under TSCA requirements



Special Wastes: Used Oil

■ Used oil-related wastes include:

- Used oil
- Used oil filters
- Oily rags & other absorbents
- Used floor dry

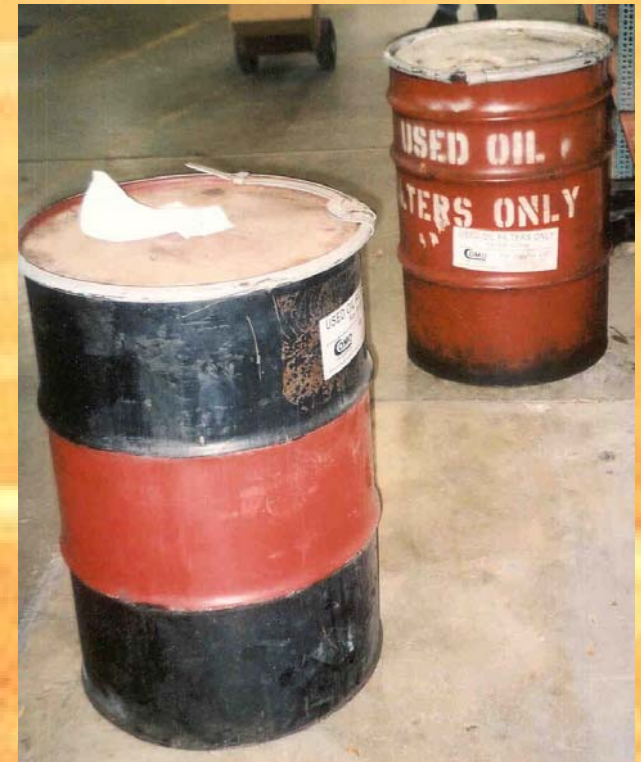
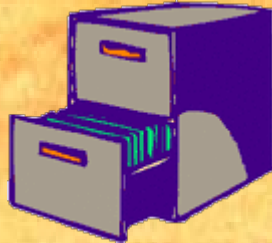
■ Used oil-related wastes may **not**:

- Be placed in solid waste
- Be dumped on the ground
- Be sewerred



Special Wastes: Used Oil

- Store in closed, leakproof containers
- Store on impermeable surface
- Label containers
- Keep shipment records



Resources

MPCA; Health Care Industry Webpage

<http://www.pca.state.mn.us/industry/healthcare.html>

Resources

- H2E: Hospitals for a Healthy Environment

- www.h2e-online.org



- MNTAP: Minnesota Technical Assistance Program

- www.mntap.umn.edu



- HERC: Healthcare Environmental Resource Center

- <http://www.hercenter.org/>



- GGHC: Green Guide for Health Care

- <http://www.gghc.org/>



Compliance Resources



Electronic copies of this presentation and all other MPCA Healthcare Hazardous Waste Presentations available at no cost





Questions?

Contact your State Regulatory Agency *First!*

Contact your EPA Regional Office for
federal interpretation questions.

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