EH&S Compliance and Risk Management is Everybody's Job: Lessons Learned from the Trenches!

September 2025

MHCEA
MINNESOTA HEALTHCARE ENGINEERS ASSOCIATION

Darrell J. Oman

Darrell has more than 40 years of experience in the Environmental, Health & Safety field and has presented at numerous national and regional professional and industry sector conferences and webinars, including for the American Health Lawyers Association (AHLA), American Society for Healthcare Engineering (ASHE) and Association for the Healthcare Environment (AHE). Darrell is member of both ASHE and AHE and a nationally recognized environmental compliance and risk management professional providing a wide range of consulting services. Over the past 15 years Darrell has directed and managed environmental compliance and consulting projects for over 100 healthcare systems covering 25 states including consulting for over 350 hospitals and over 100 cancer treatment centers, surgery centers and clinics. Darrell obtained his B.S. engineering degree from Michigan Technological University and has complemented his EH&S consulting experience with professional coursework and training in environmental auditing, information management systems, business management and organizational performance, team- building and strategic planning.

Technical Director | Principal Engineer
Braun Intertec Corporation
Doman@BraunIntertec.com
Cell: 612-360-1213

MHCEA
MINNESOTA HEALTHCARE ENGINEERS ASSOCIATION

Marge McFarlane

With over 50 years of experience in the healthcare industry, Marge provides education on the physical environment, safety and infection prevention for construction during facility mock surveys and document review (JC, AAAHC, VA, CMS, OSHA, EPA, CLIA, OSHA).

Marge is currently working with healthcare systems, laboratories and clinics nationally to identify and mitigate risks in the physical environment.

She is a Life Safety Surveyor and a *Legionella* Water Management and Safety Specialist, ASSE/ANSI 12080 with a:

- PhD in Safety Engineering
- MS in Risk Control and Safety Management from the Univ. of Wisconsin-Stout
- MS in Environmental and Public Health from Univ. of Wisconsin-Eau Claire
- BS in Medical Technology from Univ. of Wisconsin-Milwaukee
- Member of ASHE, WHEA Code Committee, NFPA

PhD, MS, MT(ASCP),CHFM, CHSP, HEM, MEP
Superior Performance Consultants, LLC
Mcfarlane.marge@gmail.com
Cell: 715-835-3730

MHCEA
MINNESOTA HEALTHCARE ENGINEERS ASSOCIATION

Learning Objectives

- Differentiate USEPA/MPCA/Local, DOT, OSHA, and NIOSH/USP Regulatory Compliance Requirements for Healthcare Organizations
- Link governmental safety and environmental compliance requirements with accreditation organization standards for these key groups: Laboratories, Facilities/Plant Operations/EVS, and Pharmacy/Rx Administration
- Learn about typical non-compliant findings, corrective actions, and best practice management solutions for each key hospital group.
- Compare your safety and environmental compliance readiness with those facilities and organizations demonstrating best practices.

MHCEA
MINNESOTA HEALTHCARE ENGINEERS ASSOCIATION

Regulatory Knot: Haz -Mats/Chems/Wastes/Drugs

- **MNOSHA** - Hazard Communication Standard: *"Hazardous Chemicals"*
- **NIOSH** - *"Hazardous Drugs"*
- Infectious Waste per MN 116.78: ***Regulated Medical Waste (RMW) or "Biohazardous Waste"***
- **DOT** - *"Hazardous Materials"*
- **USEPA/MPCA – RCRA** *"Hazardous Wastes"* & *"Hazardous Waste Pharmaceuticals"*

MHCEA
MINNESOTA HEALTHCARE ENGINEERS ASSOCIATION

Hazardous What?? Which Agency Defines What?

- **MNOSHA**
- NIOSH
- DOT
- **USEPA/MPCA**

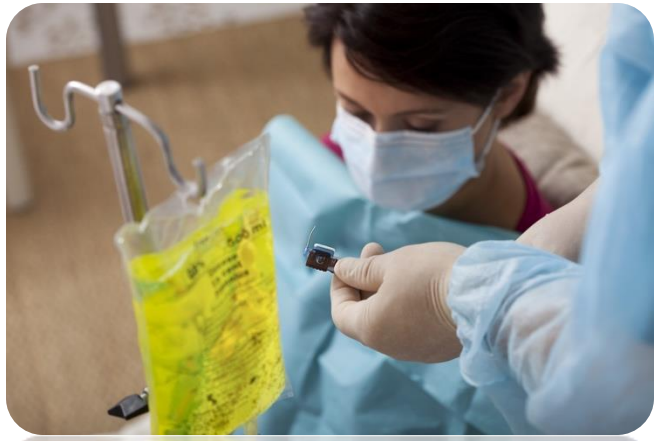
- Infectious Wastes
- Hazardous Materials
- Hazardous Substances
- Hazardous Chemicals
- Hazardous Waste Pharms
- Hazardous Drugs
- Hazardous Wastes

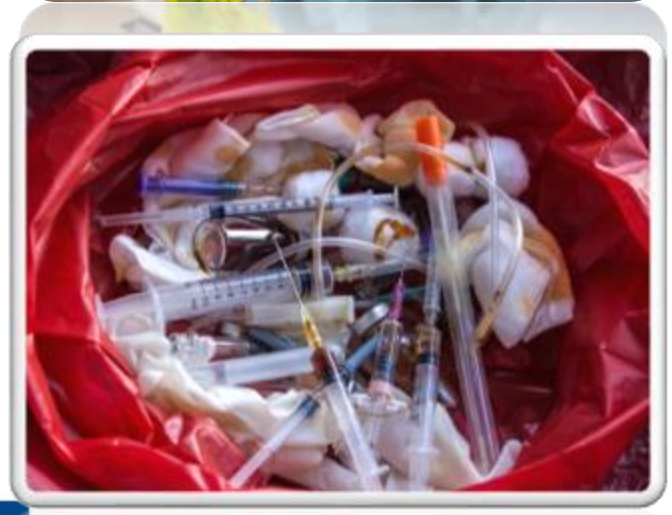
MHCEA
MINNESOTA HEALTHCARE ENGINEERS ASSOCIATION

What's New?

- **MNOSHA - HazChems**
- **NIOSH - HazDrugs**
- **DOT - HazMats**
- **EPA/MPCA – HazWastes & HazWastePharms (HWPs)**

What's New? Haz - Mats/Chems/Wastes/Drugs





- **MNOSHA** – "**HazChem**" Inventory. New federal Haz Com rules under review by MN. Changes to SDS, hazard categories and labeling. Training will be required and SDS replaced by 2026-27.
  - Lab Chemical Hygiene Plan
  - Lab Chemical Hygiene Officer
- **NIOSH - "HazDrugs" – update published in** Dec 2024 (added 25, removed 7)
  - USP 797/800 Standards
  - CDC/NIOSH Managing Hazardous Drug Exposures - 2023
- **"Infectious Waste"**
  - Infectious Waste Management rules (MR 7035.9100 – 7035.9150)
  - Infectious Waste Control Act, Minnesota statutes (116.75311 6.82)

MHCEA
MINNESOTA HEALTHCARE ENGINEERS ASSOCIATION

What's New? Haz - Mats/Chems/Wastes/Drugs

- DOT - ***"HazMats"***
  - Number of amendments being proposed (package design, regulatory text updates, incident reporting)
  - Harmonization Rule 215-Q
    - Alignment with International Standards
    - Lithium Batteries
- USEPA/MPCA/RCRA - ***"HazWastes"& "HazWastePharms (HWPs)"***
  - Subpart P still not adopted in MN
  - **REMEMBER: The 7 MSP Metro Counties regulate Hazardous Waste as well**

MHCEA
MINNESOTA HEALTHCARE ENGINEERS ASSOCIATION

Linking EPA/DOT/OSHA/NIOSH with Joint Commission Compliance with NEW PE 02.01.01 as of 1/2026 (formerly EC.02.02.01)

"The Hospital Manages Risks Related to Hazardous Materials and Waste"

- EP1: Maintains written, current inventory
- EP2: Manages permits, manifests and SDS
- EP3: Labels hazardous materials and wastes
- EP4: P/P developed to protect patients and staff from exposures to:
  - Minimize risk when selecting, handling, transporting, using and disposing radioactive materials, hazardous chemicals and hazardous gases and vapors
  - Disposal of hazardous medications
  - Precautions and PPE needed for spill response
- EP 5:Use of radiation badges/monitoring for personnel
- EP 6:Proper storage and handling for trash and regulated medical waste

MHCEA
MINNESOTA HEALTHCARE ENGINEERS ASSOCIATION

Note: All references to Environment of Care Standards and Elements of Performance used with permission from The Joint Commission

Internal Risks, Liabilities, and Costs

- Employees, Providers, Patients, Visitors, Vendors and Volunteers
  - Exposures (potential acute or chronic injury or illness) from spills, transporting, or otherwise handling
  - Compliance with OSHA, EPA, DOT **and** internal policies

MHCEA
MINNESOTA HEALTHCARE ENGINEERS ASSOCIATION

Internal Risks, Liabilities, and Costs

- Organizational time and costs
  - Spill response, corrective actions, injuries/illnesses
  - Policy/procedures development and review
- Hospital employees are NOT chemists
  - Certain individuals might have
    - Knowledge of workplace chemicals, and
    - Proper use, handling, storage, spill response and exposure risks

MHCEA
MINNESOTA HEALTHCARE ENGINEERS ASSOCIATION

Laboratory: Key EH&S Requirements and Risks

- Accurate chemical inventory needed (OSHA)
  - Chemical Hygiene Plan required (OSHA)
- Waste evaluations of all chemicals and analyzer effluents
  - General trash, HazWaste (EPA), Medical/Infectious Waste, or “Special” Waste (such as Formalin)
- Regulations prohibiting “sewering” –
- NOTE: City/Municipal wastewater regulations likely also apply
- Chemistry, pathology and hematology analyzer waste and stains in microbiology

MHCEA
MINNESOTA HEALTHCARE ENGINEERS ASSOCIATION

Laboratory – Employee Safety

- Safety Data Sheet (SDS) readily available
- Hazards depicted on secondary containers
- Spill kits, PPE and eyewash stations
- ANZI-Z358.1-2014 – weekly and annual testing
- NO saline bottles
  - Difficult to activate
  - Cannot be used free”
  - Does not provide minutes flush

Eyewash Stations & Showers

50

- **ANSI Z358.1-2014**
- Highly visible signage
- Plumbed units activated weekly
- Inspected annually
- Any HCW who may be exposed to hazardous chemical should be trained
- Drench hoses/personal wash units are only supplemental equipment

MHCEA
MINNESOTA HEALTHCARE ENGINEERS ASSOCIATION

Laboratory Hazardous Waste Management & Storage (EPA/OSHA/DOT)

- Labeled containers compatible with HazWaste stream
- Weekly inspections of Central Accumulation Area
- Secondary containment
- Spill response plan
- Monthly HazWaste generation volume tracked and added to other hospital HazWaste volumes to control generator status

MHCEA
MINNESOTA HEALTHCARE ENGINEERS ASSOCIATION

Pharmacy & Pharmaceutical Administration: Key EH&S Requirements and Risks

- Pharmacy, Nursing, Imaging, Oncology
- Pharmaceutical Waste
  - Very complex and evolving
  - Affects more than hospitals/clinics
  - 2,500 – 4,000 NDCs in an average 300 bed hospital
  - HWPs, Non-RCRA Rx, Imaging Rx, Controlled Substances
  - Subpart P not fully adopted in MN (https://www.pca.state.mn.us/sites/default/files/w-hw3-33.pdf)
- NIOSH HazDrugs (HDs) updated late in 2024
- USP 800 – Quality and Safety Standards
  - Handling HDs in Healthcare
  - Many renovations in Pharmacies

USP<800>

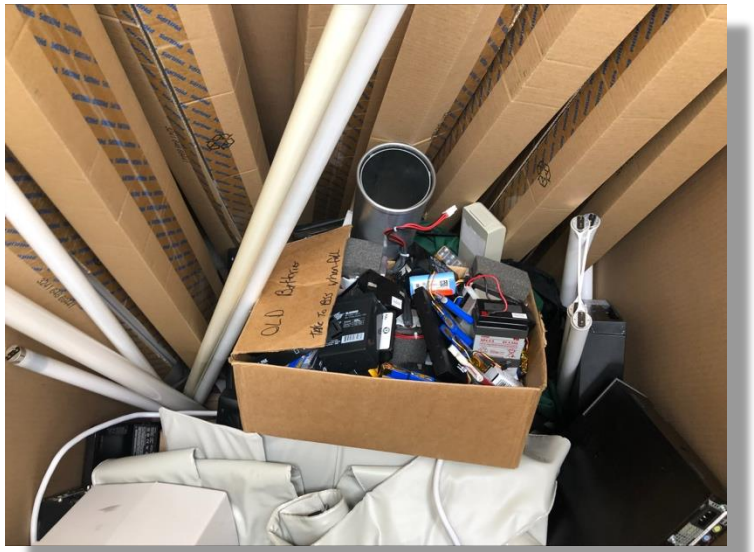
MHCEA
MINNESOTA HEALTHCARE ENGINEERS ASSOCIATION

Facility Management/Engineering: Key EH&S Requirements and Risks

- "Gradle-to-Grave" and SUPERFUND Liability
- Power Plant – Boilers, Fuel, Generators, Air Emissions, Medical Gases
  - EPCRA Tier II Reporting Requirement
- Maintenance – Asbestos, Lead Paint, Used Oils, Oil-based Paints
- MN updates to PFOS and PFAS in 2023 and 2024
- Challenges to Managing Universal Waste
  - Batteries and Used Fluorescent Bulbs
    - (NOTE: Bulb Crushers still common which elevates EH&S risks)
  - Mercury – containing equipment; Pesticides
  - Aerosol Cans (not adopted in MN however allowed to manage as UW)
  - Additional MN Universal Wastes
    - Dental amalgam
    - Disposable compressed gas cylinders
    - Pretreated dental wastewater

Regulatory Compliance Case Studies

- Two Hospitals with USEPA “Notice-of-Violation”
- Repeat NOVs from the State EPA
- State inspections and NOVs for a Hospital System.



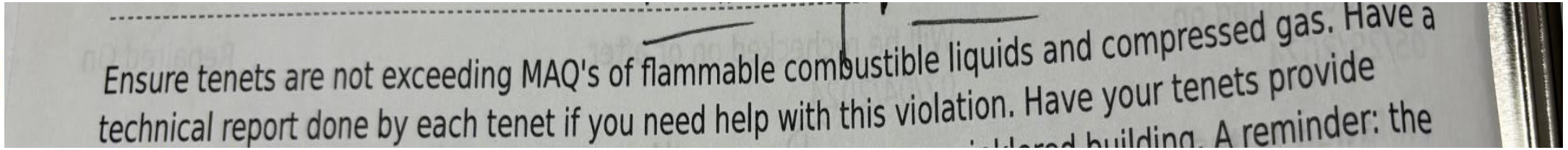
MHCEA
MINNESOTA HEALTHCARE ENGINEERS ASSOCIATION

Regulatory Compliance Case Studies

- Formalin spill after hours – Histology lab and Fire/Hazmat team response.
- Fire Marshall Inspection of a Multi-tenant MOB. Needing "Maximum Allowable Quantities" (MAQs) of combustible liquids and compressed gas.

INSTRUCTIONS: Complete both pages of this form*. List all hazardous materials, including wastes, in use handled, or stored at the business at any given time. Only materials meeting [redacted] classifications of hazardous materials need to be included. Below are the hazardous materials required to b listed:

Combustible Fibers	Highly Toxic Materials
Combustible Liquids (Class II, IIIA, IIIB)	Organic Peroxides (Class I, II, III, IV, V)
Compressed Gases – All Classes	Oxidizers - Solid, Liquid, or Gas (Class 4, 3, 2, 1)
Corrosives	Pyrophoric Materials
Cryogenic Fluids – Flammable, Inert, Oxidizing	Toxic Materials – Solid, Liquid, or Gas
Flammable Gases	Unstable Reactive Materials (Class 4, 3, 2, 1)
Flammable Liquids (Class IA, IB, IC)	Water-Reactive Materials (Class 3, 2, 1)
Flammable Solids	Explosives



Challenges to EH&S Risk Management

- Assuming someone else is managing your current and future EH&S risk and liabilities.
- Relying on a single department leader/department to manage ALL applicable EH&S compliance requirements.
- Assuming your accreditation surveys address EPA/OSHA/DOT/NIOSH regulatory compliance requirements and risks.
- Addressing EH&S compliance risks, liabilities, and costs only when there is:
  - An injury/illness due to a chemical or waste spill or incident,
  - A chemical or hazardous waste spill or release inside or to the environment (ground, water, air), or
  - An unsatisfactory regulatory inspection

MHCEA
MINNESOTA HEALTHCARE ENGINEERS ASSOCIATION

Actions to Take **When Building a "Proactive" EH&S Risk Management Program**

1. Prep a campus "EPA Resume" to quickly uncover obvious incorrect or outdated regulatory information.
2. Assess your internal EH&S subject matter expertise.
    1. EH&S professional typical credentials (CHMM, CIH, CSP, PE, PG)
    2. Consider experienced EH&S professionals from other industries
3. Conduct an internal compliance audit (self assessment or 3rd party). – GAP ANALYSIS
    1. On Environmental Compliance, Risks and Liabilities
        1. Many inspection checklists and protocols available
    2. On Employee H&S Compliance, Risks and Liabilities
        1. Accreditation surveys and Association (Laboratory and Pharmacy)
    3. Key on Major or High EH&S Risk Departments (Lab, Pharmacy, Plant Operations/EVS)

MHCEA
MINNESOTA HEALTHCARE ENGINEERS ASSOCIATION

Thank You for Attending – Recap & Questions

Darrell J. Oman
Technical Director - Principal Engineer
Braun Intertec Corporation
Doman@BraunIntertec.com
612-360-1213

Marge McFarlane
PhD, MS, MT(ASCP), CHFM, CHSP, HEM, MEP
Superior Performance Consultants, LLC
Mcfarlane.marge@gmail.com
715-835-3730

- Differentiate USEPA/MPCA/Local, DOT, OSHA, and NIOSH/USP Regulatory Compliance Requirements for Healthcare Organizations
- Link governmental safety and environmental compliance requirements with accreditation organization standards for these key groups: Laboratories, Facilities/Plant Operations/EVS, and Pharmacy/Rx Administration
- Learn about typical non-compliant findings, corrective actions, and best practice management solutions for each key hospital group.
- Compare your safety and environmental compliance readiness with those facilities and organizations demonstrating best practices.

MHCEA
MINNESOTA HEALTHCARE ENGINEERS ASSOCIATION