

# **3E Company HazMat Management Web Seminar Series**

## **“How To” Manage Hazardous Waste**

**3E Company alleviates the pain of HazMat  
Information and Compliance Management**

- Web Seminar audio and visual presented on the Internet
- The preferred screen resolution is 1024 x 768
- If you do not have access to the Internet, please call 800.207.0148 passcode – 809683
- Click Q&A to submit your questions
- Questions will be answered at the end of the presentation
- If you have any technical difficulties, please email Communicast at [support@communicast.com](mailto:support@communicast.com)
- Web Seminar will be recorded. Audio and visual presentation will be available after the Seminar

- Certification Maintenance Points now available
- Must participate in full 2 hour Web Seminar to receive 0.125 CMPs and 2 CUSA Credits
- Complete quiz at the end of the seminar and submit to 3E for approval
- 3E will email a certificate with the amount of points received for each Web Seminar
- Submit certificates to IHMM and NSC for credits
- Previous Web Seminars approved for CMPs. We are sending out certificates to participants

Terry Greenberg – Attorney and Founding Partner of Singer & Greenberg, P.L.L.C.

- Practice Areas include Occupational Safety & Health and Employment Law
- Previous Experience
  - U.S. Department of Labor
  - Fulbright & Jaworski, L.L.P.
- University of Texas – B.A. Degree
- University of Houston Law Center – J.D. Degree

Michael Beckel – Hazardous Materials Technical Specialist, 3E Company

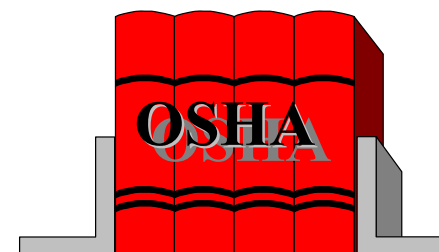
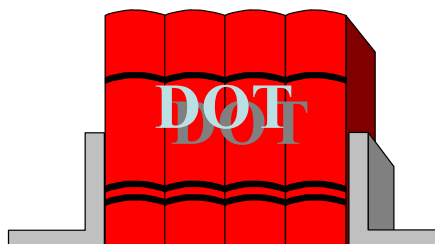
- 18+ years practical experience in hazardous waste management and occupational safety
- Current member of ASSE, SCHC and OSHA Alliance Committee
- BS Degree \_\_\_\_\_ Occupational Safety Management and Engineering Technology

# **“How To” Manage Hazardous Waste**

**Terry Greenberg**

**Michael Beckel**

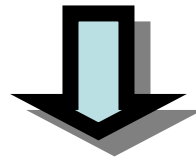
- Environmental Protection Agency (EPA)
- US Department of Transportation (DOT)
- Federal Occupational Health and Safety Administration (OSHA)



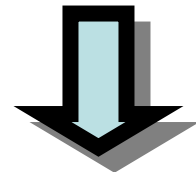
# Emergencies – Different OSHA Standards that Address them

- A Hazard Communication program must contain emergency and first aid procedures
- Emergency action plans are required by 29 CFR 1910.38
- HAZWOPER 1910.120 (q) Any time an employer has employees who respond to an emergency release of a hazardous substance, they must meet these requirements
- Secretary v. Mead Control Board, Inc.
- *ONE PLAN*

Generator – Employees collect waste, move waste to central accumulation



Transporter – Employees load waste onto trucks and transport to TSD



TSD – Employees unload, store, open and treat waste (incineration/chemical reaction)

- Typical Waste Streams:
  - Lead/Acid Batteries 80 - 90%
  - Fluorescent bulbs 10 - 20%
  - Capacitors/PCBs
  - Misc. Shop Waste (paint/solvents etc.)
- Multiple Locations:
  - CESQG - SQG

**What is  
hazardous waste?**

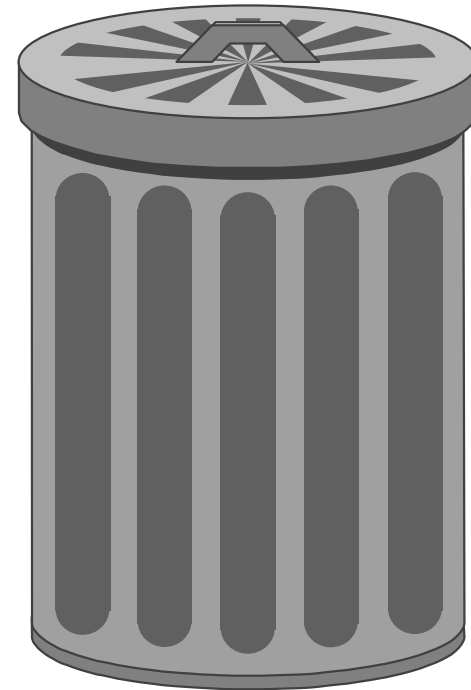




# A RCRA Hazardous Waste Must First Be A Solid Waste



- Discarded
  - Abandoned
    - Disposed of
    - Burned / incinerated
  - Considered “inherently waste-like”
  - Recycled



Ref: 40 CFR 261.2

- Substitutes for commercial products
- Discharges to sanitary sewers if covered by a POTW permit
- Point source discharges (e.g. if an NPDES permit has been obtained)
- High level radioactive wastes

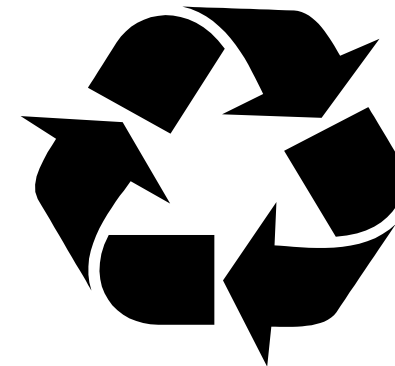
# What is Hazardous Waste Under OSHA HAZWOPER?



“Any biologic agent and other disease causing agent which, after release into the environment and upon exposure, ingestion, inhalation or assimilation into any person, either directly from the environment or indirectly by ingestion through food chains, will or may reasonably be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions (including malfunctions in reproduction) or physical deformations in such persons or their offspring.”

- Any substance defined as such under § 101(14) of CERCLA, under 42 U.S.C. 9601(14) which relates to superfund sites
- Any substance listed by the U.S. Department of Transportation as a hazardous material
- Hazardous waste as defined in
  - 40 CFR 261.3 (EPA regulations)
  - 49 CFR 171.8 (DOT regulations)

- Household hazardous waste (40 CFR 261.4)
- Reclaimed/recycled materials (40 CFR 261.6)
  - Used Oil
  - Lead-acid batteries
  - Scrap metal

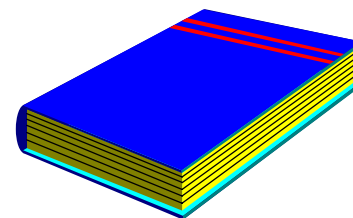


- Each solid waste must be evaluated to determine if it is a hazardous waste. This process is called a:

“Hazardous Waste Determination”

40 CFR 262.11

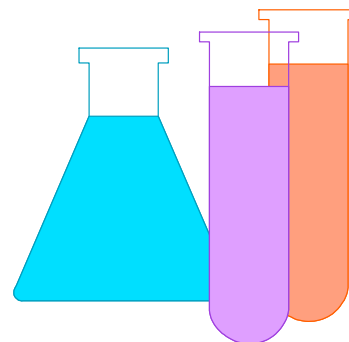
- Regulations



- Knowledge of Process



- Analysis





- Listed Waste
- Characteristic Waste
- Universal Waste

- F – list: non-specific sources
- K – list: specific industrial processes
- P – list: acutely toxic unused off-specification chemical products
- U – list: unused off-specification chemical products
  - (PU lists: solely the listed constituent, or sole active ingredient)

- Spent Solvent F001 – F0005
- Pre-use criteria of 10% or more by volume
- F001 vs. F002: degreasing vs. spent solvent
- F003 & F005 spent non-halogenated solvents

- Ignitable
- Corrosive
- Reactive
- Toxic



40 CFR 261.20 – 261.24

- Ignitability – D001
- Corrosivity – D002
- Reactivity – D003
- Toxicity – D004 – D043

Flash Point  $< 140^{\circ}$  F

Ph  $< 2$  or Ph  $> 12.5$

Water Reactive

TCLP



- Sources of Hazardous Waste:
  - Something other than product resulting from a process or accident that cannot be directly used onsite as a raw material without some form of treatment
  - A raw material which is unstable due to age or to its being off-specification
  - Leftovers from previous occupants
  - Residue/debris from spill/leak clean-up

- Perform hazard determination
- Label all containers
- Provide Material Safety Data Sheets to distributors and employers
- Determine hazards of chemical mixtures
- Place warnings on containers
- Update MSDS's within 3 months of receiving new information

- Perform hazard identification
- Label all secondary containers
- Provide Material Safety Data Sheets to employees
- Maintain a written plan
- Maintain an inventory
- Train and communicate chemical hazard data to employees
- Include “incidental spill” safety in training



- Clean up operations required by a governmental body involving hazardous substances at uncontrolled hazardous waste sites (including initial investigations of those sites)
- Corrective clean up operations under RCRA
- Voluntary clean-up operations at uncontrolled hazardous waste sites

- Hazardous waste operations at treatment, storage and disposal (TSD) facilities regulated by the EPA and RCRA
- Emergency response for releases of or substantial threats of releases of hazardous substances without regard to the location of the hazard

## **The Standard Applies to All:**

Hazardous waste and emergency response operations.  
If there is any overlap with other regulations – the measures most protective to employees apply.



# What are Uncontrolled Hazardous Waste Sites?



Uncontrolled hazardous waste sites are areas containing an accumulation of hazardous substances that creates a threat to either individuals or the environment. This designation is given by a governmental body (federal, state or local). The property can be public or private.

- Must have a fully emergency response plan under 1910.120 (p) including a:
  - Safety and health program
  - Hazard Communication program
  - Medical surveillance program
  - Decontamination program
  - New technology program
  - Material handling program and a full training program

- In areas of these facilities that are not used primarily for treatment, storage and disposal, the requirements of 120(q) for hazardous substance release plans, must be met.

- Pre-emergency planning and coordination with outside parties
- Personnel roles, lines of authority, communication
- Emergency recognition and prevention
- Safe distances and places of refuge
- Site security and control
- Evacuation routes and procedures

- Decontamination procedures
- Emergency medical treatment and first aid
- Emergency alerting and response procedures
- Critique of response and follow-up
- PPE and emergency equipment
- Training

- Safety and Health program
- Hazard Communication program
- Medical Surveillance program
- Decontamination program
- New technology program
- Material handling program
- Training program
- Emergency Response Plan

- Organizational structure
- Site specific safety & health plan (does not have to duplicate operating procedures for safety & health)
- Operating procedures for safety & health
- Comprehensive work plan
- Medical surveillance program
- Interface between general program and site specific activities

- These apply to everyone responding to emergency releases who are NOT performing an operation defined in (a)(1)(i) through (iv). It requires:
  - An emergency response program
  - An emergency response plan for anticipated emergencies

- Pre-emergency planning and coordination with outside parties
- Personnel roles, lines of authority, training and communication
- Emergency recognition and prevention
- Safe distances and places of refuge
- Site security and control

- Evacuation routes and procedures
- Decontamination
- Emergency medical treatment and first aid
- Emergency alerting and response procedures
- Critique of response and follow up
- PPE and emergency equipment

- Designation of a senior emergency response official in charge of the Incident Command System (ICS). Initially an on-site person, but may change later as more expert personnel arrive.
- Identification of hazardous substances and conditions
- Wearing of positive pressure self-contained breathing apparatus

- Medical surveillance and consultation
- Chemical protective clothing
- Limited number of people, including a buddy system in groups of two or more

- Back-up personnel with rescue equipment
- Designation of a safety officer qualified to evaluate hazards
- Authority to suspend activities in imminent danger
- Skilled support personnel may be used without all of the required training

- First responder awareness level
- Specialist employees
- Function specific training
- First responder operations level
- Hazardous materials technician
- Hazardous materials specialist
- On scene incident commander

- In writing, available to employees
- Reporting procedures for fire or emergency
- Emergency evacuation procedure, exit
- Procedures for critical personnel
- Post-evacuation procedures
- Name and number for explanation to employees

- Rescue or medical duties
- Employee alarm system
- Training
- Review of plan with each employee after initial assignment, change in assignment or change in plan



# Hazard Communication Requirements

## 29 CFR 1910.1200



- Hazard determinations
- Labeling
- Training
- Informational programs
- A hazard communication program, including emergency measures



# Other OSHA Standards Protecting Employees who work with Chemicals:



- Air Contaminants – 1910.1000
- Personal Protective Equipment – 1910.132, 133 and 134
- Chemical specific standards
- Emergency Action Plans – 1910.38
- Spray finishing using flammable and combustible materials 1910.107



Waste Management?  
Where do I begin?



- Count wastes generated each month that are subsequently:
  - Stored, and/or
  - Disposed/ Treated
  - Recycled

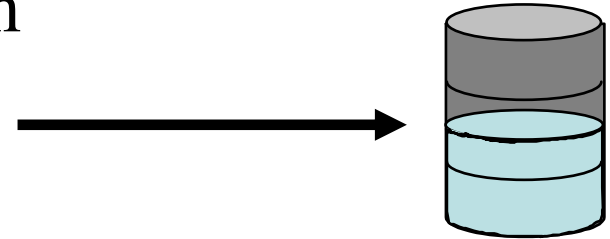


# Hazardous Wastes Not to Count

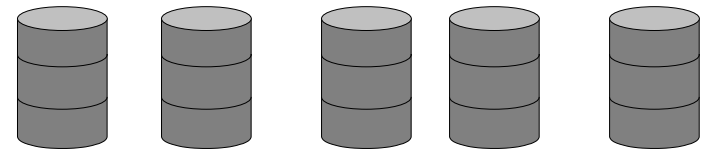


- Wastewater discharged to POTW under an industrial discharge permit
- Wastewater discharged under an NPDES permit
- Wastes recycled in a closed-loop system

- Never generate more than 220 lb. (approx. 30 gal.) of hazardous waste in any month

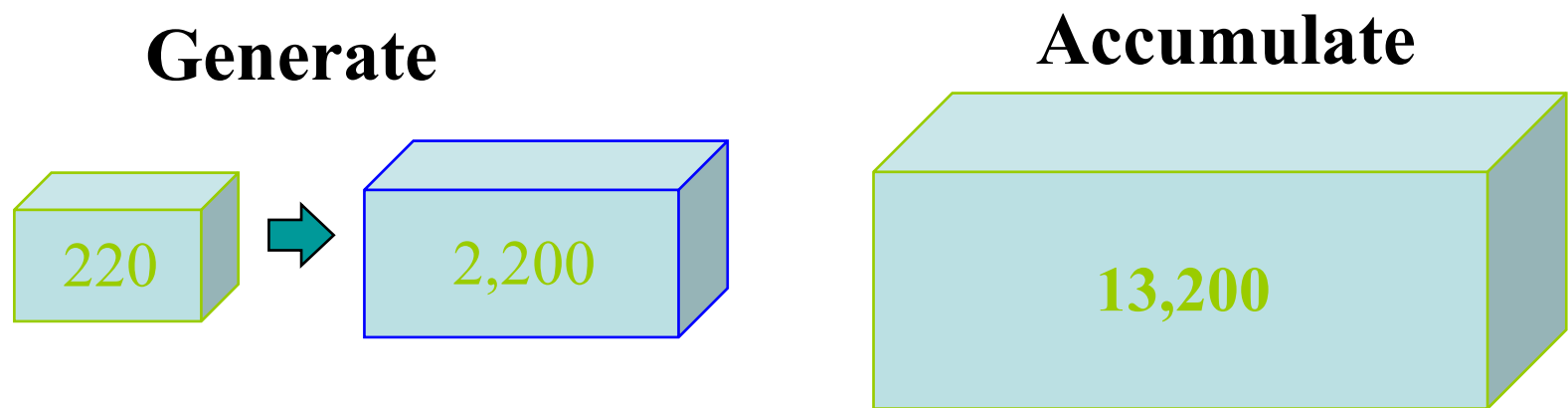


- Never store more than 2,200 lb. of hazardous waste



- Never generate more than 2.2 lb. of acutely hazardous waste (P-listed)

- Generate more than 220 lb. But less than 2,200 lb. of hazardous waste in any month
- Never accumulate/store greater than 13,200 lb. Of hazardous waste



- Generate more than 2,200 lb. of hazardous waste in any month
- Generate or accumulate more than 2.2 lb. of acutely hazardous waste (P-listed) in any month
- Generate more than 220 lb. of debris containing acutely hazardous waste in any month

- Must comply with of the requirements of 120(p)(8). In other words, a full emergency response plan, including training, specified in (p)(8) including:
  - employers required by the EPA or state to have employees engage in emergency response, and
  - employers who direct their employees to engage in emergency response
  - ⇒will be in compliance with (p)(8), because they are also required to comply with (Q)

- Must comply with the requirements of 120(p)(8). In other words, a full emergency response plan, including training, specified in (p)(8) including:
  - Employees required by the EPA or state to have employees engage in emergency response, and
  - Employers who direct their employees to engage in emergency response
  - ⇒ then all of the requirements of (p)(8) will be met by virtue of compliance required with (q)

- Federal and State Requirements
- Generator registration
  - On-site waste management
  - Transportation & manifesting
  - Emergency preparedness & prevention
  - Record keeping & reporting

- Weekly inspections
- Non-leaking containers
- Closed with tight lids
- Labeled
  - “Hazardous Waste”
  - Accumulation date
- Ignitables >50 feet from property

- Required equipment
- Minimum aisle space
- Arrangements with local authorities

- Large Quantity Generators
- Designed to minimize hazards to human health & the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous wastes

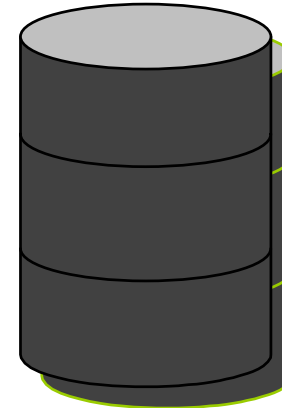
- Obtain EPA/DEQ ID number
- Comply with accumulation time limits\*

## Time Limit

**SQG 180 days**

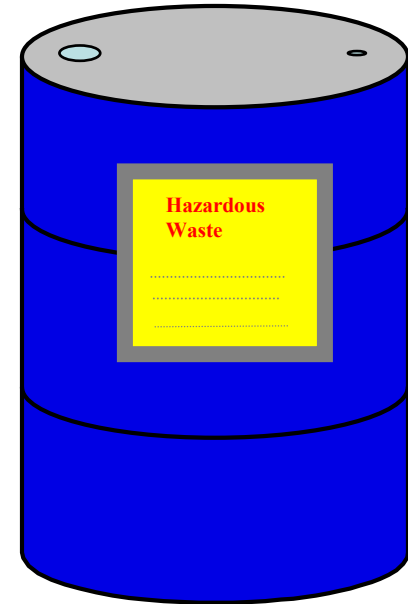
**LQG 90 days**

\*



SQGs: 270-day accumulation time allowed if TSDf is more than 200 miles from facility.

- Accumulate up to 55 gallons of H.W. or 1 quart of acutely H.W.
- Must be at or near point of generation
- Must be under operator's control



- Generally, waste destined for recycling is subject to all generator requirements.
- Off site recycling: solvent pickup service

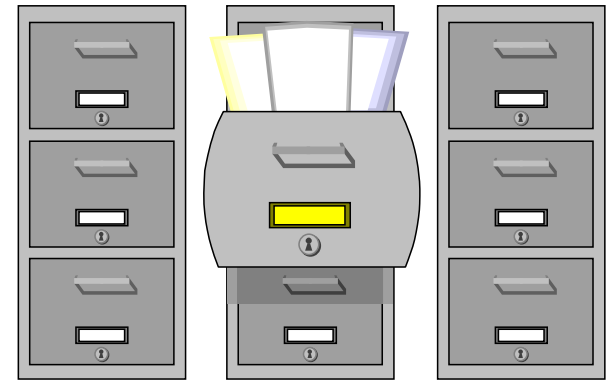
- Must be used to ship hazardous waste.
- Must include all generator, transporter and destination facility information.
  - Names
  - Addresses
  - EPA ID Numbers
  - Phone numbers



- Must be signed and dated by the generator, transporter and TSD facility representative
- Must accurately describe the wastes being shipped
  - Accurate DOT description
  - Container type and number
  - Quantity of waste (volume or mass)
- Copies must be distributed as required and retained for 3 years

- Copy 1 - Destination State
- Copy 2 - Generation State
- Copy 3 - Generator
- Copy 4 - TSDF Copy
- Copy 5 - Transporter 1
- Copy 6 - Destination State
- Copy 7 - Generator State

- Notification must include:
  - All applicable hazardous waste codes
  - Applicable treatment standards
  - Manifest number
  - Signed certification statement
- Records must be kept for 3 years





# Summary of Waste Management Requirements for SQGs and LQGs



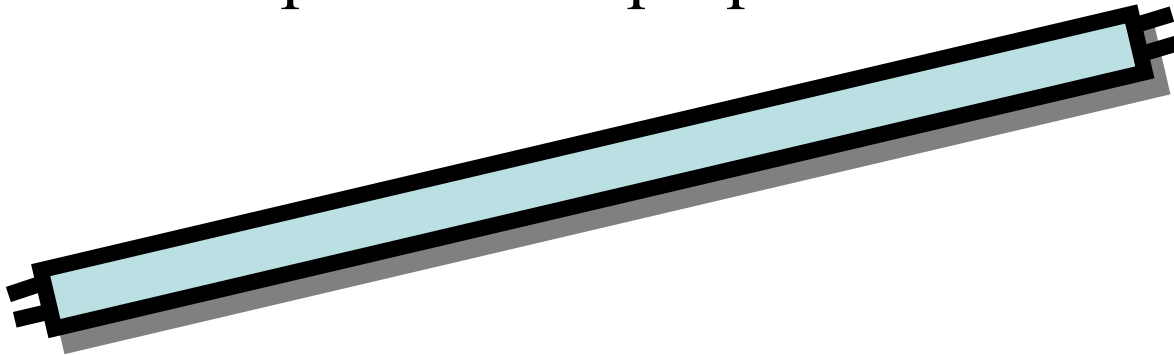
- EPA ID number
- Waste determination
- Container management (Labels, DOT)
- Use a manifest
- Use a registered hazardous waste transporter

	<i><b>CEG/SQG</b></i>	<i><b>LQG</b></i>
• Accumulation Time	180 days	90days
• Accumulation Quantity	3,200 lbs	unlimited

- Maintain adequate aisle space
- Maintain and test emergency equipment:
  - Device to summon emergency assistance
  - Fire extinguishers / fire control equipment
  - Spill control / decontamination equipment
  - Water at adequate volume and pressure



- Universal wastes are hazardous wastes that are very common in residential and commercial locations
- Fluorescent light bulbs are universal waste - they are to be stored in a special light bulb box provided by The Home Depot for this purpose



- Personnel Training Program
  - Directed by individual trained in HW management procedures
  - Ensure employees can respond to emergencies by familiarizing them with waste handling procedures, and emergency systems

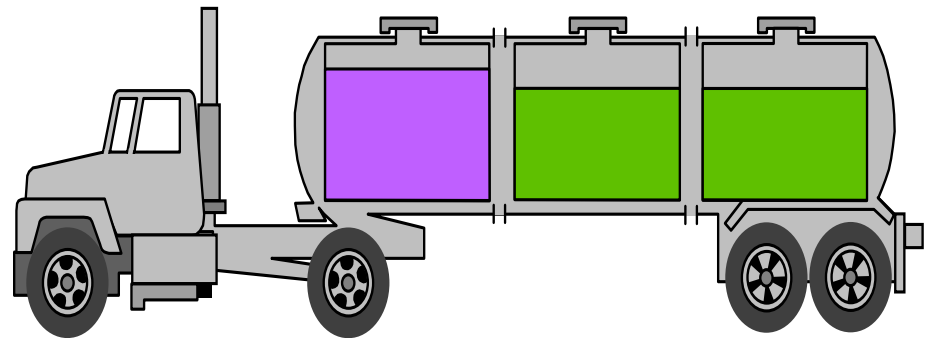


- Complete training within 6 months of hire
- Conduct review training annually
- Document job titles, job descriptions and training descriptions
- Retain records on site

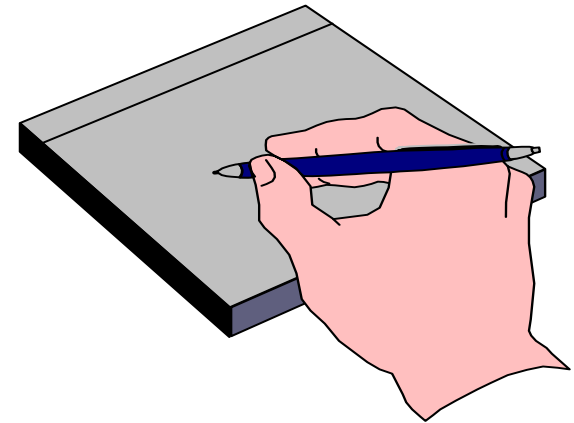


- Typical Waste Streams:
  - Biological wastes
  - Lab packed waste
    - Off spec/expired pharmaceuticals
    - Laboratory solvents/regents
    - Radioactive (labeled) wastes
  
- Single facility with central accumulation area
  - SQG - LQG

- Laws govern transporting hazardous wastes by regulating:
  - Packaging
  - Labeling
  - Marking
  - Placarding



- Preparing waste for shipment
  - Hazardous waste determination
  - DOT shipping name
  - Hazard class
  - UN/NA number
  - Labels
  - Placards



1. Explosives
2. Gases
3. Flammable Liquids
4. Flammable Solids
5. Oxidizers
6. Poisonous
7. Radioactive
8. Corrosives
9. Misc. ORM-D



- Proper identification
  - Shipping Name
  - Hazard Class
  - UN or NA Number
  - Packing Group (I, II, III)
- Emergency Information
  - 800 Number
  - Instructions
- Shipper certification

- Registered hauler
- Uniform hazardous waste manifest (cradle to grave management system)
  - EPA ID Number
  - Keep for 3 years
  - Sign & date
  - TSDf copy back within 45 days (exception report within 35 days)
- Land disposal record (LDR)

- Part A & B permits
- 264 – Permitted facilities
- 265 – Interim status

- Devised by OSHA, EPA and RSPA
- Meets requirements of OSHA's emergency plan, HAZWOPER, the Process Safety Standard and EPA requirements
- Found at Vol. 61 Federal Register 28642
- Combines recognition, notification, initial response, mobilization and implementation

- What type of operation are you running?
  - If you have employees at a hazardous waste clean up or uncontrolled waste site, or a site for treatment storage or disposal of hazardous waste, or are an emergency responder ⇒ portions of the HAZWOPER standard (29 CFR 1910.120) apply to you
  - If you are an employer who routinely manufactures or uses chemicals ⇒ Hazard Communication Standard (29 CFR 1910.1200) for employees; OSHA personal protective standards, health standards, possibly chemical specific standards, and EPA for environmental issues

## What type of chemicals do you use?

- Identify substances with which your employees work
- Identify the quantities of the substances
- Identify method of employee contact with the substance
- Identify duration of the contact
- ➡ Is your chemical listed in a specific standard?  
(29 CFR 1910, Sub H)

- Secretary of Labor v. Akzo Nobel Chemicals, Inc. *OSHRC Docket No. 96-0062*
- Secretary of Labor v. Alaska Trawl Fisheries, Inc. *OSHRC Docket No. 89-1017 & 1192*
- Secretary of Labor v. Mead Coated Board, Inc. *OSHRC Docket No. 01-0551*
- Secretary of Labor v. Yellow Freight, *OSHRC Docket No. 93-3292*
- Secretary of Labor v. Westinghouse Haztec, Inc., *OSHRC Docket No. 88-2458*
- Secretary of Labor v. Wiley Organics, *OSHRC Docket No. 91-3275*

# Q&A

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