Release Reporting

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What is a Release

- ✓ Spill
- ✓ Leak
- ✓ Pump
- ✓ Pour
- ✓ Emit
- ✓ Empty
- ✓ Discharge
- ✓ Inject
- ✓ Escape
- ✓ Leach
- ✓ Dump
- ✓ Dispose

- Is it a Reportable Release?
- Is it below reporting thresholds?

Environmental Emergencies Release Reporting

- Chapter 6 in Michigan Guide to Environmental, Health & Safety Regulations
  - Release Notification (page 6-21)
  - Follow-up Release Report (page 6-23)
  - Release Reporting Table (page 6-25)
  - Example Release Calculations (6-34)
  - Release Response Cleanup (6-36)
- *While diligent efforts have been made to assure that the information provided in this presentation is accurate and complete there is no guarantee that it covers all of the regulatory requirements for release notification and reporting in Michigan Public health issue/basement backups*

Release Notification Requirements Table

- www.michigan.gov/chemrelease
- This table should be used as a tool to identify potential reporting requirements before a release occurs, and to identify follow-up reporting requirements based on the release.
- WHAT
- WHEN
- TO WHOM &
- HOW releases must be reported in State & Federal
- Regulations that apply in Michigan.

Release Reporting

- Chemical releases in Michigan are potentially reportable under one or more of twenty-seven different state and federal regulations.
- Determining which regulations apply to a specific release can be an overwhelming task
- Reporting Criteria
  - Check your permits, licenses, registrations, pollution prevention plans, and local ordinances for additional release reporting requirements.
  - In particular, all National Pollutant Discharge Elimination System permits and most air permits have release reporting requirements in them that are not included on this table.
  - Different regulations can have different reportable quantities for the same chemical
  - Research the regulations and key out which release reporting requirements apply to your facility.
- Release Reporting Preparation
  - Do a thorough inventory of your chemical and hazardous waste storage
  - Determine which State and Federal Release Reporting Regulations apply to your facility

  - Have an emergency plan in place for when a spill occurs
  - Create a list of officials and clean-up services who need to be immediately contacted (911, PEAS, NRC, and LEPC etc.)
  - Develop a checklist that can be used to help you a document a spill should it occur.
- Releases can be prevented by using care when storing, transferring, and transporting regulated materials
  - Train all personnel in spill prevention techniques. Some regulations indicate who, at a minimum, must be trained for handling regulated material and waste.
  - Practice safe loading and unloading procedures.
  - Have inventory control procedures track material from receipt to disposal.
  - Post warning and instructional signs in appropriate places.
  - Adequately label all containers.
  - Use pumps or funnels to transfer liquids.
  - Keep lids and covers on containers to control spills and evaporation.
  - Use seal-less pumps.
  - Install spill basins or dikes in storage areas.
  - Install splash guards and drip boards on tanks and faucets.
  - Use drip buckets under liquid spigots.
  - Prohibit outside draining or replacement of fluids over the ground or on pavement not designed for containment.

Initial Notification

- When
  - Immediate (within 15 min)
  - Within 24 hours
  - Within 30 days
  - As soon as practical
  - As soon as practicable
  - Promptly
  - As soon as possible
  - Within 8 hours
  - Earliest practicable moment
  - Non-Point Source Water
- Worst Case
  - Immediate means within **15 MINUTES AFTER DISCOVERY OF THE RELEASE**
- To Whom
  - 911
  - PEAS
  - MDARD
  - LEPC
  - NRC
  - LARA
  - SERC
  - DEQ-RRD (and other divisions)
- Bottom Line – If there is a release, IMMEDIATELY notify:
  - Local – 911
  - MDARD (Agricultural) Hotline 800-405-0101
  - State – (PEAS) 800-292-4706
  - Federal – NRC 800-242-8802
- Then assess the situation and make additional notifications as required.
- THERE ARE NO PENALTIES FOR OVER-REPORTING!!

Assess and Contain

All hazardous and/or toxic chemical release responders need to *consider* the following actions:

- Immediately *assess* the nature of the release; chemicals and exposure pathways of concern; toxicity; safety; type of personal protection equipment (PPE) needed; and take appropriate response and cleanup actions to protect the health and safety of those in the affected area, when and where possible.

- If possible, quickly work to contain the release to prevent the spread of contamination.
  - Cover floor drains to prevent the release from reaching the sewer and dike the release with absorbents such as spill pillows or cat litter and dirt as necessary to prevent it from spreading.
- Staff responding to the release must be trained in wearing the appropriate Personal Protection Equipment (PPE)

Prevention and Planning

- Most facilities managing hazardous and/or toxic chemicals are required to have an environmental release prevention and response plan in the event of a release.
  - These plans need to be practical, efficient, and provide useful instructions to trained facility personnel that can be easily followed to clean up a release.
  - Clean up contamination quickly to prevent impacts to human health and the environment.

Release Response

- Waste generated from a cleanup must be properly characterized, managed, and disposed in accordance with applicable state and federal regulations.
- Communicate with the environmental regulatory agencies in your area during the planning phase or in advance of any release.
- Your DEQ District Office can provide additional guidance to help assure your response is appropriate and cost-effective.

Follow-Up Notification

- Written Follow-up Report
  - REQUIRED BY REGULATION
    - Specified Form
    - Specified Information
  - DEQ general form: "Spill or Release Report"
    - Also use to document initial notification
- AS SOON AS PRACTICABLE MEANS WITHIN 30 DAYS AFTER DISCOVERY OF THE RELEASE

Release Reporting and Chemical Lists

Several Chemical Lists exist (both State and Federal) that contain thresholds for Release Reporting

- U.S. EPA's List of Lists includes
  - CERCLA - Hazardous
  - SARA Title III EHS Toxic (section 313)
  - CAA - Extremely Hazardous Air Pollutant - section 112(r) - Updated March 2015
  - ✓ CAS = Chemical Abstracts Service No.
  - ✓ EHS = Extremely Hazardous Substance
  - ✓ TPQ = Threshold Planning Quantity
  - ✓ *RQ = Reportable Quantity*
  - ✓ CAA = Clean Air Act
  - ✓ TQ = Threshold Quantity
  - ✓ *Amounts in POUNDS*
- Gallons to Pounds Formula for Conversion

Gallons of Substance
x
Weight of Water (8.34 lbs. per gal)
x
Specific Gravity (Relative Density) from **M**SDS
=
Pounds of Substance

The specific gravity (also called the relative density) can be found in the "Physical & Chemical Properties" Section of the SDS

- Conversion Example - Look up: Ammonia, CAS = 7664-41-7
  - Lists of Lists Eample
    Section 302 (EHS) TPQ = 500
    Section 304 EHS RQ = 100
    CERCLA RQ = 100
    Section 313 = 313
    RCRA Code = NONE
    CAA 112(r) TQ = None
    10,000 if anhydrous
- Chemical Lists -State
  - NREPA Part 31 Water Resources Protection
    - Part 5 Rules - Spillage of Oil & Polluting Materials
    - Table 1: Polluting Materials
      - TRQ = Threshold Reporting Quantity
- PART 5 RULES POLLUTING MATERIALS Example
  Look up: Ammonia
  TRQ = 10 lbs.
- EXAMPLE 1 - Ammonia Release
  - When is a release of ammonia subject to reporting?
  - SARA Title lll Section 304 Example
  - NREPA Part 31 Example
- EXAMPLE 2.
  A textile company had a release of 860 gallons of sodium hydroxide solution to the soil. Of this, 15% reached the river.
  1.a. Notify
    - 911
    - PEAS
    - NRC

  1.b. Respond
  2. Follow-up
    - Investigate
    - Calculate
    - Report
  - Calculate Release
    1. Identify the hazardous ingredients and weight % in the sodium hydroxide solution.
       - **CAS = _____**
       - **Weight % = _____**
    2. Calculate the weight of the released sodium hydroxide solution.

       860 gal of NaOH Solution
       x
       Weight of Water: _____
       x
       Specific gravity on SDS: _____
       =
       NaOH Solution Released: _____

    3. Calculate the weight of the released hazardous ingredients.
       3(a). How many pounds of sodium hydroxide were released to the soil?
       _____ NaOH solution
       X
       _____ NaOH concentration
       =
       _____ NaOH

3(b). How many pounds of sodium hydroxide reached the river?

_____ lbs. NaOH released to soil

X

_____ % reached the river

=

_____ lbs. NaOH reached the river

4. Compare to Reportable Quantity (RQ). (The RQ depends on the regulation.)
   Sodium Hydroxide
   CAS No. = 1310-73-2
   Released to soil = _____
   Released to river = _____
   CERCLA RQ = _____
   SARA EHS RQ = _____
   SARA Toxic? _____
   Part 5 Rules TRQ = _____
5. What regulations apply to this release of sodium hydroxide solution?
   SARA sect 304
   CERCLA sect 103
   NREPA Part 201
   Fire Prevention Code sect 29.5g
   NREPA Part 31, Part 5 Rules

Summary

- Notification (call 911, PEAs, NRC, Ag Hotline)
- Secure the Site
- Investigate
- Follow-up Reporting
- IMPORTANT !
- ALL RELEASES MUST BE CLEANED UP
  - even if not reportable.