



**NTH Consultants, Ltd.**  
Infrastructure Engineering  
and Environmental Services



***PRESENTATION:***

# Overview of Emergency Response Plans

***PRESENTED BY:***

Marianne Gutknecht

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## Our Speaker



**Marianne S. Gutknecht**

[mgutknecht@nthconsultants.com](mailto:mgutknecht@nthconsultants.com)

248-662-2743



## Topics of Today's Presentation

- Hazardous Waste Contingency Plans (HWCP)
- Spill Prevention, Control, and Countermeasures (SPCC) Plan
- Facility Response Plan (FRP)
- Pollution Incident Prevention Plans (PIPP)
- FL/CL Emergency Action Plan
- Storm Water Pollution Prevention Plan (SWPPP)
- Risk Management Plan (RMP)
- HAZMAT Security Plan
- Federal Site Security Plan
- Integrated Contingency Plan (ICP)



## Who Can Benefit from an Emergency Response Plan?

- Even if not required to have a written plan, you are responsible for any release from your property.
- Your company can avoid fines and penalties for non-compliance.



## Hazardous Waste Contingency Plan

- Required for Small Quantity Generators (SQG) and Large Quantity Generators (LQG)
- Encouraged for Conditionally Exempt Small Quantity Generators (CESQG)
- LQG's require a written plan



## Hazardous Waste Contingency Plan

### Small Quantity Generators Must:

- Designate one employee as a emergency response coordinator;
- Post name and telephone numbers of emergency response coordinator(s) and local fire department;
- Post locations of fire extinguishers, alarms, and spill control equipment;
- DEQ's Hazardous Waste Emergency Information form (EQP3472)



# HAZARDOUS WASTE EMERGENCY INFORMATION

EMERGENCY NAME \_\_\_\_\_

COORDINATOR PHONE \_\_\_\_\_

ALTERNATE NAME \_\_\_\_\_

PHONE \_\_\_\_\_

FIRE DEPT. PHONE \_\_\_\_\_

HOSPITAL PHONE \_\_\_\_\_

POLICE PHONE \_\_\_\_\_

Fire alarm is located: \_\_\_\_\_

\_\_\_\_\_

Spill control equipment is located: \_\_\_\_\_

\_\_\_\_\_

Fire extinguishers are located: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Map of facility with emergency equipment, spill equipment, exit routes, and alarm locations.

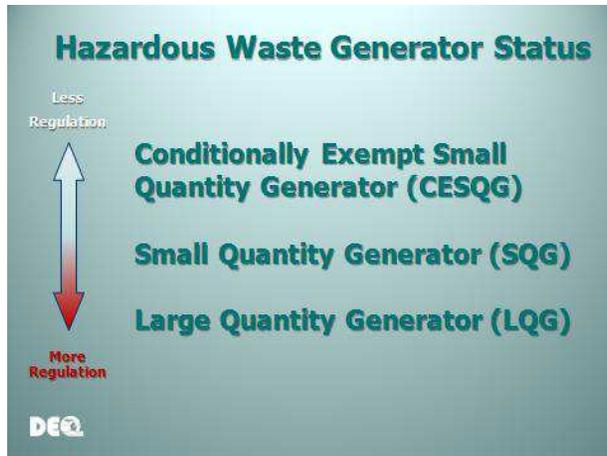


National Response Center: 1-800-424-8802  
 Michigan Pollution Emergency: 1-800-292-4706

Provided by: The Environmental Assistance Division and the Waste Management Division of the Michigan Department of Environmental Quality  
 Environmental Assistance Center 1-800-662-9278

Other hazardous waste requirements may apply.





## Hazardous Waste Contingency Plan

### Large Quantity Generators Must:

- Prepare a written plan to include:
  - Emergency coordinators
  - Written procedures
  - List of emergency equipment
  - Evacuation diagrams
- Provide copy of plan to local emergency responders;
- Provide annual training;
- Annually review your plan.



## Spill Prevention Control and Countermeasure Plan (SPCC)

- 40 CFR 112 EPA Regulations on Oil Pollution Prevention
- Required if:
  - Total aboveground storage in tanks is **greater than 1,320 gallons** and/or
  - Underground storage **greater than 42,000 gallons**
- Non-transportation facility
- Reasonable chance of discharge to waters



## Spill Prevention Control and Countermeasure Plan (SPCC)

- Oil in any form or kind includes:
  - Petroleum and fuel oils
    - Gasoline
    - Diesel
    - Lube oils
    - Aviation gasoline
    - Naptha
    - Mineral spirits
  - Sludge
  - Synthetic oils
  - Oil refuse
  - Oil mixed with wastes
  - Animal fats, oils and greases
  - Vegetable oils
  - Mineral oils



## Spill Prevention Control and Countermeasure Plan (SPCC)

- Bulk storage containers counted towards the 1,320 gallons and includes any container greater than 55-gallons.
- Permanently closed tank/containers are exempt

Permanently closed must:

- Remove all liquid and sludge
- Disconnect and blank off lines and piping
- Close and lock valves
- Post sign



# SPCC Applicable?

Yes!!!

No!!!





## Spill Prevention Control and Countermeasure Plan (SPCC)

- PE review and certification of the plan
- Option for “self-certification” for facilities with less than 10,000 gallons of oil
- Management approval
- 5-year plan review
- Amend the plan within 6 months for technical changes
- Maintain a copy of the plan ( does not need to be sent to the EPA)
- Maintain records for 3 years



## Spill Prevention Control and Countermeasure Plan (SPCC)

- SPCC plan to include:
  - Facility diagrams
  - Oil inventory and spill predictions
  - Appropriate secondary containment or diversionary structures
  - Procedures for spill prevention and response
  - Release reporting contact list and phone numbers
  - Bulk storage container inspections, and integrity testing
  - Loading/unloading procedures
  - Transfer procedures
  - Personnel training



## Facility Response Plan (FRP)

- 40 CFR 112.20 EPA Regulations for Oil Pollution Prevention (also 33 CFR 154 Requirements for Coast Guard)
- Required if total aboveground storage in tanks is **greater than 1,000,000 gallons**
- **And** meets one of the following conditions:
  - Not sufficient secondary containment
  - Located a distance that a discharge would cause “injury” to fish, wildlife, or sensitive areas, or shut down a public water intake
  - Reportable discharge  $\geq 10,000$  gallons within the past 5 years



## Required Elements of an Facility Response Plan

- Emergency Response Action Plan
- Facility Information
- Emergency Response Information
- Hazard Evaluation
- Response Planning Levels
- Discharge Detection Systems
- Plan Implementation
- Self Inspection, Drills/Exercises, and Response Training (Contracts with OSRO)
- Diagrams
- Security Systems
- Response Plan Cover Sheet



## Facility Response Plan (FRP)

- Submit to EPA for review and approval
- Facility must revise the FRP in accordance with the changes requested by the EPA
- Five year review with agency
- Detailed requirements given in 40 CFR 112, Appendix F



## Pollution Incident Prevention Plans (PIPP)

- MDEQ's Part 5 Spillage of Oil and Polluting Materials Rules
- Polluting materials include oil, salt, or any material listed in Table 1 (R 324.2009)
- Polluting materials ~900 chemicals, complete list is in Part 5 Rules
- Applies to on-land facilities
- [http://www7.dleg.state.mi.us/orr/Files/AdminCode/318\\_10296\\_AdminCode.pdf](http://www7.dleg.state.mi.us/orr/Files/AdminCode/318_10296_AdminCode.pdf)



## Pollution Incident Prevention Plans (PIPP)

- For oil:
  - Single container  $\geq$  660 gallons
  - Total capacity  $\geq$  1,320 gallons of all oil tanks, drums, and other containers
- Oil in any form or kind includes:
  - Animal fats
  - Fuel Oil
  - Gasoline
  - Oil mixed with waste
  - Oil refuse
  - Oily sludges
  - Petroleum
  - Synthetic Oils
  - Used Oil
  - Vegetable Oils



## Pollution Incident Prevention Plans (PIPP)

- *Oil Storage/On-land Facility Exceptions*
- Oil field, petrol, or brine storage facilities
- Recreational marinas
- Installations of oil-containing electrical equipment
  - Transformers
  - Capacitors
  - Reclosers
  - Circuit breakers
  - Voltage regulators
  - Rectifiers
- Flammable and combustible materials exemption
- Surveillance, storage, and release reporting requirements



## Pollution Incident Prevention Plans (PIPP)

- For **salt**:
  - in solid form  $\geq 5$  tons
  - in liquid form  $\geq 1000$  gallons
- Salt includes:
  - Sodium chloride
  - Potassium chloride
  - Calcium chloride
  - Magnesium chloride
  - Solutions or mixtures of these compounds



## Pollution Incident Prevention Plans (PIPP)

- For **polluting materials**:
  - Indoor locations  $\geq$  2200 pounds
  - Outdoor locations  $\geq$  440 pounds
- Polluting materials ~900 chemicals, complete list is in Part 5 Rules:
- Examples of common polluting materials
  - Caustic Soda, Sodium Hydroxide, and Alkalis
  - Sulfuric, Nitric and Hydrochloric Acid
  - Ethylene Glycol
  - Phosphoric Acid
  - Betz, GE, and/or Nalco Chemicals



## Pollution Incident Prevention Plans (PIPP)

- Self-implementing
- Send notifications to MDEQ, local LEPC and health department
- Secondary containment requirements
- Spill notification requirements
- Spill prevention and control requirements
- 3 year plan review



## FL/CL Emergency Action Plan

- Flammable and combustibles
- The plan *must* include:
  - Emergency procedures
  - Appointing and training personnel
  - Conducting drills
  - Maintenance and operation procedures
  - Emergency shut down procedures
  - Safety of occupants
- Kept in operating area or posted if unattended



## Storm Water Pollution Prevention Plan (SWPPP)

- Required if your facility has a permit to discharge stormwater associated with industrial activity;
- The SWPPP *must*:
  - Signed by a Certified Storm Water Operator
  - Certified by the permittee or authorized agent
  - Kept on-site
  - Reviewed annually
  - Prepare annual report
- DEQ's Annual Review Report Form (EQP5962)



## Storm Water Pollution Prevention Plan (SWPPP)

- Elements of the SWPPP include:
  - Site map
  - Significant material evaluation
  - Comprehensive site inspections
  - Description of good housekeeping practices
  - Routine maintenance schedule
  - Employee training program
  
- Maintain documentation for 3 years
  
- MDEQ website has SWPPP template



The meaning of increased  
**risk management** used  
compensation for potential  
guard against loss  
taken i

## Risk Management Plan (RMP)

- Section 112(r) of the Clean Air Act Amendments (40 CFR Part 68)
- Chemical accident prevention for facilities that manufacture, use, or store extremely hazardous substances
- List of ~ 150 toxic and flammable substances, including threshold quantities
  - Ammonia – 10,000 pounds
  - Chlorine - 2,500 pounds
  - Flammables – 10,000 pounds
- Appendix A of 40 CFR Part 68 EPA's "List of Lists" identifies these substances



The meaning of increased  
**risk management** used  
compensation for potential  
guard against loss  
taken

## Risk Management Plan (RMP)

- Risk Management Program includes:
  - Hazard Assessment
  - Prevention Program
  - Emergency Response Program
- Submit to the EPA using RMP\* eSubmit
- Revise and resubmit every 5 years
- Current regulations may be updated to add more chemicals and align more closely with OSHAs Process Safety Management



## Hazmat Security Plan

- U.S. Department of Transportation
- Requires shippers of any of the following hazardous materials to develop a plan:
  - Radioactive materials
  - Explosive materials
  - Extremely toxic by inhalation
  - Bulk packaging
  - Hazardous materials
- Personnel security, unauthorized access, and en route security



## Facility Site Security Plan (SSP)

- U.S. Department of Homeland Security
- Approximately 300 chemicals of interest including: chlorine, propane, hydrogen, ammonia, nitric acid, vinyl chloride, ethylene oxide, and formaldehyde
- Industries that may be impacted include:
  - Chemical manufacturing and storage
  - Energy and utilities
  - Agriculture and food
  - Paints and coatings
  - Explosives
  - Mining
  - Electronics
  - Plastics
  - Healthcare



## Facility Site Security Plan (SSP)

- Prepare vulnerability assessments
- Security standards such as
  - Securing the perimeter and critical targets Controlling access
  - Deterring theft of potentially dangerous chemicals
  - Preventing internal sabotage
- Inspections



## Common Elements of Emergency Response Plans

- Facility information
- Training
- Spill prevention/response procedures
- Site plans/maps
- Notification requirements
- Accountability (identified personnel)



## Integrated Contingency Plan (ICP)

- Facility may use the ICP sample format or an alternative format
- The ICP sample format includes three sections:
  - Plan Introduction
  - Core Plan
  - Supporting Annexes



## Integrated Contingency Plan (ICP)

- Consolidates multiple facility response plans into one plan
- Minimizes duplication and may simplify plan
- May improve coordination of planning and response activities within the facility and public agencies
- Common integrated plans include:
  - SPCC/PIP
  - SPCC/PIP/SWPPP
  - SPCC/PIP/SWPPP/HWC
  - RMP/OSHA's Process Safety



## Why having a Plan in Place Makes Economic Sense

### Potential Consequences...

- Civil enforcement penalties start at \$27,500 for each day of violation
- Includes fines for failing to notify the appropriate Federal agency of a discharge (a maximum of \$250,000 for an individual or \$500,000 for an organization)
- Criminal enforcement penalties for violations have a maximum of \$250,000 and 15 years in prison



## Other Potential Benefits

- Reduces liabilities related to workplace safety
- Identifies current or potential future problems that need to be addressed
- Assists in the exchange of information between plants of subsidiary companies
- Demonstrates company commitment to environmental protection to employees, public, and authorities



# REFERENCES





## A FEW USEFUL WEBSITES

1. EPA's Facility Response Plan /Spill Prevention Control Countermeasure Plan  
<http://epa.gov/OEM/content/frps/index.htm>
2. EPA's Risk Management Plan:  
<http://www2.epa.gov/rmp>
3. Michigan's Part 5 Rules – Pollution Incident Prevention Plan (PIPP)  
[http://www.michigan.gov/deq/0,4561,7-135-3313\\_23420---,00.html](http://www.michigan.gov/deq/0,4561,7-135-3313_23420---,00.html)
4. Michigan's Industrial Stormwater Program:  
[http://www.michigan.gov/deq/0,4561,7-135-3313\\_3682\\_3716---,00.html](http://www.michigan.gov/deq/0,4561,7-135-3313_3682_3716---,00.html)
5. Michigan's Guide to Environmental, Health, and Safety Regulations (June 2014):  
[http://www.michigan.gov/deq/0,4561,7-135-3310\\_4148-15820--,00.html](http://www.michigan.gov/deq/0,4561,7-135-3310_4148-15820--,00.html)
6. Michigan's Hazardous and Liquid Industrial Waste  
[http://www.michigan.gov/deq/0,4561,7-135-3312\\_4118\\_4240---,00.html](http://www.michigan.gov/deq/0,4561,7-135-3312_4118_4240---,00.html)



Marianne Gutknecht  
[mgutknecht@nthconsultants.com](mailto:mgutknecht@nthconsultants.com)  
248-324-5367

# QUESTIONS?

