

Part 5 Rules: “Spillage of Oil and Polluting Materials”

Andrew Bahrou
DEQ Water Resources Division
Southeast Michigan District Office
586-753-3775
BahrouA@Michigan.gov



Part 5 Rules:

“Spillage of Oil and Polluting Materials”

Part 5 Rules Structure:

1. Definitions
2. Definitions
3. Conditional Exemptions
4. Oil storage and on-land facility surveillance
5. Secondary Containment
6. Pollution Incident Prevention Plan
7. Pollution Incident Report
8. Enforcement
9. List of other pollutants (~900 chems)

Part 5 Rules - Applicability

Who is regulated?

- Temporary or Permanent facility
- Land-based facility
- Receives, uses, stores, ships, manufactures or processes

Polluting Materials in excess of
Threshold Management Quantities.

Facility Definition

If any of the follow values are met, a location is considered to be a facility

Oil Storage Facility

- 1,320 aggregate gallons **capacity** in above-ground containers, or
- 660 gallons **capacity** in a single container

On Land Facility

- 5 tons of solid salt, or
 - 1,000 gallons of liquid salt
- or -
- 440lbs of listed polluting materials **outdoors**, or
 - 2,200lbs **indoors**



Facility Exemptions

Oil Storage Exceptions

- Oil fields - petroleum or brine storage
- Recreational Marinas
- Installations of oil-containing electrical equipment
 - Transformers
 - Capacitors
 - Reclosers
 - Circuit Breakers
 - Voltage Regulators
 - Rectifiers
- Transportation related facilities per 40 CFR Part 112



Part 5 Rules - Applicability

What is regulated?

Polluting Materials:

- Oil
- Salt
- Table 1 Compounds

Polluting Materials:

- Oils

- Petroleum
- Fuel Oil
- Oily sludges
- Oil mixed w waste
- Synthetic oil
- Gasoline
- Grease
- Oil refuse
- Hydraulic oil
- Vegetable oils

- Salts

- sodium chloride
- potassium chloride
- calcium chloride
- magnesium chloride
- solutions or mixtures of these salts

- Other Pollutants

- ~900 chemicals, complete list is in Part 5 Rules specification

Part 5 Rules - Applicability

Polluting Materials commonly found at municipal operations

- Salt/Brine
- Sodium Hypochlorite
- Aluminum Sulfate
- Ferric Chloride
- Sodium bisulfite
- Potassium Permanganate
- Acids/bases
- Ethylene Glycol
- Used Oil

Part 5 Rules - Applicability

What is regulated?

Threshold Management Quantities:

- Oil – Storage Capacity
 - Total 1,320 gallons, single tanks >660 gallons
- Salt
 - Solid – 5 tons
 - Liquid – 1,000 gallons
- Table 1 Compounds
 - Indoors – 2,200 lbs
 - Outdoors – 440 lbs

Part 5 Rules – Applicability (What)

Table 1: Polluting Materials

Name	CAS	(TRQ - lbs.)
Acetaldehyde, trichloro-	75876	(500)
Acetamide	60355	(10)
Acetic acid	64197	(500)
Acetic anhydride	108247	(500)
Acetone	67641	(500)
Acetonitrile	75058	(500)
...

General Facility Conditional Exemptions

Exceptions

- Containers <10 gallons or <100lbs, given that they are indoors with safeguards preventing release to state waters
- Manufactured Items – solids that do not leach
- Materials already regulated, for example:
 - Oils subject to Federal SPCC Rules
 - Hazardous Waste subject to Part 111
 - Flammables & Combustibles subject to Act 207, MI Fire Prevention Code
 - Underground storage tanks subject to Part 211/213
 - Oil & Gas production wells subject to Part 615





Part 5 Requirements

Salt & Chemicals (“on-land facilities”)

- Surveillance
- Secondary Containment
- Pollution Incident Prevention Plan
- Release Reporting

Part 5 & Oil

- Oil Storage Facilities must comply with *portions* of Part 5:
 - Surveillance
 - Use Area & Indoor Storage Rules
 - Release Reporting

Part 5 Requirements

Surveillance

- Maintain adequate surveillance of processes and storage areas to detect and respond to spills to prevent release to waters of the state.

Part 5 Requirements

Secondary Containment

- Three Categories
 - Liquids – outdoor storage
 - Liquids – indoor storage & use areas
 - Solids

Part 5 Requirements

Secondary Containment

- **Liquid outdoor** storage
 - Compatible & Impervious
 - Greater of 10% total volume or 100% of largest tank
 - Surveillance, leak detection, and precipitation removal



NO SMOKING

1203

Unleaded

Winston
NO BULL

383

297

**GASOLINE
KEEP FIRE AWAY
FLAMMABLE LIQ**

**NO SMOKING
50 FT**



Part 5 Requirements

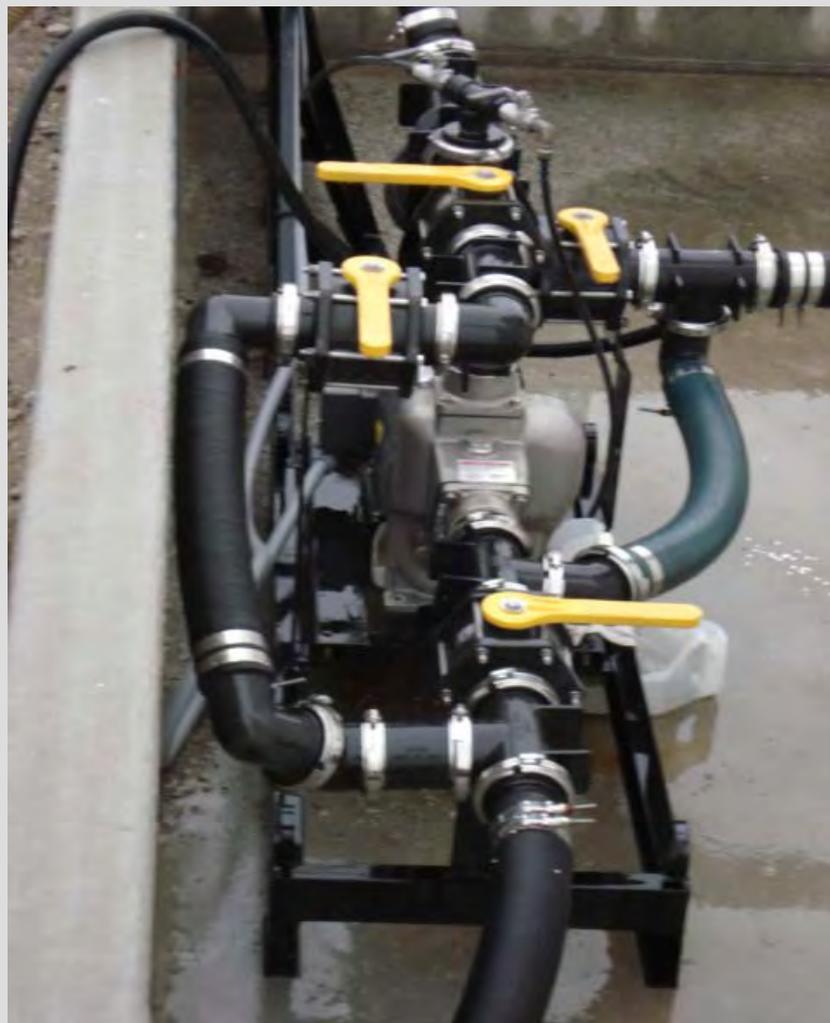
Secondary Containment

- **Indoor storage & use areas**
 - Designed, constructed & maintained to prevent a release, directly or indirectly, to waters of the state.

TRANSFER



LOADING



CFE Crystal Flash Energy

EMERGENCY NUMBERS

POLICE FIRE 911
CRYSTAL FLASH
ENERGY 888.286.6227
AFTER HOURS 888.286.6227
CRYSTAL FLASH
DRAIN SERVICE 815.363.2811
WIND
SETBACKS

USED OIL



051021



Top Industry Pay
Experienced Drivers Needed

- Success Begins Here
- Excellent Programs
- Business Advantages

866-208-8050
Call Us Today!

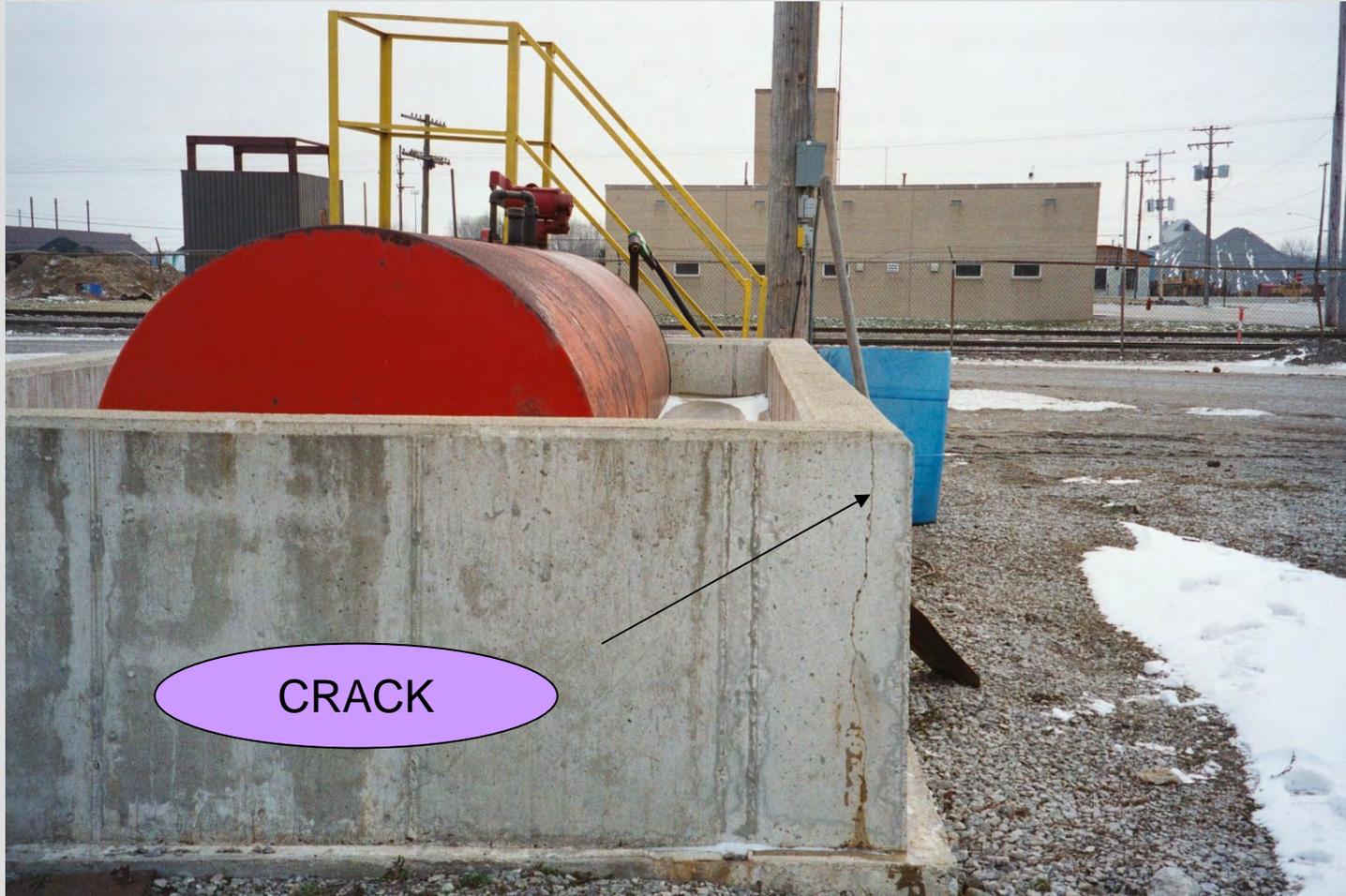




DISCHARGE



CRACKED



CRACK



Solid Material Storage

- Enclosed to prevent run-on, runoff, seepage, or leakage into any state waters or sewer
- Not within 50ft of wetland, shore, lake or stream
- If on 100yr flood plain, containment must be designed to withstand such flood







Office of the
County Clerk
of the
County of
Harris





Part 5 Requirements

Pollution Incident Prevention Plan (PIPP)

- Basic facility info
- Detailed site map
- Emergency notification procedures
- Spill control and cleanup procedures
- Polluting material inventory
- Secondary containment description
- Precipitation management
- Security measures

Part 5 Requirements

PIPP Notification

- DEQ Water Resources Division
District Office
- County Health Department
- Local Emergency Planning
Committee (LEPC)

Part 5 Requirements

PIPP Updates

- Review/Revise every 3 years
- Review/Revise after any release
- Re-notify DEQ, Health Dept, Local Emergency Planning Committee

Part 5 Requirements

Release Reporting

- Report All Releases over
Threshold Reporting Quantities
 - Call PEAS 1-800-292-4706
 - 9-1-1
 - Written Report – 10 days

Part 5 Requirements

Release Reporting – What is a Release?

Release defined under Part 201:

Spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, disposing, or abandonment...into the environment

Part 5 Requirements

Release Reporting – What is not a Release?

Exemptions:

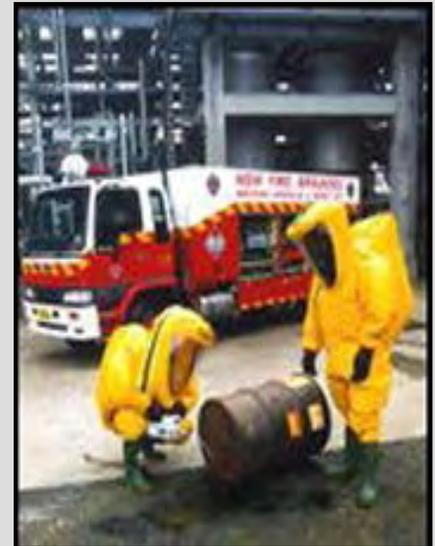
- Permitted discharges
- Air emissions
- <1,000 gallons of Polluting Material into secondary containment
- < 55 gallons oil to ground or water
 - If effectively cleaned-up immediately

Rule 2b, Release Reporting Exemptions

Exempt if a pollutant release was contained by **secondary containment** that **complies with rules**

Conditions:

- release is <1,000 gallons
- cleanup starts within 24 hrs
- cleanup finishes within 72 hrs
- no pollutants reach sewer or state waters



Rule 2b, Release Reporting Exemptions

Oil on ground surface exception

- release is <55 gallons
- release is detected and recovered within 24 hrs
- oil does not reach sewer or state waters

Oil on surface water exception

- release is <55 gallons
- effective recovery measures are used immediately upon detection

Part 5 Requirements

Release Reporting

Threshold Reporting Quantities (TRQs)

- Oil

- To the ground > 50 lbs
- To Waters of the State – Any quantity that causes a sheen

Part 5 Requirements

Release Reporting - TRQs

- Salt
 - Solid > 50 lbs
 - Liquid > 50 gallons



Part 5 Requirements

Release Reporting - TRQs

- Table 1 Compounds
 - Chemical Specific TRQs



Pounds to Gallons Conversion

LBs = Specific Gravity x 8.34 lbs/Gallon x Gallons of Material

Example: Acetone: TRQ = 500lbs, Specific Gravity = .79

$0.79 \times 8.34 \text{ lbs/gal} \times X \text{ Gallons} = 500\text{lbs}$

$6.6\text{lbs/gal} \times X \text{ Gallons} = 500\text{lbs}$

$X \text{ gallons} = 500 \text{ lbs} \div 6.6 \text{ lbs/gal}$

$X = 75.75 \text{ gallons spilled to exceed TRQ}$

Find Specific Gravity of a chemical

- MSDS
- Internet Search



Calculate TRQ for Solutions

Example: Sulfuric Acid, TRQ = 100 lbs

From MSDS, Specific Gravity = 1.84

$1.84 \times 8.34 \text{ lbs/gal} \times X \text{ gallons} = 100 \text{ lbs}$

$X = 6.5 \text{ gallons spilled to exceed TRQ}$

BUT – You store a 20% solution

$1.84 \times 8.34 \text{ lbs/gal} \times 0.20 \times X \text{ gallons} = 100 \text{ lbs}$

$X = 32 \text{ gallons of solution spilled to exceed TRQ}$
for sulfuric acid

Enforcement – Part 31

- A person who violates any provision of Part 31 is subject to the procedures and penalties prescribed in section 3115 and 3115a of Part 31 of the NREPA.
- The maximum fine imposed by the court shall be not more than \$25,000.00 per day of violation.
- For failure to report a release [under Part 5] the court shall impose a fine of not more than \$2,500.00

Part 5 Summary

Determine if facility is regulated:

- Solid salt >5 tons
- Liquid salt >1,000 gal
- Oil storage *capacity* >1,320 gal or one tank >660 gal
- Listed Chemicals
 - Indoors > 2,200 lbs
 - Outdoors > 440 lbs

Part 5 Summary

What is required?

- Pollution Incident Prevention Plan (PIPP)
- Certify compliance to DEQ,
Local Emergency Planning Committee &
Health Dept
- Secondary containment
- Surveillance
- Release Reporting

Part 5 Resources

- Part 5 Rules
- PIPP & Part 5 Rules Information Packet
- Salt & Brine Storage Guidance
- Guide to Salt Storage Requirements for Small Commercial Snow Removal Services
- Release Notifications Requirements in Michigan

Example Guidance Documents

- POG #1 , **Railcars and Trucks**
- POG #2 , **Oil**
- POG #3 , **Elec. Equip. Installation Spills**
- POG #4 , **Sulfuric Acid Batteries**
- Part 5 Rules: changes, facilities, FAQs
- PIPP Completeness Review Checklist
- Small Commercial Salt Storage Req
- Salt and Brine Storage Guidance for DPWs

[About the DEQ](#)

[Printer Friendly](#) | [Text Version](#) | [A- A+ Text Size](#) | [Share](#)

Air

[Climate Change](#)

[Key Topics](#)

[Land](#)

[News and Events](#)

[Pollution Prevention](#)

[Waste](#)

[Water](#)

Protecting Michigan's Environment. Ensuring Michigan's Future.

Environmental Spotlight

2012 Michigan Environmental Compliance Conference

Conferences are offered April 26 in Gaylord, May 1 in Grand Rapids, and May 10 in Livonia.



News Releases

- [Earth Day includes computer recycling](#)
- [DEQ awards funding for scrap tire cleanups](#)
- [DEQ to host Midland cleanup hearing](#)
- [DEQ announces Earth Day poster contest winners](#)
- [DEQ offers water quality monitoring grants](#)

[RSS](#)

- [Issues to Watch](#)
- [Report Emergencies](#)
- [Environmental Assistance](#)
- [Contact Information](#)
- [Popular Links](#)

Scorecard

The screenshot shows the Michigan Department of Environmental Quality website. At the top, there is a navigation bar with links for Michigan.gov Home, DEQ, Online Services, Permits, Programs, Site Map, and Contact. Below this is a 'Water' sidebar menu with various categories. A red box highlights the 'Part 5 Rules: Spillage of Oil/Polluting Materials' link. To the right of the sidebar is a banner for Michigan's Water, followed by a paragraph about water quality programs. Below that is an 'Announcements' section with several links, some marked as PDFs. At the bottom right, there is a 'Featured Online Services' section with more links.

DEQ Department of Environmental Quality

Michigan.gov Home | DEQ | Online Services | Permits | Programs | Site Map | Contact

Water Printer Friendly Text Version Text Size

MICHIGAN'S WATER Our water quality programs protect our most precious resource!

Department of Environmental Quality Water Programs establish water quality, provide regulatory oversight for all public water supplies, issue permits for industrial and municipal wastewaters, monitor State Water resources for water quality of aquatic habitat, the health of aquatic communities, and compliance.

Announcements

- [Water Quality Monitoring Grant Application Package, Fiscal Year 2012](#)
- [Water Resource Division Metrics - Updated 1/26/2012](#)
- [St. Marys River Monitoring Project for TMDL Development](#) PDF
- [Water Resources Division Measures of Success 2011](#) PDF
- [Water Resources Division Policy Guidance Documents](#)
- [The Facts on Water Quality and Animal Agriculture](#) PDF
- [The Facts on August 2009 Fish Kill in Sanilac County's Black River](#) PDF
- [St. Marys/Sugar Island 2008 Monitoring Report](#)

Spotlight

- [Michigan Nutrient Framework](#) PDF
- [Wet Weather Pollution in Michigan - Final Report](#) PDF
- [Low Impact Development Manual for Michigan](#)
- [DEQ Phosphorus Policy Advisory Committee](#)

Featured Online Services

- [Aquatic Nuisance Status](#)
- [Beach Monitoring System](#)
- [Coastal and Inland Water System \(CIWPIS\)](#)

Water

- Biosolids & Industrial Pretreatment
- Campgrounds and Pools
- Drinking Water
- Great Lakes
- Groundwater Conservation Advisory Council
- Groundwater Discharge
- Groundwater Modeling
- Inland Lakes & Streams
- On Site Wastewater
- Operating Training & Certification
- Part 5 Rules: Spillage of Oil/Polluting Materials**
- Resolving Fund Programs
- Rule 97 Certifications
- Surface Water

Part 5 Rules Link

Part 5 Contacts

Bay City	Gene Suuppi	989-894-6276
Cadillac	Ryan Blazic – Statewide Coordinator	989-705-3420
Gr. Rapids	Keith Zahn	616-356-0244
Jackson	Jeff Surfus	517-780-7921
Kalamazoo	Ken Leanin	269-567-3572
Lansing	Craig Lapham	517-335-6113
	Chris Babcock	517-373-2230
SEMI	Andrew Bahrou	586-753-3775
	Melinda Steffler	586-753-3788
U.P.	Randy Conroy	906-346-8527