CHAPTER 6: RELEASE REPORTING IN MICHIGAN

IN THIS CHAPTER:

Release Notification Requirements in Michigan

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. The "Release Notification Requirements in Michigan" document was compiled by the Michigan SARA Title III Program staff in the Department of Environment, Great Lakes and Energy (EGLE) to help owners and operators of facilities in Michigan, including vehicles and farms, determine their potential notification and reporting requirements in the event of a chemical release.

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 in this document.

The "Release Notification Requirements" document 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. It outlines what releases must be reported, when they must be reported, and to whom they must be reported.

Links to the referenced release reporting forms and chemical lists are available on the EGLE release reporting website (**Michigan.gov/ChemRelease**). Visit this site for updated EGLE and LEPC contact information.

NOTE: Executive Order 2012-14 transferred the EGLE storage tank program to the Bureau of Fire Services in the Michigan Department of Licensing and Regulatory Affairs. Phone numbers and email addresses associated with the storage tank program and staff have not changed.

For information regarding a specific regulation, contact the agency specified in the "notes" column of the table. If it is a EGLE division, contact the district division office.

General questions or comments regarding this table should be directed to the EGLE Environmental Assistance Center at 800-662-9278 or egle-assist@michigan.gov. EGLE program information is available at **Michigan.gov/egle**, or you may contact the Environmental Assistance Center.

What is a Chemical Release?

The term "release" means spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing. "Chemical" includes substances considered to be toxic or hazardous, as well as substances as seemingly harmless as salad oil.

Chemical Lists

The U.S. Environmental Protection Agency (USEPA) published a consolidated list of chemicals subject to SARA Title III, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and Section 112(r) of the Clean Air Act called the "List of Lists." The List of Lists (June 2019 Version) is located in Appendix B of this guidebook. It is also available as a Microsoft Excel file via the following USEPA link**:** www.epa.gov/epcra/consolidated-list-lists-under-epcracerclacaa-ss112r-june-2019-version.

The "List of Lists" includes:

- **CERCLA Hazardous Substances**, including Resource Conservation and Recovery Act waste streams and unlisted hazardous wastes, with Reportable Quantities (RQ) for releases (originally published in 40 CFR 302, Table 302.4).
- **SARA Title III Extremely Hazardous Substances** (EHS) with RQs for releases (originally published in 40 CFR 355, Appendix A).
- **SARA Title III Section 313 Toxic chemicals** (originally published in 40 CFR 372 Subpart D).

The Part 5 Rules, Spillage of Oil and Polluting Materials, were promulgated pursuant to Part 31 of Michigan's Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA). These rules include a list of "polluting materials" with threshold reporting quantities for releases. The Part 5 Rules are provided in Appendix C of this guidebook.

NO_X Exemption in CERCLA and SARA Title III

The USEPA finalized an exemption for certain releases of emissions of nitric oxide (NO) and nitrogen dioxide (NO_2) (collectively nitrogen oxides or NO_X) to air from CERCLA and SARA Title III reporting requirements (71 FR 58525). The exemption was effective November 3, 2006 and applies to releases to the air of less than 1,000 pounds of NOx in 24 hours that are the result of combustion. The exemption also applies to emissions from combustion-related activities such as detonation or processes that include both combustion and non-combustion operations (e.g., nitric acid production).

Petroleum Exclusion in CERCLA

Petroleum, including crude oil or any fraction thereof is excluded from the definitions of "hazardous substance," and "pollutant or contaminant" under CERCLA. Petroleum releases, accordingly, must generally be addressed under the authority of other law, such as the underground storage tank (UST) provisions of RCRA, or the Clean Water Act (CWA). This exception, which has become known as the "***petroleum exclusion***," plays a significant role in CERCLA because many sites contain petroleum contamination. Petroleum frequently contains specific listed hazardous substances, the most common of which are benzene, toluene and xylenes. In general, such substances are not treated as CERCLA hazardous substances, as long as they are found in refined petroleum fractions and are not present at levels that exceed those normally found in such fractions. Substances present in petroleum as a result of contamination during use or from mixing or combining are not within the petroleum exclusion, and in such cases, the substances are considered CERCLA hazardous substances.

NREPA Part 201, Environmental Remediation, Section 20114(1)(b) states that the requirements to report a release under this regulation apply to "reportable quantities of hazardous substances established pursuant to 40 CFR 302.4 and 302.6" This regulation references the listed hazardous substances published in the Code of Federal Regulations. It does not adopt the petroleum exclusion that applies to federal regulation of releases of CERCLA hazardous substances. As a result, petroleum constituents, including component substances such as benzene, toluene, and xylenes, plus any additives (e.g., MTBE, lead) are all reportable under Part 201, based on the reportable quantities in the CERCLA list of hazardous substances published in 40 CFR 302.4 and 302.6. See the release calculation example at the end of this chapter.

Initial Notification: There is NO PENALTY for over-reporting!

When there is a release, determining if, when, and to whom it should be reported can be a daunting task, even if you are familiar with the table. It is therefore recommended that if there is a release, immediately call the three numbers in the box to the right, even if the content or quantity of the released material has not yet been determined:

Post These Numbers by Every Phone!

911 to notify Local authorities

800-292-4706 (PEAS) to notify State authorities

800-424-8802 (NRC) to notify Federal authorities

You can then respond to the release, reassess the situation, and make additional notifications as required (e.g., as specified in the table or in your permits). Your follow-up report will provide details that explain why a release was or was not reportable.

SARA Title III Section 304 requires that the LEPC be notified immediately of a release. Many LEPCs accept the call to 911 as notification. Others require direct notification. Contact your LEPC in advance to find out their requirements.

Written Follow-up Report

Written follow-up report forms that are specified in the table are required by regulation. The EGLE has developed a generic written report form called "Spill or Release Report" (EQP 3465) that can be used to report releases of:

- Hazardous and extremely hazardous substances under SARA Title III.
- Hazardous waste under NREPA Part 111.
- Liquid industrial waste under NREPA Part 121.
- Hazardous substances under NREPA Part 201.
- Polluting materials under NREPA Part 31, Part 5 Rules.

Hot Tip!

Use the generic Spill or Release Report form to record *initial* notifications.

EGLE Release Reporting website: **Michigan.gov/ChemRelease**

Release Calculations

How to determine the reportable quantity of a product based on the reportable quantity of an ingredient.

Example Calculation: When is a release of gasoline reportable?

Under NREPA Part 201 regulation, releases of CERCLA hazardous substances as published in the 2012 version of 40 CFR 302, Table 302.4 must be reported. Gasoline is not included on this list. However, some of the ingredients in gasoline are on the list of CERCLA hazardous substances.

This example shows how to determine when a release of gasoline *in gallons* is reportable under NREPA Part 201 based on reportable quantities *in pounds* of the ingredients.

1. **Identify the hazardous ingredients, reportable quantities, and weight percentages.**
   Look at the example Safety Data Sheet (SDS) for gasoline at the end of this chapter to find the hazardous ingredients and the weight percent of those ingredients. Look at the "List of Lists" to find the reportable quantity of an ingredient that is a CERCLA hazardous substance.

   Benzene (CAS number 71-43-2) is a CERCLA hazardous substance listed in the "List of Lists." The reportable quantity (RQ) for benzene under CERCLA is 10 pounds. That means that a release of 10 pounds or more of benzene to the environment must be reported to the EGLE Remediation and Redevelopment Division district office (or PEAS after hours). The weight percent of benzene in the example gasoline is 0.4 to 5%. When calculating a reportable release, use the higher, more conservative, weight percent.

2. **Calculate the weight of the gasoline.**
   Because the gasoline is a liquid measured in gallons, and the reportable quantity of benzene is in pounds, calculate the weight of a gallon of gasoline. The formula is as follows:

   Specific gravity of the product x 8.34 lb/gal (weight of water) = weight of the product in lb/gal

   The specific gravity, also called the relative density, can be found in the "Physical & Chemical Properties" section of the SDS. It is a unit-less number that tells how much the substance weighs relative to the weight of water. If the specific gravity is 1, the substance weighs the same as water. If it is less than 1, then the substance weighs less than water. If you think about this logically, you know that gasoline floats on water (thus the sheen you see on water at boat launches), so you can conclude that gasoline must weigh less than water. The specific gravity is often reported as a range. In this example, the specific gravity is reported on the SDS as a range of 0.72 to 0.75. If you plug these values into the calculation, this gasoline can weigh anywhere from 6.0 lb/gal to 6.3 lb/gal. When

calculating a reportable release, use the higher, more conservative, value. The weight we will use for our example gasoline is 6.3 lb/gal.

3. **Calculate the smallest reportable release of gasoline.**

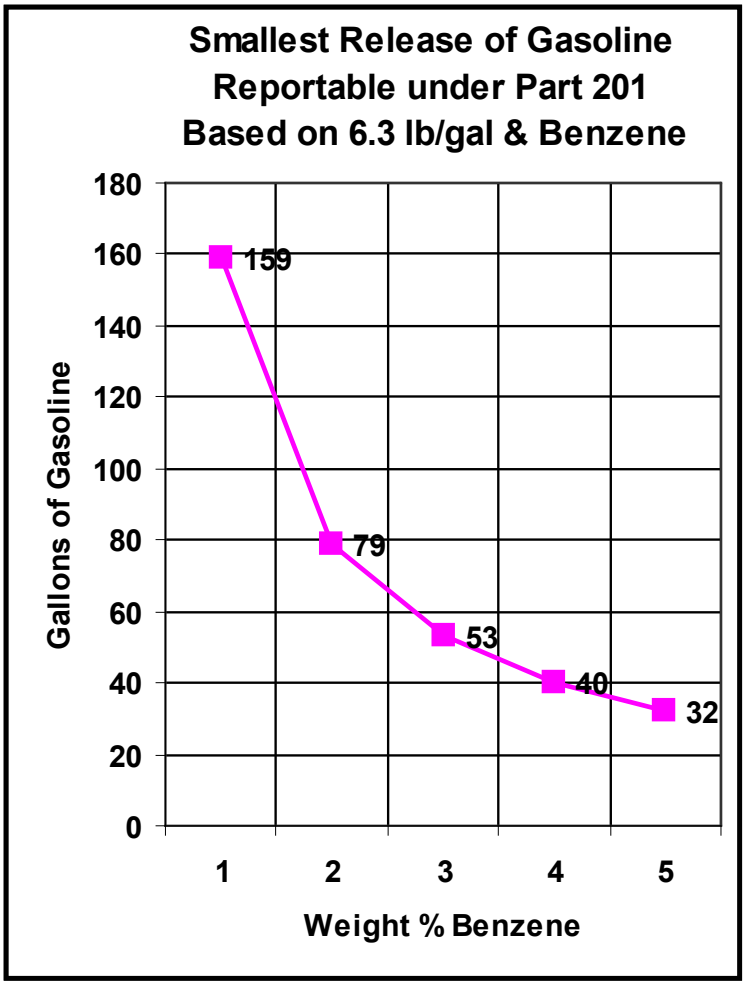
For this example, determine the smallest reportable release under NREPA Part 201 based on the ingredient benzene. Here is the formula:

RQ of ingredient (lbs) ÷ weight of product (lb/gal) ÷ weight % of ingredient = reportable gallons of product

Using the numbers we have determined above, we get:

10 lb (RQ benzene) ÷ **6.3** lb/gal gasoline ÷ **.05** (wt. % benzene) = **32 gallons of gasoline** (reportable if released to the environment).

The following graph shows how the reportable quantity of gasoline varies with the weight percent of benzene:



There would be a smaller reportable quantity (the line would shift down) for “heavier” gasoline. Look at all hazardous ingredients to determine which one would “control” the reportable quantity. The controlling ingredient is the one that results in the smallest reportable quantity. For gasoline, the controlling ingredient is benzene.

In real life, this is not an exact science. Use this as a way to come up with educated guesstimates for when to report. For gasoline, report any release that looks like it is approaching 30 gallons or more.

Keep in mind that smaller releases of gasoline are potentially reportable under other regulations (e.g., if the release reaches surface or groundwater). Also remember that all releases must be cleaned up to the extent specified in the regulations. This includes releases that are not reportable under any regulation.

Summary:

When determining reportable releases, it is important to realize that it is sometimes the ingredients in a given product that makes the release of the product reportable. There are three main steps in the process for determining when a release of a product is subject to reporting based on the reportable quantities of the ingredients:

Identify the hazardous ingredients, corresponding reportable quantities, and weight percentages. This depends on the regulation!

If the product is a liquid and the reportable quantity of the ingredient is given in pounds, calculate the weight of the product in pounds per gallon. If the product is a solid, skip this step.

Calculate the smallest reportable release.

For a liquid, use the formula in step 3 of the example. If the product is a solid, the formula is:

RQ of ingredient (lbs) ÷ weight % of ingredient in solid product = reportable pounds of solid product

Safety Data Sheet – Gasoline, Unleaded – Sample

Section 1: Identification

Product name: Gasoline, Unleaded
Synonyms: Blend of Highly Flammable Petroleum Distillates, Regular, Mid-Grade, Premium, 888100008809

Section 2: Hazard(s) Identification

Classifications: Flammable Liquid – Category 1
Aspiration Hazard – Category 1
Carcinogenicity – Category 2
Specific Target Organ Toxicity (Repeated Exposure) – Category 2
Specific Target Organ Toxicity (Single Exposure) – Category 3
Skin Irritation – Category 2
Eye Irritation – Category 2B
Chronic Aquatic Toxicity – Category 2

Pictograms:

Signal Word: Danger

Hazard Statements: Extremely flammable liquid and vapor.
May be fatal if swallowed and enters airways 0 do not siphon gasoline by mouth.
Suspected of causing blood cancer if repeated over-exposure by inhalation and/or skin contact occurs.
May cause damage to liver, kidneys and nervous system by repeated and prolonged inhalation or skin contact. Causes eye irritation. Can be absorbed through skin.
May cause drowsiness or dizziness. Extreme exposure such as intentional inhalation may cause unconsciousness, asphyxiation and death.
Repeated or prolonged skin contact can cause irritation and dermatitis.
Harmful to aquatic life.

Precautionary statements:
Prevention:
Response:

Storage:

Disposal:

Section 3: Composition/Information on Ingredients

Component	*CAS-No.*	*Weight %*
Gasoline, natural; Low boiling point naphtha	8006-61-9	10 -30%
Toluene	108-88-3	10 -30%
Xylene	1330-20-7	10 -30%
Ethanol; ethyl alcohol	64-17-5	0-8.2%
Trimethylbenzene	25551-13-7	1 -5%
Isopentane; 2-methylbutane	78-78-4	1 -5%
Naphthalene	91-20-3	1 -5%
Benzene	71-43-2	Less than 5%
Pentane	109-66-0	1 -5%
Cyclohexane	110-82-7	1 -5%
Ethylbenzene	100-41-4	1 -5%
Butane	106-97-8	1 -20%
Heptane [and isomers]	142-82-5	0.5 -0.75%
N-hexane	110-54-3	0.5 -0.75%

Section 4: First-Aid Measures

Omitted

Section 5: Fire-Fighting Measures

Suitable extinguishing media: SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO2, water spray or firefighting foam. LARGE FIRES: Water spray, fog or firefighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire exposed containers. Keep containers and surroundings cool with water spray.

Specific hazards during fire-fighting: Extremely flammable liquid and vapor. This material is combustible/flammable and is sensitive to fire, heat, and static discharge.

Special protective equipment for fire-fighters: Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full face-piece and full protective clothing.

Further information: Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied firefighting foam. Exposure to decomposition products may be a hazard to health. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Section 6: Accidental Release Measures

Personal precautions: Evacuate personnel to safe areas. Ventilate the area. Remove all sources of ignition. Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

Environmental precautions: Discharge into the environment must be avoided. If the product contaminates rivers and lakes or drains inform respective authorities.

Methods for cleaning up: Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations.

Section 7: Handling and Storage

Omitted

Section 8: Exposure Controls/Personal Protection

Omitted

Section 9: Physical and Chemical Properties

Appearance: Clear to straw colored liquid

Odor: Characteristic hydrocarbon-like

Odor threshold: 0.5 - 1.1 ppm

pH: Not applicable

Melting point/freezing point: About -101°C (-150°F)

Initial boiling point & range: Flash point < -21°C (-5.8°F)
Boiling point varies: 30 – 200°C (85 – 392°F)

Evaporation rate: Higher initially and declining as lighter components evaporate

Upper explosive limit: 7.6 %(V)

Lower explosive limit: 1.3 %(V)

Vapor pressure: 345 -1,034 hPa at 37.8 °C (100.0 °F)	
Vapor density (air = 1): Approximately 3 to 4	
Relative density (water = 1): 0.72 to 0.75	
Solubility (in water): Negligible	
Partition coefficient (n-octanol/water) 2 – 7 as log Pow	
Auto-ignition temperature:	Approximately 250°C (480°F)
Decomposition temperature:	Will evaporate or boil and possibly ignite before decomposition occurs.
Section 10: Stability and Reactivity	
Reactivity:	Vapors may form explosive mixture with air.
Chemical stability:	Stable under normal conditions.
Possibility of hazardous reactions:	Can react with strong oxidizing agents.
Conditions to avoid:	Avoid high temperatures, open flames, sparks, welding.
Hazardous decomposition dioxide:	Ignition and burning can release carbon monoxide, carbon dioxide.
Section 11: Toxicological Information	
Omitted	
Section 12: Ecological Information	
Omitted	
Section 13: Disposal Considerations	
Omitted	
Section 14: Transport Information	
Omitted	
Section 15: Regulatory Information	
OSHA Hazards:	Flammable liquid Highly toxic by ingestion Moderate skin irritant Severe eye irritant Carcinogen
TSCA Status:	On TSCA Inventory
SARA 311/312 Hazards:	Fire Hazard Acute Health Hazard Chronic Health Hazard
	CERCLA SECTION 103 and SARA SECTION 304 (RELEASE TO THE ENVIROMENT) The CERCLA definition of hazardous substances contains a "petroleum exclusion" clause which exempts crude oil. Fractions of crude oil, and products (both finished and intermediate) from the crude oil refining process and any indigenous components of such from the CERCLA Section 103 reporting requirements. However, other federal reporting requirements, including SARA Section 304, as well as the Clean Water Act may still apply.
Section 16: Other Information	
Omitted	