
What are the regulations that address secondary containment?

The following table summarizes secondary containment regulations. It is required by several state and federal laws and regulations, depending on the type and quantity of hazardous substances stored. In addition to the state and federal regulations, you may have local requirements that are not discussed in this publication. Local requirements are often incorporated into zoning, building, or fire protection regulations.

The following brief explanation is for those readers unfamiliar with reading regulations. Federal regulations will be preceded by a number, followed by CFR which stands for Code of Federal Register, and then the Part number. Environmental federal laws include “40 CFR” in their citation. Usually they are overseen by the Environmental Protection Agency (EPA) unless that agency has given the state(s) authority to implement the program. In this document, citations for state laws include the year it passed, followed by PA for Public Act, and then the act number. Rules promulgated under state law start with an “R” in their citation. Many of Michigan’s environmental laws have been included in the Natural Resources and Environmental Protection Act (1994 PA 451, as amended) and renumbered with a “Part” number. The rules may still refer to the old act number but are being updated to the new act citation when revised.

You may have substances that are regulated by more than one agency and under different regulations. For example, oil is regulated by the DEQ, Fire Marshal, and the US EPA. **In those situations, you will need to incorporate the most stringent requirements in your secondary containment system.** It is highly recommended that you contact all the involved agencies and, if necessary, schedule a joint meeting to discuss what would be best for your situation.

The regulations overseen by the DEQ are described in more detail after the summary table. Information on how to get the DEQ regulations are on page 30.

SUMMARY OF SECONDARY CONTAINMENT REGULATIONS

The material you have may be regulated by more than one agency and therefore, listed in more than one row of this table. Due to limited space, not all of the requirements are explained. If you have any questions on how substances are regulated, contact the appropriate agency for their specific requirements. The bullets in the individual columns do not correspond with bulleted information in the other columns of that row. The bullets are only used as an indicator for another point.

REGULATED SUBSTANCES	REGULATED STORAGE VOLUMES	REQUIRED CONTAINMENT VOLUMES	REGULATION REFERENCE	AGENCY WITH REGULATORY RESPONSIBILITY
Cyanide	<ul style="list-style-type: none"> ◆ All surface-coating operations 	<ul style="list-style-type: none"> ◆ Dikes or other arrangements must be provided to prevent the possibility of intermixing of cyanide and acid in the event of tank rupture 	<ul style="list-style-type: none"> ◆ 1974 PA 154, as amended; and Rule 3220, "open-surface tanks" 	<ul style="list-style-type: none"> ◆ Dept. of Consumer and Industry Services, Bureau of Safety and Regulation (MIOSHA¹)
Flammable and combustible liquids (class I/II/III) where flashpoint (FP) is less than 200° F	<ul style="list-style-type: none"> ◆ AST² 1,100 gallons or larger capacity ◆ Storage capacity of greater than 660 gallons of combustible liquids ◆ Any size container holding flammable liquids requires diking ◆ Any container less than 660 gallons capacity if secondary containment is determined to be necessary by authorities 	<ul style="list-style-type: none"> ◆ Volume varies with amount stored and fire protection level; indoor/outdoor restriction; distance requirements between tanks, buildings, and property lines; aisle width between containers; etc. ◆ Tanks must be in an area capable of containing 100% volume of the largest tank, plus the volume occupied by other tanks in the same area measured from the height of the dike wall ◆ At least 4" sill height or sunken floor for inside storage room or use of open-grated trench ◆ At least 6" curb height for outside storage area or sloped away from building 	<ul style="list-style-type: none"> ◆ 1941 PA 207, as amended; and Michigan Storage and Handling of Flammable and Combustible Liquids (FL/CL) Rules 	<ul style="list-style-type: none"> ◆ DEQ, Underground Storage Tank Division NOTE: This program was transferred from the Dept. of State Police, Fire Marshal Division to DEQ on 10/1/97. ◆ Local authority (e.g., Fire Marshal or Fire Chief)

¹MIOSHA - Michigan Occupational Safety and Health Act

²AST - Aboveground Storage Tank

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Flammable and combustible liquids, including flammable aerosols	<ul style="list-style-type: none"> Varies with container type and class of material, and whether material stored indoors or outside; limits how much material can be kept in storage cabinets 	<ul style="list-style-type: none"> Storage room size varies with amount stored and fire protection rating--see MIOSHA document OSC-113 AST requirements: See R 408.17501(b)(1)(vii) and 29 CFR 1910.106 Part 75(b)(2) At least 6" outdoor curb height [29 CFR 1910.106(d)(6)(iii)] At least 4" sill height or sunken floor for inside storage room [29 CFR 1910.106(d)(4)(i)] 	<ul style="list-style-type: none"> 1974 PA 154, as amended; and Part 75 Flammable and Combustible Liquid Rules; along with federal safety standard 29 CFR 1910.106 	<ul style="list-style-type: none"> Dept. of Consumer and Industry Services, Bureau of Safety and Regulation (MIOSHA)
Hazardous chemicals where flashpoint (FP) is less than 200° F (includes explosives, blasting agents, poisons, poison gas, oxidizers, organic peroxides, irritating materials, radioactive materials, corrosives, and carcinogens)	<ul style="list-style-type: none"> Varies with chemical type and if a liquid, solid, or gas 	<ul style="list-style-type: none"> Volume varies with type and quantity of chemical, how and where stored At least 4" sill height or sunken floor for inside storage room or use of open-grated trench At least 6" curb height for outside storage area or sloped away from building 	<ul style="list-style-type: none"> 1941 PA 207, as amended; and Michigan Storage and Handling of Flammable and Combustible Liquids (FL/CL) Rules 	<ul style="list-style-type: none"> DEQ, Underground Storage Tank Division NOTE: This program was transferred from the Dept. of State Police, Fire Marshal Division to DEQ on 10/1/97 Local authority (e.g., Fire Marshal or Fire Chief)

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Highly hazardous chemicals listed in Appendix A to 29 CFR 1910.119	<ul style="list-style-type: none"> ◆ At or above the threshold quantity specified in Appendix A to 29 CFR 1910.119 	<ul style="list-style-type: none"> ◆ Varies with physical and chemical characteristics of the hazardous chemical 	<ul style="list-style-type: none"> ◆ 1974 PA 154, as amended; and 29 CFR 1910.119, "process safety management of highly hazardous chemicals" 	<ul style="list-style-type: none"> ◆ Dept. of Consumer and Industry Services, Bureau of Safety and Regulation (MIOSHA)
Hazardous waste (includes both listed and characteristic wastes)	<ul style="list-style-type: none"> ◆ SQGs³ accumulating more than 1,000 kg (2,200 lbs.) of liquid hazardous waste ◆ LQGs⁴ accumulating any amount of hazardous waste ◆ SQGs or LQGs accumulating any waste with codes F020, F021, F022, F023, F026, F027 ◆ Anyone accumulating more than 1 kg (2.2 lbs.) of acute or severely toxic waste ◆ Generators with regulated tanks ◆ CESQGs⁵ are not required to have secondary containment unless they accumulate > 2,200 lbs. but they must manage the waste so there is no release into the environment, sewers, or drains ◆ Treatment, storage, and disposal facilities and transporters have specific requirements 	<ul style="list-style-type: none"> ◆ Capacity must be able to contain 100% of the largest container or 10% of the volume of all the containers in the system, whichever is larger, of liquid hazardous waste or those identified "F" code wastes plus any precipitation that gets in the accumulation area <p>NOTE: Even if secondary containment is not required, it is recommended for all hazardous waste accumulation areas</p>	<ul style="list-style-type: none"> ◆ Part 111 of 1994 PA 451, as amended, and Rules; and Federal Resource Conservation and Recovery Act (RCRA) 40 CFR Parts 260 to 299 <p>NOTE: If you handle hazardous waste, you will also need to meet emergency notification and planning requirements.</p>	<ul style="list-style-type: none"> ◆ DEQ, Waste Management Division ◆ U.S. Environmental Protection Agency

³SQGs - Small Quantity Generators

⁴LQGs - Large Quantity Generators

⁵CESQGs - Conditionally Exempt Small Quantity Generators

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Petroleum products (includes oil, gasoline, diesel fuel) Hazardous substances on CERCLA ⁶ list	<ul style="list-style-type: none"> ◆ Regulated UST⁷ located in an exclusion zone or secondary containment zone 	<ul style="list-style-type: none"> ◆ Requires double-walled tanks or integral secondary containment tanks 	<ul style="list-style-type: none"> ◆ Part 211 of 1994 PA 451, as amended; and Michigan Underground Storage Tank Rules NOTE: These regulations are under revision	<ul style="list-style-type: none"> ◆ DEQ, Underground Storage Tank Division
Oil, if any discharge can reach navigable water (Oil means any kind or in any form including petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil)	<ul style="list-style-type: none"> ◆ If total storage capacity is more than 1,320 gallons ◆ If single AST storage capacity is more than 660 gallons ◆ If underground storage capacity is more than 42,000 gallons ◆ If subject to 40 CFR 112, then the capacity of all containers is regulated 	<ul style="list-style-type: none"> ◆ 100% of the largest single tank plus sufficient freeboard to allow for precipitation 	<ul style="list-style-type: none"> ◆ Spill Prevention, Control, and Countermeasure (SPCC) under the Clean Water Act, 40 CFR 112 NOTE: If your storage capacity is regulated under these Oil Pollution Prevention regulations, then an SPCC Plan is required	<ul style="list-style-type: none"> ◆ U.S. Environmental Protection Agency

⁶CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act

⁷UST - Underground Storage Tank

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<p>Oil (means any kind and in any form including petroleum, gasoline, fuel oil, grease, sludge, oil refuse, and oil mixed with waste)</p> <p>Polluting materials listed on the Critical Materials Register</p> <p>Salt</p>	<ul style="list-style-type: none"> ◆ Oil more than 40,000 gallons or less if required by DEQ ◆ Any amount or concentration of material listed on the Critical Materials Register, including if it is an ingredient in the substances stored ◆ Liquid salt ◆ Solid salt stored longer than 15 days 	<p>Depending on the circumstances, a smaller containment volume than the following may be approved by the Waste Management Division district supervisor:</p> <ul style="list-style-type: none"> ◆ Oil containment capacity: equal to or more than 100% of volume that could be released from a full single tank; see rule if multiple tanks [R 323.1156] ◆ Polluting material containment: equal to or more than 150% of the volume stored [R 323.1158] ◆ Liquid salt containment: capacity of equal to or more than 100% of volume that could be released from a full single tank; see rule if multiple tanks [R 323.1157(1)] ◆ Solid salt: managed to prevent entry into water and stored not less than 50 feet from shore or bank of any lake or stream [R 323.1157(2)] 	<ul style="list-style-type: none"> ◆ Part 31 of 1994 PA 451, as amended; and the Part 5 Rules <p>NOTE: If you have any of these materials stored, then a Pollution Incident Prevention Plan (PIPP) is required.</p> <p>These regulations are currently being reviewed for revisions.</p>	<ul style="list-style-type: none"> ◆ DEQ, Surface Water Quality and Waste Management Divisions ◆ County Health Department