



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Aboveground Storage Tank Regulations; Secondary Containment for Liquid Hazardous Materials in Aboveground Storage Tanks or Storage Areas and Transfer Areas 327 IAC 2-10

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Description/Introduction:

- The Indiana Department of Environmental Management (IDEM) established secondary containment requirements under the Secondary Containment Rule, 327 Indiana Administrative Code (IAC) 2-10-1 through 327 IAC 2-10-8, in effect since June 27, 1999. This rule requires secondary containment and a spill response plan for liquid hazardous materials in Aboveground Storage Tanks (ASTs), storage areas and transfer areas. New facilities must provide secondary containment unless there is: less than 660 gallons at a facility that is not in a delineated wellhead protection area as approved by IDEM under 327 IAC 8-4.1; or less than 275 gallons at a facility that has been notified in writing by a water utility that it is in a delineated wellhead protection area as approved under 327 IAC 8-4.1.
- The secondary containment requirements in the rule apply to AST systems that were constructed after the effective date of the rule (June 27, 1999). An AST system, storage area, or transfer area constructed before this date must be brought into compliance with this rule if and when it is moved or relocated. The spill response plan requirements apply to all subject AST systems regardless of when they were constructed.
- Provision of secondary containment is not only required by the state, but also required by several different federal regulations for liquid hazardous materials in ASTs, storage areas, and transfer areas, depending on the type of unit, the date of construction of the unit, the type of liquid hazardous material being managed in the unit, and the capacity and location of ASTs or storage or transfer areas in relation to wellhead protection areas.
- Secondary containment means a structure or a part of a structure that prevents or impedes a hazardous material that is released accidentally from entering surface water or groundwater. (See Indiana Code (IC) 13-11-2-197.)
- Exclusions to the Secondary Containment Rule are found in 327 IAC 2-10-3. (See **Types of Units Excluded From 327 IAC 2-10 Due to the Date of Construction, Replacement, or Relocation** and **Types of Units Subject to Secondary Containment Requirements under Other Regulations**, *below*.)

Types of Secondary Containment:

- ASTs or storage areas containing hazardous materials that are located **INSIDE** a building, requiring secondary containment, must have a floor compatible with the material being stored and a system to prevent or impede a spill from entering waters of the state.

- AST or storage areas containing hazardous materials that are located **OUTSIDE** a building, requiring secondary containment, must be designed and constructed consistent with current engineering standards with materials that are compatible with the hazardous materials being stored and which will prevent a release from entering waters of the state for a seventy-two (72) hour period.
 - The design requirements of secondary containment must be met in one (1) of the following ways:
 - A secondary containment area with dikes, berms, retaining walls, or trenches, and a floor that must cover the entire area within the dikes, berms, retaining walls, or trenches.
 - A tank designed and built with an outer shell and an interstitial space between the tank wall and the outer shell that allows for monitoring.
 - Diversionary systems that direct the discharges to treatment or temporary holding areas.
 - Other methods approved by the Commissioner that have been demonstrated to be equally protective of human health and the environment.
 - Be properly maintained to protect the integrity and capacity of the secondary containment.
 - The secondary containment volume requirements must have:
 - A volume, considering displacement, to contain at least one hundred ten percent (110%) of the volume of the largest aboveground tank, or portable tank in the secondary containment area, or the volume of the largest aboveground tank, or portable tank plus enough freeboard to contain precipitation generated by a twenty-five (25) year/twenty-four (24) hour rain event. A tank designed and built with a secondary containment feature in the outer shell is an acceptable alternative.
 - At a minimum, secondary containment for storage areas holding only drums must be capable of holding or diverting one hundred twenty (120) gallons.
 - The liquid collected within the secondary containment area must be:
 - A volume of one hundred percent (100%) of the largest above ground tank, or portable tank in the secondary containment area, must be removed within seventy-two (72) hours of its discovery in order to maintain the available capacity of the secondary containment area.
 - Ice must be removed as soon as weather permits.
 - Liquid that collects within the secondary containment area must meet all applicable requirements of Indiana's Water Quality Standards if discharged to waters of the state.

Types of Hazardous Materials Requiring Secondary Containment (Unless Excluded):

Liquid hazardous materials are materials that are in a nongaseous state at 60 degrees Fahrenheit and atmospheric pressure and will take the shape of their container immediately upon being placed in such container, and that meet at least one of the following definitions in the table below:

Types of Hazardous Materials	
Hazardous Chemicals	<i>42 USC 11021(e) as in effect on January 1, 1990.</i> As defined by the Emergency Planning and Community Right-to-Know Act (EPCRA), hazardous chemicals have the meaning given in Title 29, Section 1910.1200(c) of the Code of Federal Regulations (CFR). It is any substance for which a facility must maintain a safety data sheet (SDS) under the Occupational Safety and Health Administration's (OSHA's) Hazard Communication Standard/Employee Right-to-Know regulations, with some exceptions.
Hazardous Wastes	<i>40 CFR 261.3.</i> This includes any characteristic or listed hazardous waste, with D, F, K, U or P codes.
Hazardous Substances	<i>42 USC 9601(14) as in effect on January 1, 1990.</i> A hazardous substance is a substance subject to reporting requirements under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and listed in Title 40, Part 302.4 of the CFR.
Extremely Hazardous Substances	<i>42 USC 11002(a)(2).</i> An extremely hazardous substance (EHS) is any substance regulated under SARA Title III, Sections 302–304. The EHSs are listed in Appendices A and B of Title 40, Part 355 of the CFR.
Hazardous Materials	<i>IC 13-11-2-96(5).</i> A material identified by the Environmental Rules Board as potentially harmful to surface water or groundwater if accidentally released from a storage or handling facility. <i>As of the date of this Fact Sheet, the Environmental Rules Board has not identified any additional materials than those within the types of hazardous materials above.</i>

- The U.S. EPA has developed as a reference tool the “Consolidated List of Lists” to assist in identifying specific chemicals by name and Chemical Abstract Number, which are subject to varying reporting requirements, and which includes several types of hazardous materials shown above. It can be found at <http://www2.epa.gov/epcra/consolidated-list-lists>.
- State government agencies that oversee compliance with the secondary containment requirements and/or other regulations include the Indiana Department of Environmental Management (IDEM), the Indiana Department of Homeland Security Division of Fire and Building Safety, and the Indiana Office of the State Chemist. Local fire departments may also have certain authority. (See **Types of Units Subject to Secondary Containment Requirements Under Other Regulations**, below.)

Types of Units Requiring Secondary Containment Per 327 IAC 2-10 (Unless Excluded):

Types of units subject to the requirements of Indiana’s Secondary Containment Rule include:

- An **AST** – an AST is a stationary device designed to structurally support, enclose, and contain an accumulation of liquid hazardous materials on or above the surface of the ground. ASTs are constructed of non-earthen materials, such as concrete, metal, or plastic (See 327 IAC 2-10-4(1)).
- A **storage area** – a storage area is a discrete area at a facility in which liquid hazardous materials are stored within 25 feet of each other for more than 15 days in either:
 - drums holding an aggregate of 1,000 gallons or more; or
 - portable tanks holding an aggregate of 2,000 gallons or more.
- A **transfer area** – a transfer area is a dedicated outside loading or unloading area used for more than 15 days in a calendar year for the transfer of liquid hazardous materials between a railcar or semitrailer tanker and an AST.

Types of Units Excluded from 327 IAC 2-10 Due to the Date of Construction, Replacement, or Relocation:

- Units constructed prior to June 27, 1999, or for which construction began less than 90 days after June 27, 1999, that have not subsequently been replaced or relocated, are **not** subject to the secondary containment requirements of 327 IAC 2-10.

Types of Units Subject to Secondary Containment Requirements under Other Regulations:

- If the unit stores, manages, or transfers liquid hazardous materials regulated under other rules, it is excluded from the requirements of 327 IAC 2-10 but may need to comply with other regulations, as outlined in the following table:

Type of Liquid Hazardous Material Unit Stores, Manages, or Transfers	Authority and/or Regulation Requiring Secondary Containment
Agricultural Chemicals	Office of the Indiana State Chemist 355 IAC 2 and 355 IAC 5
Flammable or Combustible Liquids	Indiana Fire Prevention and Building Safety Commission 675 IAC 22
Oil or Petroleum	40 CFR 112 IC 13-11-2-160
Hazardous Waste	Indiana Department of Environmental Management, Office of Land Quality 329 IAC 3.1 and 42 USC 6991-6991(i)

Exclusions Based on the Size of the ASTs and Location in or out of a Wellhead Protection Area:

- ASTs that store materials other than oils or petroleum located within an IDEM-approved delineated wellhead protection area are required to have secondary containment unless excluded, as shown in the following table:

Unit Located within Wellhead Protection Area		Unit Not Located within Wellhead Protection Area	
AST has a capacity less than 275 gallons, then	AST is excluded from regulation under 327 IAC 2-10	AST has a capacity of 660 gallons or less, then	AST is excluded from regulation under 327 IAC 2-10
AST has a capacity equal to or greater than 275 gallons, then	AST and associated piping from the AST to the point of the first fitting is subject to regulation under 327 IAC 2-10 and must meet the requirements of 327 IAC 2-10-5, 6, 7 and 8	AST has a capacity greater than 660 gallons, then	AST and associated piping from AST to the point of the first fitting is subject to regulation under 327 IAC 2-10 and must meet the requirements of 327 IAC 2-10-5,6, 7 and 8

(Indiana’s wellhead protection rules are found under 327 IAC 8-4.1. Exclusions to the Secondary Containment Rule are found under 327 IAC 2-10-3.)

Other Exclusions from Secondary Containment Requirements of 327 IAC 2-10:

- The following units, machinery, and equipment are excluded from regulation under 327 IAC 2-10-3:
 - units containing liquids which are solids or gases when above 60 degrees Fahrenheit at atmospheric pressure;
 - underground storage tanks per IC 13-11-2-241;
 - units that store or transfer products packaged for distribution to, and used by, the public;
 - machinery and equipment containing integral operating fluids necessary for proper operation of the equipment;
 - process tanks as defined at 327 IAC 2-10-4(16); and
 - storage areas that store solely empty drums and portable containers per 40 CFR 261.7.

Best Management Practices:

- Even though secondary containment may not be required under 327 IAC 2-10 or another regulatory program, any discharging or allowing contamination or waste into the environment is prohibited by IC 13-30-2-1. Facilities are encouraged to be proactive in preventing any material they manage from being released to the environment. It is recommended that secondary containment be provided for units that manage materials of concern even if not required by regulation. The liabilities and costs associated with mitigating natural resource and ecological



damage usually greatly outweigh the costs associated with the provision of secondary containment or other similar preventative measures. Implementing practices to prevent future releases also helps to preserve property values and facilitate real estate transfers.

- Some management practices to consider implementing and common components of secondary containment systems to consider installing at your facility include:
 - performing routine inspections;
 - installing overfill alarms;
 - installing leak detection systems;
 - performing structural integrity testing on a routine basis;
 - requiring visual observation during transfer activities;
 - ensuring compatibility of materials being stored with tank construction materials;
 - ensuring compatibility of all materials being stored within the same secondary containment structure;
 - anchoring ASTs to prevent floating or instability in the event of a release;
 - accounting for precipitation accumulation within the secondary containment system; and
 - designing the system to withstand a full hydrostatic head of any discharged liquid and weight load of material used in construction.

Additional Information:

For more detailed information, please refer to the following standards, rules, and regulations that address secondary containment at ASTs based on industrial sector and the nature of the material being managed:

- American Society for Testing and Materials (ASTM) Standards: www.astm.org
- American Petroleum Institute (API) Standards: www.api.org
- Office of the Indiana State Chemist
 - 355 IAC 2: www.IN.gov/legislative/iac/T03550/A00020.PDF
 - 355 IAC 5: www.IN.gov/legislative/iac/iac_title?iact=355&iaca=5
- Indiana Department of Homeland Security Fire Prevention and Building Safety Commission, 675 IAC 22: <https://secure.in.gov/dhs/2490.htm>
- Federal Oil Pollution Prevention Authority Regulations, 40 CFR 112: www.ecfr.gov/cgi-bin/text-idx?SID=bfff157ae2fe91af8d87e35f659c512d&node=40:22.0.1.1.7&rgn=div5
- IDEM Hazardous Waste Management Program
 - 329 IAC 3.1: www.IN.gov/legislative/iac/T03290/A00031.PDF?&iacv=iac2007
 - 40 CFR 265, Subpart J: <http://www.ecfr.gov/cgi-bin/text-idx?SID=9af75baee3b2ee3dcccce4235173fc609&node=40:26.0.1.1.6&rgn=div5#40:26.0.1.1.6.10>

Additional Assistance:

If you have questions or concerns about your facility's compliance with these or other environmental regulations, please contact IDEM's Compliance and Technical Assistance Program (CTAP). CTAP is Indiana's business assistance program, statutorily required to operate under Indiana Code (IC) 13-28. CTAP is a non-regulatory program that provides free, confidential compliance and technical assistance to regulated entities. For more information, please visit www.IN.gov/idem/ctap/. To speak with someone confidentially, call (800) 988-7901 or (317) 232-8172. To request an onsite consultation, visit www.IN.gov/idem/ctap/2328.htm.