MAFES Dawg Tracks

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MISSISSIPPI STATE UNIVERSITY™
MS AGRICULTURAL AND FORESTRY EXPERIMENT STATION

Secondary Containment

What is secondary containment? Secondary containment is defined as containment that is external to and separate from primary containment; an additional level of containment necessary to isolate a hazardous materials from adjoining areas or the environment.

Secondary containment prevents spills or accidental discharge of hazardous materials from spreading and causing additional problems.

So then, what is considered a hazardous material? Chemicals or substances which are physical hazards or health hazards.

Physical hazards – combustible liquid, cryogenic fluid, explosive, flammable, organic peroxide, oxidizer, pyrophoric, unstable (reactive) material or water-reactive material.

Health hazards - pose a risks to people from handling or exposure; it includes chemicals that are toxic and corrosive.

When is secondary containment of a hazardous material needed? This requirement is usually based on quantity.

EPA requires secondary containment of petroleum based products (oils, fuels) in bulk storage containers or oil-filled equipment with a capacity of 55 gallons or more.

Fire code requirements are based off of location (indoor or outdoor), use (storage or open/closed use system), & if maximum allowable quantities are exceeded. Secondary containment for flammable & combustible liquids is dependent on if the building is sprinkled and the total amount in nearby areas or the entire building. For other hazardous materials, it is more dependent on how unstable or reactive it is and varies greatly. Regulations are stricter for indoor areas & liquids than they are for outdoor areas & solids.

Secondary containment can be active or passive as long as discharge cannot escape the device.

Active secondary containment is when an employee personally contains a spill or discharge:

- Deploying drain covers before a spill happens.
- Deploying drain covers after a spill has occurred, but before it reaches a drain.
- Using a spill kit in the event of a hazardous material discharge.
- Having a spill response team.
- Closing a gate valve prior to a discharge.

Active secondary containment may not be appropriate or possible for all situations due to lack of resources and staff.

Unlike active secondary containment, passive secondary containment does not require deployment or the action of an employee or employees to contain a spill or discharge. Passive secondary containment includes:

- Placing containment pans, pallets or decks under drums and other containers.
- Surrounding machines and containers with berms.
- Erecting retaining walls around machines and containers.
- Placing drip trays under leaky machines and containers.

Whether containment is active or passive or general or specific, the goal is always the same: preventing a hazardous material from being discharged into the surrounding environment.

Having the ability to contain spills at or near their source helps minimize the potential for discharge into the outdoor ground or waters, or can prevent the spread of fire and flammable vapors, or can prevent health or physical hazards potentially resulting in a variety of bad scenarios.

Sources:
- https://www.newpig.com/expertadvice/shedding-light-on-spccs-secondary-containment-requirements/
- International Fire Code : 202; table 5003.1.1; 5004.2.2; 5005.3.7; 5703.4

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