Farm Safety Association
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Tailgate - Chemical Spills

Cleaning up Chemical Spills

Instructor: *The following script can be used to deliver a 15- minute training session to employees.*

POINTS TO EMPHASIZE

- Duty to notify the Ministry of Environment.
- Strategies for reducing spills.
- Spill response and clean up procedures.

Duty to notify

All solid, liquid or gaseous spills released to the air, land and water must be immediately reported to the Ministry of Environment and your municipality.

Strategies for reducing spills

Bulk dry fertilizers – Pay-loader buckets must not be overfilled; all floors and pathways must be kept clear of equipment, level and smooth. All dry materials must be cleaned up before switching to a different material or mix.

All work areas must be swept daily to avoid build-up of unknown materials; loading docks must be utilized to prevent spillage. All recycled scrap fertilizers must be stored indoors.

Bulk liquid fertilizers/ solutions. – Loading sites must consist of a concave concrete floor with a sump hole to contain any spilled liquid, A holding tank must be in place to store all reclaimed liquids until they can be applied to crop land.

Liquid / wastewater – Crop protection chemicals should be washed off equipment regularly several times a day as prescribed by the Ontario Ministry of Environment Guidelines.

Wash water and other liquids from equipment containing crop protection chemicals must be stored in a designated container and reused when next spraying that chemical and crop.

All drains, sewer locations, and openings to underground systems must be plugged in the areas used for rinsing and washing equipment.

Equipment cleanup – Equipment should be cleaned by rinsing in the field, or cleaned at a designated area made of impervious material. Storage capacities should be of adequate volume to hold dilute solutions.

A sign should be posted in the designated cleaning area identifying the type of product that can be washed and rinsed in that area.

Develop a spill response plan

A spill response plan should be developed and discussed with employees. The plan should include:

- Names and telephone numbers of individuals to contact should a spill occur.
- Evacuation plans for the room or building as appropriate.
- Instructions for containing the spilled material, including potential release to the environment.
- An inventory of spill control materials and personal protective equipment.
- A means for proper disposal of cleanup materials, including tools and clothing.

Chemical spill procedures

When a spill occurs immediately alert area occupants and evacuate the area where necessary. Attend to any people who may be contaminated, without endangering yourself.

Contaminated clothing must be removed immediately and the skin flushed for no less than 15 minutes with water.

Contaminated clothing must be laundered before reuse.

Do not clean up spills if the material is mixed with other articles such as grass, paper etc. or if the material is reacting, i.e. hissing bubbling, smoking, gassing or burning.

If there is any sign that a chemical reaction is happening evacuate the area immediately and call your local fire department for help.

Put on Personal protective equipment as appropriate to the hazard before proceeding to control the spill.

Stop the spill as quickly as possible by restoring the container to its upright position, closing a leaking valve or hose or putting a secondary container in place to catch the leaking solution.

Begin clean up promptly. On pavement or concrete, use absorbent materials to capture the spilled liquids. Non-chlorinated pet litter is an inexpensive absorbent material for such purposes.

Loose spill absorbent materials should be distributed over the entire spill area, working from the outside, circling to the inside. This reduces the chance of splash or spread of the chemical.

Once the spilled materials have been absorbed, use a brush and scoop to place materials in, a polyethylene bag for small spills, and a reusable screw top plastic container with polyethylene liners for larger quantities.

If a spill occurs on soil, it may be necessary to dig up the contaminated soil.

Keep an eye on the material once it has been picked up because there may be a delayed reaction.

Affix a label to the chemical waste, identifying the material as spill debris involving XYZ chemical.

Decontaminate the surface areas after cleanup where the spill occurred using a mild detergent and water, when appropriate.

Dispose of all contaminated materials according to the manufacturer's instructions and the local regulations.

Recommended spill control materials inventory

Personal protective equipment – chemical splash goggles, chemical resistant gloves in various sizes, shoe covers, apron.

Absorption materials – Non-chlorinated pet litter, spill pad for acid, base, and oil solvents.

Miscellaneous containers/ suppliers – Heavy-duty polyethylene plastic bags, a reusable screw top plastic container, snap together dustpan and whisk broom.

Neutralizing materials – an acid neutralizer and a caustic neutralizer. It is recommended to use a neutralizer with a built in colour change to indicate complete neutralization.

Are there any questions?

Finally let's take a moment to review some of the "do's and don'ts" of spill clean up.

DO:

- Label containers clearly.
- Train employees in spill clean up procedures.
- Keep an eye on the material once it has been picked up.
- Develop a spill response plan.
- Ventilate the area if indoors when cleaning up powder or solids.

DON'T:

- Over fill pay-loader buckets
- Let any pesticide enter any water source.
- Clean up spills without the appropriate PPE.
- Placed spilled materials back in the original container.
- Clean if the material has mixed with other chemicals.

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