

WDATCP and INDUSTRY POLLUTION PREVENTION PROJECT

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Agricultural chemical dealers store, mix or blend, and distribute large quantities of dry and bulk liquid fertilizer and bulk and packaged pesticides. In practice, the bulk storage rules cover the loading of the products into storage, the mixing or blending, and the loading out of the products. The dealers incorporate a variety of housekeeping practices into the various activities of their operation.

Data collected as part of the Agriculture Chemical Cleanup Program (ACCP) indicate that a significant number of agrichemical dealerships continue to impact ground water at their facilities. This trend is of particular concern because the data show ground water impacts occurred after the extensive secondary containment rules for bulk liquid agrichemicals were in place. It also occurred despite the Department's serious inspection efforts to assure compliance with the containment rules.

What should or can be included in a pollution prevention program that is not already covered by the bulk rules? A pollution prevention program with the following goals was proposed:

- Establish a voluntary pollution prevention program using good housekeeping practices to help prevent on-site pollution.
- Develop a model pollution prevention plan and approach that incorporates tools, management practices, and techniques to reduce potential pollution
- Sponsor demonstration sites across Wisconsin?

HOUSEKEEPING PRACTICES

The first need of the project was a list of "good housekeeping practices" used by Wisconsin agricultural chemical dealers at their facilities to prevent contamination. "Housekeeping practices" are the management practices, tools and equipment, and techniques currently used or that can be used to prevent on-site pollution.

The goal of the bulk rules and housekeeping practices is to prevent spills of any size, from a drop to a truckload, anywhere fertilizer or pesticide is transferred (loaded or unloaded). Both dry and liquid products are potential contaminants.

If spills cannot be prevented, the goal becomes a reduction in the frequency, and capturing the spilled material before it escapes to the environment. Any spill or combination of spills, regardless of the size or quantity of material, at "the-point-of-transfer" may find its way into surface or ground water, if not contained or cleaned up.

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An example of bulk dry fertilizer housekeeping practices organized by point-of-transfer (Load out site), and task (pollution prevention, maintenance, and construction) could include:

Load out site

Tasks:

Pollution Prevention Practices:

- Load in building(s) for dust control
- Load on a large pad
- Routinely sweep up fertilizer dust and spills after each load, or end of the day, or before the next rain
- Place materials that lose their identity in separate container for later disposal
- Use an adjustable tube/sock to load the fertilizer to avoid windblown material
- Place the boot of portable augers/elevators in a large tray to catch spills
- Use a large concrete/ asphalt pad to catch spills from portable augers/elevators

Maintenance:

- Repair and lubricate all adjustable boots, socks and shields
- Replace or repair all damaged boots, socks, and shields

Construction:

- Grade entrance and exit from loading area to improve surface water removal and eliminate potholes
- Enclose the loading area
- Provide curtains at entrance and exit to contain fertilizer
- Provide boots, shields, and socks on elevators and conveyors to limit spills/dust
- Pad with a 10-foot border around the largest vehicle (truck/fertilizer buggy)
- Place a lip (stiff belting) into concrete pad to catch dry fertilizer

THE POLLUTION PREVENTION PLAN – A PILOT STUDY

This year, DATCP representatives met three (3) times with an industry advisory group to discuss possible causes of the problem, and to test ideas and approaches to correct it. The group agreed that required containment took care of most gross spillage, but discharges from small spills, drips, leaks, and generally lax housekeeping continue to occur.

The group's deliberations resulted in the proposal to create a voluntary pollution prevention program incorporating housekeeping practices becoming a pilot study. Five to seven dealers are volunteering to test the program and work out the kinks. The emphasis is on improved communication about pollution control between agrichemical dealers and DATCP field and office staff.

The development of a pollution prevention plan is a five (5) step process.

1. LOCATE / DEVELOP A SITE MAP

A site map may be available which shows the features listed below. If not, use the best site map available, and plan to develop a better one in the future. Locate and show the following features accurately on the facility plan:

- All Buildings
- Show the outline of the buildings, type of construction, permanent interior walls, building openings, and major fixed equipment
- Label the functional areas – bulk dry liquid fertilizer storage, bulk and small container pesticide storage, unloading and load out sites, etc.
 - Pesticide and fertilizer storage containment areas
 - Mixing / Loading pad
 - Railroad spur(s)
 - Access routes – highways, roads, drives
 - Surface water – ponds, creeks, rivers, lakes, water supply reservoirs
 - Drainage pattern on site (topographic) including discharge of ditches, drainage or waterways, creeks
 - Prevailing wind directions – summer, winter, and other key periods
 - North arrow
 - Fences, gates, easements

2. THE SITE ASSESSMENT

The site assessment forms are available to help managers document housekeeping and other pollution prevention activities. The filled-out forms do not become a formal part of the pollution prevention plan. Answering the questions and marking the required information on a site map will create a comprehensive picture of how agricultural chemicals flow through the facility – where and how they are transferred, whether material can escape or be spilled, and how cleanup is done. The exercise will identify areas and/or practices that could lead to contamination. The result is a focus on and prioritizing of the most critical handling areas of the facilities.

The dealer may request assistance from one of DATCP's environmental enforcement specialists by scheduling the assessment with him/her. During the assessment, the environmental enforcement specialist will operate in a non-enforcement role unless there is a serious violation that poses severe potential harm to the environment, persons, or animals.

For example, the assessment form for bulk dry fertilizer uses a series of questions to examine:

- Where and how the fertilizer is unloaded and transported into storage
- Does the storage leak
- How fertilizer moves to mixing / blending

- Mixing / blending and impregnating equipment
- Load-out site equipment, pad, enclosures
- Releases (spills) at any site and during transport and whether it can be recovered
- When and how cleanup occurs at each site
- What is done with the recovered material
- Possible changes in equipment, maintenance, and housekeeping at each site

A similar set of questions would be used to evaluate bulk liquid fertilizer sites, bulk and packaged pesticide storage and handling sites, and equipment parking or storage sites.

3. POLLUTION PREVENTION TASKS - SELECTION AND PRIORITIZATION

The site assessment exercise and knowledge of the site will lead to selecting pollution prevention, maintenance, and construction tasks that might be useful in preventing contamination at each site. A priority selection form is provided to list the critical sites and selected practices. Once the complete list is in hand, the tasks should be prioritized. Some will be easy to do. Others will take some time and planning, and may be more costly.

4. IMPLEMENTATION

The final step for the pilot project agrichemical dealers is to select five (5) pollution prevention activities to be given high priority and implemented during the year.

An activity form is prepared for each “high priority” pollution prevention task. The form identifies who will be responsible for doing the task, when and where it will be done, what will be done and how the job will be accomplished. A list of materials, equipment, and the cost is included.

5. POLLUTION PREVENTION PLAN

The pollution prevention (2P) plan includes the site map, prioritized list of tasks, and the five activity forms. The plan is submitted for review by the Department’s staff. Once agreed to, the facility can implement the plan within the period planned on the activity forms. DATCP field and office staff will visit the pilot facilities to assess how the effort is going, offer and accept advice, and answer questions.

The pilot project will be reviewed after one (1) year to determine whether it should become a statewide program, or a different approach is needed.