

MESA COUNTY
Solid Waste Management

Proper Disposal of Pesticides

February 2013

Brief History of Pesticides



- Swiss chemist Paul Muller discovered the insecticidal properties of DDT in 1939.
- World War I and II served as a watershed for the modern agricultural industry. Chemicals developed for warfare were later focused on the farm.

Brief History of Pesticides, cont.



- "Silent Spring," Rachel Carson's landmark challenge to the abuse of synthetic pesticides, was published in 1962, and initiated the movement toward chemical regulations.
- Federal Environmental Pesticide Control Act 1972.

Brief History of Pesticides, cont.

- Today's pesticides are designed to persist for shorter periods of time and are "supposedly" less lethal than the early days.
- Yet more pesticides are used in more countries than ever before - over \$26 billion annually.
- Statistics from the State of Washington indicate that urban pesticide use is three times greater than agricultural use.



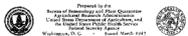
Proper Use and Handling of Pesticide



Improper Use and Disposal of Pesticides can Seriously Impact the Environment

- Possible ground water, surface water, and soil contamination can occur from over application and improper disposal of pesticide and pesticide waste.
- The old saying, "If I add a few more drops it will make it stronger" is not true for pesticide use and can put you and the environment at risk.

DDT... FOR CONTROL OF HOUSEHOLD PESTS



Pesticide Use

Generally speaking pesticide use and disposal can be categorized into the following:

- Commercial
- Agricultural (Farmers)
- Small Business (Conditionally Exempted Small Quantity Generator or CESQG)
- Household

Pesticide Use and Disposal Regulations

Commercially Used Pesticides Are Regulated as Hazardous Wastes

- Regulated by the Federal Resource Conservation and Recovery Act (RCRA);
- Generator must have an EPA Identification Number;
- Be a certified pesticide applicator;
- Unused or waste pesticides must be disposed of PROPERLY, usually by a licensed hazardous waste contractor or waste facility.

Pesticide Use and Disposal Regulations

Agriculture Pesticide Use Exemptions

Farmers are exempt from complying with **most** of RCRA; commercial applicators are not. But, the farmer is still required to comply with state and local Solid Waste Management Regulations (40 CFR 262.70).

To use the agricultural exemption:

- The wastes were generated ON THAT FARMER'S PROPERTY;
- The disposal does not cause GROUND or SURFACE WATER CONTAMINATION;
- The disposal is consistent with LABEL INSTRUCTIONS.

Pesticide Use and Disposal Regulations- (Generator Status)

40 CFR 273.3 (a) (applicability-pesticides)

- "[t]he requirements of this part apply to persons managing pesticides, as described in §273.9..."

40 CFR 273.9 (Definitions)

- **Large Quantity Handler of Universal Waste** "means a universal waste handler...who accumulates 5,000 kilograms or more total of universal waste (...pesticides...) at any time."
- **Small Quantity Handler of Universal Waste** "means a universal waste handler...who does not accumulate 5,000 kilograms or more of universal waste (...pesticides...) at any time."

40 CFR 273.3(b)(2)

- "Pesticides not meeting the conditions set forth in paragraph (a) of this section. These pesticides must be managed in compliance with the hazardous waste regulations in 40 CFR parts 260 through 272."

Pesticide Use and Disposal Regulations- (Generator Status, cont.)

If you do not fall under definitions found in 40 CFR 273.9 then

- **Large Quantity Generator:** a generator who generates more than 2,200 lbs (1,000 kg) of hazardous waste or more than 2.2 lbs (1 kg) of acute hazardous waste per calendar month (EPA530-F-96-032).
- **Small Quantity Generator:** a generator who generates more than 100 kilograms, but less than 1,000 kg (220 lbs) of hazardous waste in a calendar month (<http://www.epa.gov/wastes/hazard/generation/sqg/>).

Pesticide Use and Disposal Regulations- (Generator Status, cont.)

If you do not fall under definitions found in 40 CFR 273.9 then

- **Conditionally Exempt Small Quantity Generator (CESQG):** a generator who generates 100 kilograms or less per month of hazardous waste, or 1 kilogram or less per month of acutely hazardous waste, or less than 100 kilograms per month of acute spill residue or soil (40 CFR 261.5; <http://www.colorado.gov/cs/Satellite/CDPHE-HM/CBON/1251617291522>).
- **Household** - RCRA exempted (40 CFR 261.4(b))

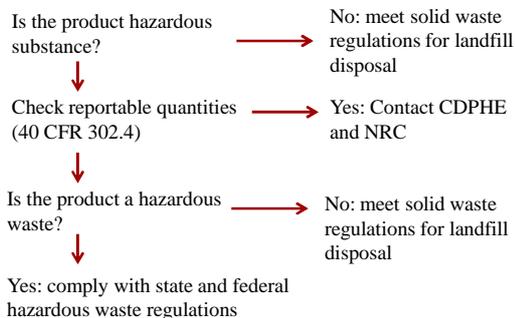
Disposal Options Per Generator Status

- Large or Small Handler of Universal Waste must use a universal waste handler or a hazardous waste vendor.
- Large and Small Quantity Generators must use a hazardous waste vendor.
- CESQG may use a Hazardous Waste Collection Facility (HWCFF) (if the HWCFF accepts waste from CESQGs) or a hazardous waste vendor.

Pesticide, Herbicide, Insecticide Spills and Clean up

- **Determine if the Spill is a Reportable Quantity (RQ)?** RQ can be found in 49 CFR 172.101 Table 1 to Appendix A-Hazardous Substances Other than Radionuclides. If the spill is determined an RQ, report the spill to the National Response Center and Colorado Department of Public Health and Environment (CDPHE).
- **Know your product:** determine if the waste from the product is a regulated hazardous waste? If the product is hazardous, determine if the waste is characteristic or listed? (characteristic wastes can be treated to remove the characteristic and disposed of in a subtitle D Landfill. If the waste is a listed waste, it is then a hazardous waste and must be disposed through a hazardous waste vendor.)

Pesticide, Herbicide, Insecticide Spills and Clean up



Examples of Hazardous Waste Vendors



- Safety Kleen
- Clean Harbors
- Veolia
- There are many hazardous waste vendors and Mesa County does not recommend one contractor over another.

Examples of HWCF Locations in Colorado

- Mesa County - 3071 HWY 50, Grand Junction, CO; 970-256-9543
- Eagle County - 815 Ute Creek Road, Wolcott, CO; 970-328-3470
- Boulder County - 1901c 63rd Street, Boulder, CO; 720-564-2243
- Jefferson County - 151 S. Rooney Rd, Jefferson, CO; 303-316-6262 ext 1 or 2
- Laimer County - 5887 S. Taft Hill Rd, Fort Collins, CO; 970-498-5771
- Weld County - 1311 North 17th Avenue, Greeley, CO; 970-304-6415 ext 2233
- El Paso County - 3255 Akers Drive, Colorado Springs, CO; 719-520-7878
- Note: HHW's may only take waste generated within the county it resides.

Waste Generated from Pesticide Application

Empty Container

- Empty BAGS should be shaken clean. They may be buried in a sanitary landfill.
- Empty DRUMS, BOTTLES, or CANS (that contained an acute hazardous waste or the label indicated triple rinse) must be triple rinsed. Empty the containers into your spray tank and drain in a vertical position for 30 seconds. Refill the pesticide container about 1/4 with water and rinse thoroughly. Add this rinse water to your tank. Be sure to let the pesticide container drain for a few seconds. Repeat rinsing and draining two more times. Now add water to your tank to bring it up to the needed level (see 40 CFR 261.7(3)).



Waste Generated from Pesticide Application

Empty Container, cont.

- After TRIPLE RINSING, punch holes in the pesticide containers to prevent reuse. They may then be buried in the landfill.
- Triple rinse may be disposed of with a Hazardous Waste Vendor or at a HWCF.

CERTIFICATION OF TRIPLE RINSED CONTAINERS

PROCEDURE FOR PREPARING CONTAINERS FOR SHIPMENT AND DISPOSAL:

Containers may be disposed of in the landfill if handled in the following manner and/or according to the guidelines set forth in 40 CFR 261.7:

1. The containers **MUST** be triple rinsed.
2. **TRIPLE RINSING:** Triple Rinse means the flushing of containers three times. The first time using a volume of the residual volume equal to approximately two percent of the container's capacity.
3. The rest of the containers must be cut out completely in preparation for disposal.
4. Labels and contents must have the appropriate label removed in preparation for disposal.
5. Labels and contents must be present in the containers according to the guidelines set forth in 40 CFR 261.7.
6. The material/containers cannot be used as a product or material as a hazardous waste.

II. WASTE DESCRIPTION:

Chemical Name _____ No. of Containers _____ Size of Containers _____
 Chemical Name _____ No. of Containers _____ Size of Containers _____
 Chemical Name _____ No. of Containers _____ Size of Containers _____
 Chemical Name _____ No. of Containers _____ Size of Containers _____

III. GENERATOR'S CERTIFICATION:

Generator's Name _____
 Generator's Address _____

I hereby certify that the containers listed above have been triple rinsed and prepared for disposal as described in the procedure above and/or according to the guidelines set forth in 40 CFR 261.7.

GENERATOR OR AUTHORIZED REPRESENTATIVE'S SIGNATURE

DATE _____ PRINT NAME _____ SIGNATURE _____ TITLE _____

Waste Generated from Pesticide Application

Excess Product/Material

- EXCESS PRODUCT is unused pesticide that you no longer need because you have stopped producing a particular commodity or because you no longer have a particular pest control problem. The best way to "dispose" of EXCESS PRODUCT is to find someone who can use it.
- If you can't use it or give it away, you must dispose of it properly by label instructions. Dispose of it with the manufacturer, a hazardous waste vendor, or an HWCF.

Waste Generated from Pesticide Application

Excess Mixture



- EXCESS MIXTURE is the diluted pesticide that is left over in your spray tank after a pesticide application. The way to "dispose" of EXCESS MIXTURE is to use it on a labeled site.
- Avoid the problem of excess mixture; measure and calibrate carefully. Fill your spray tank with only the amount required to do the job. Don't generate excess mixture.
- Must be disposed of properly (labeled instructions, manufacturer, hazardous waste vendor or HWCF).

Household Pesticide Use and Disposal



- Are regulated under local solid waste management policies;
- Pesticides used at residential households are exempt from RCRA;
- Must be disposed of according to LABEL INSTRUCTIONS;
- Household pesticides can be disposed of at an HWCF.

Common Regulated Pesticides

The following is a partial list of pesticides banned from household use.



- Diazinon
- Aldrin
- Dieldrin
- Arsenate's
- Heptachlor
- Sodium Arsenite
- Chlordane
- Kepone
- Creosote
- Lindane
- Cyanides
- Pentachlorophenol
- DDT

DO NOT USE THESE PRODUCTS

Important Information

- Colorado Department of Ag. Pesticide Applicator Program (303) 239-4178
- Colorado Department of Agriculture Fertilizer Section (303) 477-0086
- State of Colorado Office of Emergency Management <http://www.coemergency.com/>
- Colorado State University Cooperative Extension (303) 491-6281
- Colorado "Chem-Sweep" 888-242-4362
- EPA Region VIII Pesticide Office 800-227-8917; (303) 312-6617
- EPA National Response Center (800) 424-8802
- CHEMTREC Emergency Hotline (800) 424-9300
- Poison Control Center (800) 222-1222
- Local police, fire, or sheriff 911

QUESTIONS ?



Slide References

University of Florida
United States Environmental Protection Agency
"Citizen's Guide To Pesticide and Toxic Substances."
Colorado Department of Health and the Environment
Local Hazardous Waste Management Program in King County Washington

Contact Information

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