



PESTICIDE WASTE DISPOSAL for: Commercial Pesticide Applicators, Services and Vendors

PESTICIDE CONTAINERS

Empty and rinsed non-returnable plastic and metal pesticide containers are to be taken to an approved pesticide container collection site. Sites are located throughout the province and listed in the ***Guide to Crop Protection With Chemicals*** published by Alberta Agriculture, Food and Rural Development. A list is also available on the Environment Pesticide Management web site at "www.gov.ab.ca/env/protenf/pmb" [container locations](#)), or by calling Alberta Environment. Information about the operation of container collection sites in a particular area is available through local municipal offices (contact the Agricultural Fieldman). Collected pesticide containers are processed and recycled or used for heat (energy) recovery.

Pesticide container collection sites are provided only for the collection of empty, rinsed non-returnable plastic and metal pesticide containers. The sites are not to be used for the disposal of pesticide concentrate or other refuse. Empty granular bags, cardboard containers, or plastic liners should be disposed of at a Class II landfill.

LEFTOVER PESTICIDE TANK SOLUTIONS AND RINSATE

Excess pesticide solution and tank rinsate can be disposed of by using as mix water in spraying operations or it can be sprayed over a treatment area provided that label application rates are not exceeded and that use is in accordance with label directions.

TREATED SEED

The fact sheet ***Disposal of Treated Seed*** provides information about disposing of seed or grain that has been treated or mixed with a pesticide.

Waste Management Guidelines for Commercial Seed Protectant Services provides information about minimizing and managing wastes for businesses that apply commercial seed protectants. These fact sheets are available from Alberta Environment offices identified at the end of this document or through the Pesticide Management Program website.

UNWANTED OR UNUSABLE PESTICIDE CONCENTRATES

The most economical method for disposing of pesticide concentrates is to use the concentrate according to label directions. If the owner of a pesticide has no further use for the product, another qualified user may be found. Pesticides that are stored properly according to provincial regulations, industry standards, and label directions should not degrade from freezing or heating. However, in some instances it may be necessary to dispose of a pesticide that is no longer suitable or registered for use.

HAZARDOUS WASTE CLASSIFICATION

Most commercial pesticide concentrates intended for disposal will be classified as hazardous waste according to the following provincial hazardous waste criteria:

Poisonous or Toxic (Class 6)

- * having an oral LD50 of 5,000 mg/kg
- * having a dermal LD50 of 1,000 mg/kg

Flammable (Class 3)

- having a flash point at a temperature less than 61° C

Toxic Leachate (Class 9)

leachate concentration in excess of values listed in the table included at the end of this fact sheet

The following exemptions apply:

- pesticide waste amounts less than five litres or five kilograms generated in any month (hazardous waste cannot be sub-divided to qualify for this exemption)
- pesticide wastes where products carry a federal DOMESTIC label classification;
- pesticide wastes generated by farmers through the production of crops on their own land are also exempt from hazardous waste requirements.

MATERIALS CONTAINING PESTICIDES

This type of waste usually results from a pesticide fire or pesticide spill cleanup (sawdust, kitty litter, etc.). Waste materials containing pesticides are hazardous waste if the leachate extracted from the material (using standardized tests) contains pesticide residues that exceed specified limits. Critical values are listed on the last page of this fact sheet.

Hazardous waste leachate testing can be done by qualified environmental laboratories. Where materials are heavily contaminated with pesticide residues, or the pesticide residues are highly leachable and disposal amounts are relatively small, it may be more economical to forgo leachate testing and manage the materials as hazardous waste.

The 5 kg hazardous waste exemption for wastes generated in any one month applies to pesticide waste materials as well as pesticide concentrates.

Pesticide residues in soil (in excess of label application rates) can result from equipment failure or road accidents. The preferred method of managing soil pesticide residues is to encourage the in situ decomposition of residues through cultivation and fertilization. Where in situ remediation is not feasible due to the type of pesticide, residue concentration, land area, or environmental concerns, other options will be required.

Any accidents involving pesticide release into the environment must be reported to Alberta Environment (1-800-222-6514) to ensure proper clean-up and remediation.

LAND TREATMENT

One-time "land treatment" may be a suitable option for dealing with soil and organic wastes that contain pesticide residues. Land treatment involves incorporating materials into the soil surface at a rate and under conditions where pesticide residues will degrade through microbial action. This option is suitable only where residues can be evenly incorporated at a rate equivalent to a label application rate; degradation will occur within one growing season; the

degradation process will present no threat to groundwater, surface water, soil productivity, or adjacent land uses; and residue levels can be monitored. One-time land treatments must be authorized through registrations issued by Alberta Environment.

WASTE TREATMENT & DISPOSAL

Anyone offering to transport hazardous waste must have a Personal Identification Number (PIN) as a Hazardous Waste Carrier. Anyone offering to accept hazardous waste for disposal must have a PIN as a Hazardous Waste Receiver. Hazardous waste treatment facilities require an approval from the Department of Environment.

Anyone generating hazardous waste (except farmers through crop production) in excess of the five litre or five kilogram exemption must obtain a PIN as a hazardous waste generator prior to removing waste off the generator's site. These authorizations are issued by Alberta Environment.

Hazardous waste from outside Alberta can be accepted for treatment only at the Alberta Special Waste Treatment Centre in Swan Hills. Hazardous waste generated outside the province cannot be accepted for disposal in Alberta.

Solid pesticide wastes that are not hazardous can be disposed of at approved Class I or Class II landfills if the landfill operator is willing to accept them. Soil containing pesticide residues may be suitable for use as intermediate cover. Hazardous waste can be disposed of only at a Class I landfill or at an approved treatment facility authorized to accept hazardous waste.

Environmental Services Association of Alberta provides information about services available to handle hazardous wastes (phone 403-439-6363 or 1-800-661-9278).

For information about pesticide waste disposal or pesticide management in Alberta, please contact any of the following Alberta Environment offices:

Grande Prairie (780) 538-5460 Fax: (780)538-5336

Room 1701, Provincial Building
10320 - 99 Street, Grande Prairie, Alberta T8V 6J4

Red Deer (403) 340-5310 Fax: (403) 340-5022

3rd Floor, Provincial Building
4920 - 51 Street, Red Deer, Alberta T4N 6K8

Calgary (403) 297-7602 Fax: (403) 297-8232

2nd Floor, Deerfoot Square
2938 - 11 Street NE, Calgary, Alberta T2E 7L7

Lethbridge (403) 381-5511 Fax: (403) 382-4008

2nd Floor, Provincial Building
200 - 5 Avenue South, Lethbridge, Alberta T1J 4C7

The above offices can also be reached by phoning 310-0000 toll-free from anywhere in Alberta.

Critical Leachate Test Values for Pesticides

(Modified from the Alberta User Guide for Waste Managers and TDG Values)

Pesticide Active Ingredient	Regulatory Level (mg/L)	Pesticide Active Ingredient	Regulatory Level (mg/L)
acrolein (inhibited)	100.0	formaldehyde	100.0
aldicarb	0.9	glyphosate	28.0
aldrin + dieldrin	0.07	heptachlor + heptachlor epoxide	0.008
arsenic	5.0	hexachlorobenzene	0.13
atrazine	6.0	lindane	0.4
azinphos-methyl	2.0	malathion	19.0
bendiocarb	4.0	mercury	0.1
benzene	0.5	methoxychlor	10.0
bromoxynil	0.5	methyl parathion	0.7
cadmium	0.5	metalochlor	5.0
carbaryl	7.0	metribuzin	8.0
carbofuran	9.0	naphthalene	0.5
chlordane	0.03	paraquat	1.0
chlorpyrifos	9.0	parathion	3.5
cyanazine	1.0	pentachlorophenol	100.0
2,4-D	10.0	phorate	0.2
diazinon	0.02	picloram	19.0
dicamba	12.0	simazine	1.0
DDT + metabolites	3.0	strychnine	100.0
diclofop-methyl	0.9	temephos	28.0
dimethoate	2.0	terbufos	0.1
dinotrophenol	100.0	tetrachlorophenol	10.0
diquat	7.0	toxaphene	0.5
diuron	15.0	triallate	23.0
endrin	0.02	trifluralin	4.5
ethylene dibromide	100.0	2,4,5-T (Silvex)	1.0
ethylene dichloride	100.0		