

Environmental Programs

Special Waste Regulations

Disposing of Photochemical Wastes

Many photochemical wastes cannot be dumped down your drain or left at a landfill. Spent fixer and stop bath solutions can require special handling, depending on their pH and the concentrations of contaminants in them.

Where photochemical wastes are classified as special waste, they must be handled and disposed of according to the Special Waste Regulations. Special waste solutions may not be disposed of directly into the environment or into any sanitary sewer system or facility.

The Law

Under the Special Waste Regulations, a business generating more than 5 litres per month of liquid special wastes, or 5 kilograms per month of solid special wastes, must have a special waste permit.

Special waste permits are required for the following types of solutions:

- acidic solutions with a pH <2.0
- basic solutions with a pH >12.5
- solutions containing >100mg/L formaldehyde
- solutions containing ≥34% hydroquinone

If you are uncertain if your solutions are special waste, you can have them tested at an approved analysis lab. The Environmental Programs Branch can help you find such a facility.

Disposal Options

Photochemical wastes can be disposed of in several different ways. All disposal options must comply with the Special Waste Regulations and other applicable regulations.

- **Annual collection.** The Department of Environment collects special wastes in the Yukon each fall. The Department pays for collecting and transporting the wastes, while the generator pays the disposal costs, which vary, depending on the waste type, volume and concentration.
- **Permitted Waste Management Facility.** Several Whitehorse businesses are permitted to collect special waste, and then either treat it at their facility or transfer it to another facility. Contact the Environmental Programs Branch for current listings of permitted facilities.
- **Silver recovery.** Silver is no longer regulated under federal legislation, so its recovery is not mandatory. But businesses that use silver-bearing solutions can sell the recovered silver, thus lowering their operating costs and ensuring that the silver is recycled.

There are two main methods for recovering silver:

➤ **Chemical recovery**

When a silver-bearing solution is passed through a steel wool cartridge, the silver reacts with the iron, which goes into solution as an ion. The metallic silver, which is released as a solid, attaches to the steel wool and can be recovered from the cartridge. The iron in solution is not a special waste and can be poured down your drain. Silver recovered in this way is generally about 95% pure.

➤ **Electrolytic recovery**

This method yields virtually pure silver, but the necessary equipment is expensive. The fixer and developer are run through an electrolytic recovery unit that takes the silver out of solution. When coupled with a chemical recovery cartridge, silver can be removed down to concentrations as low as 0.01 parts per million.

Storage

When wastes are stored before collection or treatment, they should be stored carefully and not mixed or diluted. When spent solutions are stored in their original containers, they are easily identifiable and mixing of solutions is less likely. Disposal costs increase dramatically when wastes are mixed. Keep containers tightly sealed to prevent spills. Inspect containers regularly for signs of leaks or damage.

Spills

The Special Waste Regulations state that a person who possesses or controls a special waste at the time of a release (spill), or who causes a release, **must report the incident**. Containment and clean-up action should begin as soon as possible to protect human health and the environment.

**Spills must be reported immediately to the
Yukon Spills Report Centre in Whitehorse at (867) 667-7244
(24 hour service).
*Collect calls are accepted.***

For permit applications or additional information, please contact:

Environmental Programs Branch
Department of Environment (V-8)
Government of Yukon
Box 2703
Whitehorse, YT
Y1A 2C6

Phone: (867) 667-5683
Toll Free: 1-800-661-0408 ext. 5683
Fax: (867) 393-6205
email: envprot@gov.yk.ca

Copies of Yukon regulations may be viewed online at <http://environmentyukon.gov.yk.ca/monitoringenvironment/> under the "Standards & Approvals" section, or at any Yukon Public Library, territorial agent, territorial representative or regional services office. You may purchase copies at the Inquiry Centre, Yukon Government Administration Building, 2071-2nd Avenue in Whitehorse, or by mail from the Subscriptions Clerk, Yukon Government Queen's Printer, Box 2703, Whitehorse, Yukon, Y1A 2C6 (phone (867) 667-5783 or toll free 1-800-661-0408 extension 5783).

