



Disposal of pesticides and potentially polluting chemicals to groundwater

1 BACKGROUND

There are a number of statutory provisions relating to the disposal of pesticides and similar potentially polluting chemicals. The University has a number of Departments that use such substances on a regular basis. The information in this Safety Note is based on information provided by the Environment Agency (Introduction of the Groundwater Regulations - Environment Agency - <http://www.environment-agency.gov.uk/modules/MOD43.14.html>). Departments should also be aware that there is an annual chemical waste disposal session organised by the Safety Office in August each year. Details are sent to Departments prior to the event.

2 THE GROUNDWATER REGULATIONS 1998

The Regulations protect groundwater against pollution caused by certain dangerous substances. It is now illegal to dispose of these materials on land unless a Groundwater Authorisation from the Environment Agency is obtained beforehand.

The substances fall into 2 categories (for full lists see Appendices 1 and 2 below):

- **List 1** - the most toxic which must be prevented from entering groundwater, include pesticides, sheep dip, solvents, hydrocarbons, mercury, cadmium and cyanide; and
- **List 2** - less dangerous substances that are harmful if disposed onto ground in large quantities.

2.1 What is the definition of groundwater?

Groundwater is defined as "any water contained in the ground below the water table". It requires protection because it is used for drinking, watering stock, crop irrigation and forms the source of many rivers and streams.

2.2 When is authorisation required?

- Authorisation is required when substances are disposed of onto land.
- Authorisation would also be required for disposal of sewage effluent close to wells, springs and boreholes used for drinking water. Any disposals of more than 5 cubic metres (1,100 gallons)/day will need authorisation regardless of location.
- Authorisation is not required for substances that are placed in the mains drainage. However, The University is subject to other requirements that place limits on certain substances for disposal via the mains drainage. Departments also need to be careful to ensure that listed substances are not deposited in surface drains, many of which on the main campus flow to the Whiteknights Lake. For further guidance, please contact the Estates and Buildings Department (extension 8300).
- Authorisation is not required where substances, like pesticides washings are sprayed back onto crops in accordance with label requirements, or where slurry, manure, sewage sludge or industrial waste is put onto the land for its nutrient benefit. Examples within The University which may require authorisation would be the disposal of experimental pesticides which are not governed by label requirements or where the washings of tankers are disposed of on yards.
- Disposal of radioactive substances is covered by the Radioactive Substances Act 1993 and is not covered by these regulations

If in any doubt whether authorisation is required please contact the Food and Farming Safety Adviser (extension 7738).

3 HOW TO MAKE AN APPLICATION

Forms are available from the Food and Farming Safety Adviser (extension 7738) together with guidance notes on completing the form. Before making an application, consideration may have to be given to prior investigation of the proposed disposal site. Disposal to soakaways will not normally be acceptable. All applications will be placed on the public register of the Environment Agency unless there are good reasons why it should stay confidential.

The costs of the authorisation are twofold:

- an application fee which is payable on application for authorisation; and
- an annual charge each year payable as long as authorisation is required.

In many instances, it should be possible to cover all disposals on one application.

Appendix 1 - List 1

- Organohalogen compounds and substances which may form such compounds in the aquatic environment;
- organophosphorus compounds;
- organotin compounds;
- substances which possess carcinogenic, mutagenic, or teratogenic properties in or via the aquatic environment;
- mercury and its compounds;
- cadmium and its compounds;
- mineral oils and hydrocarbons; and
- cyanides.

Appendix 2 - List 2

- The following metals and metalloids and their compounds;

Antimony	Boron	Lead	Silver	Titanium
Arsenic	Chromium	Molybdenum	Tellurium	Uranium
Barium	Cobalt	Nickel	Thallium	Vanadium
Beryllium	Copper	Selenium	Tin	Zinc

- biocides and their derivatives not appearing in List 1;
- substances which have a deleterious effect on the taste or odour of groundwater and compounds liable to cause the formation of such substances in such water and to render it unfit for human consumption;
- toxic or persistent organic compounds of silicon and substances which may cause the formation of such compounds in water excluding those which are biologically harmless or are rapidly converted in water into harmless substances;
- inorganic compounds of phosphorus and elemental phosphorus;
- fluorides; and
- ammonia and nitrites.

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