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Proposal for an EPA Notice for disposal of hazardous substances

What does the Proposal for of the EPA Notice for disposal of hazardous substances mean?

The Environmental Protection Authority (EPA) proposes to replace the current Hazardous Substances Disposal Regulations 2001 with a Hazardous Substances Disposal Notice. This Disposal Notice aims to clarify and set requirements for the disposal of hazardous substances, hazardous substance packaging, and gases under pressure. The EPA claims that the key driver for the proposed change is to update and align the disposal requirements with international best practice and other relevant New Zealand regulation.

Key issues of concern for environmental protection in relation to toxic and ecotoxic substances include:

1. Proposal to allow toxic, corrosive, and ecotoxic hazardous substances to be more readily disposed in landfill; and
2. Proposal to allow for 'rapidly degradable' toxic substances to be discharged into the environment without any treatment.

These proposals are unacceptable for the following reasons.

Landfill is never an appropriate option for hazardous substances

Deposition directly in landfill can never be the 'best practice' method of disposal for toxic or ecotoxic waste generally, as leaching of some form will always occur due to disintegration of containment vehicles over time. Importantly such leaching will be exacerbated by climate change effects such as flooding, as well as other unpredictable catastrophic events such as earthquakes and tidal waves. In this context sea level rising and other flooding events are a particular concern for many New Zealand landfill sites due to their location in low-lying coastal areas. For example, the Green Island Landfill in Dunedin is built on a reclaimed wetland within an estuary. The Christchurch earthquake has also amply demonstrated the catastrophic effect of liquefaction processes on the integrity of the built landscape.

As there can be no guarantee of containment of toxic and ecotoxic substances in any landfill, the deposition of such hazardous waste in landfill provides a route to environmental contamination.

One of the proposals is to allow disposal in landfill if "the landfill will contain the substance until it decomposes into a substance that is no longer a hazardous substance". There can be no guarantee that

the appropriate decomposition will occur in a particular landfill conditions to render the substance non-hazardous, and such chemical change would be very difficult or impossible to monitor.

Generally allowing for hazardous waste to be deposited in landfill is not aligning New Zealand with the Basel Convention[a] guidance and with international best practice.

Alternative treatment options must take priority over landfill disposal. For example, certain metals may be recycled from waste where it is environmentally safe to do so. Where no alternatives to landfill disposal exist, hazardous substances must be treated to render them environmentally harmless before the waste is deposited in landfill.

Environmental discharge of hazardous substances deemed 'rapidly degradable' is unacceptable

All hazardous substances, including those stated to be 'rapidly degradable' must be treated to render them environmentally harmless before they enter into the environment. The reasons we reject the EPA proposal to allow discharge into the environment of 'rapidly degradable' toxic substances are:

1. Even if the substance is degraded 'rapidly', it may have an immediate detrimental environmental and health effects before it has degraded.
2. The substance may be continuously discharged into the environment, resulting in pseudo-persistence. This has the same negative environmental outcome as a 'persistent' or slowly degradable hazardous substance.
3. Even it is claimed a hazardous substance is 'rapidly degradable', the breakdown is often very dependent on particular environmental conditions for the breakdown to occur. This can never be guaranteed.

New Zealand must set up and use alternative non-combustion technologies for the destruction of hazardous waste

Incineration of any kind is not acceptable for any hazardous substances at any temperature, as incineration inevitably produces toxic air pollution and toxic ash.

Disposal of toxic or ecotoxic waste by deposition into a sewage facility, as proposed in the EPA notice, is also not acceptable. Sewage facilities are designed, at best, to remove pathogenic organisms and solids from waste water. These are not designed to render toxic, corrosive or ecotoxic substances 'no longer hazardous'. Indeed, treated wastewater and sewage sludge around the world has been shown to

[a] Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal See: www. basel.int

include persistent organic pollutants such as brominated flame retardants, heavy metals, such as lead and arsenic, and active pharmaceutical ingredients.

The proximity principle is one of the guiding principles of the Basel Convention, to which New Zealand is a signatory. This principle requires that treatment and disposal of waste takes place as near as possible to the point of production as is technically and environmentally possible. Accordingly, appropriate local facilities should be developed to render all hazardous substances harmless.

The Basel Convention Updated general technical guidelines for the environmentally sound management of wastes consisting of, containing or contaminated with persistent organic pollutants (POPs) provides details of a number of alternative non-combustion technologies for the destruction of POPs, such as the plasma arc and gas-phase chemical reduction technologies that have been used in Australia. Industry should take a lead on funding and developing these technologies in New Zealand.

New Zealand needs to adopt the principle of extended producer responsibility

We propose adopting the principle of extended producer responsibility for to ensure that hazardous substances and hazardous substance packaging are disposed of in an environmentally acceptable manner. This would require that the producer of the product including the hazardous substance provide for appropriate collection and disposal systems for any waste produced. This is rapidly becoming international best practice.

Some parts of industry have already established collection schemes in New Zealand, for example the collection of agricultural chemicals by Agrecovery (www.agrecovery.co.nz). However it is essential in the context of EPR that the schemes are mandatory rather than voluntary and guarantee environmentally appropriate disposal of all hazardous waste. It is also essential that suitable governance structures and controls are in place to ensure the appropriate collection and disposal takes place.

The EPAs proposal comes at considerable environmental cost

In summary, we consider that some of the EPAs proposals come at significant environmental cost, which has not been sufficiently identified and acknowledged. We also consider that industry should be required to take more of an active role in the environmentally responsible and appropriate disposal of hazardous waste arising from its products through extended producer responsibility schemes, in line with current international best practice. Finally disposing hazardous substances in landfill should always be prohibited. Deposition of hazardous waste in landfill provides a route to environmental contamination and hence all hazardous waste must be rendered harmless before entering landfill.