



## Proposal for an EPA Notice for disposal of hazardous substances

Please submit your comments to [hsnotices@epa.govt.nz](mailto:hsnotices@epa.govt.nz) on this form in Word document format

<b>Submission on</b>	Proposal for an EPA Notice for disposal of hazardous substances
<b>Name of submitter (or contact for joint submission)</b>	Dr. Rye Senjen
<b>Organisation name</b>	Environmental and Human Health Aotearoa
<b>Postal address</b>	50 Craigleith Street, Dunedin 9010
<b>Telephone Number</b>	0226263115
<b>Email</b>	<a href="mailto:ryesenjen@ehh-aoteroa.org">ryesenjen@ehh-aoteroa.org</a>

### Submissions will be publicly available

The EPA may post all or parts of any written submission on its website at [www.epa.govt.nz](http://www.epa.govt.nz). Making a submission implies that you consent to such publication, unless you clearly specify otherwise in your submission.

The content of submissions may be subject to public release under the Official Information Act 1982 following requests to the EPA. Please clearly indicate if you have any objection to the release of any information contained in your submission, and in particular, which part(s) you consider should be withheld, together with the reason(s) for withholding the information. We will take into account all such objections when responding to requests for copies and information on submissions to this document under the Official Information Act 1982.

### Privacy

The Privacy Act 1993 establishes certain principles with respect to the collection, use, and disclosure of information about individuals by various agencies including the EPA. It governs access by individuals to information about themselves held by agencies. Any personal information you supply in the course of making a submission will be used only in conjunction with the matters covered by this document. Please clearly indicate in your submission if you do not wish your name to be included in any summary of submissions that the EPA may publish.

Confidentiality waiver/privacy:

- I would like my submission (or specified parts of my submission) to be kept confidential, and attach my reasons for this consideration by the EPA.
- I would like my submission reported anonymously (i.e. without my name attached) by the EPA.

## Proposals and submission form

The EPA is seeking your views as interested parties on the proposals presented in the consultation document *Proposal for an EPA Notice for disposal of hazardous substances*.

The consultation document presents a number of proposals and poses a series of questions to help you frame your comments. Your feedback is important as it will enable the EPA to make more informed decisions on the content of the proposed notices. Please take this opportunity to have your say.

**Please use this form to submit your written comments and send it to [hsnotices@epa.govt.nz](mailto:hsnotices@epa.govt.nz) (in Word document format) no later than 5.00 p.m. 22 August 2016.**

The submission form brings together all of the proposals and questions asked throughout the consultation document in table format. Page references are provided to help you locate the relevant discussion as necessary.

There are many proposals and questions in Chapters 3 to 4 of the consultation document. Please focus on the ones that are relevant to you and don't feel that you should answer them all.

When providing your comments, please provide your rationale and any information about the relative costs and benefits (financial or otherwise), and any other impacts of these proposals on businesses, workers or other stakeholders. This information will help us more fully understand the effects the notices would have if introduced as proposed.

Question# (Proposal)	Proposal/Question	Pg#	Your comments/notes and rationale
<b>CHAPTER 3 Proposed changes to disposal requirements</b>			
Question 1 (Proposal 1)	<p>Do you agree with the three proposed options for disposal of toxic, corrosive or ecotoxic (class 6, 8, or 9) substances into a landfill:</p> <ol style="list-style-type: none"> <li>Treating the substance so it is no longer hazardous before depositing the substance in a landfill; or</li> <li>Depositing the substance into a landfill, if the landfill will contain the substance until chemical change renders the substance non-hazardous; or</li> <li>Depositing the hazardous substance into a landfill that will isolate and contain the substance (including leachate containing the substance) and prevent it from entering the environment beyond the landfill.</li> </ol>	20	<p><b>We do not agree with option b and c.</b></p> <p>Alternative treatment options must be 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.</p> <p>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.</p> <p>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.</p> <p>There can also be no guarantee that the appropriate ‘chemical change’ 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.</p> <p><i>The Basel Convention Updated general technical guidelines for the environmentally sound management of wastes consisting of, containing or contaminated with persistent organic pollutants (POPs),</i></p>

Question# (Proposal)	Proposal/Question	Pg#	Your comments/notes and rationale
			<p>provides that disposal in “specially engineered landfill” is a <b>last resort option</b> “when neither destruction nor irreversible transformation is the environmentally preferable option”. According to these guidelines, a number of types of wastes containing or contaminated with POPs, including liquids and materials containing free liquids and biodegradable organic wastes are also simply not suitable for disposal in landfill.</p> <p>Therefore, generally allowing for hazardous waste to be deposited in landfill does not align New Zealand with Basel Convention guidance and with international best practice.</p>
Question 2 (Proposal 1)	Do you consider there should be a hierarchy of these three proposed disposal options, i.e. specifically in the order as listed above?	20	<p>Please see above question 1. We propose that all hazardous substances be made non-hazardous before disposal of any kind. This would necessitate investment in such technologies that are capable of rendering all manner of hazardous substances non hazardous.</p> <p>The Basel Convention <i>Updated general technical guidelines for the environmentally sound management of wastes consisting of, containing or contaminated with persistent organic pollutants (POPs)</i> 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.</p> <p>New Zealand must develop facilities for the appropriate destruction of hazardous substances in waste rather than resorting to ineffective ‘containment’ in landfill.</p>
Question 3 (Proposal 1)	What impact would these proposals have on the disposal of household hazardous substances?	20	<p>We propose adopting the principle of extended producer responsibility for hazardous substances, including those found in the household, to ensure that these substances 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</p>

Question# (Proposal)	Proposal/Question	Pg#	Your comments/notes and rationale
			<p>rapidly becoming international best practice. The OECD defines, Extended Producer Responsibility (EPR) as “<i>an environmental policy approach in which a producer’s responsibility for a product is extended to the post-consumer stage of a product’s life cycle</i>”. See the detailed report by the European commission <a href="http://ec.europa.eu/environment/waste/pdf/target_review/Guidance%20on%20EPR%20-%20Final%20Report.pdf">http://ec.europa.eu/environment/waste/pdf/target_review/Guidance%20on%20EPR%20-%20Final%20Report.pdf</a>.)</p> <p>Some parts of industry have already established collection schemes in New Zealand, for example the collection of agricultural chemicals by Agrecovery (<a href="http://www.agrecovery.co.nz">www.agrecovery.co.nz</a>). 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.</p>
Question 4 (Proposal 1)	Do you consider that a transition period for the landfill requirements proposed would be useful? If so, how long would you recommend?	20	<p>The proposed landfill requirements appear to be broadening the disposal options for hazardous substances. The current requirements under the Regulations are:</p> <p style="padding-left: 40px;">“Treating the substance includes depositing the substance in a landfill, if the landfill will treat the substance by changing the characteristics or composition of the substance so that it is no longer a hazardous substance.”</p> <p>The new proposal includes the option for disposing of untreated hazardous waste in landfill, using the notion of ‘containment’. For the reasons discussed above, there can be no permanent ‘containment’ of toxic and ecotoxic hazardous substances in landfill.</p> <p>Accordingly we suggest that we keep the current wording and hence no transition period will be required.</p>
Question 5 (Proposal 2)	Do you agree that the TEL and EEL requirements should be clarified as stated above?	22	No. We disagree that TEL and EEL should be used to allow discharge of toxic or ecotoxic substances into the environment.

Question# (Proposal)	Proposal/Question	Pg#	Your comments/notes and rationale
			<p>TEL and EEL do not and cannot take into account the chemical and toxic/ecotoxic nature of the environment into which the substance is discharged. That is, the substance may be more toxic or ecotoxic (according to the standards used in testing these values) in the context of a mixture of pollutants present in the environmental medium that provided in the TEL or EEL. Furthermore, clauses 9(1)(b) and 10(3) of the draft Notice for disposal of hazardous substance (the Draft Notice) requires that the TEL or EEL be determined 'after reasonable mixing'. This discounts any immediate point source effects that occur prior to mixing.</p> <p>It already appears to be acknowledged in clauses 9(2)(f) and 10(4)(h) of the Draft Notice that dilution is not a form of treatment of waste containing a toxic or ecotoxic substance before discharge into the environment. Accordingly, it is equally inappropriate to use an 'environmental medium' to dilute a toxic or ecotoxic substance, as provided by clauses 9(1)(b) and 10(3).</p> <p>All waste containing toxic or ecotoxic substances <b>must</b> be treated prior to release into the environment to alter these substances so that they no longer have the toxic or ecotoxic properties.</p>
Question 6 (Proposal 3)	Do you consider that hazardous substances, that are rapidly degradable and the products of that degradation are not hazardous, should be able to be discharged into the environment?	23	<p>No. All hazardous substances, including those stated to be 'rapidly degradable' must be treated to render them environmentally harmless before they enter into the environment.</p> <p>The reasons we reject the proposal to allow discharge into the environment of 'rapidly degradable' are:</p> <ol style="list-style-type: none"> <li>1. Even if the substance is degraded 'rapidly', it may have immediate detrimental environmental and health effects before it has degraded.</li> <li>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</li> </ol>

Question# (Proposal)	Proposal/Question	Pg#	Your comments/notes and rationale
			<p>slowly degradable hazardous substance.</p> <p>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.</p>
Question 7 (Proposal 3)	Do you agree that any discharge of a substance that is rapidly degradable must comply with any TEL set for that substance?	23	See answers to questions 5 and 6
Question 8 (Proposal 4)	Do you agree with the proposed changes to the provision relating to discharge into the environment of class 9.1 substances that are bioaccumulative and not readily degradable?	24	<p>We agree that all hazardous substances should be treated to render them environmentally harmless before they enter into the environment.</p> <p>However, for the reasons discussed above, we disagree with the deposition of such substances in landfill.</p>
Question 9 (Proposal 5)	Do you consider it necessary to provide a threshold of the amount of halogenated organic compound in the hazardous substance to apply to this provision? If so, why?	26	No, the threshold for the amount of halogenated organic compound in the hazardous substance to apply to this provision should be zero.
Question 10 (Proposal 5)	Do you consider that a transitional period is necessary? If so, why and what term would you recommend?	26	We do not consider transitional periods necessary and would definitely not recommend them.
Question 11 (Proposal 6)	Do you agree that all persons should be required to detonate and deflagrate explosives in accordance with the HSW (Hazardous Substances) Regulations?	29	
Question 12 (Proposal 7)	Do you agree that the Q Formula should be replaced by a qualitative measure of heat radiation?	29	

Question# (Proposal)	Proposal/Question	Pg#	Your comments/notes and rationale
Question 13 (Proposal 8)	Do you agree to remove the blast overpressure control for flammable liquids and gases (class 3.1 and 2.1.1 substances)?	30	
Question 14 (Proposal 9)	Do you agree that the disposal of self-reactive substances and desensitised explosives (class 4.1.2 and 3.2 and 4.1.3 substances) should be undertaken in accordance the requirements for the disposal of explosives?	31	
Question 15 (Proposal 10)	Do you agree that compressed gas, contained in a cylinder, should not be disposed of into a landfill?	31	
Question 16 Benefits and Costs	Do you consider that the benefits of these proposals will outweigh the costs?	35	As outlined above, we consider that some of these proposals come at significant environmental cost, which has not been identified in the EPA proposal. 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.

## Additional comments by EHHA

### Further treatment options provided in clauses 9(2) and 10(4) of the Draft Notice

9(2)(e)(ii) and 10(4)(g)(ii): Incineration of any kind is not acceptable for any hazardous substances at any temperature, as incineration inevitably produces toxic air pollution and toxic ash. Industry involved in the manufacture, importation and sale of products that result in toxic and ecotoxic waste need to invest in alternative non-combustion technologies for environmentally appropriate disposal of that waste.

9(2)(e)(iii) and 10(4)(g)(iii): Disposal of toxic or ecotoxic waste by deposition into a sewage facility is 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 include persistent organic pollutants such as brominated flame retardants, heavy metals, such as lead and arsenic and active pharmaceutical ingredients. Accordingly, 'treating' toxic, corrosive and ecotoxic waste by deposition in a sewage facility is no more than a dilution of these substances in wastewater, which is proscribed in clause 2(f). Even the best wastewater treatment technology is not able to render persistent toxic and ecotoxic substances 'no longer hazardous', and many New Zealand wastewater treatment plants are far from having the best available technology. The deposition of such toxic and ecotoxic substances in a sewage facility is a direct deposition of these substances into the environment, as the 'treated' wastewater and sewage sludge (also termed biosolids) is discharged into rivers, the marine environment, or on to land.

### **Export of hazardous waste**

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.

The stated aims of the EPA Notice for disposal of hazardous substances include the better alignment of New Zealand with best practice recommended under international conventions. Accordingly, New Zealand should take on its obligations under the Basel Convention and strive to not export any hazardous waste.

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.

### **The move to Disposal Notices needs a strengthened governance structure and increased accountability provisions**

EHHA welcomes the EPA's embracing of international best practice for the disposal of hazardous substances.

We also broadly agree that Disposal Notices, rather than Disposal Regulations are useful in providing a speedy response to changes in our knowledge regarding the harmful environmental impact of hazardous substances.

The proposal outlines the intention that the EPA publicly notify its intention, gives time for submission and to consult relevant stakeholders. This notice requirements are vague (no time limits are given, nor indication on what the meaning of consultation is).

We strongly recommend:

- that the EPAs notice requirement be made more explicit, in particular that a more inclusive governance and accountability structure be added.
- For this purpose we strongly recommend the establishment of a multi-stakeholder oversight body that includes civil society representatives (environment, public health and union representatives).
- The purpose of such an oversight committee (rather than the current governance board) would be to ensure that EPA notices are made in a timely manner, are made public and that the public can influence/challenge EPA notices.