

Your ref:
Our ref: 1.6.24/14
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End-of-waste review
Department of Environment Regulation
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DER GUIDANCE STATEMENT: REGULATING THE USE OF WASTE DERIVED MATERIALS

Thank you for giving ChemCentre the opportunity to comment on this initiative. ChemCentre regards this initiative as a significant step forward to ensuring the safe use of waste-derived materials to benefit the environment, improve agricultural productivity and divert potentially useful materials from scarce landfill.

In Response to questions raised in the Guidance Statement:

Question 1

- a) Which waste streams should DER develop material guidelines for?

ChemCentre is in favour of the development of material guidelines for all the suggested end-uses:

- Waste-derived fill (including clean fill)
- Soil conditioners
- Construction products
- Treated acid sulfate soils
- Waste derived fuel

- b) What do you think the priority order for the development of the material guidelines should be and why?

ChemCentre has participated in many studies over recent years in collaboration with industry, in particular Alcoa and Water Corporation, as well as Universities and governments departments. Projects involved the Department of Food and Agriculture and the Swan River Trust investigating the use of various red mud, sand and amended biosolids, primarily for the application in soil amendment. The key focus of this research has been to demonstrate that these test materials can improve soil quality, i.e. phosphorous retention, cation exchange capacity, buffering capacity and soil structure.

The ability of waste-derived materials to improve horticulture and turf productivity and to reduce contamination of ground and surface water quality needs to be investigated. Given the rapid development and urbanisation of the Swan Coastal Plain and based on the scarcity of available land fill options, efforts need to be directed to minimising land-fill. Thus, the use of waste derived materials in soil amendment and co-generation of power in our view is an option which must be explored.

ChemCentre has recently gained experience in the use of the US EPA and EU adopted leaching tests and in the near future will gain experience using the associated predictive models to inform and support product and by-product utilisation, i.e. the Leaching Environment Assessment Framework (LEAF). ChemCentre is currently in discussion with Alcoa, Water Corporation, Iluka and the MRIWA as to how best to validate these tests for WA waste-derived materials.

In our view the priority order should be given to the following:

- Soil conditioners
- Construction products
- Treated acid sulfate soils
- Waste-derived fill
- Waste derived fuel

Question 2

- a) Are you willing to participate in workshops to help inform the development of material guidelines?

ChemCentre would welcome the opportunity to participate in workshops to help inform the development of waste-derived material guidelines.

The key ChemCentre contacts are:

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b) If so, which waste streams would you like to be involved with?

ChemCentre would like to have the opportunity to participate in workshops primarily focusing on:

- Waste derived fill
- Soil conditioners
- Treated acid sulfate soils

Question 3

How Should DER's costs associated with regulating waste-derived materials be recouped from flat fee per application;

- Sliding fees based on the degree of work involved; or
- Some other mechanism (please specify)?

ChemCentre believes that the proponent should be responsible for all costs required to demonstrate the effectiveness and environmental benignness of waste derived materials.

ChemCentre also believes that DER should charge a flat fee per application.

Additional Comments

In November 2013, ChemCentre co-hosted with the Minerals Research Institute of WA (MRIWA) a workshop titled "Mine Wastes: Smarter Analytical tools for Extracting Value and Managing Closure". This workshop brought together researchers, the mining industry and Government regulatory agencies to discuss leaching characteristics of mine wastes, and the current level of knowledge and the testing capabilities in areas, such as by-products derived from waste materials from mineral processing and related industries. It is believed that having smarter analytical tools would provide the platform in the development of a WA framework for by-product re-use and classification.

Regarding the issue raised in the DER Guidance Statement on "uncertainty about when waste ceases to be waste". This issue can be addressed by developing smart analytical and modelling tools that are applicable to local materials, typical of WA. Field trials should also be performed as part of the process.

Regarding "DER's proposed approach to the regulation of waste-derived materials is to publish a guidance statement and associated guidelines...", this alone may not be sufficient as a uniform approach by all regulatory agencies is required. ChemCentre suggests that other regulatory agencies such as EPA, Department of Health and Department of Mines and Petroleum be consulted in this process. The objective should be to have one single process for applications of waste-derived materials with one submission that meets the requirements of all agencies.

Yours sincerely



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