

15th August, 2014

End-of-waste review
Department of Environment Regulation
Locked Bag 33
CLOISTERS SQUARE WA 6850

DER Draft guidance statement: Regulating the use of waste-derived materials

Thank you for the opportunity to comment on the above DER initiative. Alcoa of Australia (Alcoa) is keen to see the introduction of an assessment framework to help facilitate the approval for use of by-product materials, and offers the following comments on the consultation paper.

Guidance Statement

DER will develop and publish material Guidelines for the production and use of different Waste Derived Materials (WDMs), for example, waste-derived fill, waste-derived fuel. Where a material Guideline for a particular WDM has not been developed and issued by DER, it will assess and make a determination on the production and use of a WDM on a case-by-case basis as requested by industry, subject to resources. DER will only consider submissions which include the information required and in the form detailed in a relevant Guideline, which is currently under development.

DER's material Guidelines and case-by-case determinations on WDMs will be based on the application of the following end-of-waste criteria:

- That the production and/or characteristics of the WDM meet all defined and relevant specifications or standards as evidenced through appropriate equality assurance/sampling and testing systems
- That the WDM will be used to replace a raw material and that use will not
- Result in unacceptable impacts on the environment.

Where the production and use of WDMs is in accordance with a published DER material Guideline or a DER written approval, WDMs may be recognised as having ceased to be waste; however, such materials may become waste again (and regulated as such under the EP Act and WARR legislation) if they fall within the ordinary meaning of the term 'waste', (for example if they are discarded as no longer wanted), or within the relevant extended statutory definition of the term (for example if they are discharged, i.e. removed, sent forth or gotten rid of, into the environment).

Question 1

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

The waste streams of most interest to Alcoa are;

- waste-derived fill (including clean fill)
- soil conditioners

Alcoa has been working toward utilisation of bauxite residue in these applications for a number of years, and the development of material guidelines for these will certainly help provide a clear pathway toward potential utilisation of bauxite residue.

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

These same two areas should be of great interest within the Southern metropolitan and Peel regions (the areas in which Alcoa operates). Large volumes of general fill for land development are required within the southern

metropolitan corridor and this has been identified by the WA State Government as a strategic issue. This has been re-enforced by the Chamber of Commerce and Industry of Western Australia (Basic Raw Materials Access and Availability Perth Metropolitan and Outer Areas 1996 – 2008), which identifies the availability of basic raw materials as a key strategic issue confronting the extractive industries sector. Alcoa also understands that basic raw materials availability and usage is a key issue being considered by the Strategic Assessment of the Perth-Peel Region, currently being led by the Department of Premier and Cabinet where the Urban Development Institute of Australia (UDIA) has provided an overview of the fill requirements for urban development on the Swan Coastal Plain. Alcoa believes that the sand by-product derived from bauxite residue could make a major contribution to this ongoing requirement for fill material.

The sandy soils on the Swan Coastal Plain are the cause of many of the eutrophication problems within our waterways. A report by Ironbark Environmental to the Peel-Harvey Catchment Council and Regional Development Australia (Peel-Harvey Catchment Council (2011) Catchment condition and priorities, Peel-Harvey Catchment 2011) finds that *whilst the actions required to protect the Peel Estuary's condition have been well described for up to 20 years, there continues to be a general reluctance to implement and resource the necessary policy, research and practical measures necessary to protect the Estuary and lower rivers*. This applies specifically to strategic land use planning for future residential and industrial areas, modification to rural fertiliser practices, adoption of soil amendment practices and sufficient funding for implementation of infrastructure and research and monitoring to audit the effectiveness of management practices. While extensive research has been done demonstrating the benefits of soil amendments (including soil amendments derived from Alcoa's bauxite residue) in addressing this problem (as well as improving the productivity of coastal farmlands), the adoption of soil amendment as a standard practice has been very limited, and has faced many challenges including the lack of a regulatory assessment framework for using materials as soil amendments.

Question 2

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

Alcoa is certainly willing to participate in the development of the material guidelines including any workshop sessions. As Alcoa has been working toward utilisation of bauxite residue over a number of years, the company has a significant amount of background information it can bring to such a process.

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

Alcoa's key interest is in the utilisation of bauxite residue in waste-derived fill and soil amendments.

Question 3

How should DER's costs associated with regulating waste-derived materials be recouped from industry?

- Flat fee per application;
- Sliding fees based on the degree of work involved; or
- Some other mechanism (please specify).

Once the Material Guideline Specifications have been developed, it is envisaged that the bulk of the work to demonstrate the suitability of a waste derived material against this specification would be done by the proponent, at the proponent's cost. To then lessen the workload for DER in assessing the application, consideration could be given to incorporating an assessment by an independent auditor who would review the submission and make a recommendation to DER (similar to the current Contaminated Sites assessment process). The auditor assessment would also be at the proponents cost. Hence the costs to DER should be minimal, and could be covered by a simple flat fee per application.

Other Considerations

Alcoa suggests the following key discussion points should also be considered by the workshops and/or the working groups.

1. The Guidance Statement refers to the development of Material Guidelines for the production and use of different Waste Derived Materials (WDMs). However, it is not clear whether there will also be an overarching assessment framework or methodology that will help guide the development of these specifications. Alcoa is keen to see this type of framework developed as it will provide proponents a clear pathway through the assessment process, something which has been a significant barrier in the past. There are good examples of

assessment methodologies available which could be readily adopted by DER (e.g. Victorian *Environment Protection (Industrial Waste Resource) Regulations*)

2. In developing the Material Guideline Specifications, consideration needs to be given to how any acceptance criteria is to be developed, allowing some flexibility to assess the material in the context that it will be used. Prescribing threshold levels for contaminant loadings based on total composition that try to cover all possible applications in all possible environments will likely lead to overly conservative criteria, hence excluding the use of a large number of potential materials. A process is required which allows consideration of the leachability of contaminants of concern, and for this leachability to be assessed within the context of the environment in which the material is to be used. Issues related to the development of Material Guidelines have been addressed in the Netherlands in relation to construction products as well as “contaminated” soil use under the Soil Quality Decree. Similar discussions are being held in US EPA in relation to the development of new environmental assessment tools (http://www.epa.gov/osw/hazard/testmethods/sw846/new_meth.htm) to be used where TCLP does not provide the needed information to make decisions. Alcoa encourages consideration of similar approaches, adopting available practices which have been demonstrated to work well in other jurisdictions, rather than trying to develop a new process in isolation from these.
3. The form of approval for use by DER will be very important. If approval takes the form of an exemption from the requirements of the waste regulations, it is likely to be very limiting in terms of commercialising a product, as the material will still be considered a waste under the regulations. In some U.S. states, a “Beneficial Use Permit” is issued by the Environmental Agency after having been through an assessment process (see Beneficial Use Permits issued by the Pennsylvania Department of Environment http://www.portal.state.pa.us/portal/server.pt/community/beneficial_use/14094). The European Union is moving toward End of Waste criteria which would see waste streams removed from the waste regulations and considered a product. Alcoa would like to see a similar process, where an Approval or Permit for use is issued in which the material is recognised as a product if used in accordance with manufacturers recommendations. These recommendations would clearly set out any boundaries and/or conditions for the proposed use, ensuring that all parties are clearly aware of the conditions under which the approval or permit for use has been granted.
4. Transfer of risk and title is an area that will likely require considerable discussion and clarification by DER. At what point does a proponent for a waste derived material cease to become responsible for it. For example, if a material is considered acceptable as general fill in a particular setting, but at some point in the future this material is removed or re-used in another application which has not been approved, where does the liability reside for any issues that may arise?
5. Alcoa is encouraged by the development of this consultation paper, however we again stress the need for the Government to resolve this issue urgently. Resources are being wasted and sustainable solutions that reduce environmental degradation are not being utilised.

Thank you again for the opportunity to comment on the draft guidance statement. Alcoa looks forward to working with DER on the development of an Assessment Framework and the Material Guideline Specifications.

Yours faithfully,



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