Friday, September 01, 2006

Inquiry into Waste Generation and Resource Efficiency
Productivity Commission
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Melbourne VIC 8003

Email: waste@pc.gov.au

RE: Draft Report on Waste Management, Productivity Commission 2006

The Ash Development Association of Australia[1] ("the ADAA") welcomes the opportunity to submit comments to the Productivity Commission ("the PC") in relation to the – "Draft Report on Waste Management, Productivity Commission 2006" ("the Report").

INTRODUCTION

The ADAA's goal is to increase the awareness of producers, regulators and users, of the ecologically sustainable benefits arising through increased utilisation of coal combustion products (CCP's), to the benefit of industry members, the environment, and the community.

The association aims are to facilitate the responsible, increased utilisation of CCP's as a valued recovered resource. In measuring this aim the association commission's regular annual surveys, commencing in 1991. These surveys are conducted to capture information on the total production and effective utilisations levels of CCP's.

Members including Generators (Coal Fired Power Station Operators), Marketers, (Reprocessing and Marketing Companies) and downstream users are surveyed for the total production and resulting sales by uses. Response rates are typically 100 percent.

The key results for the calendar period 2005 survey were:

- Approximately 13 Mt (million tonnes) of CCP's were produced within Australasia (Australia and New Zealand). On per capita basis this equates to 682 kgs per person

[1] Australian producers and marketers of power station ash formed the Ash Development Association of Australia (ADAA) in 1991, with the primary objective to investigate and develop economic market opportunities for the use of Coal Combustion Products (CCP) commonly known as power station ash, fly ash or furnace bottom ash. Our association's aims are to facilitate the responsible and increased utilisation of CCP's as valuable material rather than see them disposed of through traditional land filling methods. We aim to achieve this through increasing user awareness of the ecologically sustainable benefits arising through increased utilisation of these products, to the benefit of industry members, the environment, and the community.

- Some 6.103 Mt or 47 percent of CCP's have been effectively utilised in various value added product/s or to some beneficial end. On per capita basis this equates to 320 kgs per person recycled or reused
- 11 percent or 1.46 Mt was used in high value added applications such as cementitious applications or concrete manufacture. This use resulted in more than 1.1 million tonnes of $C0_2^{-e}$ being abated through reduced clinker manufacture[2]
- 4 percent or 0.550 Mt was used in non cementitious applications
- 32 percent or 4.131 Mt was used in projects offering some beneficial use (e.g. onsite mine site remediation, local haul roads etc.) These uses typically generate no economic return, that is cost recovery only
- Surplus (6.897 Mt) is typically placed into onsite storage ponds awaiting some future opportunity for economic reuse[3]
- From 1990 to 2005 utilisation rates have increased from 8.4 percent to 47 percent.
- Revenues of more than $100 million was generated from the reuse of 6.103 Mt

Surplus CCP's represent a significant alternative raw material (ARM), with characteristics and properties lending themselves to a wide range of potential applications (cement, concrete manufacture, engineering fills and agricultural applications) and when effectively utilised, CCP's can provide significant positive environmental impacts and economic returns.

COMMENTS ON THE REPORT FINDINGS & RECOMMENDATIONS

Firstly, the ADAA welcomes many of the report findings and considers the commissions recommendations to be sound and with merit in regard to waste management and resource efficiency.

The commission's attention is drawn to the recent publication of the "Cement Industry Action Agenda"[4] (CIAA) report. It is noteworthy that a number of recommendations arising from CIAA report strike some accord with the commission's findings. In particular those in relation to addressing regulatory barriers and those that frustrate the use of recovered resources. We encourage the commission to review the findings of the CIAA report, as they represent a significant and independent source, supporting the recommendations of the commission's report.

In particular, we strongly support the commission's recommendations of 7.1, 12.2, 12.3, 12.4, 13.1 and 13.2. That is, we would advocate strongly for the retention of these recommendations into the final report.

Response approach to recommendations arising from the report - we have limited our comments on those findings and recommendations of relevance to our industry and members. Where we have made no comment/s, it can be said we are in general agreement, to the limit of our interest, with the commission's recommendations.

DRAFT FINDING 2.2

[2] Heidrich, C. (2005). SCM's potential to lower Australia's greenhouse gas emissions profile. Iron and Steel Slag Products: A significant resource in a time of scarcity, Sydney, NSW, Australia, Australasian (iron & steel) Slag Association.

[3] Heidrich, C. The environmental bonafides for CCP use in Australian agricultural and horticultural systems. in World of Coal Ash 2005. 2005. Lexington, Kentucky, USA: American Coal Ash Association & University of Kentucky.

[4] DITR (2006). Punching Above its Weight - Australia's Cement Industry. Canberra, Department of Industry, Tourism and Resources: pp. 87.

Whilst we support the commissions general findings in this regard, the report should not ignore, where data is comparable, that efforts be undertaken to establish international comparison for best practice purposes. That is, utilisation practices. These comparisons can be insightful and important in determining appropriate policy, leading to effective industry action.

DRAFT RECOMMENDATION 12.2 & 12.3

In context of issues raised in chapter 12 of the report, institutional and regulatory impediments have figured as significant imposts for our members and have frustrated many attempts to develop and sustain new market uses for CCP's.

It is noteworthy for the volumes currently utilised, some 6.103 million tonnes annually, there has come to be general acceptance by regulators for these typical uses for CCP's, that is, for use by the cement and concrete sector and as general engineering fill within the boundaries of the generation source. To this end there have been significant achievements to gain some exemptions for the use of CCP's, but there are still considerable barriers to overcome.

Where members have attempted to expand this list of typical uses, regulations and so called waste levies have been used inappropriately to frustrate these endeavors. For example in NSW, fly ash is listed as a waste. Accordingly any offsite movement of these materials requires both monitoring and minimum levels of reporting by the generator and user.

To illustrate our view on inappropriate application of regulation, during early 2005 a very large development project in close proximity to a fly ash source site required some 500,000 tonnes of engineering fill. The design engineers agreed that fly ash met the physical and chemical properties of the project. Regardless, additional testing requirements at some considerable additional cost, were called for from the local regulator. These additional requirement were above and beyond that required of virgin materials. These additional test requirements were met. Subsequently the regulator deemed and required that "land fill levies" were payable if the prescribed waste material was used as the project required more than 20,000 tonnes. The resulting levy impost made the proposed use of CCP's commercially unviable resulting in the use of traditional quarried and virgin excavated natural materials.

This is just one of many examples where regulation can be used inappropriately, either to frustrate the use of recovered resources, or to generate revenue streams to local authorities where no environmental harm could be demonstrated.

We support the commission recommendation for state and territory environmental regulators to undertake a review of those regulatory requirements that lead to the unnecessary regulation of byproduct materials where it can be demonstrated that the materials can be safely reused or recycled.

Arising from a commissioned report of the ADAA – *Coal Ash: A Review of Legislation and Regulations within Australia*[5], the report findings conclude that – "Legislatively there appears at both the Federal and State levels dislocation between Environment regulation and to by-product use where environmental bona fides can be demonstrated. This finding further supports the commission recommendation.

[5] Aynsley, D., M. Porteous, et al. (2003). Coal Ash: A Review of Legislation and Regulations within Australia. Wollongong, ADAA: 52.

The Commission's call for further information in relation to the costs and benefits of harmonising "waste classification systems" is an interesting one. The report is devoid of any substantive economic analysis or conclusions. We believe the commission's report presents much of the evidence required to form these conclusions.

We see "waste management requirements" as requiring some considerable effort, but separate from any resultant "material classification system". The inclusion of a "waste exemption system" within any recommendation for a classification system, where environmental bona fides are demonstrated would be helpful.

We strongly support the goal to develop a national classification system that is both "low cost", and balances the needs of state jurisdictions thus leading towards, over time, regulatory convergence.

Classification systems, for example NSW EG's[6], of both virgin materials and wastes exist and are appropriate and necessary to determine levels of environmental risk. The key is the development and general agreement on a national classification system, that is both broadly supported by industry and governments. This may not be that costly given their existence.

What is costly from the current fragmented state based system is the range of classification systems which result in various jurisdictions and differing laboratory test procedures, multiplying the costs of analysis, interpretation and reporting, as well as industry management time.

DRAFT RECOMMENDATION 13.1

The Environment Protection and Heritage Council is an organisation we have engaged with and who goals we broadly support. Whilst we generally support the principles to coordinate the development of a concise, nationally consistent, data set for waste management that would facilitate evaluation and comparison of waste management policies across jurisdictions.

We wish to offer the following observations about EPHC, in particular the NEPC and methodologies used to develop consensus positions. Members of the NEPC are ministers, although not necessarily environment ministers, appointed by the principal ministers of participating jurisdictions. Given the membership constitution, decisions can be distorted by political motives from time to time and furthermore lead to frustration of efficient outcomes.

GENERAL COMMENTS ON THE REPORT

Glossary

Update definitions:

Coal Combustion Products (CCPs) – fly ash (FA), furnace bottom ash (FBA), boiler slag, fluidised-bed combustion (FBC) ash, or flue gas desulfurisation (FGD) material produced primarily from the combustion of coal or the cleaning of the stack gases. Also a collective term referring to fly ash, bottom ash, boiler slag, fluidized bed combustion (FBC) ash or flue gas desulfurization (FGD) material produced primarily from the combustion of coal and the cleaning of the stack gases and are manufactured either as a

[6] NSW EPA (1999). Environmental Guidelines: Assessment, Classification & Management of Liquid & Non-liquid Wastes. EPA 99/21. Sydney, NSW, Australia, Environment Protection Authority.

part of the coal fired power plants operating processes or otherwise to meet standards, guidelines etc. and used commercially.

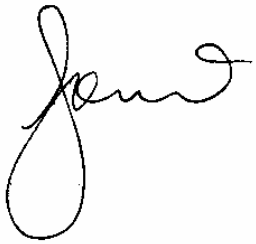
Fly Ash – the noncombustible oxidized elements that exit the combustion chamber in the flue gas and is captured in equipment such as Electrostatic Precipitators, Filter Baghouses, and wet scrubbers. Fly ash is typically a pozzolan. Australian fly ash is light to mid-grey in colour and have the appearance of fine powder. Particle sizes range from less than 1 μm (micrometer) to 200 μm and are irregular to spherical in shape.

Furnace Bottom Ash - agglomerated ash particles formed in pulverized coal furnaces that are too large to be carried in the flue gases and impinge on the furnace walls or fall through open grates to an ash hopper at the bottom of the furnace. Bottom ash is typically grey to black in color, is quite angular, and has a porous surface structure. Bottom ash is used as an aggregate, as feedstock for cement manufacturing or in construction applications in lieu of other constituents (such as sand, gravel).

SUMMARY

In closing, we again offer our support to the Commissions findings and recommendations subject to the above comments. We look forward to meeting with the Commissioner next week to discuss aspects of our submission.

Regards



Craig Heidrich
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CC:

Board