

## **GENERAL APPROVAL OF THE IMMOBILISATION OF CONTAMINANTS IN WASTE**

Pursuant to the provisions in Clause 28 of the *Protection of the Environment Operations (Waste) Regulation 1996* the New South Wales Environment Protection Authority has authorised the following general approval of the immobilisation of contaminants in waste:

### **A) APPROVAL NUMBER**

1999/05

### **B) SPECIFICATION OF WASTE STREAM**

Ash, ash-contaminated natural excavated materials or coal-contaminated natural excavated materials.

### **C) CONTAMINANTS APPROVED AS IMMOBILISED**

Benzo(a)pyrene (BaP) and Polycyclic aromatic hydrocarbons (PAHs)

### **D) TYPE OF IMMOBILISATION**

Natural

### **E) MECHANISM OF IMMOBILISATION**

The combustion of carbonaceous materials, such as coal, can take place at 700 to 1500 degrees Celsius. Residual PAHs and BaP present in ash generated at these temperatures are immobilised within a vitrified carbonaceous and siliceous matrix.

Any PAHs and BaP present in coal are strongly bound within the coal's carbonaceous matrix.

### **F) CONDITIONS OF APPROVAL**

- Packaging Requirements

Powdery ash waste must be bagged or drummed or otherwise contained to avoid dust generation during handling.

- *Waste Assessment Requirements*

The total concentration (SCC) limits for PAHs (total) and BaP listed in Table A4 of the *Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes* (Waste Guidelines – EPA 1999) do not apply to the assessment of ash, ash-contaminated natural excavated materials or coal-contaminated natural excavated materials. With respect to BaP, ash, ash-contaminated natural excavated materials or coal-contaminated natural excavated materials can be classified according to their leachable concentration (TCLP) values alone.

Any contaminants that are listed in Table A4 of the Waste Guidelines (other than PAHs (total) and BaP) that are contained within the ash, ash-contaminated natural excavated materials or coal-contaminated natural excavated materials must be assessed in accordance with Technical Appendix 1 of the Waste Guidelines.

The ash, ash-contaminated natural excavated materials or coal-contaminated natural excavated materials must not contain any free liquids as defined in the Waste Guidelines.

- *Disposal Restrictions*

Ash, ash-contaminated natural excavated materials or coal-contaminated natural excavated materials subject to this approval that meet the requirements of the Waste Guidelines for classification as 'inert waste' or 'solid waste' may only be disposed of at solid waste landfills or industrial waste landfills which have currently operating leachate-management systems and which are licensed to receive that particular class of waste, and that have licence conditions to receive waste subject to immobilisation approvals with this type of disposal restriction. Ash, ash-contaminated natural excavated materials or coal-contaminated natural excavated materials subject to this approval that are classified as 'industrial waste' must be disposed of at industrial waste landfills.

The interpretation of the above disposal restrictions should be referred to Part 5 of Technical Appendix 2 of the Waste Guidelines.

- *Record keeping requirements*

The responsible person is required to keep records of the management and disposal of ash, ash-contaminated natural excavated materials or coal-contaminated natural excavated materials, which is assessed as industrial waste or hazardous waste, for a period of at least 3 years from the date which these wastes are disposed of off site.

- *Waste Management Requirements*

The responsible person should ensure the landfill is permitted by conditions in its licence to receive waste subject to immobilisation approvals with the above disposal restrictions.

### 1.1.1 G) RESPONSIBLE PERSON

The person or class of persons to whom this general approval relates is the person who carries out the assessment and classification for the purpose of this approval. The responsible person must comply with the conditions of this approval.

**Environment Protection Authority**

Per: Roz Hall  
Manager Waste Policy

By Delegation