



Khangisa  **aste**
CONSULTING

**BOILER ASH ASSESSMENT
REPORT**

Prepared for
McCain Delmas



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A composite sample of the Boiler Ash was forwarded Talbot Laboratories to analyse the representative sample per requirements dictated in the National Norms and Standards (GNR 635) for the assessment of waste for landfill disposal.

Per Regulation 4(1) of the GNR document, the TC of all elements and chemicals substances specified in section 6 of the Norms and Standards that are known to occur, likely to occur or can reasonably be expected to occur in the waste must be determined. The implication is Regulation 4(1) of GNR 635 would apply to the LC of the identifiable and potentially identifiable COCs as well.

An evaluation pH of 10.5, per Talbot report W1695/16, has been established for the waste stream. The pH implies the stream meets the disposal to landfill restrictions imposed per GNR 636 and would not require pH adjustment prior land-filling.

The stream characterisation indicates the stream would be unreactive under the mild basic conditions that would be encountered in South African landfills producing leachate.

The stream would not react violently with moisture or water to generate explosive mixtures or toxic gases in a landfill environment.

Radioactivity is not considered to be a hazardous property of concern given the input materials in the waste generation process.

Per 5 (1) of the National Norms and Standards for Disposal of Waste to Landfill, i.e. Waste Disposal Restrictions; the above establishes the stream would not pose a hazard within a landfill context and identifies land-filling without treatment as an acceptable disposal option, involving acceptable risk. Taking into consideration the intention is to secure access to a landfill facility for the disposal of the stream; the waste, per item 8 (1) of the Waste Classification and Management Regulations, has been assessed in accordance with the Norms and Standards for Assessment of Waste for Landfill Disposal.

In light of the targeted class of disposal facility, Talbot Labs were instructed to utilise the leaching medium as detailed in 5 (1) (a) of the National Norms and Standards for the Assessment of Waste for Landfill Disposal.

Per attached Annexure 1 and Talbot report W1695/16, the following is applicable for Arsenic: LCT0<LC<LCT1, Manganese: LCT0<LC<LCT1, Molybdenum: LCT0<LC<LCT1, Nickel: LCT0<LC<LCT1, Lead: LCT0<LC<LCT1, Total Dissolved Solids: LCT0<LC<LCT1



The stream, per 7(2) (d) of the National Norms and Standards for the Assessment of Waste for Landfill Disposal, is **Type 3 Waste**.

Type 3 wastes, per 4(1) of the National Norms and Standards for Disposal of Waste to Landfill, may be disposed at a **Class C** landfill or at a facility designed in accordance with the requirements for a **GLB+** landfill as specified in the Minimum Requirements.

