

MM KEMBLA ENVIRONMENT INCIDENT UPDATE 29.04.2013

MM Kembla has been operating at its Port Kembla site since 1916. In 2010 a new Horizontal Billet Caster (HBC) was commissioned.

Feedstock to the billet caster is typically “cathodes”. Cathodes are supplied to MM Kembla in sheets of 99.9% pure copper that are typically around a metre square and four to five mm thick.



What is a horizontal billet caster?

A horizontal billet caster is an electrical induction heating process that melts pure copper to produce a continuous solid, round log (billet) of copper, cast horizontally. Billets produced by the billet caster are 248 millimetres in diameter and they are cut into lengths of 1.35 metre long and used as feed stock for the tube mill.

The billet caster typically operates for two or three 80-100 hour campaigns per month. This is 3-4 days about every fortnight. The horizontal billet caster’s nominal capacity is 16,800 tonnes of copper products per annum (tpa). When the billet caster is not casting the molten metal is kept at temperature with an insulation covering protecting the surface.



Attached to the billet caster is a bag house, which could be described as a giant vacuum cleaner. Emissions from the melting process are drawn through the bag house which contains around 250 filter bags which are designed to filter particulate matter from the air stream.



The billet caster and its bag house have been operating for approximately two years. The initial air emissions validation conducted under the licence conditions showed compliance with all requirements. A second round of tests conducted earlier this year showed elevated dioxins.



MM Kembla was both surprised and concerned about the high reading and commissioned subsequent tests which also returned high readings. MM Kembla believes the high readings are due to operational issues and has set about trying to identify possible causes.

Possible cause contributing to the high readings include,

- 1/ an approximate increase of around 50% of the air flow rate exiting the bag house via the stack;
- 2/ particles collected post the bag house that are greater in size than the theoretical size of particles that can pass through the filter bags in the bag house, and
- 3/ uncharacteristic rapid pulsing of the bag house. Pulsing occurs at regular intervals to loosen particulate matter that has collected on the outer surfaces of the bags within the bag house.

Investigations into these and other potential causes will continue.