

Hydrodynamic Modelling for the Bell Bay Pulp Mill

Summary of Commonwealth Approval Thursday, March 10, 2011

Background

The Commonwealth Government has given final approval for conditions under which the Bell Bay pulp mill is permitted to discharge treated wastewater into the sea.

The Commonwealth approval granted under the *Environment Protection and Biodiversity Conservation Act, 1999* (EPBC Act), and this most recent decision effectively concludes the Commonwealth permitting process for the mill. It follows advice from the minister's Independent Expert Group.

The Commonwealth has given final approval of the remaining three out of 16 modules of the pulp mill project's Environmental Impact Management Plan (EIMP) and agreed to revision of three previously approved modules. The Commonwealth had previously approved 13 modules of the EIMP, but asked for a number of pre-operational studies to support the three remaining modules before their final approval.

Gunns Limited submitted extensive hydrodynamic modelling reports to the Commonwealth earlier this year addressing the relevant conditions.

The reports

The hydrodynamic reports comprised:

1. **Field measurement** activities, to provide the modelling team with a good understanding of the existing marine environment and atmospheric conditions relevant to modelling the mill's impacts around Five Mile Bluff in northeast Tasmania, as well as an extensive database to facilitate final calibration of the model.
2. **Effluent studies** looking at chemical composition, toxicology and particulate characteristics of effluent from a pulp mill operating in Brazil, which is similar to the Bell Bay pulp mill, and fed with similar eucalypt plantation feedstock, and
3. **Computer modelling** of the movement of effluent and sediment from the outfall that releases waste water into Bass Strait, close to the outfall (near-field modelling) and further out into the entire Bass Strait region (far-field modelling).

The reports provide the Commonwealth and Gunns with information that will enable Gunns to understand and manage the environmental impacts from the mill and report on the monitoring of its operations and the condition of the receiving environment in accordance with the detailed requirements of its permits.

Key findings allowing Commonwealth permitting

- A plantation only resource strategy, previously committed to by Gunns, has now been given formal regulatory status. As a consequence, a revised bleaching process (ECF Light) using 40 per cent less chlorine dioxide per tonne of pulp has also been adopted
- In line with the revised bleaching process (ECF Light), the allowable level of chlorate (the chemical that was of major interest to the Commonwealth before and during the studies) has been reduced by 40 per cent and it has also been recommended that State limits be reviewed (lowered) to align the two regulatory regimes for this important parameter.
- High quality baseline data on the receiving environment has been, and will continue to be, obtained against which potential impacts can be monitored and measured
- Levels of chlorate, the “key toxicant parameter”, will readily meet the dilution target based on maximum allowable loadings but this chemical should be undetectable or absent for the majority of the time, and likewise TEQ dioxins and furans at ultra trace detection levels¹ should be consistently undetectable (or even absent).

Other Matters relating to Commonwealth permitting

- A revised pipeline construction corridor has been approved, which best satisfies landowner requirements and improves general environmental outcomes.
- A revised wharf design has been approved which allows improved material handling.

¹The practical detection level for these types of chemicals is expected to be equal to or less than 0.000 000 000 003 grams per litre of wastewater.