Esperance Mineral Concentrate Enhancement Project

BACKGROUND

Esperance Port has been handling bulk nickel concentrates since 1967. Up until the recent upgrading, much of the circuit used to handle the product was old and had been used for other purposes, including the loading of iron ore.

Concerns about the environmental performance of the circuit generated the need to develop a world-class bulk sealed system for the export of nickel sulphide concentrate from Esperance Port.

A working group assessed all the technically feasible options for upgrading the existing circuit to manage the handling of bulk nickel concentrates at the Port. Six options were defined by the group.

The project selected included the upgrade of existing assets to continue to handle nickel concentrates in the short term (Stage 1) and a new storage facility and handling circuit (Stage 2).

The ESP Alliance was formed between the Esperance Port Authority and Bilfinger Berger Services (Australia) to deliver Stage 1.

OBJECTIVES OF THE ESP ALLIANCE

- Improve environmental compliance during the handling of concentrates at the Port of Esperance to meet the targets provided in the Port's Environmental License.

- Establish an alliance between the Esperance Port Authority and engineering consultant Bilfinger Berger Services to accelerate the delivery of the project and overcome high risk situations where there are time constraints that present challenges for traditional contract approaches.

- Deliver the project on time and budget.

COMPLETED WORKS

Works undertaken by the Alliance that met the requirements of the Port's Environmental License were completed by the Licence deadlines of March 31 and August 31. 2009.

Dry commissioning of the Stage 1 occurred in August, 2009 and the circuit was used for the first time on Thursday, 10 September 2009.

OUTSTANDING WORKS

Although all works required by the Licence were completed by the required deadlines, a number of operational projects are still being progressed to finalise Stage 1.

The remaining works include:

1. Construction of a container hardstand area adjacent to the new container tippler.

Current Situation
Engineering design of the container hardstand area is continuing. A drainage report is being prepared which will be forwarded to BBS designers. Once the design is approved by the ALT, tenders will be called for the construction of the hardstand area.

Golder and Associates completed the geotechnical design of the hardstand area in December 2009. Their report is pending, which will be reviewed by BBS designers and the AMT before civil design works proceed.

An environmental stormwater management plan for the hardstand area will be completed in conjunction with the specifications drafted by EPSL Environmental Department.

2. Structural modifications to the CV11 iron ore conveyor supports to enable access to tippler from the new hardstand area.

Current Situation
Investigation of the soil strength adjacent to the CV11/18 transfer tower is being assessed. BBS Design Engineers are preparing civil design and the detailed structural designs are being reviewed.

3. Upgrade of the Port's waste water system.

Current Situation
This project has been separated into four parts:
1. the waste water treatment plant;
2. the light vehicle wash down facility;
3. the heavy machinery wash down facility; and
4. the storm water system.

The waste water treatment plant will remain in its current location but will be upgraded to improve the treated water production capacity and lower operational costs. A scope of works for the upgrade is being prepared for approval before the calling of tenders.

The proposed upgrading of the current light vehicle wash-down facility is being reviewed to improve its environmental compliance. The proposal to upgrade the facility has been approved by the AMT, a scope of works has been prepared and quotes have been received to carry out the upgrade. Site works have started and an order will shortly be placed with the successful tenderer.

The location of a heavy machinery wash-down facility is being considered. The proposed location is between iron ore Sheds 3 and 4.

EPSL Environmental Department is preparing draft specifications improvements to storm water management and a scope of works. The specifications will be reviewed by the AMT before engineering design work begins.

4. New Nickel Concentrate Storage Facility (Stage Two)

This project will deliver a new concentrate storage facility that will enable a number of customers to discharge mineral concentrates by road and rail in 30-tonne half height containers and to load the product on ships to Panamax size in all weather conditions.

Current Situation

The business case study prepared for this project has been submitted to the State Government for its consideration.