

9 March 2022



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Dear Jessie and Gabby,

SSD 8445: Condition B30 - Commissioning of Water Treatment Plant

As you are aware, Condition B30 of Tahmoor South Development Consent (SSD 8445) states that *'Prior to the commencement of second workings under this consent, the Applicant must commission the Water Treatment Plant required under Special Condition E1.1 of EPL 1389'*. Special Condition E1.1 of EPL 1389 details a two-stage process to improve Water Treatment Plant at Tahmoor Colliery. Stage 1 requires a Pilot Plant to be installed and trialled by 31 December 2021. Following this, Stage 2 requires installation of the Main Plant by commencement of secondary extraction (currently scheduled for September 2022).

Following our meeting with yourselves on 16 February 2022, under Section 4.55 1(A) of the Environmental Planning and Assessment Act 1979, this letter seeks minor modification to condition B30 by replacing the statement *'Prior to the commencement of second workings under this consent'* with *'Prior to the 31st of December 2023'*. This modification is considered to cause minimal environmental impact, as the licenced discharge will continue to meet interim Licence conditions until the commissioning of the Main Plant by the 31st of December 2023. Tahmoor Coal meets current interim EPL discharge conditions as illustrated by the graphs in the attachment to this letter and thus extending the period of discharge while continuing to meet our licence conditions would be substantially the same as the current situation.

The justification for the Main Plant to be commissioned by December 2023 is detailed below.

Background to Special Condition E1.1 of EPL 1389

Stage 1 – Pilot Plant

The Pilot Plant trial was completed in December 2021 and was successful in achieving compliance with EPL 1389 specified analyte output water quality parameters and ANZECC Guidelines for Fresh and Marine Waters. The Pilot Plant operated for a period of 8 weeks with compliance achieved within 1 week, with the exception of Total Nitrogen which was gradually reduced until compliant levels were reached in weeks 7 and 8 of the trial.

Also, due to the concentration of Zinc in the mine feed water, it took several trials to finally achieve the reduction of zinc in the brine stream to required limits. The introduction of a Granulated Activated Carbon (GAC) process successfully reduced Zinc to an acceptable level within the brine by-product.

A report detailing the outcomes of the Pilot Plant was submitted to EPA on 2 February 2022 and a copy can be provided to DPIE if required.

Stage 2 – Installation of Main Plant

The trial of the Pilot Plant has been critical to ensure that the Reverse Osmosis technology and systems is fit for purpose prior to commitment of expenditure in awarding the contract for Stage 2, Main Plant. The technology of the Pilot Plant was required to be proven prior to being able to proceed with the contract execution of the Main Plant and commencing the detailed design process. Following the Pilot Plant's successful trial, the Main Plant contract was executed in December 2021 and awarded to IXOM with the contract value being in the order of \$20M.

The Main Plant contains three processes with the complex Reverse Osmosis technology requiring considerable engineering design as no two water treatment plants are the same. Variability of the feed water quality was identified which sparked the need to conduct further water analysis (this continued throughout the Pilot Plant trial process and to date). Having an accurate data set ultimately enabled the development of the right engineering solutions to address the feed water quality variances.

Orders have been placed for several long lead time items. Unfortunately, with suppliers being overseas, the delivery time of specialised equipment (e.g. RO modules and pumps) are heavily delayed due to COVID-19 effecting supply chains. In turn, the follow-on effect on the installation schedule for the Main Plant has moved the commission date from September 2022 to December 2023.

Tahmoor Coal is committed to continually work with IXOM to review all available opportunities to complete the Main Plant earlier. The opportunities investigated to date include conducting work in parallel and expediting the procurement process. Unfortunately, there are only a limited number of installation tasks that can be done in parallel to reduce the timeframe. With the supply of key components from overseas, it has been difficult to obtain firm delivery dates in this current climate. In addition to that, completing tasks onsite earlier where possible will not bring the completion date forward alone as without the key overseas supplied components the Main Plant cannot operate.

Interim options were considered such as the extended operation of the Pilot Plant, however this option is not viable as the Pilot Plant was installed within the main WTP Building and as it is in the same footprint of the Main Plant, the Pilot Plant is required to be removed from its current location to begin preparation for the installation of the Main Plant. Also, the Pilot Plant only has the capacity to treat up to 1ML/d and being a scaled down plant cannot operate continually and hence is not a suitable nor viable mitigation option to consider.

Proposal for Condition B30 amendment

To this end, Tahmoor Coal seeks the removal of *'Prior to the commencement of second workings under this consent'* from Condition B30 to allow for the continuation of the current interim licence conditions for water discharge via LDP1 listed in EPL 1389 until the commissioning of the Main Plant by the 31st of December 2023. It is Tahmoor's understanding that the continuation of status quo to discharge under current interim EPL conditions will be substantially the same with minimal environmental impact.

In parallel, Tahmoor Coal consulted with the NSW EPA on the 16th of February regarding this matter and subsequently applied for the variation of EPL1389 Condition E1.1 to change the Main Plant commissioning date to December 2023.

Tahmoor Coal is continually working with IXOM to review all opportunities to complete the Main Plant earlier and will continue to provide DPIE with updates on progress.

Please refer to myself for any queries regarding this letter via email: zina.ainsworth@simecfgfg.com or mobile 0438 284 106.

Yours sincerely,



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Attachment A – LDP1 Water Quality Monitoring



