



22 June 2020

Stephen O'Donoghue
Director Resources Assessments
Department of Planning, Industry and Environment
12 Darcy Street
Parramatta NSW 2124

Our ref: GHDDocId
Your ref:

Dear Steve

Angus Place Mine Project Approval Modification to Consent

1 Introduction

Centennial Angus Place Pty Ltd (Centennial) operates the Angus Place Coal Project (the Project) pursuant to a Part 3A Project Approval issued by the Minister for Planning on 13 September 2006. The Part 3A Approval has been transitioned to a State Significant Development (SSD) consent under Part 4 of the *Environmental Planning and Assessment Act, 1979* (EP&A Act) and has been modified on five occasions.

The Angus Place Mine Development Consent (AP consent) includes provisions for management of groundwater inflows to the underground mine operations, which were described in detail as part of AP Consent Modification 5. The water management system requires all water to be transferred to a water treatment plant at Mount Piper Power Station (MPPS) following the commissioning of the Springvale Water Treatment Project (Springvale WTP) under SSD 7592.

The new water treatment plant commissioned as part of the Springvale WTP has been designed to treat incoming mine water based upon a historical blend of mine water quality originating from both Springvale and Angus Place Mines.

It has been recently identified that the quality of mine water stored within the Angus Place Mine underground storages has deteriorated to a point where it falls outside the required design envelope for treatment within the new water treatment plant. Current water monitoring data shows elevated hardness, alkalinity and electrical conductivity (EC), which has been caused in part as a result of the use of a temporary reverse osmosis treatment system to manage mine water discharges from the Angus Place pit top prior to the commencement of the Springvale WTP. Delays to commissioning of the new water treatment plant (by approximately 7 months) extended the use of the temporary reverse osmosis treatment system at Angus Place and contributed to the decline in pit water quality.

Water from dewatering facilities for both Angus Place and Springvale Mine is either combined in the Springvale Delta Water Transfer Scheme (SDWTS) or Springvale WTP pipeline and transferred to the water treatment plant at the MPPS. There have recently been regular instances of the incoming mine water being defined as Out of Envelope (OoE) and the plant has been required to operate with a reduced flow condition to achieve the required treatment standards for reuse at MPPS.

2 Alternatives

A number of options involving blending and dilution of water between Springvale and Angus Place have been considered to achieve the required incoming mine water specification to enable effective treatment of mine water. However, limited water is currently able to be transferred from Angus Place Mine due to elevated hardness and alkalinity to avoid operating with a reduced flow condition within the treatment facility. The current dewatering rates are too low to maintain adequate dewatering of the mine workings and is not considered a sustainable option in the medium to long term.

Potential options have been identified to provide a more permanent solution to address incoming mine water quality issues at the water treatment plant including;

- A new Angus Place water transfer system to allow Angus Place Mine water to be independently transferred to MPPS. This allows the subsequent treatment of OoE mine water within existing Brine Concentrators and integration with the power stations cooling water management system
- Mixing pipeline to transfer treated water from within MPPS or catchment water extracted from the Fish River water supply to the mine water transfer pipeline prior to the inlet works at the water treatment plant.

The Angus Place water transfer system will form an extension to the existing Angus Place Mine water management system and will require modification to the AP consent. A description of the works associated with the transfer system are described below.

3 Angus Place Transfer system

The Angus Place transfer system will allow transfer of Angus Place mine water from Angus Place Pit-top directly to MPPS for subsequent treatment and reuse without mixing with water from Springvale Mine. The transfer will be required to minimise the volume of Angus Place mine water mixing with Springvale water to prevent exceedance of the incoming mine water specifications for the water treatment plant.

The transfer system will require a modification to existing raw water pumps to allow a low flow transfer via a dedicated transfer pipeline system using a combination of existing and new pipeline sections for discharge to the existing Pond D at MPPS. Water discharged into Pond D will be managed in accordance with the MPPS consent.

The proposed transfer system incorporates four sections as shown on Figure 1 and described below.

- Section A – Existing haul road pipeline (owned by Centennial) from Angus Place and currently connected into the Springvale WTP transfer pipeline.
- Section B – A new pipeline from the end of Section A, laid in the pipeline and conveyor easements to a point west of Lidsdale where it could be connected to an existing brine pipeline to MPPS.
- Section C – Existing pipeline (owned by EA), formerly used to transfer brine from Wallerawang Power Station to MPPS.
- Section D – A new pipeline from near the end of the brine line to discharge into the recently constructed Pond D at MPPS.

Section A will utilise the existing Angus Place Haul Road Pipeline which was constructed as Exempt Development under Clause 10A(2)(c) of State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 (SEPP Mining). The pipeline currently connects to the Springvale WTP raw water transfer pipeline where it crosses the Wallerawang Haul Road and will have capability of transferring water to either to the existing raw water transfer pipeline or to the new transfer system to Pond D. Up to 2 ML/day will be transferred directly to MPPS Pond D via the new pipeline connection with any remaining flows transferred in accordance with Springvale WTP consent.

Section B will be a new section of pipeline installed adjacent to the Springvale WTP transfer pipeline along within an existing haul road and the Centennial conveyor easements to connect to the existing EnergyAustralia Brine pipeline. The pipeline will be installed within previously disturbed environments along haul roads and the conveyor easement following the pipeline corridor previously considered as part of the Springvale WTP EIS. It is proposed to utilise the existing conveyor tunnel to traverse the Castlereagh Highway and Coss River to minimise disturbance and construction footprint where possible.

Section C will utilise an existing pipeline previously constructed by Delta Electricity to transfer brine from a Reverse Osmosis Plant at Wallerawang Power Station to MPPS. The original pipeline was approved following assessment under Part 5 of the EP&A Act and is no longer in use following the closure of Wallerawang Power Station.

Section D will require a new section of pipeline to connect the existing brine pipeline to the newly constructed Pond D at MPPS. Pond D is a multi-use storage pond capable of receiving flows from process streams within MPPS Cooling Water system and mine water from the Springvale WTP.

Water stored within Pond D will then be treated within the MPPS Brine Concentrators (BCs) which forms part of the approved integrated water management system at MPPS. The treated water or “distillate” will be reused within the power station operations and the brine stream will be discharged to the existing brine waste pond for subsequent disposal in the approved ash repositories.

The BCs were developed as part of the original power station operations to treat blowdown water from MPPS cooling water system and fall under the existing MPPS consent. The use of the BCs for treatment of brine stream from the water treatment plant was approved as part of the original Springvale WTP consent. The consent was subsequently modified by Modification 1 to allow treatment of brine streams from MPPS and the water treatment facility operations within an integrated OPUS brine management system approved under the Springvale WTP consent.

The use of the existing BCs will allow the water treatment system to make use of an existing water treatment asset which has become redundant following the implementation of the integrated brine management network. The BCs will allow independent treatment for a small portion of flows of out-of-spec mine water to ensure the capacity and function of the water treatment plant is not compromised.

The existing BCs have been confirmed to have capacity to treat incoming mine water without dilution or increased dosing requirements.

4 Approval Pathway and Assessment Requirements

The Angus Place Transfer System will form an extension to the existing water management system for Angus Place Mine and the overall mining operations subject to the consent will remain substantially the same development as currently approved. The transfer system is required to allow separate treatment of mine water which falls outside the required incoming mine water specification for the new water treatment plant at MPPS and will continue to meet the overall objective of industrial reuse of mine water within the power stations integrated water management system.

New sections of pipeline will be installed within disturbed environments following the alignments of haul roads, coal conveyor, the existing Springvale WTP transfer pipeline and active operational areas within MPPS. The transfer system is not considered to have potential to result in any impacts to biodiversity or cultural heritage values and is suitable to be assessed as a modification to consent under Section 4.55(1A) of the EP&A Act.

A Modification Report will be prepared to support the modification application. The Modification Report will include:

- an overview of the proposed modification;
- strategic context for the proposed modification;
- justification for the proposed modification; and
- alternatives considered.

As construction will be restricted to previously disturbed environments following the pipeline alignment previously assessed as part of the Springvale WTP EIS, it is assumed that additional specialist biodiversity or heritage assessment will not be required. Consultation with relevant stakeholders will be undertaken including Lithgow City Council and the Environment Protection Authority. Outcomes of this consultation will be described within the Modification Report.

5 Conclusion

Centennial seeks confirmation from the Department on the proposed approval pathway and assessment requirements to support a modification application. Please contact James Wearne on 0407 207530 or myself if you have any questions, or require any further information in regard to this matter.

Sincerely

Karl Rosen

Principal Environmental Consultant
+61 2 92397682

