

15 March 2022

Department of Planning and Environment
Locked Bag 5022
PARRAMATTA NSW 2124

Attention: Stephen O'Donoghue, Director Resource Assessments

Via email: Stephen.ODonoghue@planning.nsw.gov.au

Dear Stephen,

RE: MTW-HVO LEMINGTON UNDERGROUND WATER STORAGE MODIFICATIONS (MP06_0261 MOD 7 AND SSD-6464 MOD 2) – RESPONSE TO ADDITIONAL INFORMATION REQUEST

INTRODUCTION

Hunter Valley Operations (HVO) and Mount Thorley Warkworth (MTW) Operations are neighbouring open cut coal mining operations situated in the Sydney Basin within the Singleton Local Government Area, in the Hunter Valley region of New South Wales (NSW).

HVO is a joint venture between subsidiaries of Yancoal Australia Ltd (Yancoal) and Glencore. HV Operations Pty Ltd is the appointed manager of the joint venture and operator of HVO. HVO South operates under Project Approval 06_0261.

MTW comprises the Mount Thorley Operation (MTO) and Warkworth Mine. MTW is majority owned and operated by subsidiaries of Yancoal. While MTW is managed as one operation, MTO and Warkworth Mine each have separate planning approvals. Warkworth Mine is approved and operates under State Significant Development Consent SSD-6464.

HVO and MTW have identified an opportunity to use the Lemington Underground Mine void as an additional water storage to improve water management across both sites. Modification applications to both Project Approval 06_0261 (HVO South) and Development Consent SSD-6464 (Warkworth Mine) were lodged under section 4.55(1A) of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) to enable the transfer and storage of water into the existing Lemington Underground Mine void for later extraction and reuse (the Modification).

HVO and Yancoal submitted the HVO South and Warkworth Mine Submission Reports to the Department of Planning, Industry and Environment (now Department of Planning and Environment [DPE]) on 17 December 2021.

HVO and Yancoal have received additional comments from DPE – Water, the Biodiversity and Conservation Division (BCD) within DPE, NSW Environment Protection Authority (EPA) and DPE on the HVO South and Warkworth Mine Submissions Reports. Responses to these comments are provided hereunder.

DEPARTMENT OF PLANNING AND ENVIRONMENT – WATER COMMENTS

Issue – Licensing of Potential Groundwater Inflows

Prior to Determination:

- *Quantify the maximum groundwater inflow into the Lemington Underground Void during the period water is to be stored and removed, and the ongoing maximum groundwater inflow after this is completed. The ability to acquire sufficient entitlement to account for the maximum predicted water take will need to be demonstrated.*

Response

Currently, water that is located within the Lemington Underground Mine Void (as a result of inflows from the groundwater source) is extracted via the existing Lemington Underground Bore (LUG Bore) pursuant to Water Access Licence 39798. As such, the water that is seeping into the void is already licensed.

Water that is currently located in surface water storage structures at HVO and MTW (Stored Water) is also the subject of existing water licences that authorised the original water take.

As noted in the Response to Submissions, HVO and Yancoal contend that, in circumstances where the Stored Water is proposed to be transferred to the Lemington Underground Void for temporary storage purposes (as proposed by the Modification), it is not required under the *Water Management Act 2000* to also license the extraction of that same water from the void when it is no longer required to be stored in the void. This would effectively be double accounting for the same water, as it would result in the Stored Water being licensed twice.

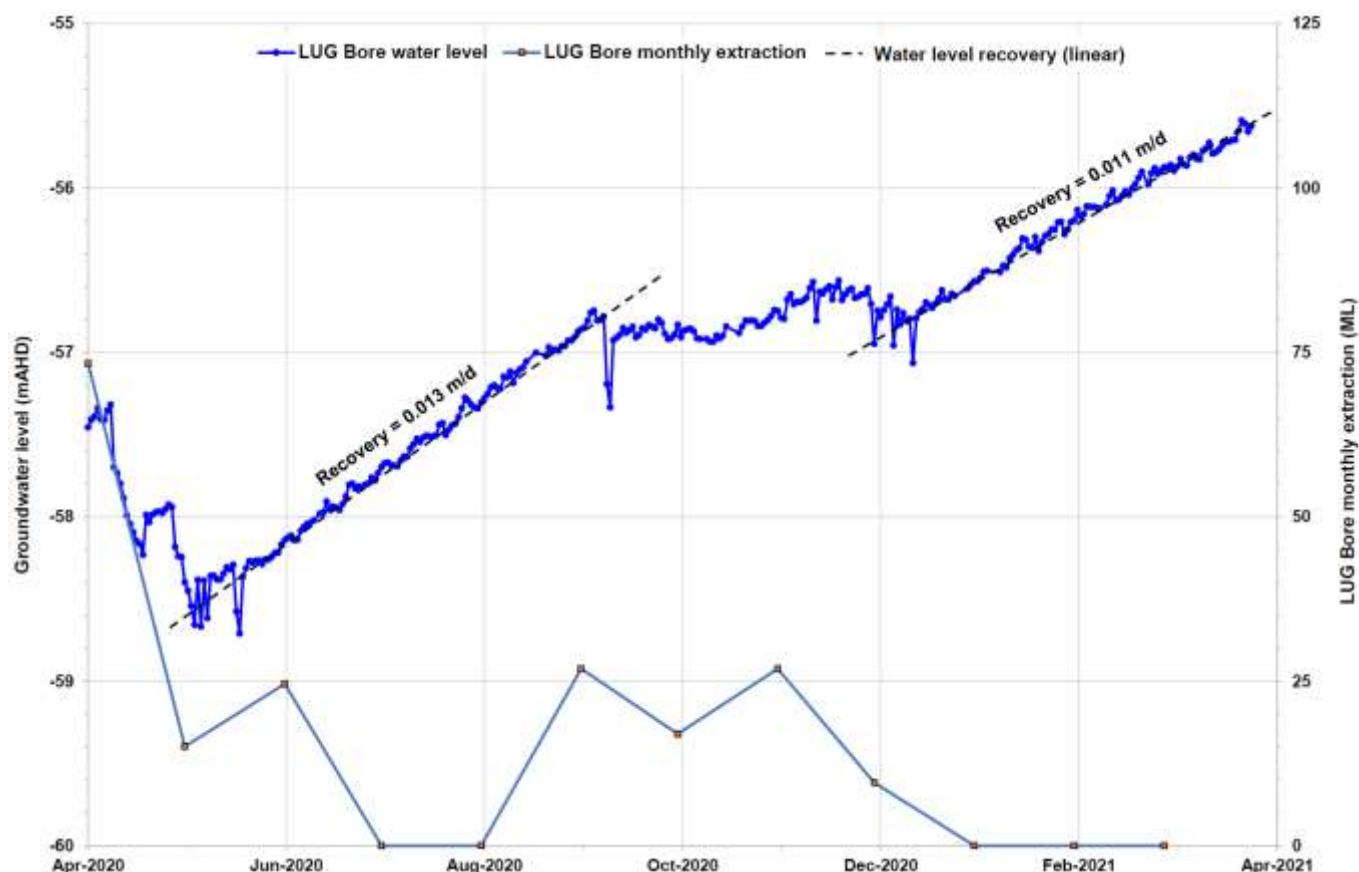
HVO and Yancoal's interpretation of the additional comments provided is that DPE – Water is not proposing that the Stored Water should be licensed twice, but rather the groundwater inflows from the surrounding strata into the Lemington Underground workings need to be accounted for and licensed if removed. For this reason, DPE – Water has proposed that further groundwater modelling be undertaken.

Groundwater inflows from the surrounding strata were estimated by Australasian Groundwater and Environmental Consultants Pty Ltd (AGE, 2021) in Section 5.6.2 of the Groundwater Assessment (Appendix A of the Modification Report) using measured groundwater level data at the LUG Bore during periods of no extraction. AGE (2021) estimated recovery rates of approximately 0.011 to 0.013 metres per day (Chart 1), which would be equivalent to inflows to the workings of approximately 500 megalitres per year.

Groundwater inflows would reduce as a result of storing Stored Water in the workings (as proposed by the Modification), or as the water level in the workings naturally recovers. This is due to the hydraulic gradient between the groundwater in the surrounding strata and the water in the workings being reduced. Accordingly, further groundwater modelling is not considered necessary.

HVO and Yancoal acknowledge that both sites are required to hold adequate and appropriate water access licence (WAL) entitlements to account for the maximum predicted water take associated with each of the operations, and report on this in each site's Annual Review Report.

Chart 1
Estimated Inflow and Recovery Rates at the LUG Bore



mAHd = metres Australian Height Datum

Issue – Water Access Licence Inventory

Prior to Determination:

- Provide details for each water access licence (WAL), particularly in the HVO South Pits, as to which WAL is used to account for what component of water take and the associated infrastructure or activity where the water take occurs.

Response

A reconciliation of the WALs and Work Approvals associated with HVO is provided in HVO's Annual Reviews and most recently in Section 3.1.1 of the HVO 2020 Annual Review (HVO, 2021). HVO continues to report licensable take against WALs in its Annual Reviews. As reported in the 2020 Annual Review, and as noted above, HVO holds WALs with sufficient entitlements to account for all water take at HVO North and HVO South.

Post Approval:

- Review existing WALs held by the proponent to identify where inactive links occur between WALs and approvals and ensure links are rectified to enable the WALs to account for water take where required.
- The proponent must ensure sufficient water entitlement is held in WALs to account for all take and must not exceed the extraction limit each water access licence held. This includes groundwater seeping into the void as well as other mine operation that uses groundwater.
- Any water pumped from the surface water sources is accounted for by appropriate WALs linked to water supply work approvals, if not covered in the SSD approval. These works must be metered. If covered in the SSD approval, another miscellaneous work for the surface water must be created and the water access licences must be linked to it by way of a dealing.

Response

DPE – Water’s Post Approval recommendations are acknowledged. HVO and Yancoal will continue to hold sufficient WALs to account for water take as required under the *Water Management Act 2000*.

HVO and Yancoal also acknowledge DPE – Water’s comment regarding linking miscellaneous works to WALs by way of a dealing and will liaise with DPE – Water to verify all miscellaneous works for the existing HVO site are linked to WALs.

ENVIRONMENT PROTECTION AUTHORITY COMMENTS

The EPA recommends HVO complete further water quality monitoring in the new monitoring locations in the Lemington Underground Mine workings and Hunter River alluvium, as recommended by AGE (2021).

The EPA recommendation is acknowledged. HVO and Yancoal will update their respective Water Management Plans post-determination of the Modifications to include the new monitoring locations.

BIODIVERSITY CONSERVATION DIVISION COMMENTS

BCD recommends that any impacts to biodiversity caused by the Modification are assessed by the Biodiversity Assessment Method and are offset in accordance with the Biodiversity Offsets Scheme, if the Biodiversity Offsets Scheme is triggered.

BCD noted that no further assessment of the impacts of wetting and drying are required. BCD also noted that Yancoal/HVO would need to review impacts on mine infrastructure if subsidence in the north-western section causes changes to mine dams or haul roads.

The BCD’s recommendations are acknowledged.

DEPARTMENT OF PLANNING AND ENVIRONMENT COMMENTS

DPE requested clarification regarding the permissibility for infrastructure to be located in an area to be dedicated as biodiversity offsets under the Warkworth Mine Development Consent SSD-6464. Schedule 3, Condition 29B of the HVO South Project Approval 06_0261 states that *“the Applicant must not undertake any mining operations or development within the Southern Biodiversity Area or Northern Biodiversity Area as indicated on the plan in Appendix 10, other than any conservation-related activity under an approved Biodiversity Management Plan under either this consent or similar plan required for Warkworth Mine.”*

The existing LUG Bore and supporting infrastructure are described in the MTW and HVO Water Management Plans, and were also described in the MTW-HVO Lemington Underground Mine Water Storage Modification Reports. As described in the Modification Reports, the proposed duplication of water management infrastructure under the Modification would be limited to previously disturbed areas (predominantly utilising existing access tracks and easements) and no additional disturbance is required.

Yancoal is in the process of securing the Southern Biodiversity Area (SBA) required under Warkworth Mine Development Consent SSD-6464. Yancoal will ensure the instrument used to secure the SBA enables the existing and proposed developments described in the MTW-HVO Lemington Underground Mine Water Storage Modification Reports to be constructed and operated. This will be through excising the infrastructure areas from the SBA, in the same way that dwellings are removed from offset areas, and/or the inclusion of terms that allow for ongoing operation of existing infrastructure, in the same way that maintenance of existing linear infrastructure such as pipelines and powerlines are permitted within an offset area.

By limiting development to previously disturbed areas, the proposed water management infrastructure under the Modifications would not materially affect Yancoal’s ability to meet its conservation objectives for the SBA.

HVO requests that DPE contemporise Schedule 3, Condition 29B of the HVO South Project Approval 06_0261 to reflect the existing water management infrastructure and proposed Modification applications, as follows (proposed additions underlined):

The Applicant must not undertake any mining operations or development within the Southern Biodiversity Area or Northern Biodiversity Area as indicated on the plan in Appendix 10, other than any conservation-related activity under an approved Biodiversity Management Plan under either this consent or similar plan required for Warkworth Mine, or the development and use of water management infrastructure (including existing infrastructure) as described in the EA (Mod 7).

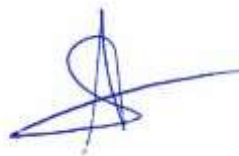
Note: The Southern Biodiversity Area and Northern Biodiversity Area form part of the biodiversity offset strategy for Warkworth Mine.

Should you have any further queries or require any additional information regarding this matter, please do not hesitate to contact either Michael Moore on 02 8583 5422 or Michael.Moore@yancoal.com.au or Andrew Speechly on 02 6570 0497 or andrew.speechly@hvo.com.au.

Yours sincerely,



Michael Moore
Manager - Approvals
Yancoal Australia Ltd



Andrew Speechly
Manager Environment and Community
Hunter Valley Operations

REFERENCES

Australasian Groundwater and Environmental Consultants Pty Ltd (2021) *Lemington Underground Water Storage – Groundwater Assessment.*

Hunter Valley Operations (2021) *Hunter Valley Operations 2020 Annual Environmental Review.*