Dear Tim,

APPROVAL OF TUNNEL BORING MACHINE (TBM) SPOIL ENVIRONMENT MANAGEMENT PLAN (EMP)

Thank you for the TBM EMP application including the Tunnel boring Machine Spoil Containment Environmental Management Plan, version 5.1 dated August 2020.

The EMP relates to the proposed management of TBM spoil from the West Gate Tunnel Project, and to be received at Maddingley Brown Coal Soil Processing Facility at East Maddingley Road, Bacchus Marsh, VIC 3340.

The Authority has reviewed the EMP and determined that it satisfies the requirements of the Environment Protection (Management of Tunnel Boring Machine Spoil) Regulations 2020 (the TBM Regulations). Therefore, pursuant to 4(1)(b) of the TBM Regulations, the Authority approves the EMP subject to the provision of the additional detailed information as follows:

1. Prior to commencement of construction of the liner of the containment cell, the submission of detailed designs for the containment cell, including auditor review which should include:
   a. detailed technical specifications and the CQA plan for all materials to ensure they can meet the design objectives using EPA Publications 788.3 and 1323.2 as guidance;
   b. detailed designs, technical specifications and a CQA plan using EPA Publication 788.3 as guidance for the leachate collection components of the cell. This should include the pumping capacity of the sump pump and the pipe capacity to ensure it meets the minimum requirements of the containment cell, noting only one sump is proposed for the cell;
   c. design of temporary stormwater management infrastructure for the operational phase;
   d. the development of a holistic site water balance to ensure sufficient leachate management capacity to enable continual compliance with the maximum leachate depth of 300mm in the containment cell; and
   e. during detailed designs the separation distance between the containment cell liner and groundwater should be confirmed and if the minimum separation distance is lower than modelled, the findings of the hydrogeological risk assessment should be re-evaluated against the spoil acceptance criteria for the containment cell.

2. Prior to commencement of construction of holding bays and leachate management infrastructure, the submission of auditor reviewed detailed designs, technical specifications and a CQA plan for the holding bays and leachate management infrastructure.

3. Prior to depositing spoil in the containment cell:
   a. provision to the Authority of verification of the containment cell construction by an environmental auditor appointed pursuant to the Environment Protection Act 1970 and third-party geotechnical verification;
   b. details of management controls to maintain a maximum leachate head in the containment cell of 300mm at all times; and
c. there should be monitoring of the effectiveness of the liner performance in the EMP to ensure its ongoing integrity. Contingency plans (which include trigger values for impacts to groundwater) should be in place to respond to incidents (assess risk and remediate where necessary) involving significant groundwater water impacts if they occur.

4. Prior to receipt of spoil:
   a. provision to the Authority of verification of holding bays and leachate management infrastructure construction by an environmental auditor appointed pursuant to the Environment Protection Act 1970 and third-party geotechnical verification;
   b. further clarity on how the appropriate policy for the treatment and disposal of waste acid sulfate soils and potential waste acid sulfate soils (EPA publication 655) will be followed;
   c. a trigger level to trigger treatment of the leachate in the leachate pond to remove PFAS; and
   d. further clarity of the record keeping method for the information required to be recorded and retained under regulation 5(p) of the TBM Regulations.

5. The completion of a follow-up noise assessment to verify compliance with Noise from Industry in Regional Victoria (NIRV) once the spoil processing and management facility is operational to confirm the effective implementation of noise mitigation measures.

6. Preparation of a detailed rehabilitation and after-care management plan including:
   a. detailed designs for the containment cell cap including surface water and stormwater management infrastructure. The final cap contours should be between 5% and 20%, unless an alternative can be suitably justified and supported by EPA. This should also include auditor review in accordance with regulation 6(2)(s) of the TBM Regulations;
   b. leachate management and monitoring during aftercare; and
   c. cap erosion inspection and remediation.

In addition to the above requirements, EPA recommends the following:

- restrict access of birdlife to the on-site leachate ponds;
- no leachate should be intentionally stored in the holding and drying bays for an extended period to ensure seepage is minimised;
- the inclusion of a PFAS concentration at which treatment of leachate would be initiated for leachate from the containment cell and the leachate ponds to ensure that higher PFAS concentrations do not remain in the leachate ponds;
- potential dust issues be monitored and assessed in real time, and triggers implemented to activate additional controls if there is risk of offsite migration of dust, PM10 and PM2.5; and
- prior to commissioning of the facility – a low frequency noise assessment should be undertaken, and a report prepared to show low frequency noise has been designed out.

This approval does not exempt the holder from further regulatory action should issues arise with the construction, operation, closure or management of the site.

Please note that all operational requirements listed with the TBM Regulations must be adhered to, including but not limited to:

- Record keeping requirements as per 5(p, r)
- Notification requirements as per 5(q)
- General site operations as per 5(a-o)

The approved EMP, with approved amendments, (including documents referenced by the EMP) is a compliance document to the extent referenced in the TBM Regulations, including but not limited to, monitoring plans for the receiveal site.
If any conflict should arise between requirements of the TBM Regulations and plans within the EMP, the TBM Regulations should be adhered to in preference to the EMP plans.

Please note this EMP will be published on EPA Victoria’s website, noting that commercially sensitive information will be redacted as per prior agreement between the applicant and EPA.

Yours sincerely,

Tim Eaton
Executive Director Regulatory Standards, Assessments and Permissioning