



Application for Works Approval Amendment

Part V Division 3 of the *Environmental Protection Act 1986*

Works Approval Number	W5843/2015/1
Works Approval Holder	Coil Group Pty Ltd
ACN	629 481 723
File Number	DER2015/000262-1
Premises	Burbanks Treatment Plant - TSF1 and TSF2 embankment raises Mining tenements: M15/1273, M15/1369, M15/1370, G15/10, G15/11, G15/12, G15/13, G15/25 and L15/110 As defined by the Premises map attached to the Revised Works approval
Date of Report	10 December 2020
Decision	Revised works approval granted

**A/MANAGER, RESOURCE INDUSTRIES
REGULATORY SERVICES**

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

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1. Decision summary

The Delegated Officer has determined to make amendments to existing works approval W5843/2015//1. The amendments are administrative in nature therefore they do not alter the risk profile of the Premises, providing that activities, emissions and receptors as stated in existing approvals remain unchanged.

This Amendment Report documents the amendments made pursuant to section 59 and 59(B) of the *Environmental Protection Act 1986* (EP Act).

The decision report for the existing works approval will remain on the department's website for future reference and will act as a record of the department's decision making.

2. Scope of assessment

2.1 Regulatory framework

In amending the works approval the department has considered and given due regard to its Regulatory Framework and relevant policy documents which are available at <https://dwer.wa.gov.au/regulatory-documents>.

2.2 Application summary

Works approval W5843/2015/1 is held by Coil Group Pty Ltd (Works Approval Holder) for the Burbanks Treatment Plant (the Premises), located on Mining tenements: M15/1273, M15/1369, M15/1370, G15/10, G15/11, G15/12, G15/13, G15/25 and L15/110.

On 28 October 2020 the Works Approval Holder submitted an application to the department to amend works approval W5843/2015/1 under section 59B of the *Environmental Protection Act 1986* (EP Act). The amendment is limited only to the extension of the works approval expiry date for an additional 5 years, as construction of the works authorised by the works approval has yet to be started. The existing works approval expires on 1 January 2021.

The existing works approval W5843/2015/1 authorises the construction of embankment raises to existing tailing storage facilities (TSF) 1 and 2. Construction stages 7 to 10 have been authorised under the existing works approval. See Table 1 for embankment heights approved under the existing works approval.

Table 1: Construction stages for TSF lifts

Stage	Active Cell	Crest RL (mAHD)
7	TSF1	436.5
8	TSF2	436.5
9	TSF1	439.0
10	TSF2	439.0
11	TSF1	441.5
12	TSF2	441.5
13	TSF1	444.0
14	TSF2	444.0
15	Combined	449.0

The current TSF height in which the Burbank's Treatment Plant operating licence (L9185/2018/1) permits tailings deposition to is RL431.5m. Therefore, a licence amendment will be required prior to operation of the TSFs at a height of RL436.5m. Future TSF raises (under proposed Stages 11-15) will need to be assessed under additional works approvals or a licence amendment.

3. Review of TSF Audit

TSF2 is the only active tailings storage at the Burbanks Treatment Plant, although the mill and the TSF are currently under care and maintenance, with no tailings being deposited into TSF2 since 2014. TSF1 was decommissioned in 1996 and has largely been rehabilitated with the top and sides of the facility covered with mine waste (the existing works approval authorises works to TSF1 to recommission it and raise the embankments). No deposition of tailings has occurred within TSF2 since the issuing of the existing works approval.

An audit and management review of TSF2 was carried out by Coffey Geotechnics Pty Ltd on 4 June 2020. A summary of the outcomes of this audit are outlined below:

- At the time of the audit inspection the diversion drain which was constructed at the time of the Stage 5 raising, was in good condition;
- At the time of the audit, the upstream face, crest and downstream face of the perimeter embankments showed no visual signs of distress such as cracking or bulging. There was no visual seepage from the TSF embankment toes;
- At the time of the audit there was a relatively small decant pond formed by water from the recovery bores. Much of the filter rock around the decant tower had been removed. The pump and generator has been removed as has portions of the access causeway rock.
- The freeboard for TSF2 meets the Department of Mines, Infrastructure, Regulation and Safety (DMIRS) minimum freeboard criteria at the time of the survey;
- The stream diversion that follows the southern perimeter embankment has been excavated to collect runoff and stream flow and direct water away from the downstream toe of the embankment. This drain appears to be in adequate operational condition, with no excessive vegetation development;
- From the inspection, no seepage was evident on either the downstream embankment toe, face or in the adjacent drain. Equally, none has been reported in the weekly inspection reports throughout the audit period. There was no water standing in the trenches which are parallel to the toe of the embankments;
- Five monitoring bores and two seepage recovery bores are present (with flow meters and submersible pumps powered by a generator, pipelines leading to return water tanks adjacent to the plant);
- The seepage recovery water flows are being discharged onto the TSF beach. The three steel tanks that form the combined process water storage located at the plant are being kept full using the seepage recovery water so as to enable periodic operation of the plant pumps and circuit;
- Conditions on general purpose leases are all being complied with; and
- The audit and management review conclude that TSF2 is being adequately managed whilst on care and maintenance.

A review of the most recent TSF Audit indicates that TSF2 is in good condition, which supports the request to extend the duration of the works approval to allow embankment lift works to continue.

4. Review of groundwater conditions

The main emission of concern from the construction of the TSF embankment raises is seepage of leachate from the tailing storage facilities causing mounding of the groundwater table / contamination of groundwater.

No changes from the original design (outlined in the original design report - *Ramelius Milling Services, TSF1 and TSF2 Combined Raise Design Report, Burbanks Mill, Coolgardie, 7 November 2014, Coffey Mining Pty Ltd (Ref MINEWPER00383AJ-AB)*) of the approved TSF embankment raises have been proposed by the Works Approval Holder as part of this amendment.

Five groundwater monitoring bores exist (constructed in 1999) surrounding TSF2 and are listed on the existing licence L9185/2018/1 for the Burbanks Treatment Plant. These bores have been monitored monthly for standing water levels and water quality on a quarterly basis.

At the time of issuing the existing works approval groundwater levels surrounding TSF2 were between 6.5 and 15 meters below ground level (mbgl). Currently groundwater levels are between 10.4 and 18.5 mbgl (Botanica Consulting, 2020).

Groundwater has a total dissolved solids (TDS) level between 2,000 – 33,000mg/L (Botanica Consulting, 2020), which is similar to the TDS levels at the time of issuing the existing works approval.

A review of the current groundwater conditions surrounding TSF1 and TSF2 indicate conditions have not changed significantly since the issuing of the existing works approval. This can be attributed to the fact that deposition into TSF1 and TSF2 has not occurred since 2014, before the existing works approval was originally issued. Therefore, the risk profile for the main emission of concern (leachate seepage from TSFs) has not changed. No further risk assessment is required.

Two additional groundwater monitoring bores located downstream of TSF1 have been proposed as part of the existing works approval. These will need to be added to the Licence L9185/2018/1 as part of a licence amendment once they have been constructed.

5. Consultation

Table provides a summary of the consultation undertaken by the department.

Table 2: Consultation

Consultation method	Comments received	Department response
Department of Mines, Industry Regulation and Safety (DMIRS) advised of proposal 17 November 2020.	No comments received.	N/A
Works approval holder was provided with draft documents on 3 December 2020.	Works approval holder responded on 9 December 2020 - No comments, comment period waived.	Noted.

6. Conclusion

Based on the assessment in this Amendment Report, the Delegated Officer has determined that an amended works approval will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

6.1 Summary of amendments

Table 3 below provides a summary of the proposed amendments and will act as a record of implemented changes. All proposed changes have been incorporated into the Revised works approval as part of the amendment process.

Table 3: Summary of works approval amendments

Condition no.	Proposed amendments
Cover page	Premises name added to the cover page
Duration	Extended for an additional 5 years to 01/01/2026
Works approval history	Row added to works approval history table to record this amendment.

References

1. Botanica Consulting 2020, *Coil Group Pty Ltd, Burbanks Treatment Plant Annual Environment Report 1 July 2019 – 30 June 2020, Licence: L9185/2018/1*, Perth WA.
2. Coffey Services Australia Pty Ltd, 19 June 2020, *Coil Group Pty Ltd - Burbanks TSF2, TSF2 Audit 2019*, Perth WA
3. Coffey Mining Pty Ltd, 7 November 2014, *Ramelius Milling Services, TSF1 and TSF2 Combined Raise Design Report, Burbanks Mill, Coolgardie*, Ref MINEWPER00383AJ-AB.