



Application for Works Approval Amendment

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

Works Approval Number	W6402/2020/1
Works Approval Holder	Hazer Group Limited
ACN	144 044 600
File Number	DER2020/000194~1
Premises	Hydrogen Commercial Demonstration Plant 837 Cockburn Road MUNSTER WA 6166 Legal description – Part of Lot 9 on Deposited Plan 31097 As defined by the coordinates in Schedule 2 of the Revised Works Approval
Date of Report	27/10/2022
Decision	Revised works approval granted

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1. Decision summary

Works approval W6402/2020/1 is held by Hazer Group Limited (works approval holder) for the Hydrogen Commercial Demonstration Plant, located at 837 Cockburn Road, Munster WA (the premises). The delegated officer has determined to make amendments to works approval W6402/2020/1. It was determined that the requested amendments were administrative in nature or did not change the previously assessed risk profile of emissions.

This Amendment Report documents the amendments made pursuant to sections 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 W6402/2020/1 granted in 2020 relates to the construction and time limited operation of a plant that will use biogas from the adjacent Woodman Point Wastewater Treatment Plant as a feed gas for production of fuel cell grade hydrogen and capture of carbon as a graphite by-product.

On 16 September 2022, the department received an application from the works approval holder to amend the works approval under section 59B of the EP Act.

The works approval holder requested the following amendments to the works approval:

1. extend the works approval expiry date by 12 months until 2 August 2024 to accommodate installation and time limited operations of the hot reactor;
2. include separate staged environmental compliance reporting timeframes for the cold wall reactor and hot reactors; and
3. provision for staged time limited operational periods and reporting requirements for the cold wall and hot reactors.

The works approval holder advised there had been hot reactor shell manufacturing issues resulting in delays to supply, install and overall project completion. The hot operation stage is not expected to be completed until mid-2023.

The works approval holder seeks to proceed with the cold reactor system as a first stage interim of manufacture and install of the hot reactor system. The cold reactor system is different from the hot reactor system in that it simply allows biogas to pass through the system for testing in the absence of a thermal chemical reaction with no hydrogen or graphite by-product generation. When the cold reactor system is operating, biogas is directed and combusted in the completed flare. The works approval holder expects that cold reactor operational activities during time limited operation will include a slow ramp up period with intermittent operational activity for system testing with the aim of achieving 2 - 3 tests per week.

As the cold reactor system does not involve a thermal chemical reaction and biogas is directed to the flare, the works approval holder was of the view that there are no changes to the emissions profile or the department's previous risk assessment outcomes.

The existing works approval conditions are inflexible in requiring the completion and compliance reporting on all specified infrastructure (i.e. the hot reactor system) prior to any transition to time limited operations. The works approval holder wishes to be able to submit compliance reporting for the cold reactor system and hot reactor system and transition each to time limited operations in a staged manner.

3. Decision

Based on the assessment in this decision report, the delegated officer has determined to grant amendments to the works approval W6402/2020/1 subject to conditions.

Considering the previous risk assessment for the works approval granted in 2020 and information provided by the works approval holder in the amendment application, the delegated officer's assessment was that the requested changes did not change the previously assessment risk profile. Not further detailed risk assessment of emissions and discharges was therefore undertaken.

The delegated officer noted that operation of the cold reactor system will result in biogas being directed to the completed flare. Condition 6, Table 2 requires that all continuous waste gases are only to be discharged via the gas flare stack and remains an appropriate control applicable to the operation of the cold reactor stage. With reference to the works approval holders requested amendments (section 2.2) and the summary of amendments (section 5.1), the delegated officer determined the application as follows:

1. Amend the works approval expiry from 2 August 2023 to 2 August 2024;
2. Amend the conditions of the works approval to allow a staged construction, compliance reporting and time limited operation of the cold and hot reactor systems;
3. Amend condition 5 to allow a 180 calendar day-time limited operational period for each stage.

It is expected the works approval holder will lodge an application for licence once it has submitted the Environmental Compliance Report for the hot reactor system (stage 2) and entered time limited operations.

4. Consultation

The City of Cockburn was invited to comment on the application and responded with no objections to the amendment.

The works approval holder was provided with a copy of the draft amendment report and draft amended works approval. The works approval holder responded on the 24 October 2022 providing corrections to specified infrastructure in Table 1 and its respective stage.

5. 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.

5.1 Summary of amendments

Table 1 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 1: Summary of works approval amendments

Condition no.	Proposed amendments
Duration	Extended to 02 August 2023
Condition 1	Added cold reactor and stages installation requirements for the hot and cold reactors.
Condition 2	Updated the condition to allow for stages reporting requirements
Condition 3	Updated the condition to allow for staged Environmental Compliance Reports.
Condition 4	Updated the condition to allow time limited operations for each stage.
Condition 5	Updated the condition to include time limited operations for each stage.
Definitions Table 3	Added definitions for stage 1 and stage 2.

References

1. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
2. Department of Water and Environmental Regulation (DWER) 2019, *A Guide to Licensing*. Perth, Western Australia.
3. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.
4. DWER 2020, *Works Approval W6402/2020/1*, Perth, Western Australia
5. DWER 2020, *Works Approval W6402/2020/1 Decision Report*, Perth, Western Australia.
6. Hazer Group Limited 2022, *Application for a works approval amendment and supporting documents*, Perth, FWestern Australia.