



## Application for Works Approval Amendment

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

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<b>Works Approval Number</b>	W6772/2023/1
<b>Works Approval Holder</b>	Chevron Australia Pty Ltd
<b>ACN</b>	086 197 757
<b>File Number</b>	DER2022/000691
<b>Premises</b>	<p>Gorgon LNG Project</p> <p>Legal description –</p> <p>Part of Crown Lease L077431, Certificate of Title Volume LR3168 Folio 315, Site 1 on Deposited Plan 409277; Part of Crown Lease L077428, Certificate of Title LR3158 Folio 476, Site 5 on Deposited Plan 64220; Temporary Wastewater Injection Facilities Licence LIC00554/2009_1_43; Part of Revised Service Corridor Easement L641372, Certificate of Title Volume LR3142 Folio 58, Deposited Plan 91514 and; Onshore Feed Gas Pipeline Right of Way Easement L466759, Certificate of Title Volume LR3142 Folio 58, Deposited Plan 91514.</p>
<b>Date of Report</b>	01 October 2024
<b>Decision</b>	Revised works approval granted

## 1. Decision summary

The Delegated Officer has determined to make amendments to Works Approval W6772/2023/1. 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 of Water and Environmental Regulation (department) has considered and given due regard to its Regulatory Framework and relevant policy documents which are available at [DWER Regulatory documents | Western Australian Government \(www.wa.gov.au\)](https://www.wa.gov.au/government/regulatory-documents).

### 2.2 Application summary

Works Approval W6772/2023/1 is held by Chevron Australia Pty Ltd (Works Approval Holder) for the Gorgon LNG Project (the Premises), located on Barrow Island.

The Premises relates to the categories and the assessed production capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which are defined in existing Works Approval W6772/2023/1.

On 4 December 2023, the Works Approval Holder submitted an application to the department to amend Works Approval W6772/2023/1 under section 59B of the *Environmental Protection Act 1986* (EP Act). Two amendments to the works approval are being sought.

One of the amendments being sought is a change of infrastructure requirement wording for Table 1, Item 3(a) of the works approval from 'four double skinned tanks' to 'five waste tanks that all have secondary containment'. This is to clarify the type of tank which will be installed, allow for a possible additional tank as per further review by the applicant, and provide flexibility on the type of secondary containment used.

The second amendment is an extension to the length of time limited operations authorised for a temporary crushing and screening plant (Table 1, Item 1 of works approval). As per condition 11 of the works approval, time limited operations may start once the Environmental Compliance Report (ECR) required by condition 2 of the works approval is submitted. The ECR for one crushing and screening plant was received in February 2024 and this plant is expected to be operational until May 2026. A proposed time limited operations extension from the current timeframe of a period not exceeding 180 calendar days to a timeframe of period not exceeding twenty-seven months (February 2024 to May 2026) is requested to allow this temporary infrastructure to operate under the works approval rather than needing to be incorporated into and then removed from the Gorgon LNG Project licence.

During the assessment the works approval holder additionally proposed the following amendments:

- amendment to Table 5 of the works approval to clarify use of both deep well injection locations for discharge of drilling wastewater from the dewatering facility;
- extension of the time limited operations period for the liquid waste facility from 180 days to

16 months as the facility is temporary with the extension allowing for operation of the facility to occur under the works approval;

- amendment to Table 4 of the works approval to remove reference to the waste transfer station for storage of solid waste/sludge; and
- additional operational controls related to maintaining and inspecting the secondary containment for the wastewater tanks of the liquid waste facility.

Additional details of these proposed amendments are within Appendix 1.

### 3. Consultation

The Works Approval Holder was provided with the draft amendment report and draft amended works approval on 16 May 2024. Comments were received from the Works Approval Holder on 7 June 2024, and a second draft works approval and amendment report was issued on 12 August 2024 with the Works Approval Holder providing further comments on 2 September 2024. All comments have been considered by the Delegated Officer as detailed in Appendix 1.

### 4. Decision

The Delegated Officer has determined to grant a revised works approval to facilitate the changes proposed by the Works Approval Holder. The changes include:

- changing the wording of Table 1, Item 3(a) in the works approval from 'four double skinned tanks' to 'five waste tanks that all have secondary containment which encompasses the tank and all connection points attached to the tank and is impervious to retain and enable recovery of liquid';
- extending the length of time limited operations authorised for the liquid waste facility from a period not exceeding 180 days to a period not exceeding sixteen months;
- inclusion of additional operational requirements for the liquid waste facility to ensure the risk of impact to receptors associated with loss of containment is adequately mitigated;
- removal of reference to the waste transfer station when storing and transporting solid waste/sludge sourced from the liquid waste facility;
- extending the length of time limited operations authorised for the crushing and screening plant from a period not exceeding 180 days to a period not exceeding twenty-seven months; and
- altering table 5 to authorise discharge of treated drilling wastewater from the dewatering facility to either the PWD or TWIP wells with associated change to table 6 to ensure monitoring occurs prior to discharge to either location.

The Delegated Officer considers these changes will not increase the previously assessed risk on the basis that:

- an additional wastewater storage tank does not change the risk profile of the premises;
- alternate secondary containment has been proposed which is suited to the temporary nature of the liquid waste facility which will have sufficient capacity to capture spillage during transfers, is suitably impervious, the facility is manned during transfers and monthly inspections of the infrastructure for leaks and defects will occur;
- the crushing and screening plant has demonstrated compliance with construction and installation requirements through submission of an ECR;
- the operation of rock crushing infrastructure and liquid waste facility is proposed for a finite period of time therefore the infrastructure is better suited to operate under the

works approval than a temporary licence amendment;

- the works approval includes operational conditions for the rock crushing infrastructure, with an assessed production capacity of 53,000 tonnes per year;
- the distance to the nearest public and environmental receptors has not changed since the risk assessment was undertaken; and
- the extended time limited operations duration remains within the works approval duration.

In granting the revised works approval the Delegated Officer also determined to make the following administrative changes to the works approval:

- add a works approval history to the instrument to document changes; and
- update condition numbers in line with the addition of new conditions.

These changes are administrative therefore will not change obligations on the works approval holder.

## 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
Condition 1 Table 1, Item 3(a)	Change of wording from 'four double skinned tanks' to 'five waste tanks, which all have secondary containment which encompass all tank and connection points and is impervious to retain and enable recovery of liquids.
Condition 1 Table 1, Item 3(b)	Including secondary containment within the requirement.
New: Condition 13	Extend time limited operations duration for the crushing and screen plant from 180 days to 27 months.
New: Condition 14	Extend time limited operations duration for the liquid waste facility from 180 days to 16 months.
Condition 15 Table 4 Item 3(a)	Removed 'waste transfer station' from the requirement.
Condition 15 Table 4 Item 3(c)	Inclusion of during transfers within the requirement

Condition no.	Proposed amendments
Condition 15 Table 4 Item 3(d)	Inclusion of secondary containment within the requirement.
Condition 15 Table 4 Item 3(e)	New requirement mandating monthly inspections of pipelines, secondary containment, and conveyance infrastructure as per requirement d.
Condition 15 Table 4 Item 3(g)	New requirement that all tank connections must be isolated via valves when the facility is not manned.
Condition 16 Table 5	Altered table to clarify that drilling wastewater is authorised for discharge to both the TWIP and PWD wells.
Condition 17 Table 6	Updated to specify monitoring frequency is prior to every discharge to either PWD or TWIP wells based on the changes to Table 5.
Condition 23	Inclusion of inspections in accordance with Condition 15, Table 4 Item 3(e) to be recorded in auditable books.

## Appendix 1: Summary of Works Approval Holder's comments on draft amendment (if required)

Condition	Summary of Works Approval Holder's comment	Department's response	Summary of Works Approvals Holders comments on 2 <sup>nd</sup> draft	Department's response
Condition 1 Table 1, Item 3(a)	<p>Requested to remove the 110% capacity requirement for secondary containment of the five waste tanks and change the wording to "(i) encompasses the tank and all connection points attached to the tank; (ii) is impervious to retain and enable recovery of any spillage during fluid transfer activities."</p> <p>The works approval holder provided the following reasonings that their proposed alternative requirements are sufficient:</p> <ul style="list-style-type: none"> <li>The liquid waste tanks are new, robust steel tanks designed based on sea container architecture.</li> <li>Three tanks will store spent drilling fluids, primarily water-based (80-95% water) with salts (potassium chloride and/or sodium chloride), biodegradable polymers, and low toxicity additives. These tanks will not contain waste hydrocarbons, though traces of dissolved hydrocarbons may be present. The environmental risk profile of</li> </ul>	<p>Due to insufficient details regarding the secondary containment bunding within the amendment application, the delegated officer specified bunding requirements equivalent to the control provided by the double skinned tanks. This included a containment capacity of 110% of a tank's volume and being impervious to retain and enable recovery of spillage. The delegated officer considers that the alternative controls proposed by the works approval holder for loss of containment of drilling fluids and treated drilling fluids provide a lesser level of control than the originally proposed double skinned tanks.</p> <p>The delegated officer agrees that the environmental risk profile of the drilling fluids is likely to be lower than that of diesel storage however notes that no water quality analysis has been provided to evidence the works approval holder's</p>	<p>The works approval holder provided additional control measures and further reasoning as to why the proposed secondary containment bunding provides an equivalent or higher level of control than what was originally conditioned.</p> <p>It was also clarified that the dewatering facility is a temporary facility, required until the end of 2025 therefore was infrastructure was designed as such. The works approval holder has requested the facility be authorised to operate under time limited operations of the works approval rather than being included onto the Gorgon operational licence. It was noted that there may be future scope for continued use of the dewatering facility until 2027.</p> <p>The works approval holder proposed the following additional operational controls to be conditioned in the works approval related to the dewatering facility:</p>	<p>The department considered the additional control measures and justification provided by the works approval holder regarding the proposed tanks and containment infrastructure. On the basis that the Liquid Waste Facility is a temporary facility, further operational controls have been proposed and further information related to quality of the wastewater provided the delegated officer considers the proposed single walled tanks and secondary containment will not alter the risk profile for the facility.</p> <p>The delegated officer incorporated the proposed operational controls that reduce the likelihood of spillage and leaks into the works approval. These include maintaining the impermeability of the secondary containment, conducting regular inspections of both the containment and transfer infrastructure, and ensuring all tank connections are isolated when the facility is unmanned</p>

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	<p>these fluids is lower than that of diesel storage.</p> <ul style="list-style-type: none"> <li>• A fourth tank holds processed fluids ready for injection, with an even lower risk profile.</li> <li>• Transfers into the waste tanks occur via a flexible hose from a vacuum truck to the tanks' fill point.</li> <li>• All tanks are within secondary containment, designed to handle key risk scenarios like accidental overfills, minor leaks, and larger spills from hose or connection failures.</li> <li>• The secondary containment is not intended to hold the entire tank contents in a total loss scenario, deemed unlikely due to several factors: <ul style="list-style-type: none"> <li>○ Tanks and connection points are new and subject to compliance audits as required.</li> <li>○ Connection points are within the bunded area.</li> <li>○ The facility is attended during operational hours, with supervised fluid transfer activities.</li> </ul> </li> </ul>	<p>claims. Additionally, there is no guarantee the water quality of the drilling fluids to be stored will remain consistent with the works approval holder's expected water quality as they are generated outside the premises boundary from drilling activities.</p> <p>While the likelihood of a total loss scenario may be considered low, the potential environmental impact of such an event in a sensitive area such as that on Barrow Island necessitates a higher level of control. Secondary containment as originally conditioned provides this additional safeguard required to achieve an acceptable level of risk therefore the condition has not been altered as requested. The delegated officer considers the bunding depicted in photograph provided is more appropriate for temporary use than permanent infrastructure, particularly given the environment the infrastructure is located in.</p> <p>An assessment of compliance with the works approval construction requirements will not be undertaken until the works approval holder has</p>	<ul style="list-style-type: none"> <li>• Time limited operations to be extended to 16 months for the dewatering facility.</li> <li>• Fluid transfers will be adequately supervised</li> <li>• When the dewatering facility is not attended, all waste tank connections will be isolated via valves</li> <li>• Secondary containment will be kept impermeable, free of leaks and defects</li> <li>• Transfer pipelines, secondary containment and conveyance infrastructure will be inspected on a monthly basis.</li> </ul> <p>The works approval holder advised that there is insufficient space at the dewatering facility for secondary containment with 110% capacity and clarified that only drilling wastes can be processed with the facility as the facility processing system is not compatible to process hydrocarbon-contaminated waters beyond trace levels. The main risk to the environment in a loss of containment situation would be salinity impacting surrounding vegetation.</p> <p>The works approval holder considers the proposed tanks</p>	<p>to ensure the risk profile is maintained as assessed.</p>



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	<ul style="list-style-type: none"> <li>Hoses are new, certified, and recertified annually.</li> <li>Regular tank status and volume monitoring will occur as the facility is attended when operational.</li> <li>Daily equipment condition monitoring ensures tanks and infrastructure are impermeable and defect-free, supported by an onsite inventory of critical spares.</li> </ul> <p>Attached to the response is a photograph of the constructed secondary containment for the waste tanks at the facility, depicting a collapsible spill bund which appears to be constructed from PVC.</p>	submitted an ECR to the department as per conditions 2 and 3. It was however noted that based on the photograph provided the installed bunding appear to be non-compliant with the works approvals requirements.	<p>and secondary containment offer better spill protection than double-skinned tanks, which only guard against tank wall integrity failures which is considered an extremely rare scenario. The double skin tanks do not afford any protection for leaks arising from tank connections and hoses or overfilling whereas the proposed bunding does.</p> <p>The proposed secondary containment bunding is 900gsm PVC with a 5 year UV rating and has capacity to contain an overflow scenario of the largest tank for greater than two minutes in accordance with AS 1940:2017</p>	
Condition 2, Table 5	Requested to merge the two rows in the first column of Table 5 as how it is currently formatted appears to only authorise disposal of treated drilling wastewater at the TWIP disposal wells during time limited operations. The works approval holder referenced the original risk assessment table which does not specify that drilling wastewater is only to be disposed of at the TWIP wells.	The delegated officer notes that the original application for W6772/2023/1 specified that treated water from the dewatering facility would be disposed of downhole at the TWIP wells but that the risk assessment documented in the decision report refers to injection being via either the PWD or the TWIP wells. The delegated officer notes that although the proposed change was not within the scope of this amendment application risk	No further comment.	N/A



Condition	Summary of Works Approval Holder's comment	Department's response	Summary of Works Approvals Holders comments on 2 <sup>nd</sup> draft	Department's response
		factors are the same whether disposal is via the PWD or TWIP wells. Clarification has therefore been made to table 5 as requested and the monitoring frequency in Table 6 has been updated to include PWD wells to ensure monitoring occurs when discharged to either location.		
Condition 14 Table 4, Item 3a	No comment	N/A	Proposed to change the requirement that specifies that solid waste/sludge is transported to the waste transfer station. This is to reflect site practices as it is not intended that solid waste/sludge will be stored at the waste transfer station, rather it will be transported off the island.	The delegated officer does not consider this change alters the risk rating, noting the solid waste is adequately contained in lined enclosed receptacle and has therefore removed reference to the waste transfer station within the condition. It is not considered necessary to specify a disposal location as waste disposal is subject to the Gorgon Solid and Liquid Waste Management Plan, under Ministerial Statement 800 requirements.
Decision report	Requested several sections of the decision report to be updated to align with the requested changes above.	The decision report has been updated based on the delegated officer's determinations outline in this table.	Requested several sections of the decision report to be updated to align with the requested changes above.	The decision report has been updated based on the delegated officer's determinations outline in this table.