



Application for Works Approval Amendment

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

Works Approval Number	W6450/2020/1
Works Approval Holder	Co-operative Bulk Handling Limited
ACN	29 256 604 947
File Number	DER2020/000458
Premises	Co-operative Bulk Handling Limited Lot 108 Rockingham Beach Road KWINANA BEACH WA 6167 Legal description – Part of Lot 108 on Deposited Plan 400167 Certificate of Title Volume 2953 Folio 177 As defined by the premises maps attached to the issued works approval
Date of Report	22/09/2023
Decision	Revised works approval granted

Table of Contents

1. Decision summary	1
2. Scope of assessment	1
2.1 Regulatory framework	1
2.2 Application scope and background	1
2.2.1 Fertiliser storage warehouse	1
2.2.2 UAN truck loading/unloading stations	2
3. Risk Assessment	2
4. Consultation	5
5. Decision	5
5.1 Summary of amendments	5
References	6
Appendix 1: Summary of Works Approval Holder's comments on draft amendment	7

1. Decision summary

Works approval W6450/2020/1 is held by Co-operative Bulk Handling Limited (CBH; works approval holder) for the staged construction of a liquid and granular fertiliser plant in Kwinana Beach. The works approval holder applied to amend the works approval to extend the imposed deadline for the installation of the dry fertiliser storage shed doors from the required 30/09/2023 until 29/12/2023, and to alter the requirements specified for the liquid urea ammonium nitrate (UAN) truck loading/unloading stations hardstand.

This amendment report documents the assessment of potential risks to the environment and public health from proposed changes to the emissions and discharges during the staged construction and operation of the premises. As a result of this assessment, revised works approval W6450/2020/1 has been granted.

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 [DWER Regulatory documents | Western Australian Government \(www.wa.gov.au\)](https://www.wa.gov.au/government/publications/regulatory-framework).

2.2 Application scope and background

On 30 January 2023, the works approval holder submitted an application to the department to amend works approval W6450/2020/1 under section 59B of the *Environmental Protection Act 1986* (EP Act). The works approval holder requested an amendment to include time limited operations, and to allow staged construction of the fertiliser storage warehouse, to allow for operations to commence prior to the fertiliser storage warehouse being fully enclosed (preceding shed door installation) for a finite period. Additionally, the works approval holder requested a phased approach to constructing the liquid urea ammonium nitrate (UAN) truck loading/unloading stations, with a temporary portable containment bund being established initially for use prior to installation of the required permanent hardstand. Consequently, an amended works approval was issued on 15 March 2023 permitting the operation of the unenclosed shed and use of a temporary bund at the UAN loading/unloading stations for the 2023 fertiliser peak season, up until 30 September 2023, subject to the submission of compliance reports.

On 11 August 2023, the works approval holder submitted an amendment application for W6450/2020/1 (this amendment) to extend the operating period of the unenclosed fertiliser storage warehouse to 29 December 2023 and to replace the requirement for the liquid UAN truck loading/unloading stations hardstand to have a maximum hydraulic conductivity of $1 \times 10^{-9} \text{m/s}$ with the requirement for the hardstands to be sealed. Subsequently, the works approval holder also requested that the time-limited operations phase be extended to ensure operations can continue while the infrastructure works needed to meet the remaining requirements can be completed.

2.2.1 Fertiliser storage warehouse

The works approval holder stated the amendment to extend the deadline for the shed doors installation by 90 calendar days is required due to supplier/procurement delays that the industry is experiencing. At the time of the March amendment additional regulatory controls were imposed for the time limited operations phase to mitigate any increased risk of fugitive

dust emission impacts to sensitive receptors associated with the warehouse operating prior to being fully enclosed. The additional controls applied in the works approval included:

- Real-time continuous monitoring of particulate matter inclusive of trigger limits ($PM_{10} > 50\mu\text{g}/\text{m}^3$) that incur management actions.
- Reduced operating throughput from 200,000 to 100,000 tonnes during the time limited operations period.
- Availability of a watercart outside of the warehouse.
- Proactive dust reduction maintenance inclusive of shed floor maintenance and use of road sweepers internally and externally and vehicle cleaning.

The works approval holder will continue to implement these measures during time limited operations to mitigate the risk of fugitive dust emission impacts. At the time of submitting the application, the works approval holder advised that no project-attributable trigger value exceedances had been recorded during the time limited operations period.

2.2.2 UAN truck loading/unloading stations

The works approval conditions specify that the UAN truck loading/unloading stations hardstand must have a maximum hydraulic conductivity of $1 \times 10^{-9} \text{m/s}$. CBH propose to replace this requirement with the requirement for the hardstand to be sealed. The works approval holder noted within the amendment application that the specified hydraulic conductivity requirement is not appropriate for this infrastructure as it generally applies to liners of ponds containing pollutants as per Water Quality Protection Note (WQPN) 26. CBH also advised that a sealed hardstand has been constructed at the UAN loading / unloading stations.

The constructed hardstand area comprises of a compacted base with a 7mm thick bitumen emulsion primer seal which underlies 50mm thick asphalt paving of 14mm dense graded asphalt (AC14). Additionally, the works approval holder intends to apply a fuel-resistant coating called JetBloc® to the hardstand to further reduce the permeability of the surface. Jetbloc® is a two-part epoxy coating designed for heavy duty pavements, primarily consisting of crystalline silica and a bisphenol-based epoxy resin. The works approval holder considers the coating to be chemically inert and highly resistant to chemicals, rendering it a suitable choice for the loading/unloading areas. The works approval holder anticipates a minimum hydraulic conductivity of $20 \times 10^{-9} \text{m/s}$ can be achieved for the hardstands, primarily based on the thickness and level of compaction, without accounting for the primer seal and the proposed additional coating.

3. Risk Assessment

The department assesses the risk of emissions from prescribed premises and identifies the potential source, pathway and impact to receptors in accordance with the *Guideline: Risk assessments* (DWER 2020a).

To establish a risk event there must be an emission, a receptor which may be exposed to that emission through an identified actual or likely pathway, and a potential adverse effect to the receptor from exposure to that emission. The key emissions and associated actual or likely pathway during premises operation which have been considered in this amendment report are detailed in Table 1 below. Table 1 also details the control measures the works approval holder has proposed to assist in controlling these emissions, where necessary, and the potential human and environmental receptors that may be impacted as a result of these emissions (*Guideline: Environmental siting* (DWER 2020b)).

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020a) for those emission sources which are proposed to change and take into account potential source-pathway and receptor linkages identified in Table 1. Where the works

approval holder has proposed mitigation measures/controls these have been considered when determining the final risk rating.

Where the delegated officer considers the works approval holder's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the works approval as regulatory controls.

Additional regulatory controls may be imposed where the works approval holder's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 1. The conditions in the revised works approval have been determined in accordance with Guidance Statement: Setting Conditions (DER 2015).

Table 1. Risk assessment of potential emissions and discharges from the Premises during operation

Risk Event					Risk rating ¹ C = consequence L = likelihood	Works Approval Holder's controls sufficient?	Conditions ² of amended works approval	Justification for regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Works Approval Holder's controls				
Continued operation of the unenclosed dry fertiliser storage warehouse to 29 December 2023	Dust: airborne fertiliser particles	Air/ windborne pathway causing impacts to health and amenity of nearby receptors	Residences 550 m southwest and bottle shop/ residence 800 m northeast. Recreational reserve adjacent to boundary (west). Other public areas 2.3 – 3 km southwest.	No additional controls proposed. Continued application of existing controls in the works approval.	C = Moderate L = Unlikely Medium Risk	Y	Condition 1 (amended to extend timeframe) Conditions 6-10 (existing)	It is proposed that operation of the unenclosed fertiliser storage warehouse will continue into the summer month of December when the region experiences drier and windier conditions presenting a potentially increased risk of dust emissions impacting sensitive receptors. Considering that no project attributable PM ₁₀ trigger exceedances had occurred at the time of application (CBH, 2023) and the conservative nature of the controls imposed at the time of the last amendment (summarised in section 2.3.1), the delegated officer considers that the risk is appropriately mitigated by existing conditions for time limited operation within the works approval. Given the above the delegated officer determined that the continued operation of the unenclosed fertiliser storage warehouse to 29 December 2023 does not present an unacceptable risk for the extended finite period and does not significantly alter the risk profile of the activity, subject to the controls specified in conditions 6 – 10 of the issued works approval.
Liquid UAN truck loading/unloading sations	Liquid UAN	Direct discharge to land from potential leaks and spills of liquid UAN causing contamination of in situ soils and groundwater	In situ soils Groundwater: 3 m BGL at the chemical storage area	Hardstand requirements: <ul style="list-style-type: none"> Comprises a 7 mm primer seal, 50 mm of AC14 asphalt paving that is sealed with a JetBloc® crystalline silica/BPA epoxy coating Graded in a manner that prevents runoff and directs potentially contaminated water runoff into drain/s which discharge into the evaporation pond 	C = Moderate L = Possible Medium Risk	Y	Condition 1	The initial risk assessment for the works approval identified that a bunded hardstand meeting a permeability requirement of 1x10 ⁻⁹ m/s was required at the UAN loading/unloading stations to mitigate the risk of liquid UAN discharges causing contamination of soil or groundwater receptors (DWER, 2021) and this was applied as construction conditions within W6450/2020/1. At the time of the last amendment, use of a temporary portable containment bund was approved until the permanent hardstand was established, with a deadline of 30 September 2023. The intent of the original infrastructure requirements was to establish an impermeable hardstand capable of capturing UAN spills and any potentially contaminated stormwater which would report to the evaporation pond via the drainage system, thereby mitigating the risk of infiltration into, and contamination of soils and groundwater. To maintain an acceptable risk level, the hardstand surface should be resistant to UAN and sufficiently impermeable. The delegated officer evaluated the characteristics of the proposed hardstand, as described in section 2.3.2. In assessing the suitability of the Jetbloc® coating for this application the delegated officer has taken into account its composition being predominantly crystalline silica and Bisphenol A epichlorohydrin (BPA epoxy). The delegated officer considers that this composition imparts both high chemical resistance and durability to the hardstand's surface, ensuring it remains sufficiently impermeable long term. Consequently, the delegated officer determined that amending the hardstand construction requirements specified in the works approval to align with those proposed will not increase the risk of soil or groundwater contamination associated with UAN loading/unloading.

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the Guideline: Risk assessments (DWER 2020).

Note 2: Proposed works approval holder's controls are depicted by standard text. Bold and underline text depicts additional regulatory controls imposed by department.

4. Consultation

The Works Approval Holder was provided with the draft Amendment Report on 21 September 2023. Comments received from the Works Approval Holder on 22 September 2023 have been considered by the Delegated Officer as detailed in Appendix 1.

5. Decision

The delegated officer has determined the proposal to extend the operation period for the dry fertiliser shed to operate without doors by 90 days does increase the assessed risk of impacts to off-site receptors. This determination is based on existing operational conditions 6 to 10 being suitable to mitigate the risk of dust impacts and there being no prior PM₁₀ trigger value exceedances associated with the premises operations.

The delegated officer concluded that replacing the specified maximum hydraulic conductivity for the UAN loading/unloading stations hardstands with the alternative proposed construction requirements for the hardstand does not alter the assessed risk of soil or groundwater contamination associated with operation of this infrastructure. This determination was based on the alternative composition of the hardstand being considered to comprise suitable construction materials and thickness to enable capture of and resistivity to UAN spills.

Due to construction works not yet being complete for the premises, the time limited operation phase has been extended to 350 calendar days to enable ongoing operation of completed infrastructure while construction and installation works for the remaining infrastructure is completed and an Environmental Compliance Document is submitted following this. The Delegated Officer notes assessment and allowance for operation of the unenclosed warehouse has been based on this being a temporary activity and considers adequate time has been allotted for the procurement and installation of the shed doors. The works approval holder should not anticipate further extensions of the imposed deadline.

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 2: Summary of works approval amendments

Condition no.	Proposed amendments
History	Updated to include this amendment
Condition 1, Table 1: Design and construction / installation requirements	Item 1: Extended the deadline for shed door installation by 90 days
	Item 4: Alteration of the hardstand requirements for the UAN truck loading/unloading stations
	Item 4: Correction of an administrative error where bunding was referred to instead of hardstand
Condition 5	Extended the time limited operations phase to 350 calendar days.

Condition no.	Proposed amendments
Condition 6	Updated wording to clarify that operational requirements are only applicable to stage 1 during use of the portable containment bunding.
Definitions	Addition of a definition for AC14 (asphalt mixture)

References

1. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
2. Department of Water and Environmental Regulation (DWER) 2020a, *Guideline: Risk Assessments*, Perth, Western Australia.
3. Department of Water and Environmental Regulation (DWER) 2020b, *Guideline: Environmental Siting*, Perth, Western Australia.
4. Co-operative Bulk Handling Limited (CBH) 2023, *Works approval amendment application W6450/2020/1* (DWERDT808734), Perth, Western Australia.
5. Department of Water and Environmental Regulation (DWER) 2021, *Works Approval W6450/2020/1 and Decision Report*, Perth, Western Australia.

Appendix 1: Summary of Works Approval Holder's comments on draft amendment

Condition	Summary of Works Approval Holder's comment	Departments Response
<p>Condition 1 Table 1: Item 4, Stage 4</p>	<p>The works approval holder clarified the pavement construction for the truck loading and unloading hardstand area, explaining that the surface asphalt layer is 50mm thick and consists of AC14 asphalt paving, which refers to the aggregate size in the asphalt mixture being 14mm. As the original specification referred to a 14mm layer atop a 50mm layer.</p>	<p>The construction requirements have been revised to reflect the clarified specifications of the hardstand and a definition added for AC14 for clarity. Section 2.2.2 of this amendment report has been updated to reflect this.</p>
<p>Condition 5a Time limited operations duration</p>	<p>The works approval holder requested that the time limited operations phase be extended by a further 60 days to 350 calendar days to allow sufficient time for the environmental compliance report to be provided following the shed door installation and the submission of a registration application.</p>	<p>The delegated officer accepts the request to include allowance of 60 calendar days for the submission of the environmental compliance report in accordance with condition 2 of the works approval within the extended time limited operations period and updated the timeframe accordingly.</p>