



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	15 March 2023
Proposed Decision	Revised works approval granted

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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 authorise construction and operation of the fertiliser storage shed and the UAN loading/unloading stations to be conducted in additional stages to enable use of the infrastructure for the 2023 fertiliser peak season. The shed will be constructed and operated without doors in Stage 2 and the doors will be added in Stage 3 (expected to be August 2023). The UAN loading/unloading stations will initially operate using a temporary portable bund while installation of a permanent hardstand area is completed in accordance with the works approval requirements (expected to be September 2023).

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 <https://dwer.wa.gov.au/regulatory-documents>.

2.2 Application summary

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 allow staged construction of the fertiliser storage shed, with the shed initially being constructed and operated as an unenclosed shed for a finite period before the addition of doors to complete construction of the shed at a later stage. Subsequent to the initial amendment application the works approval holder also requested staged construction of the urea ammonium nitrate (UAN) fertiliser loading/unloading stations, with a temporary portable containment bund being established initially for use for a finite period while installation of the permanent hardstand area is completed. The purpose of the requested amendment is to allow, subject to submission of compliance reports, operation of the unenclosed shed and use of a temporary bund at the UAN loading/unloading stations for the forthcoming 2023 fertiliser peak season. Completion of procurement and installation/construction of the remaining required infrastructure is expected to be complete before the end of September 2023.

The requested amendments are to:

- split item 1 in Table 1 (condition 1) into Stage 2 works for the unenclosed shed component and Stage 3 works for the addition of the doors.
- split item 4 in Table 1 (condition 1) into Stage 1 works for establishment of temporary bunding for UAN loading and unloading, and Stage 4 works for completion of the installation of the permanent hardstand area.
- amend condition 3 and 4 to allow preparation and lodgement of compliance reports for each stage (stages 1, 2, 3, and 4).

The requested changes also necessitate inclusion of conditions authorising time limited operation of the shed without doors and temporary bunding at the UAN fertiliser loading/unloading stations with associated controls and monitoring.

3. Risk assessment

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

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 2020)).

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) 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).

The works approval holder has the option of applying for a registration or alternatively a licence for the operational phase of the premises, subject to compliance with the works approval requirements. In the event the works approval holder opts to complete and report on works in stages, it has the option to submit an application along with its compliance report for stage 1 (liquid fertiliser plant). A risk assessment for the operational phase for the fertiliser shed has been included in this decision report.

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 works approval	Justification for additional regulatory controls
Source/ Activities	Potential emission	Potential pathways and impact	Receptors	Works approval holder's controls				
<p>Stage 2: Shed without doors</p> <p>Granular fertiliser storage, blending, loading and unloading within the fertiliser storage warehouse</p>	Dust: airborne fertiliser particles	Air/ windborne pathway causing impacts to health and amenity of nearby receptors	<p>Residences 550 m southwest and bottle shop/ residence 800 m northeast.</p> <p>Recreational reserve adjacent to boundary (west).</p> <p>Other public areas 2.3 – 3 km southwest</p>	<p>When operating without doors installed the following controls will apply:</p> <ul style="list-style-type: none"> - Real time dust monitoring using dust monitors within the site boundary to the north and south of the shed. A maximum dust concentration limit of 50 µg/m³ averaged over a 24-hour period will be applied. - Reduced scheduled throughput of 100,000 tonnes from March to August 2023, with granular fertiliser diverted to other facilities where possible. - Water cart available for use outside of the storage shed. - Truck bookings scheduled to prioritise morning loading, where possible, to coincide with typically calmer wind conditions. - Proactive dust reduction maintenance of site and equipment: <ul style="list-style-type: none"> • Shed floor maintenance, consisting of a road sweeper attached to a small loader to be used inside the warehouse after each truck load. • Road sweeper active during the day, sweeping the external site areas. • Trucks to be cleaned of fertiliser prior to exit from storage shed • Truck washdown bay utilised following loading and prior to departing site. 	<p>C = Moderate L = Unlikely Medium Risk</p>	Y	<p>Condition 1: Infrastructure and equipment</p> <p>Condition 2: Compliance reporting</p> <p>Conditions 4, 5 and 6: Time limited operations</p> <p>Conditions 7: Monitoring during time limited operations</p> <p>Conditions 8 and 9: Management actions following trigger exceedance</p> <p>Condition 11: Dust management</p>	<p>The solid fertiliser supplied to the premises will be in granular form from 2 – 4 mm in diameter, thereby minimising the risk of particles becoming airborne. Dust from blending will be captured within the blending equipment where all travel paths of the fertiliser are fully enclosed. The initial risk assessment for the works approval identified that the addition of doors on the granular fertiliser storage shed was required to maintain an acceptable level of risk of dust impacting on nearby sensitive receptors. Therefore, the requirement for the installation of doors remains within the works approval as Stage 3 works to ensure that risk of dust emissions from the ongoing operation of the premises is minimised.</p> <p>The delegated officer has considered the risk of dust emissions from operations during the interim period between Stage 2 and Stage 3 works, following construction of the unenclosed shed and prior to the installation of doors. The works approval holder's proposed controls include real time dust monitoring, reduced throughput, regular dust cleaning and the availability of a water cart for dust suppression.</p> <p>The delegated officer considers the above controls are critical for effectively mitigating dust emissions from the unenclosed granular fertiliser storage shed and ensuring there is an acceptable level of risk of health and amenity impacts to nearby receptors during operations. The above controls have therefore been imposed on the works approval as infrastructure and operational controls through the inclusion of a time limited operations period. During this period, the works approval holder will be required to limit throughput, keep a water truck available for dust suppression and conduct regular cleaning with a road sweeper to avoid accumulation of dust. Given that the assessment of additional risk from operating within an unenclosed shed was based on the premise that the increased risk would be for a finite period, a 30 September 2023 deadline for installation of the doors has been included in the design and construction / installation requirements of the works approval.</p> <p>The works approval holder proposed to undertake real time dust monitoring at two locations within the site boundary, to the south and north of the shed. The delegated officer considers dust monitoring to be an effective tool for indicating the level of potential impact of dust emissions from the premises operations prior to the installation of doors and has therefore specified conditions requiring dust monitoring to be undertaken at two locations to validate the effectiveness of the works approval holder's dust management controls during this finite period.</p> <p>The delegated officer notes that while a real-time system cannot provide an Australian Standard measure of emission concentration, it will provide a real-time detection of dust concentrations outside of the unenclosed shed during all operating conditions and will allow operators take action to investigate, apply dust suppression or shut-down in a timely manner should dust concentration increase beyond an acceptable value. As such, conditions relating to PM₁₀ dust monitoring with a specified trigger limit and related management actions following trigger exceedance have been included in the works approval. Should the recorded dust concentration exceed the trigger value, the works approval holder will be required to respond within 60 minutes by investigating the dust source, and applying additional dust suppression where it is available for identified sources. Should the dust management actions not be sufficient to reduce PM₁₀ below the trigger level within 120 minutes of the exceedance, the works approval holder must cease all dust-generating activities until the dust concentrations are below the trigger value.</p> <p>The works approval also includes reporting conditions requiring the works approval holder to submit engineering reports to verify compliance with infrastructure construction conditions following each Stage prior to operation being authorised.</p>

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<p><u>Stage 2: Temporary bunding at UAN loading/unloading stations</u></p> <p>Loading and unloading trucks with liquid UAN at dedicated stations</p>	Liquid UAN	Direct discharge to land from potential leaks and spills of liquid UAN causing contamination of in situ soils and groundwater	<p>In situ soils</p> <p>Groundwater: 3 m BGL at the chemical storage area</p>	<p>Use of a temporary trafficable portable containment bund (heavy duty 1350 gsm PVC construction with 0.1m high walls and 30m by 4m dimensions).</p> <p>Weather awning to reduce rainfall impacts on bund capacity</p>	<p>C= Moderate</p> <p>L = Possible</p> <p>Medium Risk</p>	N	<p>Condition 1: Infrastructure and equipment</p> <p>Condition 2: Compliance reporting</p> <p><u>Conditions 4, 5 and 6: Time limited operations</u></p>	<p>The initial risk assessment for the works approval identified that a hardstand meeting a permeability requirement of 1x10⁻⁹m/s was required at the UAN loading/ unloading stations to maintain an acceptable level of risk of liquid UAN discharges causing contamination of soil or groundwater receptors. This requirement has been retained in the works approval with wording amended to clarify requirements and the delegated officer gave consideration to the acceptability of using an alternate control (portable containment bunding) for a finite period of time while construction of the permanent hardstand is complete.</p> <p>The delegated officer considered that use of a fit for purpose temporary portable containment bund for a finite period while a permanent hardstand is established is an appropriate control to mitigate the risk of contamination from spills during transfers subject to infrastructure and operational controls. The delegated officer reviewed the type of temporary bund proposed for use and determined to specify installation standards for the temporary bund to ensure it is of a suitable standard for its intended use (i.e established on a hardstand and subject to heavy vehicle traffic). The infrastructure controls include specification of material and dimensions and use of a anti abrasion ground mat beneath the bund to minimise the risk of punctures. The delegated officer determined operational controls were also necessary to ensure the portable bund is operated and maintained in a manner which mitigates the likelihood of UAN discharge to the environment. Operational controls requiring the works approval holder to visually inspect the bund prior to use, maintain it in fit for purpose condition, park trucks entirely within the bund when unloading/loading of trucks with UAN occurs and transfer all liquids captured within the temporary bund to the premises evaporation pond for disposal prior to truck departure, were therefore included in the works approval.</p> <p>Given use of a portable containment bund has been proposed as a temporary measure pending completion of the permanent hardstand at the UAN unloading/loading stations, and the risk assessment has been based on this premise, a 30 September 2023 deadline for installation of the permanent hardstand has been included in the works approval to ensure the permanent infrastructure is completed within the anticipated timeframe and use of the portable bund is limited to one peak fertiliser season.</p>

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 revised works approval and amendment report on 23 February 2023 and 15 March 2023. Comments received from the works approval holder on 9 March 2023 and 15 March 2023 have been considered by the delegated officer as detailed in Appendix 1.

5. Decision

The delegated officer has determined the proposal to construct and operate the granulated fertiliser storage shed in stages, allowing for the facility to be operated for a period without doors, and the doors added at a later stage, does not pose an unacceptable risk of impacts to off-site receptors. This determination is based on the following:

- The operation of the shed without installed doors will occur within a finite period of time during time limited operations, as conditioned within the works approval. A deadline has been added to the works approval for the installation of the doors (30 September 2023).
- During the period when the shed is operated without installed doors, the works approval holder will conduct continuous, real-time dust monitoring with associated management actions specified to reduce dust emissions following any exceedance of the trigger value. The nominated trigger value has been taken from the National Environment Protection Council (NEPC), *National Environment Protection (Ambient Air Quality) Measure 2021*.
- Additional infrastructure and operational controls have been implemented to reduce the risk of fugitive dust emissions during time limited operations including a reduced operating throughput, minimisation of dust accumulation through regular site maintenance and cleaning, and the availability of water carts for dust suppression as required.
- The works approval holder has also proposed to prioritise loading of trucks in the morning to coincide with typically calmer wind conditions, where possible.
- The works approval holder has also proposed to divert granular fertiliser to other facilities, where possible.

The delegated officer has determined the proposal to construct and operate the UAN loading/unloading stations in stages, allowing for the facility to be operated for a period using a temporary portable containment bund, while awaiting completion of the construction of the permanent hardstand area, does not pose an unacceptable risk of impacts to receptors. This determination is based on the following:

- The use of a temporary portable containment bund occurring for a finite period of time during time limited operations, to be replaced by the permanent hardstand area built in accordance with the conditions of the works approval.
- Infrastructure and operational controls have been implemented to ensure the temporary bund is fit for purpose to contain spills, inspected frequently, maintained in good condition, used for all loading/unloading events, and all spillage captured is transferred to the premises evaporation pond.

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	Divided the granular storage facility infrastructure requirements into Stage 2 and Stage 3 works to allow for staged construction with later addition of doors.
	Divided the UAN truck loading/ unloading stations infrastructure requirements into Stage 1 and Stage 4 works to allow for staged construction of a temporary bund to be replaced with the permanent hardstand
	Addition of a deadline for the installation of permanent hardstand area
	Addition of a deadline for the installation of doors.
	Addition of air quality monitoring stations.
	Correction of typographical errors (Figure 3 duplicated throughout the table)
Conditions 4 and 5	Addition of conditions 4 and 5 to allow time limited operations.
Condition 6	Addition of time limited operations requirements.
Conditions 7,8, 9 and 10	Addition of conditions relating to monitoring during time limited operations and management actions required in the event of trigger value exceedance.
Condition 11	Addition of a dust management condition relating to visible dust crossing premises boundary.
Condition 12	Addition of monitoring and management actions to record keeping requirements.
Definitions	Definition updated: 'Stage of works' Definitions added: PVC and gsm
Schedule 1: Maps	Addition of Figure 4: Site plan showing air quality monitor locations

References

1. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
2. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
3. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Risk Assessments*, Perth, Western Australia.
4. National Environmental Protection Council 2021, *National Environment Protection (Ambient Air Quality) Measure*, Canberra, Australian Capital Territory.
5. Co-operative Bulk Handling Limited (CBH) 2023, *Works approval amendment application and supporting document for W6450/2020/1 (DWERDT718433)*, Perth, Western Australia.

Appendix 1: Summary of works approval holder's comments on draft amendment

Condition	Summary of works approval holder's comment	Department's response
General	Works approval holder requested that all units be corrected to µg/m ³	Typographical error has been corrected.
Table 3	Works approval holder requested that the averaging period for dust monitoring be changed to an hourly average.	Hourly averaging is considered sufficient to identify and address dust events within a timely manner, and the averaging period has been changed in accordance with the request.
Table 4	Works approval holder requested that management action response time be increased to 60 minutes to allow time for onsite investigation and completion of truck loading/unloading	The delegated officer considers 60 minutes to be sufficient to identify and address dust emissions within a reasonable time period
	Works approval holder requested that management action response be updated to "apply additional dust suppression to identified source, where possible" as it is not feasible to apply dust suppression to the entire blending plant, should that be identified as the source	The condition was altered such that the works approval holder is required to apply any available and suitable dust suppression to identified sources so that infrastructure which isn't able to have dust suppression applied is excluded from the requirement.
	Works approval holder requested that the management action requiring cessation of all activities to be only applicable in the event that dust suppression efforts are not successful	The delegated officer considers 120 minutes to be sufficient time for onsite investigation, identification of dust source, and application of dust suppression methods. As such the specified period for cessation of activities has been amended to 120 minutes to allow for 60 minutes of active dust suppression efforts before ceasing operations.
Condition 1	Works approval holder requested Stage 1 and Stage 2 infrastructure be combined for reporting purposes	The delegated officer considers this administrative change to be unnecessary with the potential for administrative errors therefore the stages will remain separate. Stage 1 and Stage 2 reporting requirements may be addressed simultaneously through the submission of a single Environmental Compliance Report(s) which contains the required information for both stages.
	Works approval holder requested the addition of a Stage 4 with amendments to Stage 1 UAN loading/unloading to allow the temporary use of a portable spill bund as construction of the loading/unloading hardstand area to meet permeability requirements is not complete but is proposed for completion prior to 30 September 2023. Details of the temporary bund proposed for use were provided.	The delegated officer has addressed this change through the risk assessment and has documented the decisions above.