Amendment Report

Application for Licence Amendment

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

Licence Number	L8680/2012/1
Licence Holder	Dyno Nobel Asia Pacific Pty Ltd
ACN	003 269 010
File Number	DER2016/002675-1
Premises	Dyno Nobel Port Hedland Emulsion Plant Lot 505 Great Northern Highway, Port Hedland Legal description – Lot 505 on Deposited Plan 70785
Date of Report	08 June 2022
Decision	Revised licence granted

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1. Decision summary

Licence L8680/2012/1 is held by Dyno Nobel Asia Pacific Pty Ltd (licence holder) for the Dyno Nobel Port Hedland Emulsion Plant (the premises) (Dyno Nobel)), located at Lot 505 Great Northern Highway, Port Hedland.

This Amendment Report documents the assessment of potential risks to the environment and public health from proposed changes to the emissions and discharges during construction and operation of the premises. As a result of this assessment, revised licence L8680/2012/1 has been granted.

The revised licence issued because of this amendment supersedes the existing licence previously granted in relation to the premises. The revised licence has been granted in a new format with existing conditions being transferred, but not reassessed, to the new format.

2. Scope of assessment

2.1 Regulatory framework

In completing the assessment documented in this Amendment Report, 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 5 December 2021, the licence holder submitted an application to the department to amend licence L8680/2012/1 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought.

- To install and operate new infrastructure including tanks, demountable building, pumps, inline mixer, pipework, concrete apron, electrical instrumentation, and fire protection equipment to blend fuels onsite.
- To change the purpose of two existing 110 kL double skinned storage tanks from bulk storage, to store blending emulsifier and oil.
- To update the licence with infrastructure installed and operated without approval through the licence amendment process, including fuel blending storage tank, 1,400 kW closed circuit cooling tower and 620 kW plate exchanger cooler for ammonium nitrate.
- To remove the redundant chiller and small exchanger (now replaced by the cooling tower and heat exchanger).

This amendment is limited only to changes to Category 75 activities from the existing licence. Dyno Nobel is an ammonium nitrate emulsion manufacturing facility, that currently imports a preblended fuel onsite. The premises is located 12 km southeast of the town of Port Hedland and commenced operations in 2012. The proposed existing repurposed and new infrastructure will allow for mixing of fuel onsite and remove the requirement to import the preblended fuel. The existing licence production capacity of the premises is 125,000 tonnes per year, and there will be no change to the annual production.

2.3 Overview of premises

2.3.1 Construction

The licence holder will install temporary self-bunded fuel phase storage tanks to enable the

plant to continue operating during construction. The licence holder has estimated that this will take up to 8 weeks. These tanks will be removed once the fuel blending infrastructure is operational.

2.3.2 Operational changes

The existing premises manufactures ammonium nitrate emulsion (ANE) as a semi continuous blending process. The two main raw ingredients are an oxidizer (ammonium nitrate) solution and a fuel/oil emulsifier blend. The licence holder proposes to modify the existing infrastructure and install an additional tank to allow fuel phases blending on site, rather than purchase from a third party. Three additional raw materials are proposed to be imported to site, an emulsifier and two base oils. The emulsifier component and one of the two oil components will be stored in bulk on site in two existing 110 kL tanks. The second oil component will be stored in bulk on site in a proposed 69 kL tank.

The finish fuel blends will be produced by concurrently pumping the three raw material components together with diesel fuel oil from existing storage tank on site, at low rates through an inline static mixer. Finished fuel blend shall be produced in a 'just-in-time' manner to accommodate ammonium nitrate emulsion manufacture, such that there will no longer be bulk storage of finished fuel blends.

The existing chiller and small exchanger were removed, and a cooling tower and heat exchanger were installed in February 2020 and are used to cool the ammonia nitrate emulsion product before sending it to storage. The ammonium nitrate emulsion is pumped through the 'hot' side of the heat exchanger. Water from the cooling tower is pumped to the 'cold' side of the heat exchanger. An estimated blow down from the cooling tower is 2.5 m^3 / day that is directed to the existing concrete lined drains leading to the oily water separator.

The oily separator consists of three oily water processing pits in sequence. The first pit collects the sediment which drops to the bottom of the pit and is removed periodically as required. The second pit allows the oil to float on top of the water and is periodically skimmed off and disposed. The third pit collects the water which is pumped through clean water soak beds via a filter. The discharge is via a release point at the oily water separator. At the discharge point the total petroleum hydrocarbon (TPC) is sampled annually and results area compare against the existing 15 mg/L licence limit on TPC discharge. In significant rainfall events the oily water separator system would overflow to the site drainage network and into the stormwater basin.

There are no proposed new emissions from the operations. The premises size does not change, and the existing assessed stormwater will be managed through the existing stormwater system and authorised discharge point. There are no changes to the diesel fired boiler stack or changes to the consumption of steam and therefore to air emissions (gaseous emissions of NOx, SOx and VOCs).

The licence holder has indicated that the operations occur 24 hours, seven days a week, rather than previously assessed operations during 6 am to 6 pm. Noise emissions will require risk assessment.

2.3.3 Infrastructure

The premises infrastructure, as it relates to category 75 activities, is detailed in Table 1 below and with reference to the premises layout in Schedule 1 of the licence.

Table 1: Premises infrastructure

Infrastructure - Prescribed Activity Category 25
The production capacity of the premises is approximately 125,000 tonnes/ year of chemical products.
Blending and Storage Plant

Infrastructure - Prescribed Activity Category 25	
Existing within current licence	Contained within the premises are: • 2x 110 kL ammonia nitrate emulsion storage tank • 60 kL diesel tank • 2x 5000 tonne ammonia nitrate storage sheds with internal cell bunding • 1x 105 kL self bunded fuel blend storage tank • 3x 200 kL fire water tanks • Truck weigh bridge • Loading and unloading facilities • Ammonia nitrate emulsifier blending plant with steam generator • Stormwater retention basin • Oily water treatment facility (consisting of 3 pits) • Chiller and exchanger (now redundant) • 30x 1 kL IBC storing 30 kL sodium thiocyanate • 6x 1 kL IBC storing sodium hydroxide • Bunded internal sump with a capacity of 1.08 m^3 for sodium thiocyanate Repurposed within the premises are: • 1x 110 kL emulsifier storage tank (currently fuel blend tank) • 1x 110 kL oil storage self-bunded tank (currently fuel blend tank) • 1x 65 kL fuel storage self-bunded tank (currently boiler diesel storage tank) Contained with ammonia nitrate storage sheds are: • Bulka bags for chemical storage
Existing and not been previously assessed.	Contained within the premises are: • 1x 110 kL chemical storage tank • 1x in-loading pump • Cooling water cooling tower • Heat exchanger
Proposed	Proposed within the premises are: • 69 kL oil storage tank • 4x blending pumps • In-line static mixer • 1x 1 kL in-process buffer tank • Pipework • Extension of the existing in-loading concrete apron • Contingency in-loading concrete apron

2.4 Consolidation of Licence

As part of this amendment package the department has consolidated the licence by incorporating changes made under the Amendment Notices as summarised in Table 2.

Table 2: Licences consolidated in this amendment

Instrument	Issued	Summary of approval
L8680/2012/1	20/12/2012	Licence granted

Instrument	Issued	Summary of approval
L8680/2012/1	29/04/2016	Notice of amendment to extend licence to 23/12/2029
L8680/2012/1	09/06/2022	Licence amendment application to allow mixing of fuel onsite and to operate a cooling tower and heat exchanger.

. The department has not undertaken any additional risk assessment of the premises related to the existing licence and previous notice of amendment. The full consolidation of licence conditions as they relate to this revised licence are detailed in Section 6.1.

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.

3.1 Source-pathways and receptors

3.1.1 Emissions and controls

The key emissions and associated actual or likely pathway during premises construction and operation which have been considered in this Amendment Report are detailed in Table 3 below. Table 3 also details the proposed control measures the licence holder has proposed to assist in controlling these emissions, where necessary.

Table 3: Licence holder controls

Emission	Sources	Potential pathways	Proposed controls
Construction			
Dust	Placement of tanks, quality control room and fuel blending equipment including vehicle movements (reversing beepers) Construction of concrete aprons bunding, electrical infrastructure and pipework's.	Air/windborne pathway	No controls
Noise		Air/windborne pathway	Operated between "day-time" hours (6am to 6 pm, Mon – Sun).
Leaks or spills from the temporary tanks used during construction	Holding and transfer of hydrocarbons and fuel blends in temporary tanks during construction	Overland runoff infiltrating soil and groundwater	Self-bunded fuel storage tanks for a period of 8 weeks.
Operation			
Air emissions	Emissions from boiler and chemical tanks	Air/windborne pathway	Tank breathers installed to safely dissipate air emissions from stored chemicals. Emission monitoring will be undertaken on commissioning to ensure the facility is operating within design air quality limits as per existing licence.
Dust	Blending, unloading, loading and storage of material (chemicals and fuels) including vehicle movements.	Air/windborne pathway	Solid ammonium nitrate stored in bulka bags within shed. All solids are immediately swept up and recycled through the process or disposed to licenced waste contractor Chemicals are stored in areas with concrete surfaces with permanent or temporary bunding Hard surfaces are swept clean and not hosed. Speed limit of 20 km/hr applies to access roads to minimise dust generation. Visual monitoring of dust and chemical emissions onsite. Any air quality complaint will be recorded and

Emission	Sources	Potential pathways	Proposed controls
			investigated.
Noise		Air/windborne pathway	Location of the premises in industrial area. Vehicles properly serviced and fitted with appropriate mufflers. Combustion engine plant (generators, compressors, and air driven equipment) are checked to ensure exhaust silencers produce minimal noise. All noise complaints to be recorded and investigated.
Spills and leaks from chemical and fuel blending, storage tanks and cooling tower.		Overland runoff infiltrating soil and groundwater	Ammonium nitrate emulsion stored in above-ground tanks Sodium thiocyanate stored in outdoor bunded area with an internal draining sump (capacity 1.08m^3). Urea stored in bulka bags in outdoor area Diesel tank self-bunded Fuel blend tanks self-bunded Citric acid stored in dangerous goods storage container. Ammonium nitrate transferred to auger hoppers over concrete pad and spills clean up after process Ammonium nitrate emulsion transfer to trucks over concrete pad and drip tray used when disconnecting hoses. Diesel and fuel blend tanks have high fill alarms. Fuel transfer areas are sealed and drain to oil water separator. Fuel bowser fitted with auto shut off. Chemicals are stored in areas with concrete surfaces and with permanent or temporary bunding All liquid spillages are immediately cleaned up with dry absorbent materials. Drip trays used when servicing any equipment that could release hydrocarbons. Spill kits are available where chemicals are stored or transferred. Flammable and combustible liquids are stored in accordance with AS 1940:2017 (the storage and handling of flammable and combustible liquids) and are within self bunding tanks. Emulsions are stored in accordance with Code of Practice: Storage and Handling of UN3375

Emission	Sources	Potential pathways	Proposed controls
			(2018). Hoses and pumps are used to transfer emulsion and liquid chemical in loading and unloading. Chemical storage areas are regularly checked for leakages after each rainfall event. Visual inspections of soil for discoloration, odour and evidence of spills. Ensure that the water quality of any wastewater discharge on the premises contains a total petroleum hydrocarbon concentration of less than 15 mg/L. This is sampled annually. Stormwater retention basin overflow is tested for total nitrogen every week whilst discharging. A trigger of 10 mg/L will lead to an investigation to prevent stormwater contamination. Treated water from oily water separator is to be tested when operations commence to ensure it meets total petroleum hydrocarbon (TPH),<15 mg/L. Waste oil to be collected and stored in a bunded tank and removed from site for recycling. All loading and unloading of road tankers occur on concrete spill capture aprons that drain to oily water separator. Stormwater basin is maintained to capacity 3,215m^3.

3.1.2 Receptors

In accordance with the *Guideline: Risk assessments* (DWER 2020), the delegated officer has excluded employees, visitors, and contractors of the licence holders from its assessment. Protection of these parties often involves different exposure risks and prevention strategies and is provided for under other state legislation.

Table 4 below provides a summary of potential human and environmental receptors that may be impacted because of activities upon or emission and discharges from the prescribed premises *(Guideline: Environmental siting* (DWER 2020)).

Table 4: Sensitive human and environmental receptors and distance from prescribed activity

Human receptors	Distance from prescribed activity
South Hedland residential area	4 km southwest of the premises boundary
Go-cart / BMX track – recreation facility	150 m south of the premises boundary.
Rural residential	2 km southeast of the premises boundary
Workers camp facility	1 km west of the premises boundary

Industrial area	40 m west of the premises boundary
Wedgefield Industrial area	5.5 km west of the premises boundary
Environmental receptors	**Distance from prescribed activity**
Vegetated crown land	330 m north and 800 m west of the premises.
Unnamed waterway discharging into salt pan operation and Indian Ocean	400 m east of the premises boundary
Underlying groundwater (non-potable purposes)	Licensed bore (under *Rights to Water and Irrigation Act 1914* (RIWI)) user 300 meters southwest of the premises boundary. Water is used for dust suppression. Groundwater is estimated by licence holder to be 3.66 metres below ground level (mbgl).

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for those emission sources which are proposed to change and considers potential source-pathway and receptor linkages as identified in Section 3.1. Where linkages are in-complete they have not been considered further in the risk assessment.

Where the licence holder has proposed mitigation measures/controls (as detailed in Section 3.1), these have been considered when determining the final risk rating. Where the delegated officer considers the licence holder's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the licence as regulatory controls.

Additional regulatory controls may be imposed where the licence holder's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 5.

The revised licence L8680/2012/1 that accompanies this Amendment Report authorises emissions associated with the operation of the premises i.e. chemical blending and mixing activities.

The conditions in the revised licence have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

Table 5. Risk assessment of potential emissions and discharges from the premises during construction, and operation

Risk Event					Risk rating[1] C = consequence L = likelihood	Licence holder's controls sufficient?	Conditions[2] of licence]	Justification for additional regulatory controls
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Licence holder's controls**				
Construction								
Placement of tanks, quality control room and fuel blending equipment including vehicle movements (reversing beepers) Construction of concrete aprons bunding, electrical infrastructure and pipework's. Holding and transfer of hydrocarbons and fuel blends in temporary tanks during construction.	Dust	Air/windborne pathway causing impacts to amenity	Worker's camp 1 km west Rural residences 2 km southeast Industrial business 40 m west Recreation facility 150 m south of the premises boundary.	No controls Refer to Section 3.1	C – **Slight**: Minimal onsite impact. L – **Unlikely**: the risk event will probably not occur in most circumstances. **Low Risk** Acceptable, generally not subject to regulatory controls.	Y	No Conditions	The delegated officer considers that the separation distance from the proposed location of the tanks, pumps, pipeline infrastructure and concreting to the closest residential receptor is sufficiently large for there to be no adverse impact from noise or dust emissions from the installation of the infrastructure. Additionally, installation is expected to be of short duration. The Environmental Protection (Noise) Regulations 1997 apply to noise emissions.
	Noise			Construction in daytime hours. Refer to Section 5.1	C – **Slight**: Minimal onsite impact. L – **Unlikely**: the risk event will probably not occur in most circumstances. **Low Risk** Acceptable, generally not subject to regulatory controls.	Y	No conditions	
	Leaks or spills from the use of temporary tanks during construction	Overland runoff infiltrating soil and groundwater	Groundwater table 3.66 mbgl, Licensed bore users 300 m southeast of premises boundary, small seasonal tributary 400 m east of premises.	Self-bunded fuel storage tanks used for 8 weeks only. Refer to Section 3.1	C – **Slight**: Minimal onsite impact. L – **Unlikely**: the risk event will probably not occur in most circumstances. **Low Risk** Acceptable, generally not subject to regulatory controls.	Y	No Condition	The delegated officer considers that the separation distance to groundwater, the temporary period of storage (8 weeks), and the self bunding of the tanks to be sufficient for there to be no adverse impact to soil and groundwater from the temporary holding of fuel during construction.
Operation (including commissioning operations)								
Emissions from boiler and chemical	Air emissions	Air/windborne pathway causing impacts to health and amenity	Worker's camp 1 km west Rural residences 2 km southeast Industrial business 40 m west Outdoor recreation facility 150 m south of the premises boundary.	Emissions monitoring will be undertaken in commissioning (early operation) to ensure the facility is operating within the existing licence air quality limits. All new storage tanks will have tank breathers installed to safely dissipate air emissions as per AS1940.2017. Refer to Section 3.1	C – **Minor**: low level on-site impacts. L – **Unlikely**: Not likely to occur in most circumstances. **Medium Risk** Acceptable, generally subject to regulatory controls.	Y	Condition 1 Condition 4 Condition 6	The proximity of the sensitive receptors to the chemical blending facility underlines an inherent risk of emissions from the boiler and chemical vapours from chemical storage. However, the delegated officer identified that air emissions are not expected to change from the existing air emissions during operation of the premises The delegated officer considered the licence holders proposed validation monitoring of air emissions during initial operations, the nearest residential receptors, existing licence conditions and considered the risk of air emissions causing health and amenity issues to be medium. The delegated officer considered that the licence holders' infrastructure and monitoring controls were acceptable to manage the risk to receptors. The department will condition the following to ensure that an acceptable level of risk is maintained during operation: • New storage tanks are fitted with tank breathers to dissipate air emissions safely. • Monitoring of air emissions is undertaken within the first 6 months of operation.
Blending, unloading, loading and storage	Dust	Air/windborne pathway		Solid chemicals are stored in areas with concrete surfaces and undercover.	C – **Minor**: low level on-site impacts L –	Y	Condition 3	The proximity of sensitive receptors to the chemical blending facility underlines an inherent risk of operational activities from chemical blending, loading, unloading and

Risk Event					Risk rating[1] C = consequence L = likelihood	Licence holder's controls sufficient?	Conditions[2] of licence]	Justification for additional regulatory controls
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Licence holder's controls**				
of material (chemicals and fuels) including vehicle movements.		causing impacts to amenity		Solid spills are cleaned up immediately. Visual monitoring of dust and chemical emissions onsite. Any air quality complaint will be recorded and investigated Refer to Section 3.1	**Possible**: Could occur at some time. **Medium Risk** Acceptable, generally subject to regulatory controls.		Condition 10	vehicle movements generating dust and being blown towards nearby industrial, recreational, and residential receptors impacting on amenity. The delegated officer considered the licence holders chemical storage, solid spill management, visual dust monitoring of chemical emissions, air quality complaint recording and investigation, and considered the risk of air emissions causing amenity issues to be medium. The delegated officer considered that the licence holders' infrastructure and monitoring controls were acceptable to minimise dust emissions on sensitive receptors. The department will condition the following licence holders' controls to ensure that an acceptable level of risk is maintained during operation: • Solid chemicals are stored in areas with concrete surfaces. • All solids are immediately swept up and recycled or disposed. • Complaint register, that records and investigates air quality complaints. The delegated officer is satisfied that these controls will reduce dust on the premises to ensure an acceptable level of risk is maintained during operations to minimise impact of the chemical blending facility on close sensitive receptors.
	Noise			Vehicles properly serviced and fitted with appropriate mufflers. Combustion engine plant (generators, compressors, and air driven equipment) are checked to ensure exhaust silencers produce minimal noise. All noise complaints to be recorded and investigated. Refer to Section 3.1	C – **Minor:** low level on-site impacts. L – **Unlikely**: Not likely to occur in most circumstances. **Medium Risk** Acceptable, generally subject to regulatory controls.	Y	Condition 3 Condition 10	The proximity of sensitive receptors to the chemical blending facility that operates 24 hours a day, seven days a week, underlines an inherent risk of operational activities from chemical blending, loading, unloading and vehicle movements generating noise and disturbing nearby industrial, recreational, and residential receptors impacting on amenity. The delegated officer considered the licence holders hours of operation, complains registry, vehicle and combustion engine muffler/silencers, and the *EPA Guidance Statement 3: Separation Distances between Industrial and Sensitive Land Uses* (EPA 2005). The guidance statement indicates that buffer distances to sensitive receptors for chemical blending facility requires a 500-metre buffer. The worker's camp is 1 km west of the premises. The delegated officer considered the risk of noise emissions causing amenity issues to be medium. The delegated officer considered that the licence holders' infrastructure and monitoring controls were acceptable, and the buffer was appropriate to minimise noise emissions on sensitive residential receptors. The department will condition the following licence holders' controls to ensure that an acceptable level of risk is maintained during operation: • All vehicles are fitted with appropriate mufflers. • Combustion engine plant fitted with silencers. • All noise complaints recorded and investigated. The delegated officer is satisfied that these controls will reduce noise emission from the premises to ensure an acceptable level of risk is maintained during operations to minimise impact of the chemical blending facility on close sensitive receptors. The Environmental Protection (Noise) Regulations 1997 apply to noise emissions.
	Spills and leaks from chemical and fuel blending, storage tanks and cooling tower.	Overland runoff potentially contaminating soil groundwater and impacting surface water quality	Groundwater table 3.66 mbgl, Licensed bore users 300 m southeast of premises boundary, small seasonal tributary 400 m east of premises.	Diesel and fuel tanks all self-bunded with high fill alarms. Fuel transfer areas on sealed concrete and drain to water oil separator. Drip trays used when disconnection of hoses for loading and unloading liquids. All liquid spills are immediately cleaned up with dry absorbent material and solids spill swept up. Flammable and combustible liquids stored according to AS1940 and AS4326.	C – Minor: low level on-site impacts. L – Unlikely: Not likely to occur in most circumstances. Medium Risk Acceptable, generally subject to regulatory controls.	Y	Condition 3 Condition 4 Condition 5 Condition 7	The proximity of sensitive receptors to the chemical blending facility underlines an inherent risk of leaks and spills from operational activities including chemical blending, loading, and unloading. Causing contamination to soil and groundwater impacting on licenced bore users, and overland runoff impacting on seasonal waterways. The delegated officer considered the licence holders infrastructure and operational controls consisting of tank bunding, high level alarms, concrete hardstands, drainage to oily water separator, drip trays, liquid spills cleaned up, maintaining total nitrogen and total petroleum hydrocarbon sampling and limits for discharge, storage tanks to UN3375, AS1940 and AS4326, and considered the risk of spills and leaks from chemical and fuel blending causing environmental impacts to be medium. The delegated officer considered that the licence holders' infrastructure and operational controls were acceptable to minimise spills and leaks from chemical and fuel blending/storage on sensitive receptors. The department will condition the following

Risk Event					Risk rating[1] C = consequence L = likelihood	Licence holder's controls sufficient?	Conditions[2] of licence]	Justification for additional regulatory controls
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Licence holder's controls**				
				Emulsion are stored to Code of Practice: Storage and Handling of UN3375 Maintain total nitrogen stormwater testing and limits. Maintain total petroleum hydrocarbon with annual sampling and limits. Waste oil stored within bunded tank and removed for recycling. All loading and unloading of road tankers occur on concrete apron that drains to oily water separator. Refer to Section 3.1				licence holders' controls to ensure that an acceptable level of risk is maintained during operation: • All flammable and combustible liquids stored according to AS1940 and AS4326 • Emulsion to Code of Practice: Storage and Handling of UN3375 • Diesel and fuel tanks all self-bunded with high fill alarms • All fuel transfer areas occur on sealed concrete and drain to water oil separator. • Drip trays used when disconnection of hoses for loading and unloading liquids. • Monitoring discharge for total nitrogen and total petroleum hydrocarbons and assessed to existing licence limits. The delegated officer is satisfied that these controls will minimise spills and leaks from chemical and fuel blending/storage from the premises to ensure an acceptable level of risk is maintained during operations to minimise impact of the chemical blending facility on close sensitive receptors.

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

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

4. Consultation

Table 6 provides a summary of the consultation undertaken by the department.

Table 6: Consultation

Consultation method	Comments received	Department response
Licence holder was provided with draft amendment on 27/04/2022 and provided comments on drafts on the 20/05/2022.	Refer to Appendix 1	Refer to Appendix 1

5. Decision

The delegated officer risk assessed the licence amendment request to construction fuel and emulsion equipment for blending on the premises and the previously installed and operating cooling tower and heat exchanger. The delegated officer noted that with the additional equipment and emulsion blending operations there are no changes to the existing production capacity of the facility.

The delegated officer risk assessed the new storage tank, change in use for product storage within tanks, cooling tower, heat exchanger and associated concrete hardstands, pipes, and pumps, and considered that the overall risk profile of the premises increased from low to medium. To manage the risk, additional licence holder controls have been imposed on the amended licence consisting of concrete hardstands, bunded tanks, high level alarms, tanks breathers, fuel transfer operations, monitoring total nitrogen and total petroleum hydrocarbon, monitoring air emission (once off), muffler and silences on machinery, spill management and storage requirements for fuel and chemicals outside and within sheds.

In revising this licence, the CEO has also:

- updated the format and appearance of the licence;
- revised works approval conditions and removed redundant conditions and realigned condition numbers for numerical consistency;
- standard reporting conditions added for consistency and
- corrected clerical mistakes and unintentional errors.

The full consolidation of the existing licence conditions as they relate to this revised licence are detailed in Section 6.1.

6. Conclusion

Based on the assessment in this Amendment Report, the delegated officer has determined that a revised licence will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

6.1 Summary of amendments

Table 7 provides a summary of the new and updated licence conditions applied to this licence because of this amendment and will act as record of implemented changes. All changes have been incorporated into the revised licence as part of the amendment process.

Table 7: Summary of licence conditions in this amendment

Existing condition	Condition summary	Revised licence condition	Conversion and proposed amendment notes
N/A	Expiry Date: 23/12/2029	No changes	N/A
N/A	Prescribed Premises Category table	Prescribed Premises Category table	Revised to current licensing format.
N/A	Definitions	Interpretation section, Definitions and Table 8	Revised to current licensing format, removed redundant definitions and added new definitions.
1	Odour	N/A	Redundant condition. Adequately covered by s.49 of the EP Act 1986. Deleted from licence.
2	Dust	N/A	Redundant condition. Adequately covered by s.49 of the EP Act 1986 and proposed new conditions. Deleted from licence.
3, Table 1	Emission to air monitoring	Monitoring - Emissions and discharge monitoring to air condition 6 Table 5	Revised to current licensing format.
4	Sampling standards	Monitoring - Emissions and discharge monitoring to air, Condition 6 Table 5	Revised to current licensing format.
5	AER reporting of sampling	AER condition 14 Table 7	Revised to current licensing format.
6	NATA accreditation	Condition 8	Revised to current licensing format.
7	Prevention of contaminating stormwater	N/A	Redundant condition. Adequately covered by alternative existing conditions and proposed new conditions. Deleted from licence.
8	Total petroleum hydrocarbon limit	Emissions and discharges, condition 5 Table 4	Revised to current licensing format.
9	Record and maintain records for condition 8	Condition 9 and Condition 14	Revised to current licensing format.
10	Monitoring requirements for stormwater discharge	Condition 5 for limits and condition 7 for monitoring	Revised to current licensing format.
11	Review of monitoring results	Condition 14	Revised to current licensing format.
12	Water sampling collection and NATA accreditation	Condition 7 and condition 8	Revised to current licensing format.
13	Dangerous goods	N/A	Redundant condition. Adequately regulated by the Dangerous Goods Safety Act 2004. Deleted from licence.
14	Recovery and removal of spills	N/A	Redundant condition. Adequately covered by EP (Unauthorised

Existing condition	Condition summary	Revised licence condition	Conversion and proposed amendment notes
			Discharges) Regulations 2004. Deleted from licence.
15	AER	Condition 14	Revised to current licensing format
16	Annual Audit Compliance Report	Condition 11	Revised to current licensing format.
Attachment 1	Plan of premises	Schedule 1 Figure 1 Premises Map	Update map and included discharge points within map.
Attachment 2	Stormwater retention basin release point	Schedule 1 Figure 1 Premises Map	Revised map now located in Figure 1.
Attachment 3	Annual Audit Compliance Report Form	N/A	Redundant attachment. Deleted from Licence Forms accessed at www.dwer.wa.gov.au
New condition	N/A	Condition 1 Works-Infrastructure and equipment Construction and installation.	Condition for construction and installation of new infrastructure.
New condition	N/A	Condition 2 Infrastructure and equipment construction	Condition for reporting and auditing of new infrastructure.
New condition	N/A	Condition 3 Infrastructure and equipment operational	Condition for the operational requirements for pollution control infrastructure for revised licence format
New condition	N/A	Condition 7 Table 6 Monitoring	Requirement to sample TPH to demonstrate compliance to meet limits.
New condition	N/A	Condition 10, Complaints	Standard condition for current licencing format.
New condition	N/A	Condition 12 Auditable books	Standard condition for current licencing format.
New condition	N/A	Condition 13 Books	Standard condition for current licencing format.
New condition	N/A	Condition 14 AER	New requirement for reporting air emission monitoring.
New Schedule	N/A	Schedule 1 Figure 2, Site layout map	New map showing infrastructure 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. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.
4. Environmental Protection Authority (EPA) 2005*, Guidance for the Assessment of Environmental Factors- Separation Distances between Industrial and Sensitive Land Uses, No. 3,* Perth, WA.
5. Dyno Nobel Pty Ltd (2021), *Application for a Licence Amendment and Supporting Documents,* Melbourne, Victoria*.*

Appendix 1: Summary of licence holder's comments on risk assessment and draft conditions

Condition	Summary of licence holder's comment	Department's response
Comments on Draft Licence Amendment Report		
No comments.		
Comments on Draft Licence Amendment		
Condition 1 Table 1, Design and construction, Item1.	Advice from engineers indicate that breathers on combustible storage tanks are not typical and should be changed to open atmospheric vents. The tanks are self-bunded on concrete pedestals not on a hardstand. The self bunding tanks meet AS1940 and adequately address environmental risks. Hardstand requirement should be removed.	DWER has reviewed the licence holder's comments for infrastructure works and will update the infrastructure.
Condition 3 Table 2 Infrastructure and equipment operations, Area B items b and c and Area C	Area B Citric acid is stored within a self-bunded dangerous goods container and not on a concrete hardstand. Remove requirement for a concrete hardstand and the self bunding container meets AS1940 and address environmental risks. The existing tanks on site are self-bunded on concrete pedestals not on a hardstand. The self bunding tanks meet AS1940 and adequately address environmental risks. Hardstand requirement should be removed. Area C Licence holder confirms that the stormwater basin is not lined.	DWER has reviewed the licence holder's comments for existing infrastructure and operations and will update the infrastructure and equipment requirements. DWER notes this information.
Condition 6 Table 5 Emissions and discharge monitoring to air.	Please confirm if the testing is to be repeated when the amendment licence is issued.	DWER can confirm that air emission monitoring is required on the issue of this Licence Amendment. This was a licence holder control that was condition. See Table 5 of Licence Amendment Report.