Licence

Licence number	L4432/1989/14
Licence holder **ACN (if applicable)**	Pilbara Ports Authority (ABN 94 987 448 870)
Registered business address	The Esplanade PORT HEDLAND WA 6721
DWER file number	DER2014/0000636-3~4
Duration	17/10/2013 to 16/10/2033
Date of amendment	23/09/2022
Premises details	Eastern Operations The Esplanade PORT HEDLAND Portion of Lot 6098 on Plan 35618

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	**Assessed production capacity**
Category 58 Bulk material loading or unloading	2,560,000 tonnes per year (total export volume)
Category 58A Bulk material loading or unloading (salt).	2,000,000 tonnes per year (export volume of spodumene concentrate)

This licence is granted to the licence holder, subject to the attached conditions, on 23 September 2022, by: Clarrie Green Digitally signed by Clarrie Green Date: 2022.09.23 16:31:22 +08'00'

Clarrie Green
MANAGER, PROCESS INDUSTRIES
REGULATORY SERVICES
an officer delegated under section 20 of the Environmental Protection Act 1986 (WA)

Licence history

Date	Reference number	Summary of changes
18/08/2016	L4432/1989/14	DWER published a full risk-based review and assessment of all Category 58 activities at the Premises.
07/03/2018	L4432/1989/14	Licence Holder initiated amendment to authorise prescribed premises boundary changes and to enable an increase in storage space for rotainers.
12/04/2018	L4432/1989/14	Licence Holder initiated amendment to authorise throughput increase of total export volume and spodumene concentrate export volume.
30/05/2019	L4432/1989/14	DWER initiated amendment for the addition of Trial conditions for the handlings of new bulk granular materials.
23/09/2022	L4432/1989/14	Licence Holder initiated amendment to authorise throughput increase of total export volume and spodumene concentrate export volume and handling through fixed shiploading infrastructure.

Interpretation

In this licence:

(a) the words 'including', 'includes' and 'include' in conditions mean "including but not limited to", and similar, as appropriate;

(b) where any word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;

(c) where tables are used in a condition, each row in a table constitutes a separate condition;

(d) any reference to an Australian or other standard, guideline, or code of practice in this licence:

  (i) if dated, refers to that particular version; and

  (ii) if not dated, refers to the latest version and therefore may be subject to change over time;

(e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act; and

(f) unless specified otherwise, all definitions are in accordance with the EP Act.

NOTE: This licence requires specific conditions to be met but does not provide any implied authorisation for other emissions, discharges, or activities not specified in this licence.

Licence Conditions

Infrastructure and Equipment

1. The Licence Holder must maintain and operate the infrastructure and equipment specified in column 1 of Table 7 in Schedule 3, in accordance with the requirements specified in column 2 and 3 of Table 7 in Schedule 3.

2. The Licence Holder must ensure that the infrastructure and equipment in Schedule 3 are maintained in good working order.

Trial Conditions

Notification of a Trial

3. The Licence Holder must notify the CEO of a Trial and such notification (which the CEO will make publicly available) must:

(a) be in writing;

(b) be made 30 calendar days or more prior to that Trial commencing;

(c) include details of the extent of the Trial, including:

(i) the duration and frequency of any loading or unloading activities;

(ii) method for materials storage and handling including any changes to infrastructure and equipment used at the Premises; and

(iii) all controls to be implemented for the management of emissions and discharges;

(d) include details of the nature of bulk granular material, including:

(i) all public health and ecosystem hazards;

(ii) the chemical and geochemical composition;

(iii) particle size distribution of bulk granular material including inhalable and respirable fractions;

(iv) the representative DEM level, where determination of DEM is possible for that material; and

(v) leachate testing conducted on materials that may present a toxicological or ecotoxicological risk;

(e) include an analysis of risks to the environment, public health and amenity from potential discharges, dust, odour and noise emissions associated with the Trial;

(f) include a monitoring plan that includes, but is not limited to:

(i) the indicator parameter/s to be monitored;

(ii) monitoring locations, equipment used and proximity to sensitive receptors;

(iii) monitoring frequencies;

(iv) monitoring averaging periods; and

(v) any meteorological monitoring to be undertaken; and

(g) only when a CEO notification to cease a Trial has been issued in accordance with Condition 4, and in the event that the Licence Holder is submitting a Trial amendment notification, then the Licence Holder must:

(i) resubmit the requirements of Conditions 3(a) – (f);

(ii) address the issues that resulted in the notification to cease the Trial on the initial (or any subsequent) Trial for the same product; and

(iii) include a new Trial end date calculated 12 months from the commencement of the first shipment of the ceased Trial, not including time elapsed between the CEO notification to cease that Trial and the Trial amendment notification.

CEO notification to cease a Trial (prior to commencement or during)

4. The Licence Holder must cease a Trial in the manner and at the time, when:

(a) the CEO forms the view, acting reasonably:

(i) that following an assessment of the information provided as part of Condition 3, it is determined that the proposed Trial will result in unacceptable impact on public health, amenity or the environment; or

(ii) that following a review of any data received in accordance with Condition 7, it is determined that the Trial is having an unacceptable impact on public health, amenity or the environment; or

(iii) that the Trial being undertaken is different in any manner from that described in the notification provided by the Licence Holder through Condition 3, when that difference is resulting in, or is likely to result in, an unacceptable impact on public health, amenity or the environment; and

(b) the CEO has provided written notice to cease the Trial (which the CEO will make publicly available) to the Licence Holder specifying the grounds for the CEO's views.

Nothing in this Condition prevents the Licence Holder subsequently submitting an amendment in relation to the Trial. Any Trial amendment proposed by the Licence Holder must follow the notification requirements as per Condition 3(g).

Trial restrictions

5. The Trial must cease:

(a) 12 months from the date of the commencement of the first shipment; or

(b) immediately after the shipment where the cumulative throughput amounts exceed 1,000,000 tonnes, or

(c) immediately upon receipt of a CEO notification to cease a Trial in accordance with Condition 4,

whichever occurs first.

A Trial may only recommence upon notification of a Trial amendment, in accordance with Condition 3(g).

6. The Licence Holder must not Trial the bulk handling of materials that:

(a) contain asbestos in concentrations equal to or greater than 0.01% w/w for non-friable asbestos or 0.01% w/w for fibrous asbestos;

(b) contain respirable silica equal to or greater than 1% w/w;

(c) exceed the radiation transport limit of 10 Bq/g for Uranium-238 and Thorium-232 combined;

(d) exceed Rubidium-87 concentrations of 30 Bq/g; or

(e) are a waste or waste-derived by product (except Clean fill).

Reporting

7. The Licence Holder must submit a report to the CEO which includes the results of monitoring required by condition 3(f), and includes:

(a) the 15-minute averaged, raw data in tabulated format;
(b) a graphical representation of the monitoring results for each Trial shipment with a comparison against 15-minute averaged meteorological (wind speed and direction) monitoring data;
(c) Moisture Content data averaged over each Trial shipment and showing a comparison against the representative DEM level, where the DEM level can be determined; and
(d) a summary of the effectiveness of the controls implemented for the management of emissions and discharges,

within 30 days of the completion of the first Trial shipment; at four, seven and 10 months from the first Trial shipment; and a final closeout report within 30 days following the cessation of the Trial.

Ongoing shipments

8. In the event that approval for the ongoing shipments of the Trial material is sought, the Licence Holder must provide an application for Licence amendment, along with a report fulfilling the requirements of Condition 7, at least three months prior to the completion of the Trial period.

Product Specifications and Monitoring

9. The Licence Holder must only load the bulk granular material detailed in Table 6 of Schedule 2 onto a vessel by an open materials handling system at the Premises unless doing so in accordance with the requirements of Conditions 3 to 8.

Copper concentrate acceptance and handling

10. The Licence Holder must take all practicable measures to ensure that all bulk copper concentrate received at the Premises contains a Moisture Content at or above its corresponding DEM level.

11. In order to verify Condition 10, The Licence Holder must:

(a) maintain accurate records for the DEM levels for all bulk copper concentrate received from each Premises User determined by a Reputable Laboratory and representative of the bulk copper concentrate accepted at the Premises at all times; and

(b) on a weekly basis obtain and maintain accurate records from each Premises User in relation to the representative Moisture Content for all bulk concentrate received at the Premises.

12. The Licence Holder must upon immediately becoming aware, and no later than 7 days, of receiving bulk copper concentrate that has a Moisture Content below the corresponding DEM level for that material:

(a) cease accepting that bulk granular material from that Premises User for the following shipment until it can be verified that the next lot of that bulk granular material from that Premises User has a Moisture Content at or above the corresponding DEM level; and

(b) implement mitigation measures to ensure no visible dust is generated from the loading of that bulk granular material.

Spodumene concentrate acceptance and handling

13. The Licence Holder must only accept bulk spodumene concentrate if it contains a Moisture Content at or above its corresponding Distinct Bulk Spodumene Concentrate DEM level.

14. In order to verify Condition 13, The Licence Holder must:

(a) maintain accurate records for the DEM levels for all bulk Distinct Bulk Spodumene Concentrate received from each Premises User determined by a Reputable Laboratory and representative of the bulk spodumene concentrate accepted at the Premises at all times; and

(b) within 10 calendar days of the completion of each shipment, obtain and maintain accurate records from each Premises User in relation to the representative Moisture Content for all bulk spodumene concentrate received at the Premises.

15. The Licence Holder must within 30 days of the first shipment from the Premises of each Distinct Bulk Spodumene Concentrate, submit to the CEO a report including:

(a) the particle size distribution;

(b) the proportion of muscovite; and

(c) the proportion of respirable silica quartz,

from a representative sample of the bulk spodumene concentrate using a clearly documented sampling and analysis methodology and laboratory that holds a NATA accreditation (where available) for the analysis undertaken.

16. The Licence Holder must update on a subsequent annual basis, the information required by Condition 15 for each Distinct Bulk Spodumene Concentrate handled at the Premises during that Annual Period.

17. In addition to the requirements specified and report required by Condition 15 and 16, the Licence Holder must include a review against any previous reports or submissions made to the CEO on the physical or mineralogical properties of each Distinct Bulk Spodumene Concentrate and an assessment on whether any changes result in an increase in risk to public health, amenity or the environment.

Point Source Dust Monitoring

18. The License Holder must undertake point source emission monitoring:

(a) at the locations specified in Column 1 and described in Schedule 3,

(b) for the parameters specified in Column 2,

(c) calculated as an average over the period specified in Column 3,

(d) at the frequency specified in Column 4,

(e) in accordance with the method specified in Column 5,

of Table 1.

Table 1: Point Source Dust Emissions Monitoring

Column 1	Column 2	Column 3	Column 4	Column 5
Discharge Point	**Parameter**	**Averaging Period**	**Frequency**	**Method**
Dust baghouse stack emission points described in Schedule 3.	Volumetric flow rate (m^3/s)	1 minute averages over 30 minutes	Quarterly, when in operation, for a 12 months period, concluding by 31 December 2019	USEPA Method 2
	Particulates (mg/m^3 and g/s)	1 minute averages over 30 minutes	Quarterly, when in operation, for a 12 months period, concluding by 31 December 2019	USEPA Method 5 or USEPA Method 17

Dust Monitoring and Reportable Events

19. The Licence Holder must undertake dust monitoring:

(a) at the locations specified in column 1;

(b) for the parameters specified in column 2;

(c) at the averaging periods specified in column 3;

(d) at the frequency specified in column 5; and

(e) in accordance with the methods specified in column 6,

of Table 2.

Table 2: Dust Emissions Monitoring Table

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Location	**Parameter**	**Averaging Period**	**Reportable Event**	**Frequency**	**Method**
M10 and M11, shown through Schedule 1, Figure 2.	Cu as PM_{10} ($\mu g/m^3$)	24 hour average	>1 $\mu g/m^3$	One 24 hour sample every sixth day, plus at least one 24 hour sample during each ship loading event	AS3580.1.1 AS3580.9.6
	Li as PM_{10} ($\mu g/m^3$)	24 hour average	N/A		
	Particles as PM_{10} ($\mu g/m^3$)	24 hour average	>145 $\mu g/m^3$		

20. The Licence Holder must obtain and present data specified in Table 3:

(a) for the location specified in column 1;

(b) at the parameter specified in column 2;

(c) for the averaging period specified in column 5;

(d) at the frequency specified in column 6; and

(e) in accordance with the method specified in column 7,

of Table 3.

Table 3: Ambient Air Quality Monitoring at Taplin Street

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
Monitoring Station Name[1]	**Parameter**	**Reportable Event Criteria**	**Interim guideline**	**Averaging Period**	**Frequency**	**Method**
Taplin Street^	Particles as PM_{10} ($\mu g/m^3$)	70 $\mu g/m^3$	70 $\mu g/m^3$	24 hour average	Continuous	AS3580.9 .11
		N/A	30 $\mu g/m^3$	Annual average		

Note 1: Taplin Street: Provision of this data to Pilbara Ports Authority is via the Port Hedland Industries Council. Pilbara Ports Authority is a member of Port Hedland Industries Council.

21. The Licence Holder must provide a report to the CEO for Reportable Events (as specified in column 4 of Table 2 and column 3 of Table 3) which have occurred, containing the information, and for the periods, specified in Schedule 4.

Record-keeping

22. The Licence Holder must maintain accurate and auditable Books including the following records, information, reports and data required by this Licence:

(a) the calculation of fees payable in respect of this Licence;

(b) the maintenance of infrastructure required to ensure that it is kept in good working order in accordance with Conditions 1 and 2 of this Licence;

(c) any product specification monitoring data obtained in accordance with Conditions 14, 15 and 16;

(d) any monitoring data undertaken in accordance with Conditions 18, 19 and 20 of this Licence;

(e) Reportable Events reported in accordance with Condition 21 and Schedule 4 of this Licence.

(f) complaints received under Condition 24 of this Licence; and

23. In addition, the Books must:

(a) be legible;

(b) if amended, be amended in such a way that the original and subsequent amendments remain legible and are capable of retrieval;

(c) be retained for at least 7 years from the date the Books were made; and

(d) be available to be produced to an Inspector or the CEO.

24. The Licence Holder must record the number and details of any complaints received by the Licence Holder relating Emissions and Discharges from the Premises, and

any action taken by the Licence Holder in response to the complaint. Details of complaints must include:

(a) an accurate record of the concerns or issues raised, for example a copy of any written complaint or a written note of any verbal complaints made;

(b) the name and contact details of the complainant, if provided by the complainant;

(c) the date of the complaint; and

(d) the details and dates of the actions taken by the Licence Holder in response to the complaints.

25. The Licence Holder must submit to the CEO no later than 30 September each year:

(a) a Compliance Report indicating the extent to which the Licence Holder has complied with the Conditions in this Licence for the preceding Annual Period;

(b) a monitoring report providing the results of monitoring and any supporting records, information, reports and data as required by:

(i) Condition 11 for moisture content and DEM level of all bulk copper concentrate received at the Premises;

(ii) Condition 12 for moisture content of bulk copper concentrate that was below the corresponding DEM level and the corrective measures applied;

(iii) Condition 14 for the moisture content and Distinct Bulk Spodumene Concentrate DEM level of all spodumene concentrate received at the Premises

(iv) Condition 15, 16 and 17 for the particle size distribution, muscovite and respirable silica quartz content for each Distinct Bulk Spodumene Concentrate and any changes to public health risk, amenity or the environment;

(v) Condition 18 for point source emission monitoring undertaken over a 12 month period, concluding 31 December 2019;

(vi) Condition 19 for ambient air quality monitoring at M10 and M11, depicted in Schedule 1, Figure 2;

(vii) Condition 20 for ambient air quality monitoring at Taplin Street including a comparison of monitoring results against the interim guideline as specified in Column 4 of Table 3.

26. The Licence Holder must comply with a CEO Request, within 7 days from the date of the CEO Request or such other period specified in the CEO Request.

Definitions

In this licence, the terms in Table 4 have the meanings defined.

Table 4: Definitions

Term	Definition
ACN	Australian Company Number
Annual Audit Compliance Report (AACR)	means a report submitted in a format approved by the CEO (relevant guidelines and templates may be available on the Department's website).
annual period	means a 12 month period commencing 1 July in any year to 30 June in the subsequent year.
AS3580.1.1	means the Australian Standard AS3580.1.1 Methods for sampling and analysis of ambient air- Guide to siting air monitoring equipment.
AS3580.9.11	means the Australian Standard AS3580.9.11 Methods for sampling and analysis of ambient air- Determination of suspended particulate matter – PM10 beta attenuation monitors.
AS3580.9.6	means the Australian Standard AS3580.9.6 Determination of suspended particulate matter PM10 high volume sampler with size selective inlet Gravimetric method.
books	has the same meaning given to that term under the EP Act.
CEO	means Chief Executive Officer of the Department. "submit to / notify the CEO" (or similar), means either: Director General Department administering the *Environmental Protection Act 1986* Locked Bag 10 Joondalup DC WA 6919 or: info@dwer.wa.gov.au
clean fill	as defined by the Landfill Waste Classification and Waste Definitions 1996 (as amended April 2018).
Condition	means a condition to which this Licence is subject under s 62 of the EP Act.
continuous	means a data recovery rate greater than 90% per month.
DEM	means the dust extinction moisture which is the moisture content expressed as a percentage of the product at which the Dust Number is 10 derived from the Australian Standard AS4156.6-2000: Coal preparation, Part 6: Determination of Dust/moisture Relationship for Coal.
Department	means the department established under section 35 of the *Public Sector Management Act 1994* (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
DES	means dust extraction system.
discharge	has the same meaning given to that term under the EP Act.

Term	Definition
Distinct Bulk Spodumene Concentrate	means any lump, fines or blended spodumene product with distinct physical and/or mineralogical characteristics that differ from another spodumene product.
emission	has the same meaning given to that term under the EP Act.
EP Act	*Environmental Protection Act 1986* (WA)
EP Regulations	Environmental Protection Regulations 1987 (WA)
licence	refers to this document, which evidences the grant of a licence by the CEO under section 57 of the EP Act, subject to the specified conditions contained within.
licence holder	refers to the occupier of the premises, being the person specified on the front of the licence as the person to whom this licence has been granted.
moisture content	means the ratio of the mass of water in a sample to the mass of solids in the sample, expressed as a percentage. In equation form: $$w = \frac{m_1 - m_2}{m_1} \times 100$$ Where: w = moisture content of sample; m_1 = initial mass, in grams, of the test portion; and m_2 = mass, in grams, of the test portion after drying.
premises	refers to the premises to which this licence applies, as specified at the front of this licence and as shown on the premises map (Figure 1) in Schedule 1 to this licence.
premises user	means the bulk granular material owner who uses the Eastern Operations Facility for the export of their material.
prescribed premises	has the same meaning given to that term under the EP Act.
reportable events	means an exceedance to criteria specified requiring certain actions to be undertaken by the Licence Holder including but not limited to reporting to the CEO.
reputable laboratory	means a laboratory that is accredited by the National Association of Testing Authorities, Australia (NATA).
trial	means a test period during which the Licence Holder loads or unloads a new bulk granular material, not specified in Table 6 Schedule 2 of this Licence, at the Premises, in accordance with Conditions 3 to 8 inclusive.
USEPA Method 2	means the United States Environmental Protection Agency's Method 2 – Determination of Stack Gas Velocity and Volumetric Flow Rate (Type S Pitot Tube).
USEPA Method 5	means the United States Environmental Protection Agency's Method 5 – Determination of Particulate Matter Emissions from Stationary Sources.

Term	Definition
USEPA Method 17	means the United States Environmental Protection Agency's Method 17 – Determination of Particulate Matter Emissions from Stationary Sources.
waste	has the same meaning given to that term under the EP Act.

END OF CONDITIONS

Schedule 1

Premises Map

The Premises is shown in the plan below (Figure 1). The blue line depicts the boundary to the Premises.

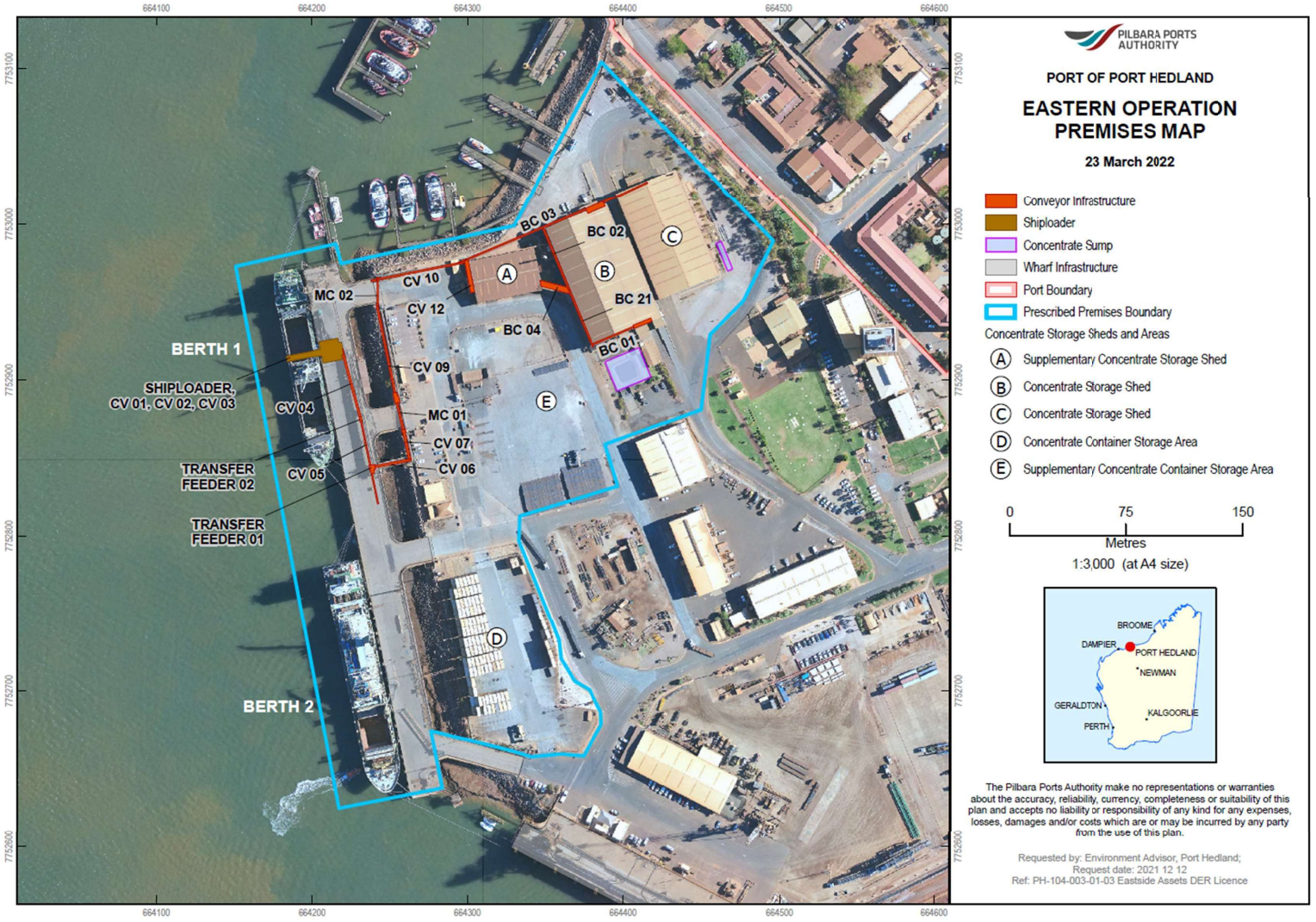

Figure 1: Map of the boundary of the prescribed premises

Figure 2: Dust and Stormwater Monitoring Locations

Schedule 2: General Description

At the time of assessment, the following activities and operations were considered in the determination of the risk and related conditions for the Premises.

The Licence Holder is carrying out activities at the Premises which fall within the meaning of Prescribed Premises under the EP Act. The Premises constitute Category 58 and 58A Premises on which bulk granular material is loaded onto or unloaded from vessels by an open materials loading system.

Infrastructure and Equipment

The infrastructure and equipment situated on the Premises are detailed in Table 5.

Table 5: Infrastructure and Equipment situated on the Premises

	Infrastructure	Plan reference
1.	Berth 1 and Berth 2	Premises Map: Berth 1 and Berth 2 respectively
2.	Concentrate container storage area	Premises Map: Concentrate container storage area (D)
3.	Supplementary Concentrate container storage area	Premises Map: Supplementary Concentrate container storage area (E)
4.	Concentrate storage shed	Premises Map: Concentrate storage shed (C)
5.	Concentrate storage shed	Premises Map: Concentrate storage shed (B)
6.	Supplementary Concentrate storage shed	Premises Map: Supplementary Concentrate storage shed (A)
7.	Outload conveyors and transfer chutes, including: Static conveyors – BC01, BC21, BC02, BC03, BC04, CV12, CV10, CV09, CV07, CV06, CV05, CV04 Mobile conveyors - MC01 and MC02	Premises Map: BC01, BC21, BC02, BC03, BC04, CV12, CV10, CV09, CV07, CV06, CV05, CV04, MC01, MC02
8.	Ship loader and conveyors and transfer chutes, including CV01, CV02 and CV03	Premises Plan: Shiploader, CV01, CV02 and CV03
9.	Rotating tipping frame	N/A – mobile equipment operated at Berth 1 and 2
10.	Concentrate sumps	Premises Plan: Concentrate Sump

Site Layout

The infrastructure and equipment are set out on the Premises in accordance with the site layout specified on the map in Schedule 1.

Bulk Materials Loaded

Bulk materials (listed below) arrive at the facility via road train. The material is delivered to one of two sheds where it is unloaded. Material is then reclaimed via a front end loader and placed via hopper onto a conveyor within each of the sheds. The conveyors and transfer chutes move material along the outload circuit to the ship-loader where it is loaded into a ships hold via telescopic chute for export.

Alternatively material is delivered to the Premises in containers (also known as rotainer boxes) via road train and stored in a designated container storage area until ready for export. Containers are then transported to the wharf using a MAFI truck or reachstacker and concentrate is directly loaded (via tipping) from containers into the vessel's hold using a crane and a Rotabox system.

Table 6: Commodity and approved volumes at the Premises

Commodity and amounts assessed	Throughputs assessed
Copper concentrate	560,000 tonnes per year (exported)
Spodumene concentrate	2,000,000 tonnes per year exported)
Total bulk granular material handled	2,560,000 tonnes per year

Schedule 3: Infrastructure and Equipment

Table 7: Infrastructure and equipment requirements

	Column 1	Column 2	Column 3	Column 4
	Site Infrastructure and equipment	**Description**	**Operation requirement**	**Infrastructure location**
	Controls for dust			
1.	Concentrate Storage Shed C	One fully enclosed (vented) shed with separate roller doors for truck entry and exit, a separate roller door for loader access and service and personnel access doors.	Shed doors are closed when: ○ truck is unloading concentrate; ○ loader is used for stockpiling activities; and ○ concentrate is loaded onto conveyor system via internal hopper.	Figure 1: Premises Map Concentrate Storage Shed C
		One air/dust extraction filter system for maintenance of negative air pressure during operation.	Air/dust extraction system is in use during all unloading, stockpiling and conveyor loading activities in shed. Air extraction system filter serviced every three months.	
		Ceiling mounted sprinkler network.	The suspended sprinkler systems in the sheds are used for dust suppression whenever visible dust is observed within the shed.	
2.	Concentrate Storage Shed B	Fully enclosed (vented) shed with separate roller doors for truck entry and exit, separate roller doors for loader access and service and personnel access doors.	Shed doors are closed when: ○ truck is unloading concentrate; ○ loader is used for stockpiling activities; and ○ concentrate is loaded onto conveyor system via internal hopper.	Figure 1: Premises Map Concentrate Storage Shed B

	Column 1	Column 2	Column 3	Column 4
	Site Infrastructure and equipment	**Description**	**Operation requirement**	**Infrastructure location**
		Dust bag house systems (one operational, one spare for redundancy).	The operational bag house system is in use for all unloading, stockpiling and conveyor loading activities in sheds. The operational bag house system is inspected quarterly and serviced when required.	
		Extracted air is filtered by bag house prior to discharge to the atmosphere.	Dust residue from the bag houses is emptied onto the conveyor system periodically when ship loading occurs.	
		Ceiling mounted sprinkler network.	The suspended sprinkler systems in the sheds are used for dust suppression whenever visible dust is observed within the shed.	
3.	Supplementary Concentrate Storage Shed A	Fully enclosed (vented) shed with roller doors for loader access and doors for personnel access.	Shed doors are closed when: ○ truck is unloading concentrate; ○ loader is used for stockpiling activities; and ○ concentrate is loaded onto conveyor system via internal hopper.	Figure 1: Premises Map Supplementary Concentrate Storage Shed A
		Shed has a dust bag house system.	The operational bag house system is in use for all unloading, stockpiling and conveyor loading activities in sheds. The dust bag house system is inspected quarterly and serviced when required.	

<table>
<tr><th></th><th>Column 1</th><th>Column 2</th><th>Column 3</th><th>Column 4</th></tr>
<tr><th></th><th>Site Infrastructure and equipment</th><th>Description</th><th>Operation requirement</th><th>Infrastructure location</th></tr>
<tr><td></td><td></td><td>Extracted air is filtered by bag house prior to discharge to the atmosphere.</td><td>Dust residue from the bag houses is emptied onto the conveyor system periodically when ship loading occurs.</td><td></td></tr>
<tr><td></td><td></td><td>Ceiling mounted sprinkler network.</td><td>The suspended sprinkler systems in the sheds are used for dust suppression whenever visible dust is observed within the shed.</td><td></td></tr>
<tr><td>4.</td><td>Conveyors (17 in total)</td><td>
<table>
<tr><th>Conveyor</th><th>Dust Cover[1]</th><th>Skirts</th><th>Side guards</th><th>Belly pan</th></tr>
<tr><td>BC01</td><td>•</td><td>•</td><td></td><td>•</td></tr>
<tr><td>BC21</td><td>•</td><td>•</td><td></td><td>•</td></tr>
<tr><td>BC02</td><td>•</td><td>•</td><td></td><td>•</td></tr>
<tr><td>BC03</td><td>•</td><td>•</td><td></td><td>•</td></tr>
<tr><td>CV01</td><td>•</td><td></td><td></td><td>•</td></tr>
<tr><td>CV02</td><td>• partial</td><td>•</td><td></td><td>•</td></tr>
<tr><td>CV03</td><td>• fully enclosed</td><td></td><td></td><td>•</td></tr>
<tr><td>CV04</td><td>• partial</td><td></td><td>wind guards</td><td>• stainless all the way to the hood</td></tr>
<tr><td>CV05</td><td></td><td></td><td>wind guards</td><td>• sealed</td></tr>
<tr><td>CV06</td><td>• partial</td><td></td><td>•</td><td>•</td></tr>
<tr><td>CV07</td><td>•</td><td></td><td></td><td>•</td></tr>
<tr><td>CV09</td><td>•</td><td></td><td></td><td>• partial</td></tr>
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<tr><td>MC02</td><td>•</td><td>•</td><td></td><td>•</td></tr>
<tr><td>CV12</td><td colspan="4">Fully enclosed with metal cowling on both sides</td></tr>
<tr><td>BC04</td><td colspan="4">Fully enclosed with metal cowling on both sides</td></tr>
</table>
[1] Dust covers include perspex, plastic, canvas and/or stainless-steel covers.
</td><td>Mist sprays operated during loading to suppress dust from conveyors at head of transfer chutes.
Conveyor belly pans are cleaned as required during and at the end of ship loading.
Conveyors inspected by Licence Holder following clean up to ensure they have been cleaned.
Maintain fully sealed rubber covers at the tail ends of CV07 and MC02 in good order to contain dust and spillage.</td><td>Figure 1: Premises Map
BC01, BC21 BC02, BC03, BC04, CV12, CV10, CV09, CV07, CV06, CV05, CV04, MC01, MC02</td></tr>
<tr><td>5.</td><td>Transfer Chutes (12 in total) and Ship loader (including 3 transfer chutes and 3 conveyors, CV01-03)</td><td>Shrouds or covers on transfer chutes between fixed and mobile conveyors.</td><td>Dust shrouds inspected prior to ship loading operations to ensure proper placement.
Dust shrouds only removed for clean up during or following ship loading operations.</td><td>Figure 1: Premises Map
Ship loader transfer feeders 1 and 2, conveyors CV01-CV03)</td></tr>
</table>

	Column 1	Column 2	Column 3	Column 4
	Site Infrastructure and equipment	**Description**	**Operation requirement**	**Infrastructure location**
		CV01-03	Conveyors are fitted with dust covers and belly pans for the purpose of minimising wind blowing product off the conveyor and to capture any spills. Conveyor belly pans are cleaned as required during and at the end of ship loading. Conveyors inspected by Licence Holder following clean up.	
		Telescopic chute used for loading into ship's hold.	Vacuum truck available at all times during ship loading and used as required to recover concentrate spilled. Head chutes have blocked chute sensors. Once these sensors are activated, all conveyors shut down.	
		The dust extraction system (DES) contains 12 dust/air filters.	DES automatically activated via the CITEC automated control system prior to the outload circuit starting up. This enables extraction of dust arising from the product when transferred between CV02 and CV01 and between CV03 and CV02. DES failure sends a signal to the CITEC automated control system and causes the outload circuit to stop running. DES dust/air filters changed out as required.	

	Column 1	Column 2	Column 3	Column 4
	Site Infrastructure and equipment	**Description**	**Operation requirement**	**Infrastructure location**
		DES automatic filter clean.	The DES has a vacuum sensing system which causes dust collected in the filters to be disposed of in a spill bin below. It is emptied and cleaned after each shipment.	
6.	Containers (also known as rotainer boxes)	Containers used to load copper and spodumene concentrate at Berth 2 into the vessel's hold.	Containers must remain closed at all times when outside of the vessel's hold, until they are below the level of the deck, unless for the purpose of carrying out product sampling.	Figure 1: Premises map Berth 2 Concentrate Container Storage Area D Supplementary Concentrate Container Storage Area E
7.	Dust Monitors	Two boundary monitors for Cu, Li and PM_{10} - M10 and M11 (Ecotech 3000 HVAS)	Operated in accordance with Condition 19.	Figure 2. Dust and Stormwater Monitoring Locations
		Ambient monitoring at Taplin Street (Port Hedland). Targets for Taplin Street based on Port Hedland Air Guideline Value.	Port Hedland Ambient Air Quality Network operated by Department of Water and Environmental Regulation.	N/A

	Column 1	Column 2	Column 3	Column 4
	Site Infrastructure and equipment	**Description**	**Operation requirement**	**Infrastructure location**
8.	Cleaning equipment	Road sweeper and Vacuum truck. Designated bunded maintenance area outside concentrate storage sheds.	Road sweeper is used daily on trafficable areas during periods when concentrate is delivered to the Premises and/or ship loading occurs. Brooms are used to manually clean the right hand side wheel guard of side tipping trucks to remove concentrate spillage prior to exiting the concentrate per storage sheds. Loaders and excavators undergo maintenance in designated bunded areas outside the concentrate storage sheds. Vacuum truck available at all times during ship loading and used as required to recover spillage and empty sumps.	N/A
Stormwater management				
9.	Stormwater drainage	Berth and container storage infrastructure	Bunding of the western (front), eastern (back) and the northern edges of Berth 1 and effective sealing of all holes in the wharf to ensure capture of all water that land on the wharf surface. Stormwater overflow from Berth 1 is contained in blind sumps which are emptied by the vacuum truck. Contaminated stormwater is returned to the concentrate sumps. All ground surrounding the concentrate outload circuit is sealed.	Figure 1. Premises Map Berth 1, Conveyer infrastructure and Concentrate Sumps Concentrate Container Storage Area D

	Column 1	Column 2	Column 3	Column 4
	Site Infrastructure and equipment	**Description**	**Operation requirement**	**Infrastructure location**
10.	Wastewater containment	Wastewater sumps (concentrate sumps and blind sumps) Loaders and excavators operated within concentrate storage sheds	Wash water from conveyor system cleaning is contained in blind sumps along the outload circuit. The wastewater is then vacuumed and deposited in the concentrate sumps. Wastewater is settled in the concentrate sumps, with settled material being left to dry out and returned to the concentrate storage sheds. Water from the concentrate sumps is either used for dust suppression within the sheds, or sent through a wastewater treatment system and used for irrigation of garden beds at the Premises. Loaders and excavators are washed inside the concentrate storage sheds.	Figure 1. Premises Map Berth 1, Conveyer infrastructure and Concentrate Sumps Concentrate Storage Shed C Concentrate Storage Shed B Supplementary Concentrate Storage Shed A
11.	Vacuum collection truck	Vacuum collection truck operating on Berth 1	Vacuum collection truck that deposits all water and slurry from the Berth 1 surface and blind sumps to the concentrate sumps.	Figure 1. Premises Map Berth 1 and Concentrate Sumps

	Column 1	Column 2	Column 3	Column 4
	Site Infrastructure and equipment	**Description**	**Operation requirement**	**Infrastructure location**
12.	Bulk loading equipment	Shiploading equipment and berth infrastructure	Concentrate arrives in road trains with covered load or in lidded containers. Storage and stockpiling of concentrate in enclosed sheds or in containers in the concentrate container storage area. The ground surrounding the concentrate outload circuit for products is fully sealed and bunded to contain all spills. The deflector plate on the shiploader is positioned between the wharf and the ship to ensure no direct spillage of product into the harbour during loading. Restricted feed speed to prevent spillage and blockages along the outload circuit.	Figure 1: Premises Map Concentrate Storage Shed C Concentrate Storage Shed B Supplementary Concentrate Storage Shed Supplementary Concentrate Container Storage Area E Concentrate Container Storage Area D
13.	Cleaning equipment and procedures	Road sweeper Conveyor system that delivers concentrate from concentrate storage sheds to the shiploader Shiploading equipment	Road sweeper is used daily during periods when concentrate is delivered to the Premises and/or ship loading occurs. Conveyor infrastructure is cleaned after each loading events Lid at base of telescopic chute is closed at commencement of cleaning to ensure no direct discharge of washdown water to the harbor.	Figure 1: Premises Map Conveyer infrastructure, Concentrate Storage Shed C Concentrate Storage Shed B Supplementary Concentrate Storage Shed Concentrate Sumps

Schedule 4: Monitoring

Dust Monitoring Reportable Events

Locations

Locations: M10 and M11 on Figure 2 and Taplin Street.

Dust monitoring reporting periods

Reportable Events must be reported to the CEO on a quarterly basis, on the last day of the following dates:

- July (for April to June),
- October (for July to September),
- January (for October to December); and
- April (January to March), in any year.

Dust monitoring reports

The monitoring reports must contain in relation to a Reportable Event:

- the Reportable Event date(s), time and duration;
- the raw monitoring data for the Reportable Event in tabulated form;
- where there is an exceedance to Reportable Event criteria, details of investigation and mitigation measures must be provided and include the following:
    - confirmation that data received is correct (no instrument fault);
    - determination of the source of the exceedance through:
        - review of operational activities; and
        - review of meteorological data (including temperature, wind speed and direction);
    - for Reportable Events at the Taplin Street monitor, a comparison of PM_{10} concentrations against 24-hour averaged levels recorded at boundary monitors M10 and M11 during the 24-hour period, where boundary monitoring has taken place during the same period in accordance with Condition 19;
    - where a Reportable Event may be attributed to the Licence Holder's activities through the investigation steps above, a review of:
        - Moisture Content of materials received at the time of the exceedance against DEM; and
        - comparison of boundary dust levels against dust levels recorded at Taplin Street ambient dust monitoring station (24-hour averaging period); and
    - where a Reportable Event is determined to be attributed to the Licence Holder's activities, Corrective and Mitigation measures undertaken including but not limited to:
        - actions taken by site personnel as a response to the any high level alarms;
        - maintenance of onsite dust management infrastructure and equipment, if identified as a causal factor by site personnel;
        - reporting of dust events to all stakeholders, including analysis of probable causes; and
    - audit of process controls (e.g. dust alarm procedures).