

Permit

Environmental Protection Act 1994

Environmental authority EPPR01553913

This environmental authority is issued by the administering authority under Chapter 5 of the Environmental Protection Act 1994.

Environmental authority number: EPPR01553913

Environmental authority takes effect on 08 March 2022

Environmental authority holder(s)

Name(s)	Registered address
NORTHERN STEVEDORING SERVICES PTY LTD	91 Hubert Street TOWNSVILLE QLD 4810

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
ERA 50 - Mineral and bulk material handling - 2 - Loading or unloading 100t or more of bulk materials in a day, other than loading or unloading mentioned in item 3, or storing bulk materials	430/EP1068 44/SP12659 448/SP12659 450/SP12659 461/SP242513 469/SP242513 577/SP251252 621/SP15759
ERA 50 - Mineral and bulk material handling - 1(a) - Loading or unloading 100t or more of minerals in a day, other than loading or unloading mentioned in item 3, or storing 50,000t or more of minerals - within 5km of the highest astronomical tide or 1km of a watercourse	430/EP1068 44/SP12659 448/SP12659 450/SP12659 461/SP242513 469/SP242513 577/SP251252 621/SP15759

Additional information for applicants

Environmentally relevant activities

The description of any environmentally relevant activity (ERA) for which an environmental authority (EA) is issued is a restatement of the ERA as defined by legislation at the time the EA is issued. Where there is any inconsistency between that description of an ERA and the conditions stated by an EA as to the scale, intensity or manner of carrying out an ERA, the conditions prevail to the extent of the inconsistency.

An EA authorises the carrying out of an ERA and does not authorise any environmental harm unless a condition stated by the EA specifically authorises environmental harm.

A person carrying out an ERA must also be a registered suitable operator under the *Environmental Protection Act 1994* (EP Act).

Contaminated land

It is a requirement of the EP Act that an owner or occupier of contaminated land give written notice to the administering authority if they become aware of the following:

- the happening of an event involving a hazardous contaminant on the contaminated land (notice must be given within 24 hours); or
- a change in the condition of the contaminated land (notice must be given within 24 hours); or
- a notifiable activity (as defined in Schedule 3) having been carried out, or is being carried out, on the contaminated land (notice must be given within 20 business days)

that is causing, or is reasonably likely to cause, serious or material environmental harm.

For further information, including the form for giving written notice, refer to the Queensland Government website www.qld.gov.au, using the search term 'duty to notify'.

Take effect

Please note that, in accordance with section 200 of the EP Act, an EA has effect:

- a) if the authority is for a prescribed ERA and it states that it takes effect on the day nominated by the holder of the authority in a written notice given to the administering authority - on the nominated day; or
- b) if the authority states a day or an event for it to take effect-on the stated day or when the stated event happens; or
- c) otherwise on the day the authority is issued.

However, if the EA is authorising an activity that requires an additional authorisation (a relevant tenure for a resource activity, a development permit under the *Planning Act 2016* or an SDA Approval under the *State Development and Public Works Organisation Act 1971*), this EA will not take effect until the additional authorisation has taken effect.

If this EA takes effect when the additional authorisation takes effect, you must provide the administering authority written notice within 5 business days of receiving notification of the related additional authorisation taking effect.

The anniversary day of this environmental authority is the same day each year as the original take effect date unless you apply to change the anniversary day. The payment of the annual fee will be due each year on this day. An annual return will be due each year on 01 April.

If you have incorrectly claimed that an additional authorisation is not required, carrying out the ERA without the additional authorisation is not legal and could result in your prosecution for providing false or misleading information or operating without a valid environmental authority.



Signature

Type text here

8/3/22

Date

Dean Sharpe
Department of Environment and Science
Delegate of the administering authority
Environmental Protection Act 1994

Enquiries:
Mineral Business Centre
PO Box 7230, CAIRNS QLD 4870
Phone: (07) 4222 5352
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Privacy statement

Pursuant to section 540 of the EP Act, the Department is required to maintain a register of certain documents and information authorised under the EP Act. A copy of this document will be kept on the public register. The register is available for inspection by members of the public who are able take extracts, or copies of the documents from the register. Documents that are required to be kept on the register are published in their entirety, unless alteration is required by the EP Act. There is no general discretion allowing the Department to withhold documents or information required to be kept on the public register. For more information on the Department's public register, search 'public register' at www.qld.gov.au. For queries about privacy matters please email privacy@des.qld.gov.au or telephone 13 74 68.

Obligations under the *Environmental Protection Act 1994*

In addition to the requirements found in the conditions of this environmental authority, the holder must also meet their obligations under the EP Act, and the regulations made under the EP Act. For example, the holder must comply with the following provisions of the Act:

- general environmental duty (section 319)
- duty to notify environmental harm (section 320-320G)
- offence of causing serious or material environmental harm (sections 437-439)
- offence of causing environmental nuisance (section 440)
- offence of depositing prescribed water contaminants in waters and related matters (section 440ZG)
- offence to place contaminant where environmental harm or nuisance may be caused (section 443)

Other permits required

This permit only provides an approval under the *Environmental Protection Act 1994*. In order to lawfully operate you may also require permits / approvals from your local government authority, other business units within the department and other State Government agencies prior to commencing any activity at the site. For example, this may include permits / approvals with your local Council (for planning approval), the Department of Transport and Main Roads (to access state controlled roads), the Department of Resources (to clear vegetation), and the Department of Agriculture and Fisheries (to clear marine plants or to obtain a quarry material allocation).

Obligations under the *Mining and Quarrying Safety and Health Act 1999*

If you are operating a quarry, other than a sand and gravel quarry where there is no crushing capability, you will be required to comply with the *Mining and Quarrying Safety and Health Act 1999*. For more information on your obligations under this legislation contact Mine Safety and Health at <https://www.rshq.qld.gov.au/>, or phone 13 QGOV (13 74 68) or your local Mines Inspectorate Office.

Development Approval

This permit is not a development approval under the *Planning Act 2016*. The conditions of this environmental authority are separate, and in addition to, any conditions that may be on the development approval. If a copy of this environmental authority is attached to a development approval, it is for information only, and may not be current. If you are unsure that you have the most current version of the environmental authority relating to this site please visit <https://apps.des.qld.gov.au/env-authorities/> to access all environmental authorities currently approved.

Conditions of environmental authority

General

- A1 This environmental authority authorises environmental harm referred to in the conditions. Where there is no condition or this environmental authority is silent on a matter, the lack of a condition or silence does not authorise environmental harm.
- A2 Contaminants with the potential to cause environmental harm must not be released directly or indirectly to the receiving environment, except as permitted under the conditions of this environmental authority.
- A3 The activity operating under this environmental authority must not be conducted contrary to any of the following limitations:
1. Bulk lead concentrate must not be loaded, unloaded or stored at or on berth 10 as indicated in Figure A - Port of Townsville boundary monitoring locations.
 2. Lead concentrate that remains within a fully sealed package that prevents the release of contaminants for the duration of the ship loading or ship unloading may be loaded or unloaded at berth 10 as indicated in Figure A - Port of Townsville boundary monitoring locations.
 3. Notwithstanding any other condition, odours or airborne contaminants must not cause environmental harm at any sensitive place or commercial premises.
- A4 Records must be kept for all mineral product handling activities carried out in accordance with this environmental authority. Records must include but not be limited to:
- a) the mineral type; and
 - b) a safety data sheet or product assay for the specific mineral; and
 - c) the duration the mineral was handled (including start and finish times and dates); and
 - d) the volume of mineral handled; and
 - e) whether the activity involved loading or unloading of the mineral; and
 - f) the loading or unloading method used; and
 - g) the location or berth number at which the mineral was handled; and
 - h) for shipping activities, the name of the vessel loaded or unloaded; and
 - i) the train or truck movements.
- A5 The activity must be undertaken in accordance with written procedures that:
- a) identify potential risks to the environment from the activity during routine operations and emergencies; and

- b) establish and maintain control measures that minimise the potential for environmental harm; and
- c) ensure plant, equipment and measures are maintained in a proper and effective condition; and
- d) ensure plant, equipment and measures are operated in a proper and effective manner; and
- e) ensure that staff are trained and aware of their obligations under the Environmental Protection Act 1994; and
- f) must be provided to the administering authority upon request.

A6 The environmental authority holder of this environmental authority must:

- a) install all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority; and
- b) maintain such measures, plant and equipment in a proper and efficient condition; and
- c) operate such measures, plant and equipment in a proper and efficient manner; and
- d) ensure all instruments and devices used for the measurement or monitoring of any parameter under any condition of this environmental authority are properly calibrated.

A7 Any breach of a condition of this environmental authority must be reported to the administering authority as soon as practicable, but no later than 24 hours after becoming aware of the breach.

A8 When required by the administering authority, monitoring must be undertaken in the manner requested by the administering authority to investigate any complaint arising from the activity.

A9 Records must be kept of all environmental complaints received about the activities to which this environmental authority relates including the following details:

- a) name, address and contact number for complainant (if supplied); and
- b) time and date of the complaint; and
- c) reasons for the complaint; and
- d) investigation undertaken; and
- e) conclusions formed; and
- f) actions taken to resolve complaint; and
- g) any abatement measures implemented; and
- h) the person responsible for resolving the complaint.

- A10 Any records kept or created in relation to this authority must be:
- a) kept for a period of at least five years; and
 - b) provided to the administering authority on request; and
 - c) provided to the administering authority in the format requested.
- A11 All monitoring and investigations required by this environmental authority must be undertaken by an appropriately qualified person.
- A12 The environmental authority holder must:
- a) ensure that an appropriately qualified third party conducts and documents an audit of compliance with all conditions of this environmental authority by 30 July 2018; and
 - b) ensure that further audits in accordance with condition A12(a) are conducted at intervals not exceeding once every three years from completion of the initial audit.
- A13 Prior to handling any new mineral product or bulk material; or significant increase in volume of a mineral product or bulk material, the written procedures required by condition A5 must be reviewed for effectiveness in minimising the likelihood of environmental harm and updated where required.

Condition

Air

- B1 If the environmental authority holder or an authorised officer observes a visible release of dust emissions to the atmosphere from bulk mineral concentrates during ship loading or ship unloading or storage activities, the environmental authority holder must:
- a) Immediately review and, where necessary, adjust operational controls.
 - b) If visible releases of dust emissions continue or are repetitive then:
 - i. cease relevant activities; and
 - ii. review applicable measures for the control of airborne emissions; and
 - iii. prior to recommencing activities, implement any reasonable identified improvements to the measures for the control of airborne emissions.
- B2 Measures for the control of airborne emissions from the storage of mineral concentrates must be documented; and installed, maintained and operated in a manner that prevents the release of mineral concentrates to the environment.

1. Bulk mineral concentrates must be handled and stored within a building that may incorporate the following dust control measures:

- a) cover all necessary openings and vents in the building (other than doorways and access ways) with filter media or other equivalent dust control measures; and
- b) ensure cladding of the building is securely affixed and free of any unnecessary holes; and
- c) maintain the interior of the storage facility under negative air pressure sufficient to prevent release of bulk mineral concentrates from the building; and
- d) fit all doorways and access ways in the building with doors; and
- e) keep all doors in the building closed except when being used for access or egress; and
- f) maintain all doors, doorways and access ways in the building in such a condition that doors, when closed, provide a seal against the release of bulk mineral concentrates to the environment.

2. Mineral concentrates handled and stored in a packaged manner (e.g. containerised) must be handled and stored in a manner that prevents releases to the environment.

- B3 Contaminants must only be released to air from the point source(s) in accordance with Table B1 - Point source air release limits and the associated requirements.
- B4 Contaminants released to air from the point source(s) must not exceed the release limits specified in Table B1 - Point source air release limits.
- B5 The environmental authority holder must monitor and record all releases of contaminants required by and in accordance with Table B1 - Point source air release limits and at the associated monitoring frequency.

Table B1: Point source air release limits

Authorised release point GDA94, Decimal degrees [1]			Minimum release height (m)	Minimum velocity {m/sec) [1][4]	Contaminant	Maximum release limit	Monitoring Frequency
Ref	Latitude	Longitude					
DC-1 Stack	-19.258303	146.836008	4m above surrounding roof peaks	8m/s	Total particulates (mg/m ³)	No limit	Continuous for evaluating the effectiveness of filtration system in meeting the maximum contaminant concentration limits
					Total particulates	50mg/m ³	Once every calendar year ^{[5][6]}
					Total heavy metals ^[2]	10mg/m ³	
DC-2 Stack	-19.258383	146.835983			Total particulates (mg/m ³)	No limit	Continuous for evaluating the effectiveness of filtration system in meeting the maximum contaminant concentration limits
					Total particulates	50mg/m ³	Once every calendar year ^{[5][6]}
					Total heavy metals ^[2]	10mg/m ³	

*Decimals degrees to be provided to a minimum of 4 decimal places.

^[1] Average velocity based on four (4) consecutive sampling events.

^[2] The limit for total heavy metals includes the total of Lead, Cadmium, Chromium, Arsenic, Antimony, Copper, Cobalt and their respective compounds.

^[4] Measurements taken to determine the velocity at the release point must be taken within the stack and in the pipework after filtering has occurred.

Associated requirements:

^[5] Australian Standard 4323.1 Stationary source emissions: Selection of sampling positions.

^[6] Australian Standard 4323.2 Stationary source emissions: Determination of total particulate matter - Isokinetic manual sampling - Gravimetric method.

- B6 The environmental authority holder must monitor and record all quality characteristics required by and in accordance with Table B2 - Ambient Air Quality Trigger Values and Limits and Table B3 - Dust Deposition Trigger Values and Limits.

- B7 The environmental authority holder must develop and implement and document an ambient air quality and dust deposition monitoring program* by 31 December 2017 to ensure compliance with the conditions of this environmental authority.

*note - the environmental authority holder may elect to participate in a collaborative Port of Townsville monitoring program as an alternative to, or in addition to the monitoring program identified above, provided the collaborative program meets the requirements of this environmental authority, and copies of all records are kept by the environmental authority holder of the results and findings of this program.

- B8 The activity must not cause or contribute to any exceedance of the air quality limits identified in Table B2 - Ambient Air Quality Trigger Values and Limits or Table B3 - Dust Deposition Trigger Values and Limits at or beyond the Port of Townsville boundary as depicted in Figure A - Port of Townsville boundary monitoring locations

Table B2: Ambient Air Quality Trigger Values and Limits.

Quality Characteristic	Limit type/ measurement period	Monitoring equipment	Monitoring frequency	Monitoring locations m	Trigger level	Air quality limit
Particulate Matter less than 10 µm in aerodynamic diameter (PM ₁₀)	Rolling 24 hour average based on 1 hour averages	Tapered Element Oscillating Microbalance (TEOM) [3]	Continuous [6]	At minimum, monitoring must be carried out concurrently at three (3) locations, including the locations indicated in Figure A or any alternative location m agreed to in writing by the administering authority.	NA	50 µg/m ³ [8]
	Calendar year average	Tapered Element Oscillating Microbalance (TEOM) [3]	Continuous [6]	At minimum, monitoring must be carried out concurrently at three (3) locations, including the locations indicated in Figure A or any alternative location m agreed to in writing by the administering authority.	NA	25 µg/m ³ [8]
Total suspended particulate matter (TSP)	Rolling 24 hour average based on 1 hour averages	Tapered Element Oscillating Microbalance (TEOM) [3]	Continuous [6]	At minimum, monitoring must be carried out concurrently at the two locations 1 and 2 as depicted on figure A locations, including the locations indicated in Figure A or any alternative location m agreed to in writing by the administering authority.	100 µg/m ³ (2)	NA
	Calendar year average	High Volume Air Sampler (HVAS)	1 in every 6 days	At minimum, monitoring must be carried out concurrently at three (3) locations, including the locations indicated in Figure A or any alternative location m agreed to in writing by the administering authority.	NA	90 µg/m ³ [1]

Quality Characteristic	Limit type/ measurement period	Monitoring equipment	Monitoring frequency	Monitoring locations[7]	Trigger level	Air quality limit
Arsenic and its compounds measured as the total metal content in (PM ₁₀ fraction)	Calendar year average	High Volume Air Sampler (HVAS)	1 in every 6 days	At minimum, monitoring must be carried out concurrently at three (3) locations, including the locations indicated in Figure A or any alternative location [7] agreed to in writing by the administering authority.	NA	0.006 µg/m ³ [1]
Cadmium and its compounds measured as the total metal content in (PM ₁₀ fraction)	Calendar year average	High Volume Air Sampler (HVAS)	1 in every 6 days	At minimum, monitoring must be carried out concurrently at three (3) locations, including the locations indicated in Figure A or any alternative location [7] agreed to in writing by the administering authority.	NA	0.005 µg/m ³ [1]
Copper and its compounds	Rolling 24 hour average based on 1 hour averages	Continuous Metals Analyser [5]	Continuous [6]	At minimum, monitoring must be carried out concurrently at the two locations 1 and 2 ¹⁾ as depicted on figure A or any alternative locations [7] agreed to in writing by the administering authority.	5 µg/m ³ [2]	NA
Lead and its compounds	Rolling 24 hour average based on 1 hour averages	Continuous Metals Analyser [5]	Continuous [6]	At minimum, monitoring must be carried out concurrently at the two locations 1 and 2 ¹⁾ as depicted on figure A or any alternative locations [7] agreed to in writing by the administering authority.	0.65 µg/m ³ [4]	NA

Quality Characteristic	Limit type/ measurement period	Monitoring equipment	Monitoring frequency	Monitoring locations [7]	Trigger level	Air quality limit
Lead and its compounds measured as the total metal content in total suspended particulates (TSP)	Rolling 3 month average based on 1 month averages	High Volume Air Sampler (HVAS)	1 in every 6 days	At minimum, monitoring must be carried out concurrently at three (3) locations, including the locations indicated in Figure A or any alternative location [7] agreed to in writing by the administering authority.	0.3 µg/m ³ [4]	0.5 µg/m ³ [4]
	Rolling 12 month average based on 1 month averages	High Volume Air Sampler (HVAS)	1 in every 6 days	At minimum, monitoring must be carried out concurrently at three (3) locations, including the locations indicated in Figure A or any alternative location [7] agreed to in writing by the administering authority.	0.25 µg/m ³	0.5 µg/m ³
	Calendar year average	High Volume Air Sampler (HVAS)	1 in every 6 days	At minimum, monitoring must be carried out concurrently at three (3) locations, including the locations indicated in Figure A or any alternative location [7] agreed to in writing by the administering authority.	NA	0.5 µg/m ³ [1]
Nickel and its compounds measured as the total metal content in (PM10 fraction)	Calendar year average	High Volume Air Sampler (HVAS)	1 in every 6 days	At minimum, monitoring must be carried out concurrently at three (3) locations, including the locations indicated in Figure A or any alternative location [7] agreed to in writing by the administering authority.	NA	0.02 µg/m ³ [1]
Nickel and its compounds	Rolling 24 hour average based on 1 hour averages	Continuous Metals Analyser [5]	Continuous [6]	At minimum, monitoring must be carried out concurrently at the two locations 1 and 2 as depicted on figure A or any alternative locations [7] agreed to in writing by the administering authority.	0.2 µg/m ³ [2]	NA

Zinc and its compounds	Rolling 24 hour average based on 1 hour averages	Continuous Metals Analyser [5]	Continuous [6]	At minimum, monitoring must be carried out concurrently at the two locations 1 and 2 as depicted on figure A or any alternative locations [7] agreed to in writing by the administering authority.	12 $\mu\text{g}/\text{m}^3$ [2]	NA
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[1] Limits based on Environmental Protection (Air) Policy 2008.

[2] Department of Environment and Heritage Protection trigger based on a no worsening effect on the air environment from the activity.

[3] A non TEOM instrument may be used if it can be demonstrated to meet equivalent detection limits and measurement accuracy. If a conversion factor is necessary to enable interpretation of data against HVAS results, this must be provided to the administering authority on request.

[4] Department of Environment and Heritage Protection trigger based on Ambient Air Lead Guideline Value Derivation for Glencore's Port of Townsvil/e Operations report dated 19 January 2017.

[5] An example of a Continuous Metals Analyser is an X-ray Fluorescence (XRF) method analyser such as an X-act or similar provided it uses a Total Suspended Particulates inlet.

[6] Continuous monitoring is monitoring that captures data equal to at least 75 percent of the total possible data required in any period (excluding during natural disaster events such as cyclones) of:

- a. twelve (12) calendar months; and
- b. three (3) calendar months; and
- c. twenty four (24) hours.

[7] Locations must be representative of actual operating and meteorological conditions for the sample frequency period.

[8] The administering authority will give due consideration to natural events (such as bushfires, dust storms, and cyclones) when determining compliance with this limit.

[9] Trigger Levels do not apply at location 2 (Lennon Drive) until 30 September 2017.

Associated monitoring requirements

1. All monitoring devices must be effectively calibrated and maintained in accordance with the manufacturer's instructions and/or relevant Australian Standard.
2. Air monitoring must be in accordance with the current edition of the administering authority's Air Quality Sampling Manual.
3. Monitoring and sample analysis must be in accordance with the most recent edition of the following:
 - a) Australian Standard AS/NZS 3580.1.1 - Methods for siting and analysis of ambient air. Part 1.1: Guide to siting air monitoring equipment;
 - b) Australian Standard AS/NZ 3580.9.3- Methods for sampling and analysis of ambient air Method 9.3: Determination of suspended particulate matter-Total suspended particulate matter (TSP)-High volume sampler gravimetric method;
 - c) Australian Standard AS 3580.9.6 'Ambient air - Particulate matter - Determination of suspended particulate PM10 high-volume sampler with size-selective inlet -Gravimetric method;
 - d) Australian Standard AS3580.9.15 'Methods for sampling and analysis of ambient air - Determination of suspended particulate matter - Particulate metals high or low volume sampler gravimetric collection - Inductively coupled plasma (ICP) spectrometric method'
 - e) Australian Standard AS/NZS 3580.10.1 - Methods for sampling and analysis of ambient air. Method 10.1: Determination of particulate matter-Deposited matter-Gravimetric method; and
 - f) Any alternative method of monitoring which may be permitted by the 'Air Quality Sampling Manual' as published from time to time by the administering authority.

Table B3: Dust Deposition Trigger Values and Limits.

Quality Characteristic	Limit type/measurement period	Monitoring frequency	Monitoring locations	Trigger level
Arsenic and its compounds as arsenic [1]	Calendar year average	Monthly	At minimum, monitoring must be carried out concurrently at three (3) locations, including the locations indicated in Figure A or any alternative location agreed to in writing by the administering authority.	4 µg/m ² /day
Cadmium and its compounds as cadmium [1]	Calendar year average	Monthly		2 µg/m ² /day
Lead and its compounds as lead [1]	Calendar year average	Monthly		100 µg/m ² /day
Dust deposition (total insoluble matter)	Monthly average	Monthly		120 mg/m ² /day [3]

[1] Metal analysis is to be carried out in accordance with the methodology in appendix A of AS/NZS3580.10.1

[3] Department of Environment and Heritage Protection trigger.

B9 Measures for the control of airborne emissions from the ship loading and ship unloading of bulk mineral concentrates must be documented; and installed, maintained and operated in a manner that prevents the release of mineral concentrates to the environment. Measures must include, but not be limited to:

- a) ensuring that the moisture content of the bulk mineral concentrates is maintained as high as practicable* at the point of ship loading or ship unloading; and
- b) implementation of operational practices to minimise any potential reduction in bulk mineral concentrates moisture content; and
- c) minimising the exposure of mineral concentrates to the effects of wind; and
- d) dust suppression systems** (e.g. misting sprays); and/or
- e) dust control systems** (e.g. dust extraction/filtration system).

* Consideration for Transportable Moisture Limit (TML) maritime safety requirements when determining practicable.

** An appropriately qualified person must design, install, test and commission all dust control and dust suppression systems specific to the bulk mineral concentrates product and for the specific method of handling (e.g. grab and hopper, rotainer, ship loader). The design must take in to consideration the dustiness, the Dust Extinction Moisture (DEM) level, and the dust/moisture relationship for the specific mineral concentrates as determined by the relevant Australian and International Standards.

Note: Relevant controls a) to e) may be applied at any point within the handling stream including upstream of the loading or unloading point to effectively control emissions.

B10 All new infrastructure and/or upgrades to infrastructure for the storage of bulk mineral concentrates constructed after 26 July 2017 must include, but not be limited to:

- a) cover all necessary openings and vents in the infrastructure (other than doorways and access ways) with filter media or other equivalent dust control measures; and
- b) ensure cladding of the infrastructure is securely affixed and free of any unnecessary holes; and
- c) maintain the interior of the infrastructure under negative air pressure sufficient to prevent release of bulk mineral concentrates from the infrastructure; and
- d) fit all doorways and access ways in the infrastructure with doors; and
- e) keep all doors in the infrastructure closed except when being used for access or egress; and
- f) maintain all doors, doorways and access ways in the infrastructure in such a condition that doors, when closed, provide a seal against the release of bulk mineral concentrates to the environment.

Note: Alternative control technology that provides an equivalent level of control outside of those listed above may be accepted.

When infrastructure is upgraded, a) to f) apply to the upgraded section of the infrastructure only.

- B11 By 31 March each year, the environmental authority holder must have an appropriately qualified person produce a report that, as a minimum:

- a) determines whether compliance with Condition B8 has been achieved for the previous calendar year; and
- b) provides a review of the effectiveness of the monitoring program* required by Condition B7.

*Note - a collective review under the collaborative Port of Townsville monitoring program may be used to satisfy this requirement.

- B12 In the event of any monitoring showing exceedance of any trigger value* specified in Table B2 - Ambient Air Quality Trigger Values and Limits or Table B3 - Dust Deposition Trigger Values and Limits at or beyond the Port of Townsville boundary as depicted in Figure A - Port of Townsville boundary monitoring locations the environmental authority holder must:

1. complete an investigation to identify the potential cause of the exceedance taking into account all available monitoring data, and:

- i. if the investigation shows that the exceedance is not caused or contributed to by the environmental authority holders activities then no further action is required and this must be advised to the administering authority within ten (10) business days.

- ii. if the investigation shows that the exceedance is caused or contributed to by the environmental authority holders activities, provide a written report to the administering authority within three (3) months of the date of the monitoring results showing an exceedance, outlining:

- (a) the potential for environmental harm being caused or likely to be caused by the exceedance; and

(b) details of the investigation carried out including a review of the measures and procedures for the control of airborne emissions; and

(c) actions taken or to be taken to minimise environmental harm.

*Note: Where no operations have occurred within the relevant period or operations have not included mineral concentrates that contain the quality characteristic of the trigger value exceeded then no action is required of the environmental authority holder.

B13 By 29 January 2018 the environmental authority holder must develop, document, implement, and comply with an operational (near field) air quality monitoring program for all activities involving the loading or unloading of ships with bulk mineral concentrates. This program must as a minimum:

- a) Be developed by an appropriately qualified person; and
- b) Identify and include sufficient monitoring locations that provide results representative of the emissions; and
- c) Include operational trigger levels and appropriate corrective management response actions to minimise the release of contaminants; and
- d) Include the use of continuous, real time air quality monitoring; and
- e) Maximise data and monitoring equipment availability; and
- f) Be utilised as part of any investigation undertaken pursuant to condition B12.

B14 The environmental authority holder must ensure all continuous monitoring results required by the conditions of this environmental authority are reviewed regularly during bulk mineral concentrate ship loading and ship unloading to ensure compliance with condition B8.

B15 From 31 December 2017 onwards, the environmental authority holder must ensure all continuous air monitoring data as required in Table B2 - Ambient Air Quality Trigger Values and Limits of this environmental authority is electronically available to the administering authority on a daily basis.

B16 From 31 December 2017 onwards, the environmental authority holder must make air monitoring data as required in Table B2 - Ambient Air Quality Trigger Values and Limits and Table B3 - Dust Deposition Trigger Values and Limits of this environmental authority publically available in a prominent position on the company website or a suitable third parties website, within 14 days of obtaining the data.

Note: Monitoring data that has not been validated following commissioning of monitoring equipment required for compliance with condition B6 is not subject to this condition for 30 calendar days or until validated whichever is the sooner.

B17 Prior to any significant increase in the amount of any lead containing product handled, the environmental authority holder must have an appropriately qualified person model# the predicted

emissions to air and determine the impacts of the increase on air quality with specific consideration given to:

- a) The cumulative impacts of the increase; and
- b) The ambient air quality trigger values and limits identified in Table B2 - Ambient Air Quality Trigger Values and Limits and Table B3 - Dust Deposition Trigger Values and Limits.

An air model that encompasses the entire Port of Townsville air shed incorporating the increase may be used to satisfy this requirement.

Condition

Water

- C1 Contaminants must only be directly released from the storage facility to waters from the release points specified in Table C1: Contaminated water release points, sources and receiving waters.

Table C1: Contaminated water release points, sources and receiving waters

Release Point (RP)	Latitude (decimal degree, GDA94)	Longitude (decimal degree, GDA94)	Contaminated water source	Monitoring point	Receiving waters
RP 1 Storage facility stormwater	- 19.257919	146.836197	Stormwater run-off from storage facility	Outlet of stormwater treatment system	Ross River

- C2 Contaminants released from a release point specified in Table C1: Contaminated water release points, sources and receiving waters, must be monitored at the release point for all quality characteristics and at the frequency specified in Table C2: Release water contaminant trigger values and contaminant limits.

Table C2: Release water contaminant trigger values and contaminant limits

Quality characteristic	Contaminant release limit (total) ³	Contaminant trigger value (dissolved) ^{1,2}	Monitoring frequency
pH (pH Unit)	6.0-9.0	7.0-8.4	Commencement of release and daily thereafter during release
Total suspended solids	100 mg/L	20 mg/L	
Arsenic(I II / V)	100 µg/L	2.3 µg/L 4.5 µg/L (low reliability)	
Copper	100 µg/L	1.3 µg/L	
Cobalt		1 µg/L	
Cadmium	50 µg/L	5.5 µg/L	
Lead	100 µg/L	4.4 µg/L	
Zinc	2000 µg/L	15 µg/L	
Nickel	500 µg/L	70 µg/L	

¹ Contaminant trigger values, are based on Australian and New Zealand Guidelines for Fresh and Marine Water Quality – Trigger values for marine water- 95% protection of species.

² For the purpose of comparing against contaminant trigger values metals and metalloids must be measured as dissolved (filtered).

³ For the purpose of comparing against contaminant limits, metals and metalloids must be measured as total.

C3 Quality characteristics of any release must not exceed any of the contaminant release limits stated in Table C2: Release water contaminant trigger values and contaminant limits.

C4 If quality characteristics of any release from the release point exceed any of the trigger levels specified in Table C2: Release water contaminant trigger values and contaminant limits, the holder of this environmental authority must complete an investigation in accordance with the Australian and New Zealand guidelines for fresh and marine water quality. Volume 1, The guidelines (Australian and New Zealand Environment and Conservation Council, Agriculture and Resource Management Council of Australia and New Zealand, 2000) methodology into the potential for environmental harm and provide a written report to the administering authority within three (3) months of the exceedance being detected outlining:

- a) details of the investigations carried out; and
- b) actions taken to prevent environmental harm

Note: Where an exceedance of a trigger level has occurred and is being investigated, no further reporting is required for subsequent trigger events for that quality characteristic within the three month Investigation period.

- C5 The first flush holding system must have a minimum capacity to accept the first twenty (20) millimetres of stormwater runoff from the site prior to any release of stormwater to waters. A first flush event is rainfall following a 14 day period without rain.
- C6 The holder of this environmental authority must maintain, keep updated, and implement a sediment monitoring program* for the activity. The program must be consistent with:
- a) the relevant Australian standards; and
 - b) the most recent version of the administering authority's 'Monitoring and Sampling Manual 2009'.

Note: the holder of this environmental authority may elect to participate in a collaborative Port of Townsville monitoring program as an alternative to, or in addition to the monitoring program identified above, provided the collaborative program meets the requirements of this environmental authority

Condition

Acoustic

- D1 Noise generated by the activity must not cause environmental nuisance to any sensitive place or commercial place.

Condition

Waste

- E1 Regulated waste must be removed and transported from the site by a person who holds a current approval to transport such wastes to a facility that is lawfully able to accept waste under the Environmental Protection Act 1994.

Definitions

Key terms and/or phrases used in this document are defined in this section. Where a term is not defined, the definition in the *Environmental Protection Act 1994*, its regulations or environmental protection policies must be used. If a word remains undefined it has its ordinary meaning.

appropriately qualified person means a person who has professional qualifications, training, skills or experience relevant to the nominated subject matter and can give authoritative assessment, advice and analysis on performance relating to the subject matter using the relevant protocols, standards, methods or literature.

administering authority means the Department of Environment and Heritage Protection or its successors or predecessors.

background means noise, measured in the absence of the noise under investigation, as L A_{90,T} being the A-weighted sound pressure level exceeded for 90% of the time period of not less than 15 minutes, using Fast response.

bulk mineral concentrates means unpackaged and loose mineral concentrates and coking coal.

calendar year average means the average over a period of 12 months beginning on 1 January.

commercial place means a place used as a workplace, an office or for business or commercial purposes and includes a place within the curtilage of such a place reasonably used by persons at that place.

lead concentrate means any mineral concentrate product where the composition of the product includes greater than 21% by weight of lead.

lead containing products means any bulk mineral concentrate product that contains lead at 1% by weight or greater .

measures means the broadest interpretation and includes plant, equipment, physical objects, monitoring, procedures, actions, directions and competencies.

mg/L means milligrams per litre.

mg/m2/day means milligrams per square metre per day.

mineral concentrate means bulk mineral concentrates.

new mineral product or bulk material means any mineral product or bulk material not previously handled by the environmental authority holder in the previous 12 months. Does not include the same product or material from a different mine or supplier.

records include breach notifications, written procedures, analysis results, monitoring reports, monitoring results, monitoring data, and monitoring programs required under a condition of this authority.

rolling 12 month average based on 1 month averages means the average of the previous 12 months for each month of the year.

rolling 3 month average based on 1 month averages means the average of the previous 3 months for each month of the year.

rolling 24 hour average based on 1 hour averages means the average of the previous 24 hours for each hour of the day.

sensitive place includes the following and includes a place within the curtilage of such a place reasonably used by persons at that place:

- a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- a motel, hotel or hostel; or
- a kindergarten, school, university or other educational institution; or
- a medical centre or hospital; or
- a protected area under the Nature Conservation Act 1992, the Marine Parks Act 2004 or a World Heritage Area; or
- a public thoroughfare, park or garden; or
- for noise, a place defined as a sensitive receptor for the purposes of the Environmental Protection (Noise) Policy 2008.

significant increase means an increase:

- a) an increase of greater than 10% in volume of any product, other than lead containing products, from that handled per year in any of the previous 5 consecutive calendar years; or
- b) an increase in the volume of lead containing products to that previously modelled; or
- c) an increase of greater than 10% in total volume of lead containing product handled per year in any of the previous 5 consecutive calendar years.

site means land or tidal waters on or in which activities are carried out

Transportable Moisture Limit (TML) means the maximum moisture content of a cargo that is considered safe for transportation in ships to manage liquefaction risk and cargo instability.

µg/L means micrograms per Litre.

µg/m³ means micrograms per cubic metre.

waters includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water natural or artificial watercourse, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and groundwater and any part thereof.

END OF ENVIRONMENTAL AUTHORITY

Appendix 1 - Figure A: Port of Townsville boundary monitoring locations

