Permit

Environmental Protection Act 1994

Environmental authority EPPR01522413

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

Environmental authority number: EPPR01522413

Environmental authority takes effect on 29-April-2021

Environmental authority holder(s)

Name(s)	Registered address
AURIZON PORT SERVICES PTY LTD	900 Ann St FORTITUDE VALLEY QLD 4006 Australia

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
ERA 50 (1a) - Loading or unloading 100t or more of minerals in a day, or storing 50,000t or more of minerals within 5km of the highest astronomical tide or 1km of a watercourse. 50 (2) – loading or unloading 100 tonnes or more of bulk materials in a day or stockpiling bulk materials	Berth 2, Berth 4, Berth 8 and Berth 9 at Port of Townsville being Lot 430 on Plan EP1068 Berth 10 at the Port of Townsville being Lot 448 on Plan SP126597, Lot 449 on Plan SP126597, Lot 450 on Plan SP126597 and Lot460 on Plan SP242513
ERA 50 (1a) - Loading or unloading 100t or more of minerals in a day, or storing 50,000t or more of minerals within 5km of the highest astronomical tide or 1km of a watercourse. 50 (2) – loading or unloading 100 tonnes or more of bulk materials in a day or stockpiling bulk materials	Archer Street, South Townsville, Port of Townsville Part Lot 577 on SP251252
50 (2) – loading or unloading 100 tonnes or more of bulk materials in a day or stockpiling bulk materials	Wharf 7, Port of Cairns being Lot 40 on SP113657
50 (2) – loading or unloading 100 tonnes or more of bulk materials in a day or stockpiling bulk materials	Harbour Road, Port of Mackay LOT 63 on SP143358

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Environmentally relevant activity/activities	Location(s)
ERA 57 (2a) – Regulated waste Transport 1 to 5 vehicles	Within the stae of Queensland

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.

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.

Tristan Roberts
Department of Environment and Science
Delegate of the administering authority
Environmental Protection Act 1994

Date issued: 29 April 2021

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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)

Conditions of environmental authority
The environmentally relevant activities conducted at the locations described above must be conducted in accordance with the following conditions of the environmental authority.

Schedule A: General

A1 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 Appendix 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. At Port of Cairns the ERA 50(2) must be conducted on Lot 40 on SP113657 as indicated in Appendix B – Location of Lot 40 on SP SP113657 (Port of Cairns) and Appendix C - GPS coordinates of Lot 40 on SP113657.
4. Notwithstanding any other condition, odours or airborne contaminants must not cause environmental harm at any sensitive place or commercial premises.

A2 In carrying out the activities to which this environmental authority relates, all reasonable and practicable measures must be taken to prevent or minimise environmental harm caused by the activities.

A3 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.

A4 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.

A5 Records must be kept for all mineral 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.

A6 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.

A7 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.

A8 All analyses required under this environmental authority must be carried out by a laboratory that has National Association of Testing Authorities (NATA) certification, or an equivalent certification, for such analyses.

A9 All monitoring and investigations required by this environmental authority must be undertaken by an appropriately qualified person.

A10 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 7 August 2018; and
b) ensure that further audits in accordance with condition A10(a) are conducted at intervals not exceeding once every three years from completion of the initial audit.

A11 The environmental authority holder must:

a) install all reasonable and practicable 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.

A12 Prior to handling any new mineral or bulk material; or significant increase in volume of a mineral or bulk material, the written procedures required by condition A3 must be reviewed for effectiveness in minimising the likelihood of environmental harm and updated where required.

A13 All sealed traffic areas and berths must be cleaned as necessary to prevent the release of contaminants to the atmosphere, land, or waters.

Schedule B: Air

Port of Townsville

The following conditions apply to the locations specified for the Port of Townsville:

B1 The environmental authority holder must monitor and record all quality characteristics required by and in accordance with ***Table B1 – Ambient Air Quality Trigger Values and Limits*** and ***Table B2 – Dust Deposition Trigger Values and Limits***.

B2 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.

B3 The activity must not cause or contribute to any exceedance of the air quality limits identified in ***Table B1 – Ambient Air Quality Trigger Values and Limits*** or ***Table B2 – 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 B1: Ambient Air Quality Trigger Values and Limits

Quality Characteristic	Limit type/ measurement period	Monitoring equipment	Monitoring frequency	Monitoring locations [7]	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 [7] agreed to in writing by the administering authority.	NA	50 µg/m^3 [1] [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 [7] agreed to in writing by the administering authority.	NA	25 µg/m^3 [8]

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Quality Characteristic	Limit type/ measurement period	Monitoring equipment	Monitoring frequency	Monitoring locations [7]	Trigger level	Air quality limit
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 [7] 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 [7] agreed to in writing by the administering authority.	NA	90 µg/m^3 [1]
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 [9] as depicted on figure A or any alternative locations [7] agreed to in writing by the administering authority.	5 µg/m^3 [2]	NA

Quality Characteristic	Limit type/ measurement period	Monitoring equipment	Monitoring frequency	Monitoring locations [7]	Trigger level	Air quality limit
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 [9] 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
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 (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	0.02 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 [9] 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

Quality Characteristic	Limit type/ measurement period	Monitoring equipment	Monitoring frequency	Monitoring locations [7]	Trigger level	Air quality limit
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 [9] as depicted on figure A or any alternative locations [7] agreed to in writing by the administering authority.	12 µg/m^3 [2]	NA

[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 the *Ambient Air Lead Guideline Value Derivation for Glencore's Port of Townsville 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 1 February 2018.

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 B2: Dust Deposition Trigger Values and Limits.

Quality Characteristic [1]	Limit type/measurement period	Monitoring frequency	Monitoring locations	Trigger level
Arsenic and its compounds as arsenic [2]	Calendar year average	Monthly	At minimum, monitoring must	4 µg/m^2/day

Cadmium and its compounds as cadmium [2]	Calendar year average	Monthly	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.	2 µg/m^2/day
Lead and its compounds as lead [2]	Calendar year average	Monthly		100 µg/m^2/day
Dust deposition (total insoluble matter)	Monthly average	Monthly		120 mg/m^2/day

Associated monitoring requirements

[1] 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

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

B4 In the event of any monitoring showing exceedance of any trigger value* specified in ***Table B1 – Ambient Air Quality Trigger Values and Limits*** or ***Table B2 – 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 minerals that contain the quality characteristic of the trigger value exceeded then no action is required of the environmental authority holder.

B5 The environmental authority holder must ensure all continuous monitoring results required by the conditions of this environmental authority are reviewed regularly during bulk mineral ship loading and ship unloading to ensure compliance with condition B3.

B6 If the environmental authority holder or an authorised officer observes a visible release of dust emissions to the atmosphere from mineral or bulk materials 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.

B7 Measures for the control of airborne emissions from the storage of minerals must be documented; and installed, maintained and operated in a manner that prevents the release of minerals to the environment.

1. Bulk minerals 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 minerals 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 minerals to the environment.

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

B8 All new infrastructure and/or upgrades to infrastructure for the storage of bulk minerals constructed after 7 August 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 minerals 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 minerals 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.

B9 Transfer of minerals to or from ships must be carried out in a manner that prevents the likelihood of any release of minerals to air.

B10 Measures for the control of airborne emissions from the ship loading and ship unloading of bulk minerals must be documented; and installed, maintained and operated in a manner that prevents the release of minerals to the environment. Measures must include, but not be limited to:

a) ensuring that the moisture content of the mineral 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 mineral moisture content; and
c) minimising the exposure of minerals 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 mineral and for the specific method of handling (e.g. grab and hopper, rotainer, ship loader). The design must take into consideration the dustiness, the Dust Extinction Moisture (DEM) level, and the dust/moisture relationship for the specific minerals 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.

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 B3 has been achieved for the previous calendar year; and
b) provides a review of the effectiveness of the monitoring program* required by Condition B2.

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

B12 Contaminants must only be released to air from the point source(s) in accordance with ***Table B3 – Point source air release limits*** and the associated requirements.

B13 Contaminants released to air from the point source(s) must not exceed the release limits specified in ***Table B3 – Point source air release limits*.**

B14 The environmental authority holder must monitor and record all releases of contaminants required by and in accordance with ***Table B3 – Point source air release limits*** and at the associated monitoring frequency.

Table B3 – Point source air release limits

Release Point	Description	Contaminant	Release limit		Frequency
			Limit Type	Limit	

BH1	Mobile *Page and Macrae* Baghouse Exhaust 1	Total suspended particulate matter (TSP)	Instantaneous	20mg/Nm^3 [1]	Continuous while hopper is in operation
BH2	Mobile *Page and Macrae* Baghouse Exhaust 2		Instantaneous	20mg/Nm^3 [1]	
DC1	Mobile *Grydale JMS M-Series* dust collector stack		Instantaneous	20mg/Nm^3 [1]	Continuous while loading and unloading.
SL1	Mobile *Page and Macrae* Shiploader filter system exhaust		Instantaneous	3mg/Nm^3 [1]	Continuous while loading.

[1] Manufacturers specification

B15 By 7 February 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 minerals. 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 B4.

B16 The environmental authority holder must monitor at least rainfall, temperature, wind speed, and wind direction. The weather monitoring provision must comply with the relevant Australian Standard.

B17 From 31 December 2017 onwards, the environmental authority holder must ensure all continuous air monitoring data as required in ***Table B1 – Ambient Air Quality Trigger Values and Limits*** of this environmental authority is electronically available to the administering authority on a daily basis.

B18 From 31 December 2017 onwards, the environmental authority holder must make air monitoring data as required in ***Table B1 – Ambient Air Quality Trigger Values and Limits*** and ***Table B2 – Dust Deposition Trigger Values and Limit****s* 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 B1 is not subject to this condition for 30 calendar days or until validated, whichever is the sooner.

B19 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 B1 – Ambient Air Quality Trigger Values and Limits*** and ***Table B2 – 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.

B20 In the event of a complaint about light emissions that is causing a nuisance at a sensitive place, the administering authority may request the environmental authority holder to take appropriate action to mitigate the nuisance and the operator must take appropriate action (e.g. by screening or directing the light away from the sensitive place) within a time set by the administering authority.

ERA 50 (2) – Bulk Materials Handling (Port of Townsville)

The following conditions apply for ERA 50 (2) Bulk Materials Handling at the locations specified for the Port of Townsville:

B21 All bulk materials handled and stored at the storage facility must be handled and stored within a building that incorporates the following dust control measures as a minimum:

a) Roofed and fully enclosed on all sides; and
b) cladding of the building must be securely affixed and free of any unnecessary holes; and
c) all doorways and access ways in the building must be fitted with doors; and
d) all doors in the building must remain closed except when being used for access or egress; and
e) all doors, doorways and access ways in the building must be maintained in such a condition that doors, when closed, provide a seal against the release of bulk materials to the receiving environment.

Schedule C: Water

C1 Contaminants that will or have the potential to cause environmental harm must not be released to waters.

C2 For activities at the Port of Townsville, sediment quality must be monitored and recorded by the environmental authority holder either by participating in an existing and relevant sediment monitoring program or by developing and implementing a sediment monitoring program for the activities. If the environmental authority holder develops and implements its own program, the program must be designed in accordance with:

a) the relevant Australian standards; and
b) the most recent version of the administering authority's "Monitoring and Sampling Manual Environmental Protection (Water) Policy.

C3 For the Port of Townsville, a Receiving Environment Monitoring Program (REMP) must be developed and implemented by the environmental authority holder either by participating in Port of Townsville receiving environment monitoring or by developing and implementing a REMP for the activities. The REMP is to monitor and record the effects of the activities on the receiving environment with the aim of identifying and describing the extent of any adverse impacts on local environmental values and to monitor any changes in the receiving water. A copy of the REMP and any update or variation of the REMP must be provided to the administering authority prior to its implementation and due consideration given to any comments made on the REMP by the administering authority.

Note: For the purposes of the REMP, the receiving environment includes the waters and connected waterways of the Ross River, and the waters immediately adjacent to the Port of Townsville in Ross Creek and Cleveland Bay.

C4 The REMP required by condition C3 must address (but not necessarily be limited to) the following:

a) description of potentially affected receiving surface waters including key communities and reference water quality and sediment characteristics based on accurate and reliable monitoring data that takes into consideration any temporal variation (e.g., seasonality).

b) description of applicable environmental values and water quality objectives to be achieved (i.e., as scheduled pursuant to the Environmental Protection (Water) Policy).

c) any relevant reports prepared by other governmental or professional research organisations that relate to the receiving environment to which the REMP applies.

d) water and sediment quality targets within the receiving environment to be achieved and clarification of contaminant concentrations or levels indicating adverse environmental impacts during the period upon which the REMP applies.

e) monitoring for any potential adverse environmental impacts caused by the activities.

f) monitoring of physical and chemical parameters.

g) monitoring relevant biological indicators and metals/metalloids in sediments to meet identified water quality objectives.

h) the locations of monitoring points (including the locations of reference/upstream and downstream potentially impacted sites for each release point). Reference sites must comply with the following criteria:

   i. be from the same bio-geographic and climatic region.

   ii. have similar geology, soil types and topography.

   iii. contain a range of habitats similar to those at the potentially impacted sites.

   iv. have a similar flow regime; and

   v. not be so close to the potentially impacted sites that any disturbance at the potentially impacted sites also results in a change at the reference site.

i) a frequency or scheduling of sampling and analysis.

j) specify sampling and analysis methods and quality assurance and control.

k) any historical datasets to be relied upon.

l) description of the statistical basis on which conclusions are drawn.

m) any spatial and temporal controls to exclude potential confounding factors; and

n) inclusion of additional monitoring points prior to potential impact.

Schedule D: Noise

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

D2 For the port of Mackay, noise from activities authorised under this environmental authority must not exceed the levels specified in **Table D1 - Noise limits** at any nuisance sensitive or commercial place.

Table D1 - Noise limits

Noise level dB(A) measured as	**Monday to Saturday**			**Sundays and public holidays**		
	7am – 6pm	**6pm – 10pm**	**10pm – 7am**	**9am – 6pm**	**6pm – 10pm**	**10pm – 9am**
	Noise measured at a 'Noise sensitive place'					
$L_{A10, adj, 10 mins}$	Bkg + 5	Bkg + 5	Bkg + 0	Bkg + 5	Bkg + 5	Bkg + 0
$L_{A1, adj, 10 mins}$	Bkg + 10	Bkg + 10	Bkg + 5	Bkg + 10	Bkg + 10	Bkg + 5
	Noise measured at a 'Commercial place'					
$L_{A10, adj, 10 mins}$	Bkg + 10	Bkg + 10	Bkg + 5	Bkg + 10	Bkg + 10	Bkg + 5
$L_{A1, adj, 10 mins}$	Bkg + 15	Bkg + 15	Bkg + 10	Bkg + 15	Bkg + 15	Bkg + 10

Bkg – Background

L_{A10} adj 10mins means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 10% of any 10 minute measurement period using Fast response

L_{A1} adj 10mins means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 1% of any 10 minute measurement period using Fast response

Schedule E: Land

E1 Contaminants that will, or have the potential to cause environmental harm must not be released to land.

Schedule F: Waste

F1 All waste generated in carrying out the activity must be lawfully reused, recycled or removed to a facility that can lawfully accept the waste.

Schedule G: ERA 57 (2a) - Regulated waste transport 1 to 5 vehicles

The conditions of the environmental authority for this activity (ERA 57-2a) include standard conditions contained within the attached document entitled:

Code of environmental compliance for certain aspects of regulated waste transport (ERA 57), version 4 and any subsequent version.

Definitions

Words and phrases used throughout this environmental authority are defined below. Where a definition for a term used and the term is not defined, the definitions provided in the *Environmental Protection Act 1994*, its regulations, and Environmental Protection Policies shall be used. Where a word or term is still not defined, the ordinary English meaning applies, and regard should be given to the Macquarie Dictionary.

activity means the environmentally relevant activities, whether resource activities or prescribed activities, to which the environmental authority relates.

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

appropriately qualified person(s) 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.

background means noise, measured in the absence of the noise under investigation, as $L_{A90,T}$ being the A-weighted sound pressure level exceeded for 90% of the time period of not less than 15 minutes, using Fast response.

bulk minerals means unpackaged and loose minerals.

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 where the composition of the product includes greater than 21% by weight of lead.

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

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

mineral has the same meaning as that defined in the *Environmental Protection Regulation 2019* (current as at 25 September 2020)

new mineral or bulk material means any mineral 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) a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
b) a motel, hotel or hostel; or

c) a kindergarten, school, university or other educational institution; or
d) a medical centre or hospital; or
e) a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 2004* or a World Heritage Area; or
f) a public thoroughfare, park or garden; or
g) for noise, a place defined as a sensitive receptor for the purposes of the Environmental Protection (Noise) Policy 2008.

significant increase means an increase:

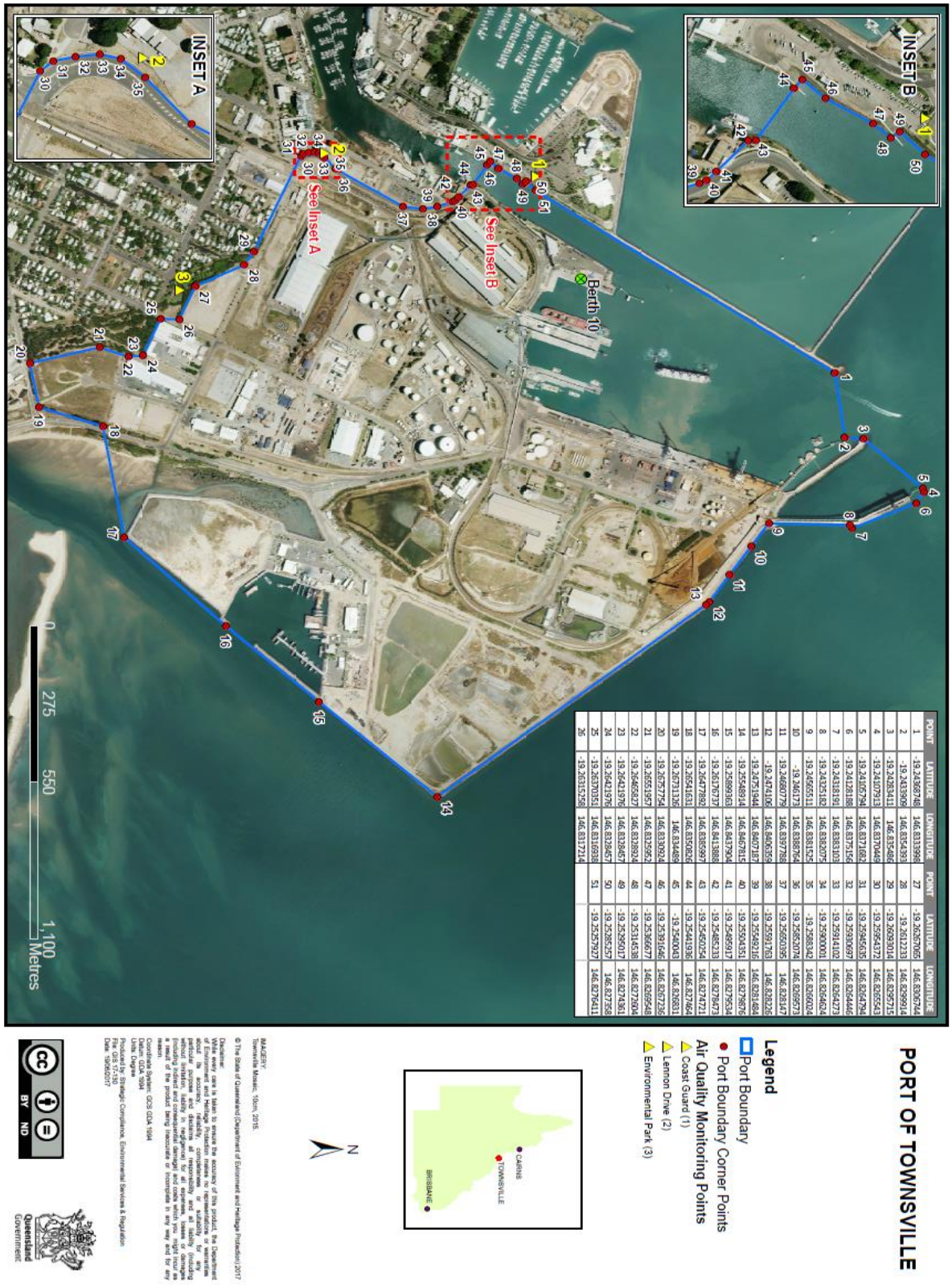
a) of greater than 10% in volume of any product from that handled per year in any of the previous 5 consecutive calendar years; or
b) in any volume to that previously modelled for the same product.

watercourse means a river, creek or stream in which water flows permanently or intermittently-

a) In a natural channel, whether artificially improved or not; or
b) In an artificial channel that has changed the course of the watercourse.

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.

Appendix A- Port of Townsville boundary and monitoring locations.



POINT	LATITUDE	LONGITUDE	POINT	LATITUDE	LONGITUDE
1	-19.2436748	146.8333998	27	-19.2626705	146.8306744
2	-19.2433909	146.8354393	28	-19.2612233	146.8299914
3	-19.2428411	146.8354486	29	-19.2609014	146.8295715
4	-19.2410791	146.8370449	30	-19.2595437	146.8285543
5	-19.2416579	146.8371682	31	-19.2594535	146.8284784
6	-19.2412818	146.8375156	32	-19.2593697	146.8284446
7	-19.2431819	146.8383103	33	-19.2591402	146.8284273
8	-19.2432518	146.8382075	34	-19.2590001	146.8284024
9	-19.2456551	146.8381525	35	-19.2588342	146.8286024
10	-19.246173	146.8388764	36	-19.2585074	146.8286573
11	-19.2468079	146.8397788	37	-19.2569395	146.828147
12	-19.2474106	146.8406359	38	-19.2559176	146.8282826
13	-19.2475944	146.8407187	39	-19.2556216	146.8281484
14	-19.2554891	146.8467815	40	-19.2550435	146.8279876
15	-19.2589936	146.8437904	41	-19.2548591	146.8279534
16	-19.2619737	146.8413888	42	-19.2548523	146.8278473
17	-19.2647892	146.8385997	43	-19.2560254	146.8274721
18	-19.2654163	146.8350826	44	-19.2544196	146.827464
19	-19.2673136	146.8344889	45	-19.2540043	146.826831
20	-19.2677754	146.8330924	46	-19.2539164	146.8267236
21	-19.2655187	146.8329952	47	-19.2536677	146.8265948
22	-19.2646827	146.8328924	48	-19.2531453	146.8272604
23	-19.2642976	146.8328457	49	-19.2529017	146.8274361
24	-19.2642976	146.8328457	50	-19.2528257	146.8273538
25	-19.2637035	146.8316938	51	-19.2527927	146.8274511
26	-19.2631526	146.8317214			

Appendix B – Location of Lot 40 on SP SP113657 (Port of Cairns)



Appendix C – GPS Coordinates of Lot 40 on SP113657

Point No.	Latitude	Longitude
1	-16.93048	145.77942
2	-16.93051	145.77973
3	-16.93014	145.77980
4	-16.93021	145.78013
5	-16.93246	145.77970
6	-16.93245	145.77941
7	-16.93230	145.77945
8	-16.93234	145.77910
9	-16.93223	145.77923
10	-16.93069	145.77967
11	-16.93064	145.77944

End of Environmnetal Authority