Permit

Environmental Protection Act 1994

Environmental authority EA0001513

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

Environmental authority number: EA0001513

Environmental authority takes effect on 13 January 2021

Environmental authority holder(s)

Name(s)	Registered address
TOWNSVILLE MARINE LOGISTICS PTY LTD	1 Zinc Rd STUART QLD 4811

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
ERA 50 - Mineral and bulk material handling 1: 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 (a) within 5km of the highest astronomical tide or 1km of a watercourse	Lot 430 on EP1068, LOT 448 on SP126597, Lot 449 on SP126597, Lot 450 on SP126597, Lot 460 on SP242513, Lot 791 on EP2348, Port of Townsville (Lot on Plan: A on AP22375) TOWNSVILLE QLD 4810

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).

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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.

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

Date issued: 13 January 2021

Enquiries:
Minerals Business Centre
Department of Environment and Science

Phone: 07 4222 5352
Email: ESCairns@des.qld.gov.au

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

General	
A1	The activity operating under this environmental authority must not be conducted contrary to any of the following limitations: 1. Bulk lead concentrate, other than low grade 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*.
A2	Notwithstanding any other condition, odours or airborne contaminants must not cause environmental harm at any sensitive place or commercial premises.
A3	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.
A4	All monitoring and investigations required by this environmental authority must be undertaken by an appropriately qualified person.

A5	Any records kept or created in relation to this environmental 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.
A6	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.
A7	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 **17 October 2019**; and b) ensure that further audits in accordance with condition A7(a) are conducted at intervals not exceeding once every three years from completion of the initial audit.
A8	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 A6 must be reviewed for effectiveness in minimising the likelihood of environmental harm and updated where required.
A9	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.

A10	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.
A11	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 quantity 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.
Air	
B1	If the environmental authority holder or an authorised person observes a visible release of dust emissions to the atmosphere from mineral concentrate during ship loading or ship unloading or storage activities, the environmental authority holder must: 1. Immediately review and, where necessary, adjust operational controls. 2. If visible releases of dust emissions continue or are repetitive then: i. cease all 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	Contaminants must only be released to air from the point source(s) in accordance with *Table 1 – Point source air release triggers and limits* and the associated requirements.
B3	Contaminants released to air from the point source(s) must not exceed the release limits specified in *Table 1 – Point source air release triggers and limits*.
B4	The environmental authority holder must monitor and record all releases of contaminants required by and in accordance with *Table 1 – Point source air release triggers and limits* and at the associated monitoring frequency.

B5	In the event of any monitoring showing exceedance of any trigger level specified in *Table 1 – Point source air release triggers and limits* the environmental authority holder must: a) take action to ensure compliance with condition B3; and b) investigate the cause of the trigger level exceedance, and: c) review the measures and procedures for the control of point source emissions.

Table 1 – Point source air release triggers and limits

Authorised release point		Contaminant (Total suspended particulate matter (TSP))	Minimum release height (m)	Maximum release trigger level (mg/m^3)	Maximum release limit (mg/m^3)	Monitoring Frequency
Ref	**Description**					
BF1	Sun Metals Mobile Hopper Bag Filter 1 Exhaust Duct	Total suspended particulate matter (TSP)	10.35[1]	20[1] (based on two-minute rolling average)	20[1] (based on fifteen (15) minute rolling average)	Continuous during loading and unloading of bulk minerals
BF2	Sun Metals Mobile Hopper Bag Filter 2 Exhaust Duct		10.35[1]	20[1] (based on two-minute rolling average)	20[1] (based on fifteen (15) minute rolling average)	
SBF	Sun Metals Mobile Shiploader Bag Filter Exhaust Duct		8.00[1]	3[1] (based on two-minute rolling average)	3[1] (based on fifteen (15) minute rolling average)	

[1] Manufacturer's specification

B6	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 must include, but not be limited to the following 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 mineral concentrate 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 mineral concentrate to the environment. 2. Mineral concentrates handled and stored in a packaged manner must be handled and stored in a manner that prevents releases to the environment. *Note: Alternative control technology that provides an equivalent level of control outside of those listed above may be accepted.*

B7	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 mineral concentrate 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 concentrate 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 mineral concentrate 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.*
B8	The environmental authority holder must monitor and record all quality characteristics required by and in accordance with *Table 2 – Ambient Air Quality Trigger Values and Limits* and *Table 3 – Dust Deposition Trigger Values and Limits*.
B9	The activity must not cause or contribute to any exceedance of the air quality limits identified in *Table 2 – Ambient Air Quality Trigger Values and Limits* or *Table 3 – 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 2: 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 one hour averages	Tapered Element Oscillating Microbalance (TEOM) [3]	Continuous [6]	At minimum, monitoring must be carried out concurrently at three (3) locations[10], 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]
Total suspended particulate matter (TSP)	Rolling 24 hour average based on one 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[9] 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)	One in every six 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]

Table 2: 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
Arsenic and its compounds measured as the total metal content in PM_{10} fraction	Calendar year average	High Volume Air Sampler (HVAS)	One in every six 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)	One in every six 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 one 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
Lead and its compounds	Rolling 24 hour average based on one 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

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Table 2: 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
Lead and its compounds measured as the total metal content in total suspended particulates (TSP)	Rolling three month average based on one month averages	High Volume Air Sampler (HVAS)	One in every six 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 [1]
	Rolling 12 month average based on one month averages	High Volume Air Sampler (HVAS)	One in every six 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 [1]
	Calendar year average	High Volume Air Sampler (HVAS)	One in every six 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)	One in every six 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]

Table 2: 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
Nickel and its compounds	Rolling 24 hour average based on one 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
Zinc and its compounds	Rolling 24 hour average based on one 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

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Table 2: 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

[1] Limits based on *Environmental Protection (Air) Policy 2008*.
[2] Department of Environment and Science 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 Science 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 at location 2 (Lennon Drive) do not apply until **9 January 2018**; and
[10] PM_{10} by TEOM (or equivalent) at location 3 (Environment Park) does not apply until **30 June 2019**.

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 3: 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 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 [2]	Calendar year average	Monthly		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

[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.

B10	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 B9.
B11	By 31 March each year, the environmental authority holder must have an appropriately qualified person produce a report that, as a minimum: 1. determines whether compliance with Condition B9 has been achieved for the previous calendar year; and 2. provides a review of the effectiveness of the monitoring program* required by Condition B14. **Note - a collective review under the collaborative Port of Townsville monitoring program may be used to satisfy this requirement.*
B12	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: 1. The cumulative impacts of the increase; and 2. The ambient air quality trigger values and limits identified in *Table 2 – Ambient Air Quality Trigger Values and Limits* and *Table 3 – 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.*

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B13	In the event of any monitoring showing exceedance of any trigger value* specified in *Table 2 – Ambient Air Quality Trigger Values and Limits* or *Table 3 – 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.*
B14	The environmental authority holder must develop and implement and document an ambient air quality and dust deposition monitoring program* by **17 January 2019** 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.*
B15	By **3 December 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: 1. Be developed by an appropriately qualified person; and 2. Identify and include sufficient monitoring locations that provide results representative of the emissions; and 3. Include operational trigger levels and appropriate corrective management response actions to minimise the release of contaminants; and 4. Include the use of continuous, real time air quality monitoring; and 5. Maximise data and monitoring equipment availability; and 6. Be utilised as part of any investigation undertaken pursuant to condition B13.

B16	The environmental authority holder must make air monitoring data as required in *Table 2 – Ambient Air Quality Trigger Values and Limits* and *Table 3 – 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 B9 is not subject to this condition for 30 calendar days or until validated whichever is the sooner.*
B17	The environmental authority holder must ensure all continuous air monitoring data as required in *Table 2 – Ambient Air Quality Trigger Values and Limits* of this environmental authority is electronically available to the administering authority on a daily basis.
Noise	
C1	Noise generated by the activity must not cause environmental nuisance to any sensitive receptor.
Water	
D1	Contaminants that will, or have the potential to cause environmental harm must not be released to waters.
D2	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*'.
D3	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 must be provided to the administering authority on request and any update or variation of the REMP must be provided to the administering authority prior to its implementation. Due consideration must be 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.*

D4	The REMP required by condition D3 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 biological indicators (for macroinvertebrates in accordance with the administering authorities' monitoring and sampling manual (AusRivas Methodology) and metals/metalloids in sediments (in accordance with ANZECC & ARMCANZ (2000), BATLEY and/or the most recent version of AS5667.1 Guidance on Sampling of Bottom Sediments); 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.
Land	
E1	Contaminants that will, or have the potential to cause environmental harm must not be released to land.
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.

Definitions

Note that 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.

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 Science or its successors or predecessors.

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.

bulk mineral concentrate means unpackaged and loose mineral concentrates.

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

commercial place/premises 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.

environmental nuisance as defined in Chapter 1 of the *Environmental Protection Act 1994*.

land does not include **waters**.

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.

low grade lead concentrate means the mineral concentrate product produced as a by-product from Sun Metals Corporation Pty Ltd Townsville refinery where the composition of the product includes no greater than 30% by weight of lead.

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

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 one month averages means the average of the previous 12 months for each month of the year.

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

rolling 24 hour average based on one 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:

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

significant increase means:

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.

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.

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.

Appendices

Figure A—Port of Townsville boundary monitoring locations.



POINT	LATITUDE	LONGITUDE	POINT	LATITUDE	LONGITUDE
1	-19.24368748	146.8333998	27	-19.26267065	146.8306744
2	-19.2433909	146.8354393	28	-19.2612233	146.8299914
3	-19.24283411	146.835486	29	-19.26093014	146.8295715
4	-19.24107913	146.8370449	30	-19.25954372	146.8265543
5	-19.24105794	146.8371682	31	-19.25945635	146.8264794
6	-19.24128188	146.8375156	32	-19.25930697	146.8264446
7	-19.24318191	146.8383103	33	-19.25914102	146.8264273
8	-19.24325182	146.8382075	34	-19.25900001	146.8264624
9	-19.24565511	146.8381525	35	-19.2588342	146.8266024
10	-19.246173	146.8388764	36	-19.25852074	146.8269573
11	-19.24680779	146.8397788	37	-19.25650395	146.828147
12	-19.2474106	146.8406359	38	-19.25591763	146.828226
13	-19.24751944	146.8407187	39	-19.25549216	146.8281484
14	-19.25548914	146.8467815	40	-19.25504351	146.8279876
15	-19.25899363	146.8437904	41	-19.25495917	146.8279534
16	-19.26176737	146.8413888	42	-19.25485233	146.8278473
17	-19.26477892	146.8385997	43	-19.25450254	146.8274721
18	-19.26541631	146.8350826	44	-19.25441936	146.827464
19	-19.26731326	146.834489	45	-19.2540043	146.826831
20	-19.26757754	146.8330924	46	-19.25391646	146.8267236
21	-19.26551957	146.8325952	47	-19.25366677	146.8269548
22	-19.26465827	146.8328924	48	-19.25314538	146.8272604
23	-19.26421976	146.8328457	49	-19.25295017	146.8274361
24	-19.26421976	146.8328457	50	-19.25285257	146.827358
25	-19.26370351	146.8316938	51	-19.25257927	146.8276411
26	-19.26315258	146.8317214			

END OF ENVIRONMENTAL AUTHORITY