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Private and confidential

Audit and Assurance Section Compliance and Enforcement Branch Environment Assessment and Compliance Division Department of the Environment GPO Box 787 Canberra ACT 2601

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28 April 2023

Our reference: RTIO-0989978 Your reference: 2018/8299

To whom it may concern

2022 Annual Compliance Report West Angelas Iron Ore Mine – Deposits C, D and G: 2018/8299

Attached is the 2022 Annual Compliance Report for the West Angelas Iron Ore Mine – Deposits C, D and G as required by *Environment Protection and Biodiversity Conservation Act 1999* approval 2018/8299, Condition 19. This report covers the period from 1 January to 31 December 2022.

Please contact Liam De Souza, Environment Lead, at <u>Liam.DeSouza@riotinto.com</u> <u>mailto:</u>if you have any queries.

Yours sincerely

Sean O'Hanlon

General Manager - West Angelas, Iron Ore

RioTinto

Environment Protection and Biodiversity Conservation Act 1999 Annual Compliance Report

EPBC Approval: 2018/8299

Project: West Angelas Iron Ore Mine - Deposits C, D and G

Report period: 1 January – 31 December 2022

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1 Description of activities

EPBC approval number:	2018/8299
Project name:	West Angelas Iron Ore Mine – Deposits C, D and G
Approval holder:	Robe River Mining Co Pty Ltd
Approval holder's Australian Business Number:	71 008 694 246
Approved action:	To develop iron ore deposits C, D and G, and associated works and infrastructure at the existing West Angelas Iron Ore Mine, Pilbara, Western Australia.
Location of the project:	Pilbara, West Australia
Reporting period:	1 January 2022 to 31 December 2022
Report preparation date:	28 April 2023
Implementation phase(s) during reporting period:	Operational

2 Audit table

Details of compliance with each condition under EPBC approval 2018/8299 are presented in Table 1.

Table 1: EPBC Approval Conditions Compliance Table – EPBC 2018/8299 – West Angelas Iron Ore Mine – Deposits C, D and G

Condition Number	Condition	Compliance status	Evidence/Comments
1	To minimise impacts to EPBC Act listed threatened species , the approval holder must not clear more than 4 310 ha of vegetation within the development envelope at deposits C, D and G as shown in Attachment A, and for associated infrastructure for the development of deposits C, D and G.	Compliant	Aerial photography was collected during the reporting period to reconcile ground disturbance and the prescribed clearing limits were not exceeded. 861ha have been cleared within the development envelope at deposits C, D and G.
2	To minimise impacts to EPBC Act listed threatened species , the approval holder must comply with conditions 5-1(1), 5-1(4), 5-1(5), 5-1(6), 5-2, 5-3, 5-4, 5-5, 5-6, 5-7 and 5-8 (Environmental Management Plan) of the Western Australia approval .	Compliant	A Condition Environmental Management Plan (our ref: RTIO-HSE-0311343) was submitted to the Western Australian Department of Water and Environmental Regulation (DWER) on 2 December 2019 and approved on 15 April 2020 by DWER (DWER ref: DWERT4704). The 2022 Annual Compliance Assessment Report (our ref: RTIO-0990122) recorded compliance (or 'not required') with conditions 5-1(1), 5-1(4), 5-1(5), 5-1(6), 5-2, 5-3, 5-4, 5-5, 5-6, 5-7 and 5-8.
3	To minimise impacts to EPBC Act listed threatened species or their habitat the approval holder must ensure that there is: (a) no drawdown of groundwater associated with the action at the boundary of, or within, Karijini National Park and (b) no change in groundwater quality associated with the action at the boundary of, or within, Karijini National Park.	Compliant	Dewatering activities did not commence for production during the reporting period and therefore no drawdown or change in quality due to the proposal has occurred. The Groundwater EMP (our ref: RTIO-HSE-0349522) required by condition 5 was submitted on 21 February 2021 and approved by the Commonwealth on 19 April 2022 and by DWER on 14 June 2022 and was implemented during the reporting period.
4	A Condition Environmental Management Plan to achieve the outcomes specified in Condition 3 must be submitted for approval by the Minister . The approved Condition Environmental Management Plan must be implemented. The approval holder must not commence dewatering activities unless the Minister has approved the Condition Environmental Management Plan in writing.	Compliant	The Groundwater EMP (our ref: RTIO-HSE-0349522) required by condition 5 was submitted on 21 February 2021 and approved by the Department of Climate Change, Energy, the Environment and Water (DCCEEW) on 19 April 2022 and by DWER on 14 June 2022 and was implemented during the reporting period. No dewatering for production occurred during the reporting period.

Condition Number	Condition	Compliance status	Evidence/Comments
5	The Condition Environmental Management Plan must: (a) provide an explanation of the method to be used to ensure the outcome required by condition 3(a) is met; (b) specify threshold criteria to demonstrate compliance with the environmental outcomes specified in condition 3. Exceedance of the threshold criteria represents non-compliance with these conditions; (c) specify trigger criteria that must provide an early warning that the threshold criteria identified in the Condition Environmental Management Plan may not be met; (d) specify monitoring capable of determining if trigger criteria and threshold criteria are exceeded. The approval holder must have a high degree of certainty that they will ensure the outcomes at condition 3 are met; (e) specify actions to be implemented in the event that trigger criteria have been exceeded; (f) specify threshold contingency actions to be implemented in the event that threshold criteria are exceeded, including ceasing water extraction if necessary; provide the format and timing for the reporting of monitoring results against trigger criteria and threshold criteria to demonstrate that condition 3 has been met.	Compliant	The Groundwater EMP (our ref: RTIO-HSE-0349522) required by condition 5 was submitted on 21 February 2021 and approved by DCCEEW on 19 April 2022 and by DWER on 14 June 2022 and was implemented during the reporting period.
6	In the event that monitoring, tests, surveys or investigations indicate exceedance of triggers or threshold criteria specified in the Condition Environmental Management Plan, the approval holder must: (a) report the exceedance in writing to the Department within five (5) business days of becoming aware of the exceedance; (b) commence implementing the trigger or threshold contingency actions specified in the Condition Environmental Management Plan specified at Condition 4 within 24 hours of becoming aware of the exceedance and, in respect of exceedance of threshold criteria, continue implementation of those actions until the Department has confirmed by notice in writing that the approval holder has demonstrated that the threshold contingency actions are no longer required; (c) investigate to determine the cause of the trigger or threshold criteria being exceeded;	Not Applicable	No exceedance of triggers or threshold criteria occurred during the 2022 reporting period.

Condition Number	Condition	Compliance status	Evidence/Comments
	 (d) investigate to provide information for the Department to determine potential environmental harm or alteration of the environment that occurred due to threshold criteria being exceeded; and (e) provide a report to the Department within twenty-one (21) business days of the exceedance being reported as required by condition 6(a). The report must include: (i) details of trigger or threshold contingency actions implemented; (ii) the effectiveness of the trigger or threshold contingency actions implemented, against the threshold criteria; (iii) the findings of the investigations required by condition 6(c) and 6(d); (iv) measures to prevent the threshold criteria being exceeded in the future; (v) measures to prevent, mitigate and remedy the environmental harm which may have occurred; and justification of the threshold remaining, or being adjusted based on better understanding, demonstrating that outcomes will continue to be met. 		
7	Groundwater management and monitoring must continue until it can be demonstrated that the outcomes specified at Condition 3 can be met without active management.	Compliant	The Groundwater EMP (our ref: RTIO-HSE-0349522) required by condition 5 was submitted on 21 February 2021 and approved by DCCEEW on 19 April 2022 and by DWER on 14 June 2022 and was implemented during the reporting period.
8	To compensate for the residual significant impacts of clearing Ghost Bat (Macroderma gigas) habitat and Pilbara Leaf-nosed Bat (Rhinonicteris aurantia (Pilbara form)) habitat, the approval holder must within six months of the date of this approval, submit an Offset Strategy for the Minister's written approval. The Offset Strategy must be consistent with the principles of the EPBC Act Environmental Offsets Policy and must: (a) specify the approach for providing offsets for the clearing of 507 ha of Ghost Bat habitat and 507 ha of Pilbara Leaf-nosed Bat habitat; (b) identify threats for the Ghost Bat and Pilbara Leaf-nosed Bat; (c) nominate detailed offset projects that will realise a conservation benefit for the Ghost Bat and the Pilbara Leaf-nosed Bat in accordance with relevant approved conservation advice, recovery plans and threat abatement plans and regional conservation plans;	Compliant	Offset strategy was submitted to DAWE on 24 March 2020 (our ref: RTIO-HSE-0342437). A revised Impact Reconciliation Procedure (IRP) (our ref: RTIO-HSE-0354022) was submitted to DWER on 13 July 2021 to meet both Western Australian and Commonwealth offset requirements. The IRP was re-submitted on 30 November 2021 and approved by DWER on 18 August 2022 (DWER ref: DWERA-001283). The first Impact Reconciliation Report (our ref: RTIO-0210819) was submitted on 16 September 2022. DWER has not yet issued an invoice for the offset payment.

Condition Number	Condition	Compliance status	Evidence/Comments
	 (d) if the proposed Offset Strategy includes offset(s) that are not land acquisition, specify a financial commitment to offset projects of at least \$3,000 AUD (exclusive of GST) per hectare of Ghost Bat habitat cleared and, in addition, at least \$821.00 AUD (exclusive of GST) per hectare of Pilbara Leaf-nosed bat habitat cleared. Payments in respect of this commitment must be adjusted in accordance with the CPI released in each calendar year from the date of this approval decision until the date on which any particular payment is made; (e) specify the location and nature of each proposed offset, along with detailed objectives, budget, timeframes, performance and completion criteria for evaluating conservation outcomes, monitoring and reporting requirements; (f) include a description of the potential risks to the successful implementation of each proposed offset (including but not limited to environmental, administrative, financial, and governance risks); (g) include a description of the measures that will be implemented to mitigate risks associated with each proposed offset and a description of the contingency measures that will be implemented if triggers arise or completion criteria are not met; (h) include processes to adaptively manage proposed offsets; and (i) include a justification for how the proposed offsets meet the EPBC Act Environmental Offsets Policy. The approval holder must implement the approved Offset Strategy. The 		
	approval holder must implement the proposed offsets under the Offset Strategy within two months of the approval of the Offset Strategy, or another time as agreed in writing by the Department .		
9	Subject to condition 11, within eight months of approval of the Offset Strategy by the Minister , the approval holder must submit a report to the Department detailing the extent of Ghost Bat habitat and Pilbara Leaf-nosed Bat habitat cleared , and the total amount of offset funds that have been allocated to the offset projects committed under the Offset Strategy and detail the implementation of offset projects. Subsequent reporting periods will be biennial, Subsequent reporting periods will be biennial, addressing the previous two calendar years, with the first biennial reporting period inclusive of the calendar year in which commencement of the action begins and the following calendar year. The approval holder must submit the biennial reports to the Department by the 30 April following the end of each biennial period.	Compliant	Offset strategy was submitted to DAWE on 24 March 2020 (our ref: RTIO-HSE-0342437). A revised Impact Reconciliation Procedure (IRP) (our ref: RTIO-HSE-0354022) was submitted to DWER on 29 June 2021 to meet both Western Australian and Commonwealth offset requirements. The IRP was re-submitted on 30 November 2021 and approved by DWER on 18 August 2022. The first Impact Reconciliation Report (our ref: RTIO-0210819) was submitted on 16 September 2022.

Condition Number	Condition	Compliance status	Evidence/Comments
			DWER has not yet issued an invoice for the offset payment.
10	The approval holder may apply to the Department for a variation to the approved Offset Strategy under condition 8 by submitting an application in writing to the Department . The application must include: (a) the approval holders contact details, including referral number and ABN/ACN (b) a draft of the proposed variation (c) a written statement that sets out the reasons why the approval holder considers that the proposed variation is required. A variation to the approved Offset Strategy must be approved by the Department in writing. If the varied Offset Strategy is approved by the Department , the varied Offset Strategy must be implemented from the date of approval of the varied Offset Strategy.	Not applicable	No variations to the Offset Strategy were required during the reporting period.
11	If a Conservation Offset Fund has been established by the Western Australian Government, and approved by the Minister, then Conditions 8, 9 and 10 may not apply (or may cease to be applied) with the agreement by the Department in writing. In such a case, the approval holder must provide funds biennially to the Conservation Offset Fund. The amount of funds must be based on the area of bat habitat cleared in the biennial reporting period as set out below. Biennial reporting periods will be based on calendar years, with the first biennial reporting period being inclusive of the calendar year in which commencement of the action occurs and the following calendar year. Biennial reports must be submitted to the Department by 30 April following the end of each biennial reporting period. The funds to be paid must be equivalent to the 2019 value of the following amounts by the application of the CPI in each financial year from the date of this approval decision until the date on which any particular payment is made: (a) at least \$3,000 AUD (exclusive of GST) per hectare of Ghost Bat habitat cleared and, in addition; (b) at least \$821.00 AUD (exclusive of GST) per hectare of Pilbara Leafnosed bat habitat cleared. Each payment required by this condition must comprise the total required in respect of the most recently ended biennial reporting period and be received by the Conservation Offset Fund within one month of the end of that biennial reporting period.	Not applicable	The approval holder requested approval from DAWE on 7 June 2021 to use the Pilbara Environmental Offset Fund established by the Western Australian Government (our ref: RTIO-HSE-0353523) in relation to meeting EPBC offsets requirements. The Federal Environment Minister has not yet approved this request.

Condition Number	Condition	Compliance status	Evidence/Comments
12	Prior to making the payment required by Condition 11, the approval holder must submit written evidence to the Department of the total area, including shapefiles , of Ghost Bat habitat and Pilbara Leaf-nosed Bat habitat cleared during the most recently ended biennial reporting period and the calculation (including working out) of the amount of funding that is required to be contributed to the Conservation Offset Fund for that biennial reporting period . Within 48 hours of the payment into the Conservation Offset Fund, evidence of these payments must be provided to the Department in writing.	Not applicable	The approval holder requested approval from DAWE on 7 June 2021 to use the Pilbara Environmental Offset Fund established by the Western Australian Government (our ref: RTIO-HSE-0353523) in relation to meeting EPBC offsets requirements. The Federal Environment Minister has not yet approved this request. The first Impact Reconciliation Report (our ref: RTIO-0210819) was submitted on 16 September 2022. DWER has not yet issued an invoice for the offset payment.
13	The approval holder must notify the Department in writing of the date of commencement of the action within 10 business days after the date of commencement of the action .	Not applicable	Notification of commencement of the action was sent on 8 October 2019 (our ref: RTIO-HSE-0336462). The action commenced on 7 October 2019.
14	If the commencement of the action does not occur within 5 years from the date of this approval, then the approval holder must not commence the action without the prior written agreement of the Minister .	Not applicable	The action commenced on 7 October 2019, within 5 years of the date of the approval.
15	The approval holder must maintain accurate and complete compliance records.	Compliant	Records associated with the conditions of this approval are maintained within the approval holder's document and data management systems.
16	If the Department makes a request in writing, the approval holder must provide electronic copies of compliance records to the Department within the timeframe specified in the request. Note: Compliance records may be subject to audit by the Department or an independent auditor in accordance with section 458 of the EPBC Act , and or used to verify compliance with the conditions. Summaries of the result of an audit may be published on the Department 's website or through the general media.	Not applicable	No requests received during the reporting period.
17	The approval holder must: (a) submit plans electronically to the Department for approval by the Minister; (b) publish each plan on the website within 20 business days of the date the plan is approved by the Minister or of the date a revised action management plan is submitted to the Minister, unless otherwise agreed to in writing by the Minister;	Not compliant	The Groundwater EMP (our ref: RTIO-HSE-0349522) required by condition 5 was submitted on 21 February 2021 and approved by DCCEEW on 19 April 2022 and by DWER on 14 June 2022. The Groundwater EMP was not published on the website within 20 business days of the approval date.

Condition Number	Condition	Compliance status	Evidence/Comments
	(c) exclude or redact sensitive ecological data from plans published on the website or provided to a member of the public; and keep plans published on the website until the end date of this approval.		
18	The approval holder must ensure that any monitoring data (including sensitive ecological data), surveys, maps, and other spatial and metadata required under a plan is prepared in accordance with the Department's <i>Guidelines for biological survey and mapped data</i> (2018) and submitted electronically to the Department in accordance with the requirements of the plan.	Not applicable	There was no requirement to submit monitoring data to the Department during the reporting period in accordance with the Groundwater EMP (our ref: RTIO-HSE-0349522).
19	Following commencement of the action, the approval holder must prepare a compliance report for each previous 12 month calendar year period. The approval holder must: (a) publish each compliance report on the website on or before 30 April for the previous 12 month calendar year period; notify the Department by email that a compliance report has been published on the website within five business days of the date of publication; (b) keep all compliance reports publicly available on the website until this approval expires; (c) exclude or redact sensitive ecological data from compliance reports published on the website; and (d) where any sensitive ecological data has been excluded from the version published, submit the full compliance report to the Department within 5 business days of publication. Note: Compliance reports may be published on the Department's website.	Compliant	The 2021 Annual Compliance Report (our ref: RTIO-HSE-0356253) was published on the approval holder's website on 29 April 2022.
20	The approval holder must notify the Department in writing of any: incident; non-compliance with the conditions; or non-compliance with the commitments made in plans. The notification must be given as soon as practicable, and no later than two business days after becoming aware of the incident or non-compliance. The notification must specify: (a) the condition which is or may be in breach; and a short description of the incident and/or non-compliance.	Not applicable	No incident or non-compliance with conditions and commitments made in plans occurred during the reporting period.
21	The approval holder must provide to the Department the details of any incident or non-compliance with the conditions or commitments made in plans as soon as practicable and no later than 10 business days after becoming aware of the incident or non-compliance, specifying:	Not applicable	No incident or non-compliance with conditions and commitments made in plans occurred during the reporting period.

Condition Number	Condition	Compliance status	Evidence/Comments
	 (a) any corrective action or investigation which the approval holder has already taken or intends to take in the immediate future; (b) the potential impacts of the incident or non-compliance; and the method and timing of any remedial action that will be undertaken by the approval holder. 		
22	The approval holder must ensure that independent audits of compliance with the conditions are conducted as requested in writing by the Minister .	Not applicable	No audits requested.
23	For each independent audit, the approval holder must: (a) provide the name and qualifications of the independent auditor and the draft audit criteria to the Department; (b) only commence the independent audit once the audit criteria have been approved in writing by the Department; and submit an audit report to the Department within the timeframe specified in the approved audit criteria.	Not applicable	No audits requested.
24	The approval holder must publish the audit report on the website within 10 business days of receiving the Department's approval of the audit report and keep the audit report published on the website until the end date of this approval.	Not applicable	No audits requested.
25	The approval holder may, at any time, apply to the Minister for a variation to an action management plan approved by the Minister under condition 4 or as subsequently revised in accordance with these conditions, by submitting an application in accordance with the requirements of section 143A of the EPBC Act . If the Minister approves a revised action management plan (RAMP) then, from the date specified, the approval holder must implement the RAMP in place of the previous action management plan.	Not applicable	No variations required during the reporting period.
26	The approval holder may choose to revise an action management plan approved by the Minister under condition 4, or as subsequently revised in accordance with these conditions, without submitting it for approval under section 143A of the EPBC Act , if the taking of the action in accordance with the RAMP would not be likely to have a new or increased impact .	Not applicable	No revisions required during the reporting period.
27	If the approval holder makes the choice under condition 26 to revise an action management plan without submitting it for approval, the approval holder must: (a) notify the Department in writing that the approved action management plan has been revised and provide the Department with: (i) an electronic copy of the RAMP;	Not applicable	No revisions required during the reporting period.

Condition Number	Condition	Compliance status	Evidence/Comments
	 (ii) an electronic copy of the RAMP marked up with track changes to show the differences between the approved action management plan and the RAMP; 		
	(iii) an explanation of the differences between the approved action management plan and the RAMP;		
	(iv) the reasons the approval holder considers that taking the action in accordance with the RAMP would not be likely to have a new or increased impact; and		
	(v) written notice of the date on which the approval holder will implement the RAMP (RAMP implementation date), being at least 20 business days after the date of providing notice of the revision of the action management plan, or a date agreed to in writing with the Department.		
	subject to condition 28, implement the RAMP from the RAMP implementation date.		
28	The approval holder may revoke their choice to implement a RAMP under condition 26 at any time by giving written notice to the Department . If the approval holder revokes the choice under condition 26, the approval holder must implement the previous action management plan approved by the Minister .	Not applicable	No revisions required during the reporting period.
29	If the Minister gives a notice to the approval holder that the Minister is satisfied that the taking of the action in accordance with the RAMP would be likely to have a new or increased impact , then: (a) condition 26 does not apply, or ceases to apply, in relation to the RAMP; and	Not applicable	No revisions required during the reporting period.
	the approval holder must implement the action management plan specified by the Minister in the notice.		
30	At the time of giving the notice under condition 29, the Minister may also notify that for a specified period of time, condition 26 does not apply for one or more specified action management plans. Note: conditions 26, 27, 28 and 29 are not intended to limit the operation of section 143A of the EPBC Act which allows the approval holder to submit a revised action management plan, at any time, to the Minister for approval.	Not applicable	No revisions required during the reporting period.
31	Within 30 days after the completion of the action , the approval holder must notify the Department in writing and provide completion data .	Not applicable	The action has not been completed.

3 Non-Compliances

3.1 Details of non-compliance(s)

Which implementation condition or procedure was non-compliant?
Condition 17: The approval holder must: (a) submit plans electronically to the Department for approval by the Minister; (b) publish each plan on the website within 20 business days of the date the plan is approved by the Minister or of the date a revised action management plan is submitted to the Minister, unless otherwise agreed to in writing by the Minister; (c) exclude or redact sensitive ecological data from plans published on the website or provided to a member of the public; and
Who detected the non-compliance?
The approval holder.
On what date(s) did the non-compliance occur (if applicable)?
19 April 2022.
Was this non-compliance reported to the Department?
☐ Yes ☐ Reported to DoE verbally Date: ☐ Reported to DoE in writing Date: ☐ No
What correction measure(s), if any, were taken or are proposed to be taken in response to the non-compliance?
The approval holder has implemented the following corrective actions:
 The Groundwater EMP (our ref: RTIO-HSE-0349522) required by condition 5 was published on the approval holder's website on 24 April 2023 as required by condition 17(b).
Who was/is responsible for correcting the non-compliance?
The approval holder.
What date did/will the correction measures commence and/or be completed or the time frame for correction?
The corrective measure was completed by 24 April 2023.
What measures, if any, are in place to prevent re-occurrence of the non-compliance?
Improvement to internal change management process.

4 Groundwater Environmental Management Plan compliance assessment

Groundwater Management conditions are summarised in Table 2 and Table 6 for the Groundwater Environmental Management Plan in accordance with the 2022 Groundwater EMP (our ref: RTIO-HSE-0349522).

Table 2: Environmental Criteria associated with Karijini NP Groundwater Level

Key environmental factor: – Karijini NP Groundwater Level	
Condition 3(a) - Ensure that there is no drawdown of groundwater associated with the action at the boundary of, or within, Karijini National Park	Reporting period 1 January – 31 December 2022
Objective-based Provisions	
Management Targets:	Status report:
1. Target 1: Water levels in bores to the south and north of the MAR scheme in areas outside of the regional aquifer are above or equal to rolling 3 year, seasonally adjusted water levels (mbgl).	
2. Target 2: Water levels in Zone 3 monitoring bores and modelled are above or equal to rolling 3 year, seasonally adjusted water levels (mbgl)	Target 1, 2 and 3 not achieved
3. Target 3 : Water levels in Zone 3 monitoring bores and modelled are above or equal to rolling 5 year, seasonally adjusted water levels (mbgl).	in quarter 4.
4. Target 4: Water levels in Zone 3 monitoring bores and modelled are above or equal to rolling 10 year, seasonally adjusted water levels (mbgl).	
Outcome-based Provisions (Triggers and Thresholds)	
Early Response Indicators:	
 Early Response Indicator 1: Injection bores non-operational outside of proposed plan for operation of the MAR scheme (more than 1 of a paired set of bores inoperable for more than 1 week). Early Response Indicator 2: Two consecutive monitoring periods of drawdown 25 cm greater than Grey Box level for modelled mitigation scenario in Zone 2 monitoring bores. 	Early Response Indicator not reached
Trigger Criteria:	
 Trigger Level 1: Two consecutive monitoring periods of drawdown 50 cm greater than Grey Box level for modelled mitigation scenario in Zone 2 monitoring bores. Trigger Level 2: Two consecutive monitoring periods of drawdown associated with the proposal of 10 cm or greater than the Grey Box level for modelled mitigation scenario in Zone 3 monitoring bores. 	Trigger criteria not exceeded
Threshold criterion:	Status report:
 Threshold Criteria: Two consecutive monitoring periods of drawdown associated with the proposal of 20 cm or greater than Grey Box level for modelled mitigation scenario in Zone 3 monitoring bores. 	Threshold criteria not exceeded

4.1 Groundwater levels - objective based provisions

Objective-based provisions have been applied to groundwater modelling within the project area and eastern Karijini NP to ensure currency and accuracy of groundwater modelling and to guarantee it is a representative and robust base to inform outcome-based provisions. Objective-based management targets and recorded water levels for the 2022 reporting period are provided in Table 3 and Table 4.

As additional data is collected the model becomes more accurate at simulating trends, which will be reflected in target adjustments.

Table 3: Boundary bore monitoring - water levels (mAHD) compared to Target 1 criteria

	Seasonally adjusted water levels (mAHD)	Water level (mAHD) (representative quarterly sample)			erly sample)
Bore ID	3 year	Q1	Q2	Q3	Q4
MB18WAW0003	623.21	NR	623.7	Not collected	623.1*
MB19WAW0006	623.4	NR	624.4	Not collected	623.6
MB21WAD0013	645.26	NR	Not collected	Not collected	645.2*
21TURB-M01	Not drilled	NR	Not drilled	Not drilled	Not drilled

^{*} Exceedance of Target 1 criteria was observed for two bores in quarter 4 monitoring.

Table 4: Zone 3 monitoring - water levels (mAHD) compared to Targets 2, 3 and 4 criteria

	Seasonally adjusted water levels (mAHD)			• • • • • • • • • • • • • • • • • • • •			,
Bore ID	3 year Target 2	5 year Target 3	10 year Target 4	Q1	Q2	Q3	Q4
MB16WAW0005	623.44	623.44	623.3	NR	623.5	623.6	623.6
MB16WAW0007	623.56	623.56	623.42	NR	623.7	623.6	623.6
MB21WAD0017	623.75	623.75	623.61	NR	Not collected	Not collected	623.7*
MB21WAD0015	623.81	623.81	623.67	NR	Not collected	Not collected	623.8*
MB21WAC0001	623.48	623.48	623.34	NR	Not collected	Not collected	623.4*
MB22WAW0001	623.3	623.3	623.16	NR	Not collected	Not collected	623.4
21WAW-M02	Not drilled	Not drilled	Not drilled	NR	Not drilled	Not drilled	Not drilled
WAW-M01	Not drilled	Not drilled	Not drilled	NR	Not drilled	Not drilled	Not drilled
MB17WAW0001	623.68	623.61	623.47	NR	625.3	Not collected	623.7

^{*} Exceedance of Target 2 and 3 criteria was observed for two bores in quarter 4 monitoring.

Target 1, 2 and 3 were not achieved during the reporting period for several bores during quarter 4. Dewatering for production has not occurred in the 2022 reporting period, and therefore results are a result of natural fluctuation and there is no potential impact to KNP water levels from the Proposal. The exceedances of target 1, 2 and 3 target criteria indicates that further work is required to determine correct seasonally adjusted water levels for 3, 5 and 10 year averages and that these exceedances are not indicative of potential impact by the approval holder.

No dewatering activities were undertaken in Deposit D during the 2022 reporting period. Therefore, the exceedance of the target criteria was not deemed to be related to the approval holder's activities. The water level target criteria is undergoing review for the 2023 monitoring period.

Several missed monitoring events occurred in quarter 2 and 3 for water level monitoring due to ineffective change management following the Groundwater EMP approval.

4.2 Groundwater levels - outcome based provisions

Outcome-based provisions in the Groundwater EMP are quantitative triggers and threshold criteria for groundwater drawdown and quality characteristics based on modelling chosen to achieve the environmental outcome of no drawdown associated with the Project at the boundary of, or within Karijini NP.

As the MAR commences and develops, monitoring data collected, including inputs and responses, will be reviewed regularly and used to update models and adapt the use of the scheme to mitigate observed impacts from drawdown associated with dewatering activities.

Outcome-based management targets and recorded water levels for the 2022 reporting period are provided in Table 5.

Table 5: Zone 2 and 3 Water levels (mAHD) in comparison to Grey Box Model - Compliance with Early Response Indicator 2, Trigger Level 1 & 2 and Threshold Criteria

		Water level (mAHD) (representative quarterly sample)			
Bore ID	Grey Box Level	Q1	Q2	Q3	Q4
		Zone 2			
MB16WAW0008	623.61	NR	622.6	622.5	623.6
MB19WAC0007	623.31	NR	623.4	623.4	623.3
MB21WAD0010	623.49	NR	Not collected	623.5	623.5
MB21WAD0012	623.39	NR	Not collected	623.4	Not collected
WAC_M28	Not drilled	NR	Not drilled	Not drilled	Not drilled
WAW_M16	Not drilled	NR	Not drilled	Not drilled	Not drilled
WAW_M17	Not drilled	NR	Not drilled	Not drilled	Not drilled
		Zone 3			
MB16WAW0005	623.57	NR	623.5	623.6	623.6
MB16WAW0007	623.63	NR	623.7	623.6	623.6
MB21WAD0017	623.72	NR	Not collected	Not collected	623.7
MB21WAD0015	623.74	NR	Not collected	Not collected	623.8
MB21WAC0001	623.45	NR	Not collected	Not collected	623.4
MB22WAW0001	623.45*	NR	Not collected	Not collected	623.4
21WAW-M02	Not drilled	NR	Not drilled	Not drilled	Not drilled
WAW-M01	Not drilled	NR	Not drilled	Not drilled	Not drilled
MB17WAW0001	623.7	NR	625.3	Not collected	623.7

^{*}Only one measurement has been taken for MB22WAW0001 historically and therefore insufficient data is available to perform a Grey Box Model calibration based on historical data. Therefore, the grey box model value currently being used is based off bore MB21WAC0001 and is subject to change once further data is collected.

Reinjection bores during the 2022 reporting period were in the commissioning phase and therefore Early Response Criteria 1 has not been exceeded. No exceedances have occurred of Early Response Indicator 2, Trigger Level 1 and 2 and threshold criteria.

Several missed monitoring events occurred in quarter 2 and 3 for water level monitoring due to ineffective change management following Groundwater EMP approval

Grey box model values will continue to be reviewed and refined to better inform outcomes based provisions through the collection of further monitoring data.

Table 6: Environmental criteria associated with Karijini NP water quality

Key er	vironmental factor: – Karijini NP groundwater quality	
Conditi Park	on 3(b) - no change in groundwater water quality associated with the action at the boundary of, or within, Karijini National	Reporting period 1 January – 31 December 2022
Early F	Response Indicators:	
1.	Long term pH trend in Zone 2 monitoring bores over two consecutive monitoring periods is not consistent with trend in control bore. or	Early Response Indicator not reached.
2.	Proportional change in EC in Zone 2 monitoring bores is greater than 20% of proportional change in control bore EC over two consecutive monitoring periods	reactied.
Trigge	r Criteria:	
3.	Long term pH in Zone 2 monitoring bores is not between 6.5 and 8 for two consecutive monitoring periods and trend is not consistent with trend in control bore and is associated with the action.	
	or	Trigger criteria not exceeded.
4.	Proportional change in EC in Zone 2 monitoring bores is greater than 50% of proportional change in control bore EC over two consecutive monitoring periods and is associated with the action.	
Thresh	nold criterion:	Status report:
7.	Long term pH in Zone 3 monitoring bores is not between 6 and 8.5 for two consecutive monitoring periods and trend is not consistent with trend in control bore pH and is associated with the action.	
	or	Threshold criteria not exceeded.
8.	Proportional change in EC in Zone 3 monitoring bores is greater than 80% of proportional change in control bore EC over two consecutive monitoring periods and is associated with the action.	

4.3 Groundwater quality

Table 7: Zone 2 and 3 water quality - compliance with Early Response Indicator 1, Trigger Criteria 1 and Threshold Criterion 1

		pH (pH units)			
Bore ID		Q1	Q2	Q3	Q4
		Zone 2			
MB16WAW0008	Trigger:	NR	Not recorded	Not recorded	8.13
MB19WAC0007	Under 6.5 or	NR	Not recorded	Not recorded	8.32
MB21WAD0010	over 8 for two	NR	Not recorded	Not recorded	8.19
MB21WAD0012	consecutive monitoring	NR	Not recorded	Not recorded	7.91
WAC_M28	periods (not	NR	Not drilled	Not drilled	Not drilled
WAW_M16	consistent with	NR	Not drilled	Not drilled	Not drilled
WAW_M17	control bore)	NR	Not drilled	Not drilled	Not drilled
	Zone 3				
MB16WAW0005		NR	Not recorded	Not recorded	7.92
MB16WAW0007	Threshold:	NR	Not recorded	Not recorded	8.03
MB21WAD0017	Under 6 or over	NR	Not recorded	Not recorded	7.7
MB21WAD0015	8.5 for two	NR	Not recorded	Not recorded	8
MB21WAC0001	consecutive monitoring	NR	Not recorded	Not recorded	7.58
MB22WAW0001	periods (not	NR	Not recorded	Not recorded	7.83
21WAW-M02	consistent with	NR	Not drilled	Not drilled	Not drilled
WAW-M01	control bore)	NR	Not drilled	Not drilled	Not drilled
MB17WAW0001		NR	Not recorded	Not recorded	7.12
		Control Bore			
MB16WAW0005		NR	Not recorded	Not recorded	7.92
MB16WAW0007		NR	Not recorded	Not recorded	8.03

Table 8: Zone 2 and 3 water quality - compliance with Early Response Indicator 2, Trigger Criteria 2 and Threshold Criterion 2

Bore ID	Bore ID EC (µS/cm)			
	Q1	Q2	Q3	Q4
<u>.</u>		Zone 2		
MB16WAW0008	NR	Not recorded	Not recorded	1,030
MB19WAC0007	NR	Not recorded	Not recorded	865
MB21WAD0010	NR	Not recorded	Not recorded	901
MB21WAD0012	NR	Not recorded	Not recorded	1,730
WAC_M28	NR	Not drilled	Not drilled	Not drilled
WAW_M16	NR	Not drilled	Not drilled	Not drilled
WAW_M17	NR	Not drilled	Not drilled	Not drilled
		Zone 3		
MB16WAW0005	NR	Not recorded	Not recorded	1,360
MB16WAW0007	NR	Not recorded	Not recorded	1,000
MB21WAD0017	NR	Not recorded	Not recorded	907
MB21WAD0015	NR	Not recorded	Not recorded	783
MB21WAC0001	NR	Not recorded	Not recorded	918
MB22WAW0001	NR	Not recorded	Not recorded	1,260
21WAW-M02	NR	Not drilled	Not drilled	Not drilled
WAW-M01	NR	Not drilled	Not drilled	Not drilled
MB17WAW0001	NR	Not recorded	Not recorded	1,330
		Control Bore		
MB16WAW0005	NR	Not recorded	Not recorded	1,360
MB16WAW0007	NR	Not recorded	Not recorded	1,000

Water quality was not recorded for two consecutive monitoring periods for any compliance monitoring bore so therefore early response indicator, trigger and threshold criteria cannot be assessed as they require consecutive monitoring period data.

Missed monitoring events occurred in quarter 2 and 3 for water quality monitoring due to ineffective change management following the Groundwater EMP approval. No dewatering activities for production were undertaken in Deposit D during the 2022 reporting period and therefore, there is no potential environmental impact from missed monitoring related to the approval holder's activities.

5 New environmental risks

There are no new environmental risks that have become apparent during the reporting period.

6 Declaration of accuracy

In making this declaration, I am aware that sections 490 and 491 of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) make it an offence in certain circumstances to knowingly provide false or misleading information or documents. The offence is punishable on conviction by imprisonment or a fine, or both. I declare that all the information and documentation supporting this compliance report is true and correct in every particular. I am authorised to bind the approval holder to this declaration and that I have no knowledge of that authorisation being revoked at the time of making this declaration.

Signed:	Saroffele
Full name:	Sean O'Hanlon
Position	General Manager – West Angelas, Iron Ore
Organisation:	Rio Tinto
	1 110 1 11110