



Amendment Report

Licence Number L8562/2011/1

Licence Holder Hamersley Iron Pty Ltd

ACN 004 558 276

File Number: DER2014/000869-1~2

Premises Koodaideri Exploration Camp

Mining Tenement ML252SA Section 2, within
coordinates –E708,070 N7,510,070; E706,830
N7,507,440; E708,850 N7,506,520; E709,670
N7,508,230; E715,870 N7,505,370; E716,310
N7,506,300

NEWMAN WA 6753

Date of Report 23/06/2020

Decision Grant licence amendment

1. Definitions and interpretation

Definitions

In this Amendment Report, the terms in Table 1 have the meanings defined.

Table 1: Definitions

Term	Definition
AACR	Annual Audit Compliance Report
ACN	Australian Company Number
AER	Annual Environment Report
Amendment Report	refers to this document
Category/ Categories/ Cat.	categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
CEO	means Chief Executive Officer of the Department. “submit to / notify the CEO” (or similar), means either: Director General Department administering the <i>Environmental Protection Act 1986</i> Locked Bag 10 Joondalup DC WA 6919 or: info@dwer.wa.gov.au
CS Act	<i>Contaminated Sites Act 2003</i> (WA)
Delegated Officer	an officer under section 20 of the EP Act
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V, Division 3 of the EP Act
DWER	Department of Water and Environmental Regulation
EPA	Environmental Protection Authority
EP Act	<i>Environmental Protection Act 1986</i> (WA)
EP Regulations	<i>Environmental Protection Regulations 1987</i> (WA)
Existing licence	The licence issued under Part V, Division 3 of the EP Act and in force prior to the commencement of and during this Review
Licence Holder	Hamersley Iron Pty Ltd
m ³	cubic metres
Minister	the Minister responsible for the EP Act and associated regulations
MS	Ministerial Statement

Term	Definition
mbgl	metres below ground level
Noise Regulations	<i>Environmental Protection (Noise) Regulations 1997</i> (WA)
Occupier	has the same meaning given to that term under the EP Act
Prescribed Premises	has the same meaning given to that term under the EP Act
Premises	refers to the premises to which this Amendment Report applies, as specified at the front of this Amendment Report
Revised licence	the amended licence issued under Part V, Division 3 of the EP Act, with changes that correspond to the assessment outlined in this Amendment Report
Risk Event	as described in <i>Guidance Statement: Risk Assessment</i>
UDR	<i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i> (WA)
WWTP	Wastewater Treatment Plant

2. Amendment Description

The following guidance statements have informed the assessment and decision outlined in this Amendment Report:

- *Guidance Statement: Regulatory Principles (July 2015);*
- *Guidance Statement: Setting Conditions (October 2015);*
- *Guidance Statement: Licence Duration (August 2016);*
- *Guidance Statement: Decision Making (June 2019);*
- *Guidance Statement: Risk Assessment (February 2017); and*
- *Guidance Statement: Environmental Siting (November 2016).*

2.1. Purpose and scope of assessment

An amendment application was received by DWER from the Licence Holder on 05 March 2020 for the following modifications:

- Category 54 – the addition of a 186 m³/day WWTP3 and spray field to service up to 1800 people (currently 1200 people). The overall capacity of WWTPs onsite will be 558 m³/day, with the addition of this 186 m³/day WWTP3, minus the decommissioning of the old resource evaluation WWTP of 46.5 m³/day.

2.2. Consolidation of licence

As part of this amendment package DWER has consolidated the licence by incorporating changes made under the following Amendment Notice:

- Amendment Notice 1, granted 29 November 2018:
 - Replacement of category 85 with category 54 to facilitate an increase in capacity of WWTP capacity from 46.5 m³/day up to 418.5 m³/day;
 - Increase in the disposal capacity of category 64 from 50 tonnes per annum to 2,000 tonnes per annum and include Special Waste Type 1 and Special Waste Type 2 to cater for the disposal of asbestos wastes, which may be located during the refurbishment of the camp, and clinical wastes from the medical centre; and
 - Modifies the Prescribed Premises boundary to boundary coordinates.

The obligations of the Licence Holder have not changed in consolidating the licence. DWER has not undertaken any additional risk assessment of the Premises related to previous Amendment Notices.

In consolidating the licence, the CEO has:

- Updated the format and appearance of the licence;
- Deleted the redundant AACR form set out in schedule 1 of the previous licence and advise the licence holder to obtain the form from the Department's website;
- Revised licence condition's numbers, and removed any redundant conditions and realigned condition numbers for numerical consistency; and
- Corrected clerical mistakes and unintentional errors.

Previously issued Amendment Notices will remain on the DWER website for future reference and will act as a record of DWER's decision making.

3. Other approvals

The Licence Holder holds four licences to take groundwater under section 5C of the *Rights in Water and Irrigation Act 1914* (GWL 158473(6), GWL 164672(7), GWL 171847(3) and GWL 177962).

The Koodaideri Exploration Camp is also subject to Ministerial Statement, MS 999 (EPA Report 1933) under Part IV of the EP Act.

Two Clearing Permits have been issued under Part V of the EP Act (CPS 2725/3 and CPS 4615/7).

The supporting documentation states that an application to the WA Department of Health for approval to upgrade the WWTP3 facility will be lodged with the Shire of East Pilbara.

4. Amendment history

Table 2 provides the amendment history for L8562/2011/1.

Table 2: Licence amendments

Instrument	Issued	Amendment
L8562/2011/1	15/03/2012	Licence granted.
L8562/2011/1	07/03/2013	Amendment to include category 64 and adjustment to the reporting year
L8562/2011/1	29/11/2018	Amendment Notice 1 Amendment for the following: <ul style="list-style-type: none">• Replace category 85 with category 54 to facilitate an increase in capacity of wastewater treatment from 46.5 m³/day to 418.5 m³/day;• Increase the throughput of category 64 from 50 tonnes per year to 2,000 tonnes per year and include special waste types 1 and 2. The latter is to cater for the disposal of asbestos wastes, which may be located during the refurbishment of the camp and clinical wastes from the medical centre; and• Changes to the boundary of the prescribed premises.
L8562/2011/1	23/06/2020	Amendment Report for an additional 186 m ³ /day WWTP3 and associated spray field to service up to 1800 people (previously 1200). The total capacity of WWTPs onsite will be 558 m ³ /day. This incorporates the current Category 54 capacity of 418.5 m ³ /day, minus 46.5 m ³ /day for the old resource evaluation WWTP which has been decommissioned, and addition of the 186 m ³ /day WWTP3. Also amalgamated Amendment Notice 1.

5. Location and receptors

Table 3 below lists the relevant sensitive land uses in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment.

There are no sensitive residential premises within 15km of the Prescribed Premises. Other than the accommodation for the premises, which is not considered a sensitive receptor, the nearest

residential accommodation is over 15km away at the Yandi, Spinifex and Mulga Downs mining camps.

There is no known contamination of the WWTP 3 site.

Table 3: Receptors and distance from activity boundary

Residential and sensitive premises	Distance from Prescribed Premises
Mine accommodation village	3.2km from the landfill and 950m from WWTP2
Mulga Downs, Yandi and Spinifex mining camps	More than 15km from the premises

Table 4 below lists the relevant environmental receptors in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment.

Table 4: Environmental receptors and distance from activity boundary

Environmental receptors	Distance from Prescribed Premises
Ramsar Sites in Western Australia	7km south of the Fortescue Marshes, which is a proposed Ramsar site
Important wetlands – Western Australia	7km south of the Fortescue Marshes, which is a proposed Ramsar site
Parks and Wildlife Managed Lands and Waters	Approximately 31km east of Karijini National Park
Threatened Ecological Communities and Priority Ecological Communities	7km south of the Fortescue Marshes, which is a proposed Ramsar site, and 13km northwest of the Fortescue Sand Dunes
Threatened/Priority Flora	<p>The Department's GIS records 10 species of threatened or priority flora that can be found within 40km of the premises. This includes two priority 1 species (those recorded from generally less than 5 locations) (<i>Eremophila spongiorcarpa</i> and <i>Tecticornia globulifera</i>), with the others being category 3 or 4. The nearest record of a priority 1 species was 10km to the south west of the premises.</p> <p>The Licence Holder reports that <i>Lepidium catapcynon</i> (recorded on the Departments GIS database above) and <i>Synostemon hamersleyensis</i> (not reported on the database) have been identified in Ministerial Statement 999 as being of conservation significance and protected under that statement. The Licence Holder reports that these species are not within the immediate vicinity of WWTP2 or landfill.</p>
Threatened/Priority Fauna	<p>The Department's GIS has numerous records of threatened or priority fauna from the surrounding area from the following species: <i>Rhinonicteris aurantia</i> (Pilbara leaf nosed bat, listed as vulnerable), <i>Dasyurus hallucatus</i> (northern quoll, listed as endangered), <i>Liasis olivaceus barroni</i> (Pilbara olive python, listed as vulnerable), <i>Falco peregrinus</i> (peregrine falcon, listed as vulnerable), <i>Pseudomys chapmani</i> (pebble mound mouse listed as priority 4) and <i>Macroderma gigas</i> (ghost bat, listed as vulnerable).</p>

6. Risk assessment

In undertaking its risk assessment, DWER will identify all potential emissions pathways and potential receptors to establish whether there is a Risk Event which requires detailed risk assessment.

To establish a Risk Event there must be an emission, a receptor which may be exposed to that emission through an identified actual or likely pathway, and a potential adverse effect to the receptor from exposure to that emission. Where there is no actual or likely pathway and/or no receptor, the emission will be screened out and will not be considered as a Risk Event. In addition, where an emission has an actual or likely pathway and a receptor which may be adversely impacted, but that emission is regulated through other mechanisms such as Part IV of the EP Act, that emission will not be risk assessed further and will be screened out through Table 6.

The identification of the sources, pathways and receptors to determine Risk Events are set out in Table 5 and Table 6 below.

Table 5: Identification of emissions, pathway and receptors during construction

Risk Events						Continue to detailed risk assessment	Reasoning
Sources/Activities		Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts		
Construction, mobilisation and positioning of infrastructure	Vehicle movements on unsealed access roads	Noise	No residences or other sensitive receptors in proximity. Mulga Downs, Yandi and Spinifex mining camps are more than 15km from the premises. Reduced ability for photosynthesis due to smothering of vegetation.	Air / wind dispersion	Health and amenity	No	No receptors nearby. Noise Regulations.
		Dust			Health and amenity Degradation of vegetation	No	No receptors nearby. Applicant will implement the following controls: <ul style="list-style-type: none"> • Clearing restricted to areas required for construction activities; • Rehabilitation of disturbed areas; and • Dust suppression (water sprays, water trucks, control of vehicle movement / restricted speeds).
	Placement of new infrastructure including pipelines, tanks etc.	Noise	No residences or other sensitive receptors in proximity. Mulga Downs, Yandi and Spinifex mining camps are more than 15km from the premises. Reduced ability for photosynthesis due to smothering of vegetation.	Air / wind dispersion	Health and amenity	No	No receptors nearby. Noise Regulations.
		Dust			Health and amenity	No	No receptors nearby. Applicant will implement the following controls: <ul style="list-style-type: none"> • Clearing restricted to areas required for construction activities; • Rehabilitation of disturbed areas; and • Dust suppression (water sprays, water trucks, control of vehicle movement / restricted speeds).

Table 6: Risk assessment for proposed amendments during operation

Risk Event				Consequence rating ¹	Likelihood rating ¹	Risk ¹	Reasoning	Regulatory controls (refer to conditions of the granted instrument)
Source/Activities*	Potential emissions	Potential receptors, pathway and impact	Applicant controls					
WWTP system and pipelines	Nutrient-rich wastewater from the WWTP3 from: <ul style="list-style-type: none"> pipeline leaks/spills that transfer treated effluent from the WWTP to the spray field; and/or overtopping of the tanks of the WWTP system. 	Direct discharge to vegetation causing inundation / smothering and impacting on photosynthesis	Refer to Section 7.	Moderate	Unlikely	Medium	Refer to Section 7.	Refer to Section 7.
Discharge of treated effluent to 9ha spray field	Nutrient-rich wastewater from the WWTP3 discharging to the spray field	Direct discharge to 9 ha area of native vegetation that may result in degradation of that vegetation from pooling of the treated effluent, ingress of weeds, attraction of livestock to the spray field area	Refer to Section 8.	Minor	Unlikely	Medium	Refer to Section 8.	Refer to Section 8.
WWTP3 and spray field	Odour	No residences or other sensitive receptors in proximity. Mulga Downs, Yandi and Spinifex mining camps are more than 15km from the premises.	<ul style="list-style-type: none"> WWTP3 designed (enclosed tanks) and operated to minimise odours; Regular maintenance and daily inspections be conducted; Design specifications; and Regular maintenance 	Slight	Rare	Low	Odour emissions would have minimal onsite impacts and, due to the 15km distance to offsite sensitive receptors, the risk event may only occur in exceptional circumstances.	Infrastructure controls have been included in the licence amendment.
Sludge removal from the A/D Tank is pumped to sludge drying beds adjacent to the WWTP3	Waste sludge or filtrate containing nutrient-rich concentrations	Direct discharge to soils and vegetation in the event of a spillage of waste sludge, rupture of the filtrate pipelines or containment issues with the sludge drying beds and potential infiltration to groundwater.	<ul style="list-style-type: none"> Sludge drying beds are a concrete enclosure divided into two separate beds; Two layers of filter sand to be on the floor of the concrete beds; Concrete floor in each bed contains a slotted under drain that collects filtrate and directs it to a collection sump; and Filtrate from sludge drying beds is transferred back to the WWTP3. 	Slight	Unlikely	Low	Waste sludge or filtrate reaching the environmental may result in minimal onsite impacts and will probably not occur in most circumstances.	Infrastructure controls have been included in the licence amendment.
Removal of old resource evaluation WWTP from the licence	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No modifications to the licence required as this WWTP is not directly mentioned in the licence.

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the Department's Guidance Statement: Risk Assessments (February 2017)

7. Risk Assessment – WWTP pipeline leaks/spills and/or overtopping

Raw sewage will be transferred from the Koodaideri mine village treatment system across to the WWTP3 for treatment through the following stages:

- Influent Screening and Balance Tank;
- Anoxic Tank;
- Denitrification step;
- Aeration / Decant Tank sequence;
- Final Effluent Discharge Tank; and
- Emergency overflows from the Anoxic Tank, Aeration / Decant Tank and Effluent Tank to the Emergency Overflow Pond (and the other tanks are connected to these); and
- Emergency Overflow Pond (already in place).

There is a single temporary sewage transfer pipeline from the Koodaideri Village to the WWTP compound. This temporary pipeline feeds a balance tank that directs the sewage to WWTP2. This temporary pipeline will be decommissioned when the new permanent pipeline is in place.

The new permanent pipeline will follow the permanent access road alignment from the Koodaideri Village to the WWTP compound and will feed a balance tank that directs sewage to WWTP2 and WWTP3.

7.1.1 Description of leaks/spills and/or overtopping

Leaks/spills of pipelines and/or overtopping of the WWTP3 would only occur in the event of a rupture or malfunction of the operating system.

7.1.2 Identification and general characterisation of emission

The WWTP3 will be treating raw sewage so discharges from pipelines leaks/spills or from the WWTP3 may be untreated raw sewage or partially treated sewage that contains elevated levels of 5 day Biochemical Oxygen Demand, Total Suspended Solids, Total Nitrogen, Total Phosphorus, pH, Residual free chlorine and Thermo-tolerant Faecal Coliforms.

7.1.3 Description of potential adverse impact from the emission

Discharge of raw sewage or partially treated sewage to the environment may contaminate soils, vegetation and potentially groundwater. However, the nearest drainage line is approximately 400m from where the WWTP3 will be located and groundwater is approximately 70mbgl.

7.1.4 Criteria for assessment

Raw sewage and partially treated sewage does not meet criteria for allowable discharge to the environment and discharge should only occur as a result of a rupture or malfunction of equipment so would be an UDR.

7.1.5 Licence holder controls

This assessment has reviewed the controls set out in Table 7 below.

Table 7: Licence Holder's proposed controls for pipeline leaks/spills and/or overtopping

Site infrastructure	Description	Operation details
Leaks/spills of pipelines	<ul style="list-style-type: none"> • Permanent pipeline installed below ground within the service corridor that contains power, communications and sewer infrastructure lines; and • Design, manufacture and installation of the permanent pipeline is compliant with all relevant Australian Standards and pressure tested to Australian Standards. 	<ul style="list-style-type: none"> • Regular maintenance and daily inspections to be conducted as there are no leak detection features along the permanent pipelines.
Overtopping of WWTP3	<ul style="list-style-type: none"> • Anoxic Tank, the Aeration / decant Tank and Effluent Tank have emergency overflows to the HDPE lined Emergency Overflow Pond: <ul style="list-style-type: none"> ➢ Capacity 2,000,000L; (in excess of 3 days sewage production with both WWTPs fully loaded (1,674,000L); ➢ Dimensions of 36m x 36m and 2m deep; ➢ Freeboard of 300mm; • Excessive levels in the other process tanks will eventually gravitate to these tanks and discharge to the emergency overflow pond thus preventing overtopping of tanks; and • High level audible and visual alarms will be installed at the plant to notify maintenance personnel of potential issues with the facility; • All tanks in both WWTPs are equipped with overflow piping which directs wastewater to the Emergency Overflow Pond; • The Emergency Overflow Pond is equipped with a pump station to transfer sewage from the Emergency Overflow Pond back to the WWTPs balance tanks; • WWTP compound, including the Emergency Overflow Pond is bunded so that any leaks/spills report to the Emergency Overflow Pond. 	<ul style="list-style-type: none"> • Regular maintenance and daily inspections to be conducted.

7.1.6 Key findings

The Delegated Officer has reviewed the information regarding pipeline leaks/spills and/or overtopping and has found:

1. Raw sewage and partially treated sewage does not meet criteria for allowable discharge to the environment and discharge should only occur as a result of a rupture or malfunction of equipment.
2. Applicant has controls in place with the use of an Emergency Overflow Pond to capture leaks/spills and overtopping and regular maintenance and daily inspections.

7.1.7 Consequence

If raw sewage or partially treated sewage is discharged to the environment, then the Delegated Officer has determined that the impact of the discharge could have mid-level onsite impacts, low level local scale offsite impacts, minimal wider scale offsite impacts and Specific Consequence Criteria (for environment) are at risk of not being met. Therefore, the Delegated Officer considers the consequence of additional seepage to be **moderate**.

7.1.8 Likelihood of Risk Event

The Delegated Officer has determined that the likelihood discharge of raw sewage or partially treated sewage from pipelines or overtopping will probably not occur in most circumstances. Therefore, the Delegated Officer considers the likelihood of additional seepage to be **unlikely**.

7.1.9 Overall rating of pipeline leaks/spills and/or overtopping

The Delegated Officer has compared the consequence and likelihood ratings described above with the risk rating matrix (Table 10) and determined that the overall rating for the risk of raw sewage or partially treated sewage discharge is **medium**.

8. Risk Assessment – Treated effluent discharge to spray field

8.1.1 Description of effluent discharge

Treated effluent from the WWTP3 will be discharged to the 9 ha spray field via 11 rows with, on average 15 impulse sprinklers per row (approximately 165 sprinklers).

8.1.2 Identification and general characterisation of emission

The WWTP3 has been designed with the following treated effluent quality targets shown in Table 8.

Table 8: Water Quality Discharge Criteria

Parameters	WWTP 3 Target Values	Discharge Criteria ¹	WWTP3 Loading Rates Target Values
5 day Biochemical Oxygen Demand	<20mg/L	20 – 30mg/L	N/A
Total Suspended Solids	<30mg/L	25 – 40mg/L	N/A
Total Nitrogen	<30mg/L	20 – 50 mg/L	226.3

Total Phosphorus	<7.5mg/L	6 – 12 mg/L	56.575
pH	6.5 – 8.5	-	N/A
Residual free chlorine	>0.5mg/L	-	N/A
Thermo-tolerant Faecal Coliforms	<1,000 cfu/100mL	<10,000 cfu/100mL	N/A

Note 1: NWQMS, 1997

Key finding: The WWTP3 is designed to meet the most applicable guidelines for concentrations of parameters and loading rates are reasonable.

8.1.3 Description of potential adverse impact from the emission

Discharge of treated effluent to the spray field could result in pooling of wastewater, which could result in attraction of livestock and native fauna. Discharge of the treated wastewater could also lead to the ingress of evasive weeds species and deterioration of native vegetation that is not conditioned to this surplus water supply.

8.1.4 Criteria for assessment

NWQMS, 1997 for concentrations of parameters in treated effluent.

8.1.5 Applicant/Licence Holder controls

This assessment has reviewed the controls set out in Table 9 below.

Table 9: Licence Holder's proposed controls for treated effluent discharge to spray field

Site infrastructure	Description	Operation details
WWTP3	<ul style="list-style-type: none"> Designed to treat sewage to a treated effluent quality as per Section 8.1.2. 	<ul style="list-style-type: none"> Monitoring of treated effluent will occur weekly during commissioning and quarterly following commissioning; and Regular maintenance and daily inspections to be conducted.
Spray field	<ul style="list-style-type: none"> Sized to 9ha so that loading rates for Total Nitrogen and Total Phosphorus are met and to prevent pooling and running off of treated effluent; Spray field to be fully fenced and signposted; and 11 rows with, on average 15 impulse sprinklers per row (approximately 165 sprinklers). 	<ul style="list-style-type: none"> Regular maintenance and daily inspections to be conducted. Weed species are managed as part of a broader program.

8.1.6 Key findings

The Delegated Officer has reviewed the information regarding treated effluent discharge to spray field and has found:

1. The WWTP3 is designed to meet the most applicable guidelines for concentrations of parameters and loading rates are reasonable.
2. Weekly monitoring of treated effluent quality during commissioning and quarterly monitoring of treated effluent quality during operations.

8.1.7 Consequence

If discharge of treated effluent to the spray field occurs, then the Delegated Officer has determined that the impact of the discharge will have low level onsite impacts, minimal local scale offsite impacts, not detectable wider scale offsite impacts, with Specific Consequence Criteria (for environment) likely to be met. Therefore, the Delegated Officer considers the consequence of discharge of treated effluent to the spray field to be **minor**.

8.1.8 Likelihood of Risk Event

The Delegated Officer has determined that the likelihood of adverse environmental impacts from discharge of treated effluent to the spray field occurring will probably not occur in most circumstances. Therefore, the Delegated Officer considers the likelihood of discharge of treated effluent to the spray field to be **unlikely**.

8.1.9 Overall rating of treated effluent discharge to the spray field

The Delegated Officer has compared the consequence and likelihood ratings described above with the risk rating matrix (Table 10) and determined that the overall rating for the risk of discharge of treated effluent to the spray field is **medium**.

A risk rating will be determined for risk events in accordance with the risk rating matrix set out in Table 10 below.

Table 10: Risk rating matrix

Likelihood	Consequence				
	Slight	Minor	Moderate	Major	Severe
Almost certain	Medium	High	High	Extreme	Extreme
Likely	Medium	Medium	High	High	Extreme
Possible	Low	Medium	Medium	High	Extreme
Unlikely	Low	Medium	Medium	Medium	High
Rare	Low	Low	Medium	Medium	High

9. Consultation

Table 11: Summary of consultation

Method	Comments received	DWER response
Local Government Authority advised of proposal	N/A	N/A
Applicant referred draft documents (19 June 2020)	See Appendix 2	See Appendix 2

10. Conclusion

Based on the assessment in this Amendment Report, the Delegated Officer has determined that a licence amendment will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

10.1. Summary of amendments

Table 10 provides a summary of the proposed amendments and will act as record of implemented changes. All proposed changes have been incorporated into the revised licence as part of the amendment process.

Table 12: Licence amendments

Condition No.	Proposed amendments
Premises details	Updated as per Amendment Notice 1
Prescribed premises table	Category 64 Putrescible landfill of 50 tonnes per year updated to 2,000 tonnes per year as per Amendment Notice 1. Category 85 Sewage facility of 46.5 m ³ /day updated to Category 54 Sewage facility of 558 m ³ /day.
Condition 1	New condition - Implemented design and construction/installation requirements for the WWTP3, spray field and sludge drying beds.
Condition 2	New condition - Environmental Compliance Report requirement to ensure that infrastructure is constructed as per construction/installation requirements.
Condition 3	New condition - Explanations for any departures from the

	construction/installation requirements or works not conducted,
Condition 4	New condition - Commissioning commencement to only occur when Environmental Compliance Report submitted.
Condition 5	New condition - Commissioning requirements and timeframe.
Condition 6	New condition - The WWTP3 and spray field to be operated in accordance with the licence conditions following the commissioning period.
Condition 7	Existing condition – Unchanged.
Condition 8	Existing condition – modified as per Amendment Notice 1 to update “irrigation area” to spray fields”
Condition 9	Existing condition – modified from “WWTP” to “WWTPs”.
Condition 10	Existing condition – Unchanged.
Condition 11	Existing condition – modified “WWTP” to “WWTPs”. Included WWTP3 in the title of Table 3. Included WWTP3 in the quarterly monitoring of the treated effluent and included treated effluent monitoring during commissioning of WWTP3.
-	Removal of previous condition referencing NATA and Standard Methods for Examination of Water and Wastewater – APHA-AWWA-WEF. Replaced by new Condition 13.
-	Removal of previous condition referencing the relevant parts of Australian Standard 5667. Replaced by new Condition 13.
Condition 12	New condition – to conduct daily inspections of the WWTP2 and WWTP3 pipelines and WWTP2 and WWTP3 compounds.
Condition 13	New condition – to use AS/NZS 5667 and NATA.
Condition 14	New condition – standard monitoring frequency.
Condition 15	Existing condition – updated to remove the targets for treated effluent quality and instead “report on and discuss” these results of the treated effluent quality obtained. This was amended as part of Amendment Notice 1.
Condition 16	Existing condition – Unchanged.
Condition 17	Existing condition – Unchanged.
-	Removal of liquid chemical storage conditions and replaced by Conditions 18 and 19.
Condition 18	New condition as per DWER Conditions Library.
Condition 19	New condition as per DWER Conditions Library.
Condition 20	Existing condition – Unchanged.
Condition 21	Existing condition – Unchanged.
Condition 22	Condition implemented as part of Amendment Notice 1 for clinical and asbestos

	wastes.
Condition 23	Existing condition – Unchanged.
Condition 24	Existing condition – Unchanged.
-	Removal of existing AER condition and replaced with Condition 25.
Condition 25	New AER condition as per DWER Conditions Library.
-	Removal of existing AACR condition and replaced with Condition 26.
Condition 26	New AACR condition as per DWER Conditions Library.
-	Removal of construction conditions for WWTP2. Compliance Report received 08 July 2019 (DWERDT176969) and DWER response 01 October 2019 (A1828001).
-	Removal of construction conditions for WWTP2. Compliance Report received 08 July 2019 (DWERDT176969) and DWER response 01 October 2019 (A1828001).
-	Removal of construction conditions for WWTP2. Compliance Report received 08 July 2019 (DWERDT176969) and DWER response 01 October 2019 (A1828001).
-	Removal of construction conditions for WWTP2. Compliance Report received 08 July 2019 (DWERDT176969) and DWER response 01 October 2019 (A1828001).
Condition 27	New complaints conditions as per DWER Conditions Library.
Condition 28	New information/recording condition as per DWER Conditions Library.
Condition 29	New information/recording condition as per DWER Conditions Library.
Definitions	Updated to remove and include definitions.
Schedule 1: Maps	Updated maps to include relevant infrastructure.

ALANA KIDD

MANAGER, RESOURCE INDUSTRIES

INDUSTRY REGULATION

An officer delegated by the CEO under section 20 of the EP Act

Appendix 1: Key documents

	Document title	In text ref	Availability
1	Licence L8562/2011/1– Koodaideri Exploration Camp	L8562/2011/1	accessed at www.dwer.wa.gov.au
2	Ministerial Statement 999	MS 999	accessed at www.epa.wa.gov.au/
5	DER, July 2015. <i>Guidance Statement: Regulatory principles</i> . Department of Environment Regulation, Perth.	N/A	accessed at www.dwer.wa.gov.au
6	DER, October 2015. <i>Guidance Statement: Setting conditions</i> . Department of Environment Regulation, Perth.	N/A	
7	DER, August 2016. <i>Guidance Statement: Licence duration</i> . Department of Environment Regulation, Perth.	N/A	
8	DER, November 2016. <i>Guidance Statement: Risk Assessments</i> . Department of Environment Regulation, Perth.	N/A	
9	DER, June 2019. <i>Guidance Statement: Decision Making</i> . Department of Environment Regulation, Perth.	N/A	
10	Email titled “RTIO Licence Amendment Application - Koodaideri L8562 - Cat 54 WWTP” dated 05/03/2020 5:28pm and authored by Rio Tinto	N/A	DWER records (A1873979)
11	Email titled “RE: [External] RE: L8562/2011/1 Koodaideri Exploration Camp Request for Further Information” dated 20/05/2020 2:52pm and authored by Rio Tinto	N/A	DWER records (A1895860)
12	Email titled “RE: [External] FW: APPLICANT NOTIFICATION - NOTICE OF PROPOSED AMENDMENT TO LICENCE L8562/2011/1” dated 19 June 2020 2:53pm and authored by Rio Tinto	N/A	DWER records (A1904840)
13	National Water Quality Management Strategy, Australian Guidelines for Sewage systems – Effluent Management, 1997	NWQMS, 1997	Available at https://www.waterquality.gov.au/sites/default/files/documents/effluent-management.pdf

Appendix 2: Summary of Licence Holder comments

The Licence Holder was provided with the draft Amendment Report on 28 May 2020 for review and comment. The Licence Holder responded on 19 June 2020 and the following comments were received on the draft Amendment Report.

Condition	Summary of licence holder comment	DWER response
Licence history	<p>The Licensee requests that reference to the Resource Evaluation WWTP being decommissioned should be amended to 'no longer operational'.</p> <p>The Resource Evaluation WWTP has not yet been decommissioned therefore it's recommended that the wording be amended.</p>	Updated as requested.
Condition 1: Table 1: Sludge drying beds.	<p>The Licensee requests that the reference 'Filtrate from sludge drying beds is transferred back to the WWTP3' should be amended to "Dried sludge material is to be transferred offsite by a licensed waste carrier, or transported to the approved site landfill for appropriate disposal.</p> <p>The process requires that the sludge is disposed to an appropriately licensed landfill.</p>	Updated to include the sludge disposal requirements, however, the filtrate transfer back to the WWTP3 is to be included in the licence.
Condition 12:	The Licensee requests that Condition 12 be amended to 'The licence holder shall conduct daily inspections of the WWTP2 and WWTP3 aboveground pipelines and the route following the placement of the underground pipeline'.	Updated as requested.
Definitions: Term: WWTP2	The Licensee requests that the definition be amended to 'Wastewater Treatment Plant 2 – the 1200EP facility at the eastern end of the premises'.	Updated as requested.
Definitions: Term: WWTP3	The Licensee requests that the definition be amended to 'Wastewater Treatment Plant 3 – the 600EP facility to the west of WWTP2'.	Updated as requested.