Amendment Report

Application for Licence Amendment

Part V Division 3 of the *Environmental Protection Act 1986*

Licence Number	L4762/1972/14
Licence Holder	Pilbara Iron Company (Services) Pty Ltd
ACN	107 210 248
File Number	DER2013/001057-2
Premises	Greater Tom Price Iron Ore Mine Mining tenements ML4SA, G47/1258, G47/1260, L47/161, L47/209, L47/210, L47/342, L47/552, L47/645, L47/668, L47/698, L47/721, G47/1271, L47/745, L47/824, L47/826 and L47/858 MOUNT SHEILA WA 6751 As defined by the coordinates in Schedule 2
Date of Report	2 March 2023
Decision	Revised licence granted

Alana Kidd

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Alana Kidd
Manager, Resource Industries
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

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1. Decision summary

Licence L4762/1972/14 is held by Pilbara Iron Company (Services) Pty Ltd (Licence Holder) for the Greater Tom Price Iron Ore Mine (the Premises), located at Mining tenements ML4SA, G47/1258, G47/1260, L47/161, L47/209, L47/210, L47/342, L47/552, L47/645, L47/668, L47/698, L47/721, G47/1271, L47/745, L47/824, L47/826 and L47/858, MOUNT SHEILA.

This Amendment Report documents the assessment of potential risks to the environment and public health from proposed changes to the emissions and discharges during the operation of the Premises. As a result of this assessment, Revised Licence L4762/1972/14 has been granted.

2. Scope of assessment

2.1 Regulatory framework

In completing the assessment documented in this Amendment Report, the department has considered and given due regard to its Regulatory Framework and relevant policy documents which are available at https://dwer.wa.gov.au/regulatory-documents.

2.2 Application summary

On 18 October 2022, the Licence Holder submitted an application to the department to amend Licence L4762/1972/14 (Licence) under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought:

- Operation of the South East Prongs Part 1 Waste Fines Storage Facility (SEP WFSF) and associated infrastructure (Figure 1).

  The SEP WFSF utilises a previously mined and dewatered pit at the Premises for the storage of tailings. The SEP WFSF was constructed under works approval W6409/2020/1 (W6409), which is also held by the Licence Holder, with works being completed for the SEP WFSF storage capacity and tailings delivery infrastructure on 25 March 2022 (Rio Tinto 2022b). Commissioning of the works commenced following the submission of the construction compliance report on 29 March 2022. Commissioning has now been completed with commissioning reports for Part 1a (WFSF Pit Storage Capacity and Tailings Delivery Infrastructure) and Part 1b (Tailings Delivery Infrastructure – secondary droppers and emergency droppers) being submitted on 22 April 2022 (Rio Tinto 2022c) and 20 May 2022 respectively (Rio Tinto 2022d). The Licence Holder advised a commissioning report for Part 2 of the development will be submitted when water samples can safely be taken from the supernatant pond once the water levels in the pit are high enough. DWER acknowledged this advice on 2 June 2022.

  The Licence Holder has commenced operating the SEP WFSF, as authorised under W6409, with operational, monitoring and reporting requirements regulated through Time Limited Operation conditions in W6409. Operations consist of depositing waste fines produced from wet processing of mined ore into the SEP WFSF through a series of droppers (spigots). The waste fines are transported to the SEP WFSF through a waste fines line (tailings pipeline). Excess water is recovered from the SEP WFSF through a new decant pump and then pumped back to the existing tailings plant via existing transfer and buffer tanks. A more detailed description of the operations can be found in the Decision Report for W6409 (Decision Report, 2020).

  The Licence Holder has now requested approval to continue these operations at the

Premises through an amendment to the Licence. DWER propose to regulate the new operations by carrying over into the Licence the Time Limited Operation conditions imposed in W6409.

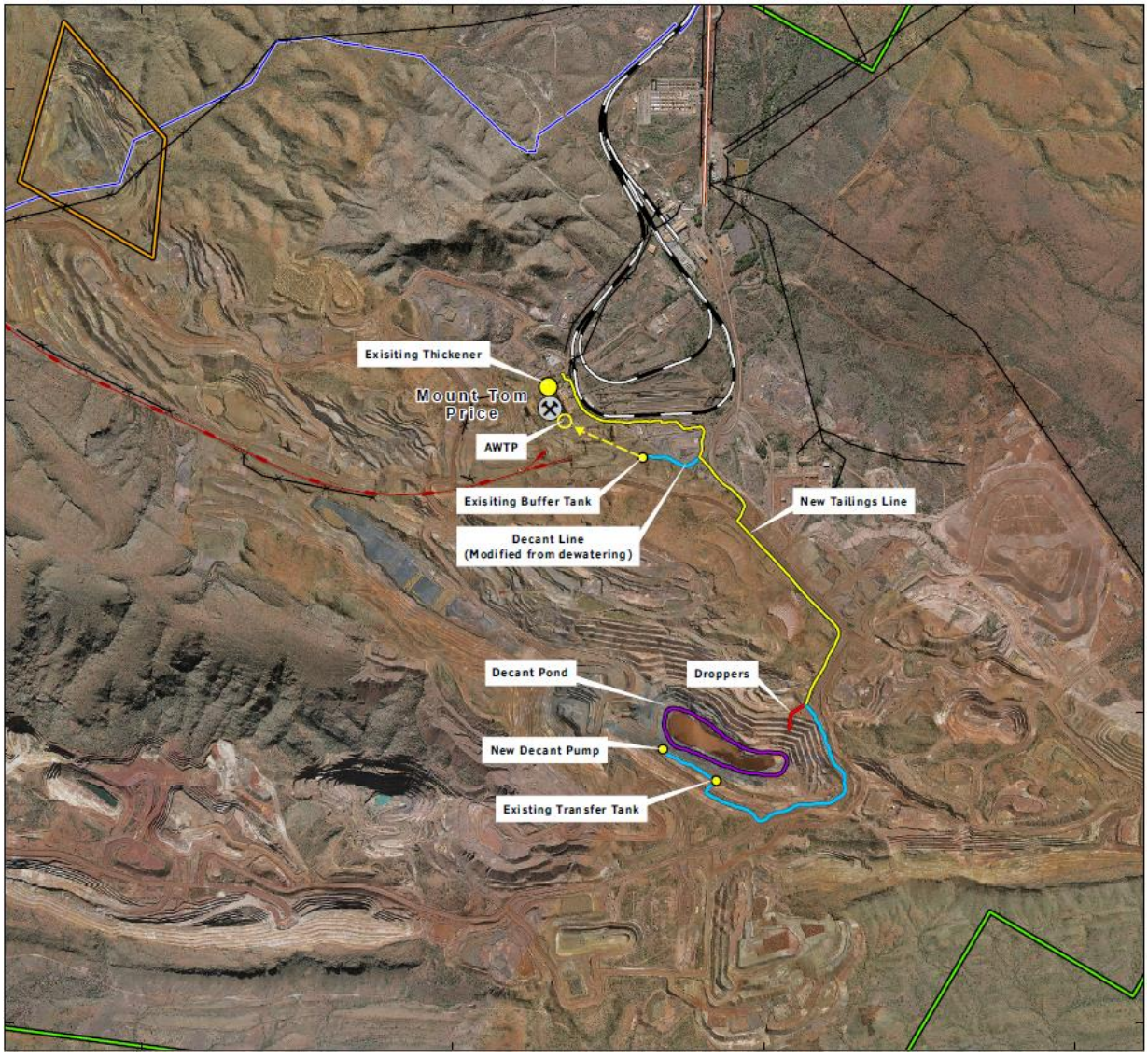

Figure 1: SEP WFSF infrastructure location

- Replace the Tom Price Landfill groundwater monitoring bore MB12TPL01 with existing groundwater monitoring bore MB22TP0001.

  The Licence Holder plans to expand the Tom Price Class II Landfill which will require decommissioning of groundwater monitoring bore MB12TPL01. The Licence Holder proposes to substitute groundwater monitoring bore MB12TPL01 with groundwater monitoring bore MB22TP0001 (Figure 2), which is located approximately 50 m west of MB12TPL01. Existing groundwater monitoring bore TPL02 will not be affected by a proposed increased to the landfill footprint.

Figure 2: Landfill groundwater monitoring bores

3. Risk assessment

The department assesses the risks of emissions from prescribed premises and identifies the potential source, pathway and impact to receptors in accordance with the *Guideline: Risk assessments* (DWER 2020).

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.

3.1 Source-pathways and receptors

3.1.1 Emissions and controls

The key emissions and associated actual or likely pathway during premises operation which have been considered in this Amendment Report are detailed in Table 1 below. Table 1 also details the proposed control measures the Licence Holder has proposed to assist in controlling these emissions, where necessary.

Table 1: Licence Holder controls

Emission	Sources	Potential pathways	Proposed controls
Acid Mine Drainage (AMD)	Runoff from exposed Potentially Acid-Forming (PAF) lithologies in the pit walls of the SEP WFSF	Surface water runoff	• Filling the tailings to 670 mRL or higher to cover exposed PAF lithologies. • An existing Acid Water Treatment Plant (AWTP) will be refurbished so that recovered decant liquor from the SEP WFSF can be treated before being reused to transport tailings back to the SEP WFSF.
Spillage of tailings and decant return water	Tailings delivery pipeline	Direct discharge to land and infiltration to soil	• Use of steel pipework in critical locations (i.e. tee joints). Use of HDPE in all other areas. • Use of magnetic flowmeter installed close to the end of the tailings pipeline to determine if velocity has remained constant. • Pipeline corridor bunded as required. • Sensors to halt pumping if sudden pressure drop is detected. • Suitably sized sumps in low areas along the pipeline routes to contain spillages. • Routine inspection of pipeline infrastructure to identify small or potential leaks.
	Decant return pipeline		• Use of HDPE pipelines. • Pipeline corridor bunded as required. • Suitably sized sumps in low areas along the pipeline routes to contain spillages. • Flowmeter installed on the pipeline between the Decant Pump Units and Transfer Station. • Flowmeters installed at the discharge of AWTP pumps and at the Buffer Tank. • Routine inspection of pipeline infrastructure to identify leaks.
Tailings seepage	Tailings discharge	Seepage to soil/ground adjacent to the WFSF and infiltration to groundwater	• Decant water will be recovered from the WFSF at a minimum rate of 60 L/s during tailings deposition so the water level in the pit remains below groundwater rebound levels for most of operations.

Emission	Sources	Potential pathways	Proposed controls
			• Operate AWTP to improve pond water quality during deposition. • Filling of waste fines to 670 mRL or higher to cover exposed potentially acid-forming lithologies within the pit wall. • Routine groundwater monitoring to compare water quality results with background groundwater sampling results from sampling conducted prior to tailings deposition. The data will be used to identify potential seepage and compare with model predictions. Monitoring data will also enable optimisation of seepage interception bore locations if they become necessary.
Pond water Tailings material	Overtopping	Direct discharge to land and infiltration to soil	• Maintaining freeboard adequate to store a 1:100 year, 72-hour rainfall event. • Contain inflows from a 1:100 year Annual Exceedence Probability (AEP). • Decant pumping at a minimum rate of 60 L/s during tailings deposition. • Routine inspections to monitor tailings and supernatant water levels.

3.1.2 Receptors

In accordance with the *Guideline: Risk assessments* (DWER 2020), the Delegated Officer has excluded employees, visitors and contractors of the Licence Holder's from its assessment. Protection of these parties often involves different exposure risks and prevention strategies, and is provided for under other state legislation.

Table 22 below provides a summary of potential human and environmental receptors that may be impacted as a result of activities upon or emission and discharges from the prescribed premises *(Guideline: Environmental siting* (DWER 2020)).

Table 2: Sensitive human and environmental receptors and distance from prescribed activity

Environmental receptors	Distance from prescribed activity
Threatened and/or priority flora (Figure 3)	The nearest *Eucalyptus victrix* communities to the proposed SEP WFSF have been recorded more than 3 km from the existing pit. The nearest Priority flora records to the proposed SEP WFSF, *Indigofera ixocarpa* (P2), Sida sp. Barlee Range (P3), *Eremophila magnifica* subsp. *magnifica* (P4) and *Lepidium catapycnon* (P4) have been recorded more than 450 m from the existing pit.

Public Drinking Water Source Area (PDWSA)	The SEP WFSF is located within the Priority 1, Paraburdoo Water Reserve (Figure 4). Groundwater sampling was conducted at the SEP WFSF prior to any tailings deposition occurring to establish baseline data (Figures 5, 6 and 7), Rio Tinto 2022b. Note: The existing drinking water borefields are located more than 10 km from the potential impact site
Groundwater and Surface Water Areas	The proposed SEP WFSF is located within the Proclaimed Pilbara Groundwater and Surface Water Areas.

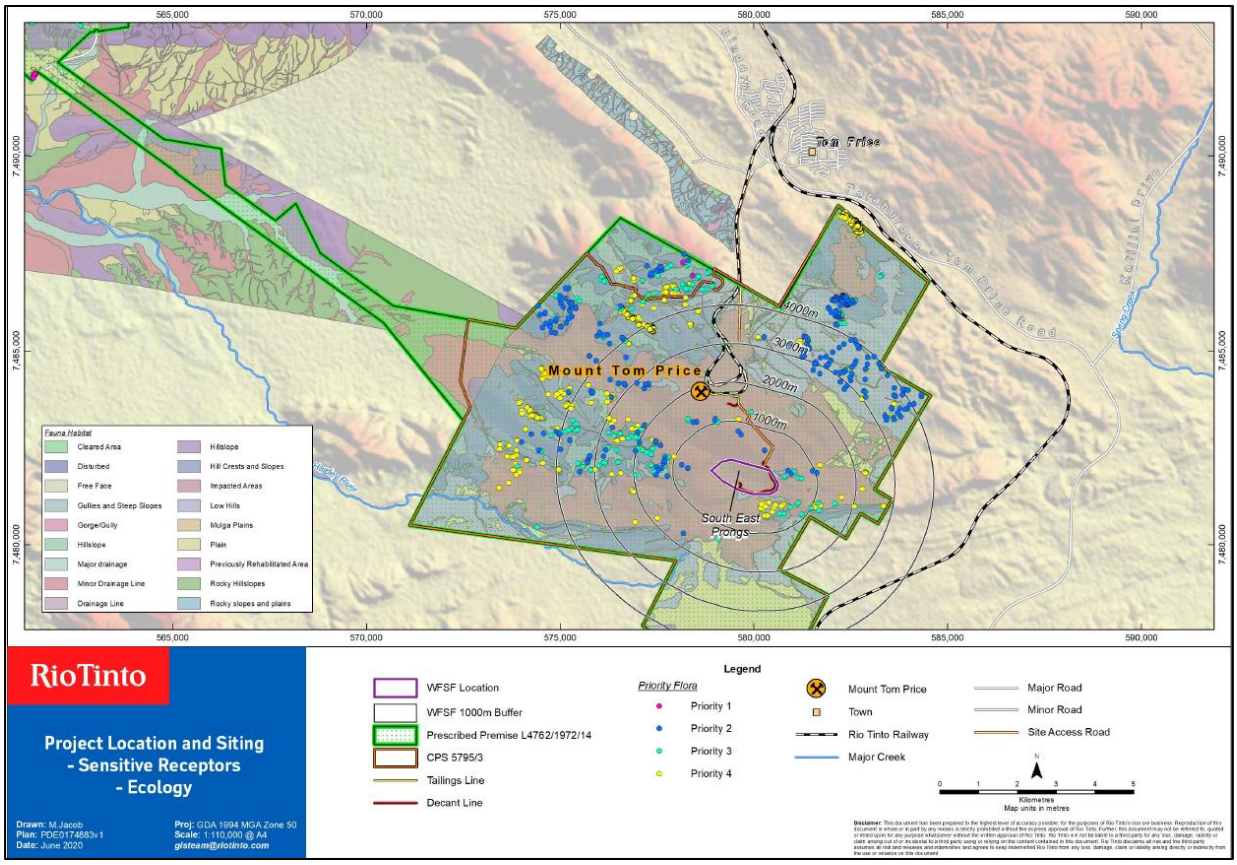

Figure 3: Distance to environmental receptors (ecological)

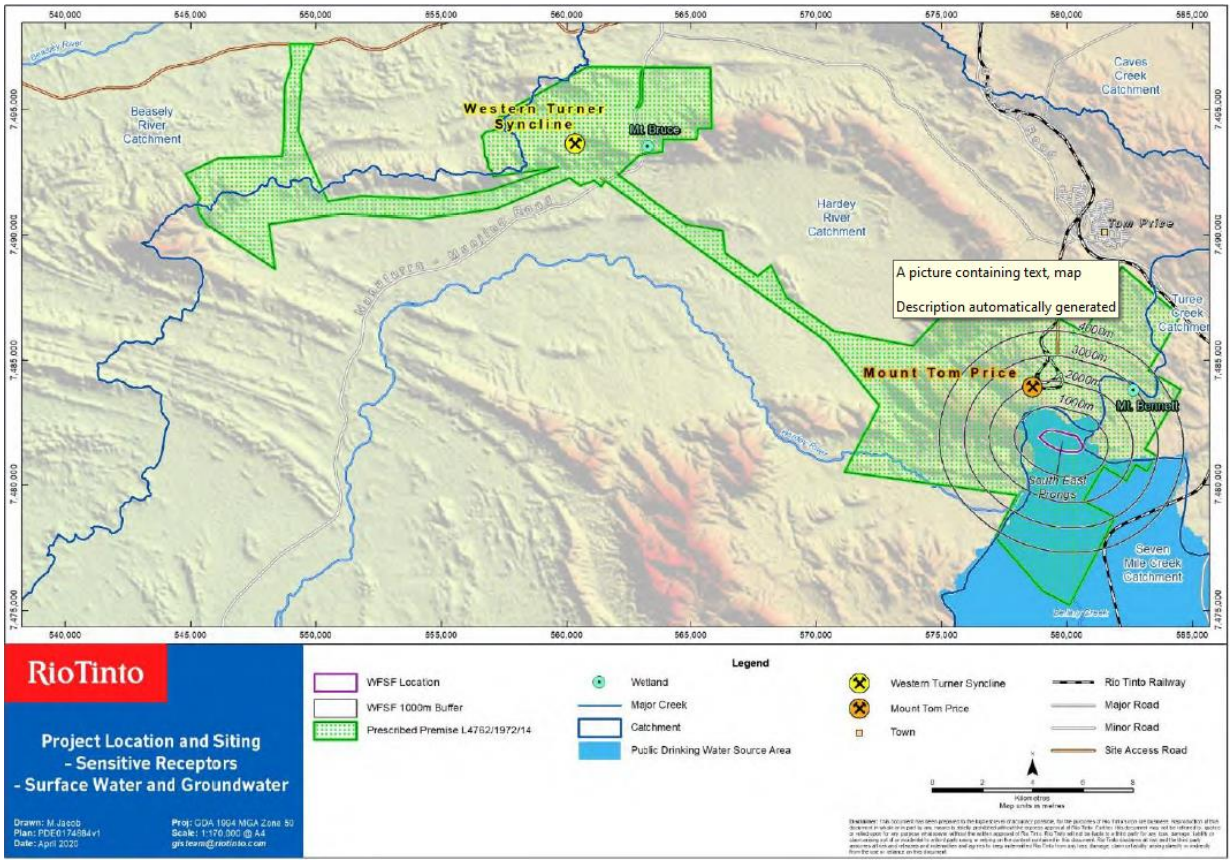

Figure 4: Location of SEP WFSF and PDWSA

	Date	Parameter		
		pH	Alkalinity (HCO3)	Acrylamide (mg/L)
ADWG	-	6.5-8.5	NA	0.0002
MB12SEP04	14/07/2020	7.33	77	-
	8/06/2021	7.22	62	<0.0002
MB10SEP01	8/06/2021	6.34	22	<0.0002
	21/02/2022	6.41	32	<0.0002
PZ07SEP03	13/07/2020	6.18	6	-
	7/06/2021	6.45	7	<0.0002
	21/02/2022	6.24	11	<0.0002
PZ16	14/07/2020	7.75	297	-
	12/05/2021	7.7	264	<0.0002
	8/06/2021	7.7	249	<0.0002
	20/02/2022	7.69	294	<0.0002
MB21SEP0001	19/04/2021	8.32	266	-
	7/06/2021	4.89	<1	<0.0002
	20/02/2022	4.91	<1	<0.0002
MB21SEP0003	12/05/2021	7.29	114	<0.0002
	7/06/2021	7.28	134	<0.0002
	20/02/2022	6.84	61	<0.0002
MB21SEP0004	12/05/2021	12.4	1,520	<0.0002
	7/06/2021	12	586	<0.0002
	20/02/2022	10.2	94	<0.0002
MB18SEP0001	13/07/2020	6.21	6	-
	8/06/2021	5.94	7	<0.0002
	21/02/2022	6.82	40	<0.0002
MB18SEP0002	13/07/2020	7.43	105	-
	7/06/2021	7.48	81	<0.0002
	20/02/2022	7.21	105	<0.0002

Figure 5: SEP WFSF Baseline sampling results for pH, Alkalinity and Acrylamide

	Date	Parameter						
		Calcium (mg/L)	Chloride* (mg/L)	Fluoride (mg/L)	Magnesium (mg/L)	Potassium (mg/l)	Sodium (mg/L)	Sulfate (mg/L)
ADWG	-	**NA**	**250**	**1.5**	**NA**	**NA**	**180**	**250**
MB12SEP04	14/07/2020	6	74	1.2	41	7	24	89
	8/06/2021	6	80	1	49	8	29	87
MB10SEP01	8/06/2021	7	110	0.4	33	10	38	81
	21/02/2022	6	104	0.4	30	10	34	76
PZ07SEP03	13/07/2020	18	213	0.2	29	21	112	134
	7/06/2021	17	224	0.1	28	22	106	130
	21/02/2022	16	222	0.1	27	18	100	143
PZ16	14/07/2020	59	103	0.4	47	7	53	39
	12/05/2021	58	100	0.4	49	7	53	44
	8/06/2021	64	104	0.4	51	8	55	41
	20/02/2022	56	103	0.3	46	7	51	39
MB21SEP0001	19/04/2021	45	101	0.3	35	9	93	46
	7/06/2021	5	219	0.2	22	19	89	63
	20/02/2022	5	217	0.2	22	17	87	60
MB21SEP0003	12/05/2021	45	261	0.3	36	23	120	117
	7/06/2021	48	306	0.4	42	24	136	105
	20/02/2022	30	387	0.2	34	19	151	96
MB21SEP0004	12/05/2021	65	190	1.1	<1	123	702	207
	7/06/2021	50	158	1.8	<1	56	374	146
	20/02/2022	14	115	0.3	<1	19	92	81
MB18SEP0001	13/07/2020	9	109	<0.1	16	11	50	30
	8/06/2021	9	111	<0.1	15	11	42	29
	21/02/2022	13	169	0.2	16	9	91	92
MB18SEP0002	13/07/2020	13	84	0.4	28	5	50	26
	7/06/2021	12	84	0.3	27	5	43	25
	20/02/2022	12	82	0.3	25	4	40	26

Figure 6: SEP WFSF Baseline sampling results for major ions

	Date	Parameter											
		Aluminium* (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron* (mg/L)	Lead (mg/L)	Manganese (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Zinc* (mg/L)
ADWG	-	**0.2**	**0.01**	**0.002**	**0.05**	**2**	**0.3**	**0.01**	**0.5**	**0.05**	**0.02**	**0.01**	**3**
MB12SEP04	14/07/2020	<0.005	<0.0002	<0.00005	0.0003	0.001	0.005	<0.0001	0.0015	0.0001	0.0028	<0.0002	0.009
	8/06/2021	<0.005	0.0021	<0.00005	<0.0002	<0.0005	0.405	<0.0001	0.605	0.0002	0.0042	<0.0002	0.049
MB10SEP01	8/06/2021	0.007	0.0029	<0.00005	<0.0002	0.0008	8.85	<0.0001	0.55	<0.0001	0.042	<0.0002	0.043
	21/02/2022	<0.005	0.002	<0.00005	<0.0002	<0.0005	9.24	<0.0001	0.592	<0.0001	0.0354	<0.0002	0.019
PZ07SEP03	13/07/2020	0.01	<0.0002	<0.00005	<0.0002	0.0016	0.012	0.0003	0.0093	<0.0001	0.0022	0.0051	0.006
	7/06/2021	0.006	<0.0002	<0.00005	<0.0002	0.001	<0.002	<0.0001	0.0826	<0.0001	0.0023	0.0049	0.026
	21/02/2022	<0.005	<0.0002	<0.00005	<0.0002	<0.0005	0.008	<0.0001	0.0292	<0.0001	0.0022	0.0046	0.007
PZ16	14/07/2020	<0.005	<0.0002	<0.00005	0.0017	<0.0005	0.002	<0.0001	0.0009	0.0002	0.0027	0.0015	0.002
	12/05/2021	<0.005	<0.0002	<0.00005	0.0013	<0.0005	0.003	<0.0001	0.0031	0.0002	0.0008	0.0014	0.002
	8/06/2021	<0.005	<0.0002	<0.00005	0.0013	<0.0005	0.003	<0.0001	0.0011	0.0003	0.0007	0.0013	0.004
	20/02/2022	<0.005	<0.0002	<0.00005	0.0016	0.001	0.005	<0.0001	0.0161	0.0002	0.0014	0.0015	0.007
MB21SEP0001	19/04/2021	0.01	<0.001	0.0006	<0.001	0.024	<0.05	0.004	1.3	<0.001	0.015	<0.01	0.336
	7/06/2021	0.463	<0.0002	0.00006	0.0226	0.0396	0.071	<0.0001	0.304	<0.0001	0.0164	0.003	0.021
	20/02/2022	0.61	<0.0002	0.00006	0.0265	0.0458	0.02	<0.0001	0.0769	<0.0001	0.0169	0.0033	0.018
MB21SEP0003	12/05/2021	<0.005	0.0009	<0.00005	<0.0002	<0.0005	0.011	<0.0001	24	0.0005	0.0152	0.0004	0.094
	7/06/2021	<0.005	0.0012	<0.00005	<0.0002	0.0008	0.011	<0.0001	35.8	0.0004	0.0204	<0.0002	0.003
	20/02/2022	<0.005	0.0021	<0.00005	<0.0002	<0.0005	2.03	<0.0001	18.4	0.0002	0.0663	0.0003	0.004
MB21SEP0004	12/05/2021	3.62	0.0014	0.00008	0.0002	0.0027	0.154	0.0005	0.0376	0.0364	0.0816	0.0046	0.036
	7/06/2021	1.91	0.0023	<0.00005	<0.0002	0.0012	0.048	0.0002	0.048	0.0166	0.108	0.0053	0.006
	20/02/2022	0.148	0.0007	<0.00005	<0.0002	<0.0005	0.007	<0.0001	0.0215	0.0035	0.0312	0.006	0.011
MB18SEP0001	13/07/2020	0.007	<0.0002	<0.00005	0.0002	0.0016	0.005	<0.0001	0.0076	<0.0001	0.0086	0.0012	0.01
	8/06/2021	0.008	<0.0002	<0.00005	<0.0002	0.0018	0.012	0.0002	0.0181	<0.0001	0.0076	0.0011	0.02
	21/02/2022	<0.005	0.0003	<0.00005	<0.0002	<0.0005	<0.002	<0.0001	0.0172	<0.0001	0.0026	0.0038	0.002
MB18SEP0002	13/07/2020	<0.005	0.0043	<0.00005	0.0019	0.0015	<0.002	<0.0001	0.0007	0.0002	<0.0005	0.0014	0.009
	7/06/2021	<0.005	0.0037	<0.00005	0.002	0.0005	0.003	<0.0001	0.0045	0.0002	0.0006	0.0014	0.008
	20/02/2022	<0.005	0.0037	<0.00005	0.0021	0.0005	0.002	<0.0001	0.0064	0.0002	0.0006	0.0016	0.004

Figure 7: SEP WFSF Baseline sampling results for metals and metalloids

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for those emission sources which are proposed to change and takes into account potential source-pathway and receptor linkages as identified in Section 3.1. Where linkages are incomplete they have not been considered further in the risk assessment.

Where the Licence Holder has proposed mitigation measures/controls (as detailed in Section 3.1), these have been considered when determining the final risk rating. Where the Delegated Officer considers the Licence Holder's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the licence as regulatory controls.

Additional regulatory controls may be imposed where the Licence Holder's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 3.

The Revised Licence L4762/1972/11 that accompanies this Amendment Report authorises emissions associated with the operation of the Premises i.e. tailings deposition activities.

The conditions in the Revised Licence have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

Table 3. Risk assessment of potential emissions and discharges from the Premises operation

Risk Event					Risk rating[1] C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions[2] of licence	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls				
Operation								
Runoff from exposed PAF lithologies in the pit walls	AMD	Surface water runoff Leaching resulting in the contamination of groundwater by metals and other toxic inorganic constituents	Groundwater Paraburdoo Water Reserve, Priority 1 PDWSA	Refer to Section 3.1	C = Moderate L = Possible **Medium Risk**	Y	Conditions **5, 6, 11, 15**, 16, 19, 20, 21, 24 and 25	Refer to Decision Report 2020 for the detailed risk assessment. Key points summarised below. The SEP contains sulfides in the pit walls which can form sulfuric acid when exposed to oxygen and water. Depositions of waste fines should cover a substantial portion of the exposed sulfides which should reduce the generation of AMD. No groundwater users in the immediate vicinity of the SEP WFSF. Drinking water bores within the Paraburdoo Water Reserve are located over 10km away and generally hydraulically isolated from the SEP WFSF. Use of the AWTP so recovered decant

Risk Event					Risk rating[1] C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions[2] of licence	Justification for additional regulatory controls
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Licence Holder's controls**				
								liquor from the SEP WFSF can be treated before being reused to transport tailings back to the SEP WFSF. Ambient groundwater monitoring conditions have been included to monitor for any localised impacts to groundwater quality and to determine the extent of the impact. Background groundwater quality results were determined prior to TLO commencing. Results will be used for comparison with future groundwater monitoring results. Existing standard recording and reporting conditions apply.
Tailings discharge	Tailings seepage	Seepage from the WFSF potentially contaminating the soil and impacting the quality of groundwater	Groundwater Paraburdoo Water Reserve, Priority 1 PDWSA Soil	Refer to Section 3.1	C = Moderate L = Possible **Medium Risk**	Y	Conditions **5, 6, 11, 15**, 16, 19, 20, 21, 24 and 25	Refer to Decision Report 2020 for the detailed risk assessment. Key points summarised below. Geochemical testing of the tailings material indicates a low Sulfur content

Risk Event					Risk rating[1] C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions[2] of licence	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls				
								which shows the tailings are negligible or no potential for acid drainage to occur. No groundwater users in the immediate vicinity of the SEP WFSF. Drinking water bores within the Paraburdoo Water Reserve are located over 10km away and generally hydraulically isolated from the SEP WFSF. Monitoring of ambient groundwater levels and quality to determine if the SWL is changing potentially indicating seepage from the SEP WFSF or water quality is deteriorating. Background groundwater quality results were determined prior to TLO commencing. Results will be used for comparison with future groundwater monitoring results. Existing standard

Risk Event					Risk rating[1] C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions[2] of licence	Justification for additional regulatory controls
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Licence Holder's controls**				
								recording and reporting conditions apply.
Tailings delivery and decant return pipelines	Spillage of tailings through leaks, pipeline ruptures or failure	Direct discharges to land and infiltration to soil resulting in contamination	Soil Priority flora	Refer to Section 3.1	C = Minor L = Possible **Medium Risk**	Y	Conditions **5, 6, 11,** 20, 24 and 25	Refer to Decision Report 2020 for the detailed risk assessment. Key points summarised below. Operational requirements including daily pipeline and corridor bunding inspections, and maintaining flowmeters and pressure drop sensors. Existing standard recording and reporting conditions apply. General provisions of the *Environmental Protection Act 1986* relating to environmental harm apply.
Overtopping	Pond water Tailings material	Direct discharges to land and infiltration to soil resulting in contamination and vegetation decline	Soil Priority flora	Refer to Section 3.1	C = Moderate L = Rare **Medium Risk**	Y	Conditions **5, 6, 11,** 19, 20, **21**, 24 and 25	Refer to Decision Report 2020 for the detailed risk assessment. Key points summarised below. Water balance modelling indicates a decant rate of

Risk Event					Risk rating[1] C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions[2] of licence	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls				
								approximately 60 L/s maintains the pit water level below RL 685, which is more than 40 m below the overtop level of RL 723. Applicant proposed control conditioned for a minimum decant rate of 60 L/s. Overtopping would result in flooding the adjacent STR3/4 pit in the first instance, and is unlikely to discharge to the surrounding land. Operational requirements included for maintaining freeboard and daily inspections of the freeboard. Existing standard recording and reporting conditions apply. General provisions of *the Environmental Protection Act 1986* relating to environmental harm apply.

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guideline: Risk assessments* (DWER 2020).

Note 2: Proposed Licence Holder's controls are depicted by standard text. **Bold and underline text** depicts additional regulatory controls imposed by department.

Licence: L4762/1972/11

4. Consultation

Table 4 provides a summary of the consultation undertaken by the department.

Table 4: Consultation

Consultation method	Comments received	Department response
Local Government Authority (Shire of Ashburton) were advised of the proposal at the works approval stage on 10/08/2020	None received	N/A
Comment was sort from the Department of Mines, Industry Regulation and Safety (DMIRS) at the works approval stage	DMIRS provided comment on the 27 July 2020 outlining that the following "*key points of the geotechnical assessment are:* • *No significant changes to the mined out SEP pit are required to use it as an in-pit WFSF, and no embankments are required within or outside the pit to contain waste fines.* • *Based on modelling waste fines slurry pond level the average pond level by the end of deposition is expected to be at 680 mRL, which is 43 m below the lowest crest elevation (723 mRL) of the land bridge.* *The documentation recognises that the pond may overtop the land bridge at 723 mRL level and spill into the adjacent STR3/4 pit under a combined scenario of PMP rainfall occurs before the residual decant pond volume has been reduced and the pond level is already too high when waste fines deposition stops. The documentation states that this risk can be managed by decant water pumping at the recommended rate of 48 L/s or higher."*	The department noted the comments provided.
Licence Holder was provided with draft amendment on 2/02/2023	Response provided 1/03/2023 requesting amendment is granted.	N/A

5. Conclusion

Based on the assessment in this Amendment Report, the Delegated Officer has determined that a Revised Licence will be granted, subject to conditions commensurate with the

determined controls and necessary for administration and reporting requirements.

5.1 Summary of amendments

Table 5 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 5: Summary of licence amendments

Condition no.	Proposed amendments
6	Infrastructure and equipment requirements updated to include operational requirements for the SEP WFSF and associated tailings delivery and decant return pipelines.
11	Table 4 updated to include the new SEP WFSF location for the discharge of tailings.
15	Table 8 updated to include emissions and discharge monitoring for the new landfill observation bore and the SEP WFSF.
21	Table 10 updated to include the requirement to report in the AER the monthly volumes of tailings discharged and decant water recovered at the SEP WFSF, and a comparison of the ambient groundwater monitoring results with baseline sampling data and appropriate ANZECC 2000 water quality trigger values.
Definitions	New definitions included for the AWTP and the SEP WFSF.
Schedule 1: Maps	- Figure 9 updated to include new groundwater monitoring bore MB22TP0001 and remove disused groundwater monitoring bore MB12TPL04. - Figure 15. New figure showing the location of the SEP WFSF. - Figure 16. New figure showing the SEP WFSF infrastructure layout. - Figure 17. New figure showing the location of the groundwater monitoring bores at the SEP WFSF.
Schedule 3: Infrastructure and equipment	Table 13 updated to include the infrastructure location for the SEP WFSF and the additional waste fines pipelines associated with the SEP WFSF.

References

1. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
2. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
3. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.
4. Rio Tinto 2022a, Application for a Licence Amendment under the Environmental Protection Act 1986 (WA) – L4762/1972/11 (RTIO-0213871), received 18 October 2022 (DWERDT673261).
5. Decision Report 2020,available at: https://www.der.wa.gov.au/images/documents/our-work/licences-and-works-approvals/Decisions_/W6409-2020-1-D.pdf
6. Rio Tinto 2022b, Compliance Report – W6409/2020/1 SEP WFSF Environment Compliance Report (RTIO-HSE-0358768), received 29 March 2022 (A2092530).
7. Rio Tinto 2022c, Commissioning Report – Tom Price SEP TSF Commissioning Report (RTIO-HSE-0359263), received 22 April 2022 (DWERDT594171).
8. Rio Tinto 2022d, Commissioning Report – Works Approval W6409/2020/1: Tom Price, South-East Prongs Tailings Storage Facility – Environmental Commissioning Report (RTIO-HSE-0359838), received 20 May 2022 (DWERDT606854).

Appendix 1: Application validation summary

<table>
<tr><th colspan="6">SECTION 1: APPLICATION SUMMARY</th></tr>
<tr><td colspan="6">Application type</td></tr>
<tr><td>Works approval</td><td>☐</td><td colspan="4"></td></tr>
<tr><td rowspan="4">Licence</td><td rowspan="4">☐</td><td>Relevant works approval number:</td><td></td><td>None</td><td>☐</td></tr>
<tr><td colspan="3">Has the works approval been complied with?</td><td>Yes ☐ No ☐</td></tr>
<tr><td colspan="3">Has time limited operations under the works approval demonstrated acceptable operations?</td><td>Yes ☐ No ☐ N/A ☐</td></tr>
<tr><td colspan="3">Environmental Compliance Report / Critical Containment Infrastructure Report submitted?</td><td>Yes ☐ No ☐</td></tr>
<tr><td colspan="4">Date Report received:</td></tr>
<tr><td>Renewal</td><td>☐</td><td>Current licence number:</td><td colspan="3"></td></tr>
<tr><td>Amendment to works approval</td><td>☐</td><td>Current works approval number:</td><td colspan="3"></td></tr>
<tr><td rowspan="2">Amendment to licence</td><td rowspan="2">☒</td><td>Current licence number:</td><td colspan="3">L4762/1972/14</td></tr>
<tr><td>Relevant works approval number:</td><td>W6409/2020/1</td><td>N/A</td><td>☐</td></tr>
<tr><td>Registration</td><td>☐</td><td>Current works approval number:</td><td></td><td>None</td><td>☐</td></tr>
<tr><td colspan="2">Date application received</td><td colspan="4">18/10/2022</td></tr>
<tr><td colspan="6">Applicant and Premises details</td></tr>
<tr><td colspan="2">Applicant name/s (full legal name/s)</td><td colspan="4">Pilbara Iron Company (Services) Pty Ltd (PICS)</td></tr>
<tr><td colspan="2">Premises name</td><td colspan="4">Greater Tom Price Iron Ore Mine</td></tr>
<tr><td colspan="2">Premises location</td><td colspan="4">Mining tenements ML4SA, G47/1258, G47/1260, L47/161, L47/209, L47/210, L47/342, L47/552, L47/645, L47/668, L47/698, L47/721, G47/1271, L47/745, L47/824, L47/826 and L47/858, MOUNT SHEILA WA</td></tr>
<tr><td colspan="2">Local Government Authority</td><td colspan="4">Shire of Ashburton</td></tr>
<tr><td colspan="6">Application documents</td></tr>
<tr><td colspan="2">HPCM file reference number:</td><td colspan="4">DER2013/001057-2</td></tr>
<tr><td colspan="2">Key application documents (additional to application form):</td><td colspan="4">• Rio Tinto. Letter, ‘Application for a licence amendment under the Environmental Protection Act 1986 (WA) – Greater Tom Price Iron Ore Mine</td></tr>
</table>

	L4762/1972/14, 15 October 2022. • *Tom Price SEP in-pit TSF Part V Support Document,* 14 January 2020 • RIO Tinto, *Tom Price SEP WFSF Infrastructure* map, October 2022. • Rio Tinto, *Tom Price Landfill* map, September 2022. • Rio Tinto, Tom Price Landfill MB22TPME0001 Borehole Planning Document.
Scope of application/assessment	
Summary of proposed activities or changes to existing operations.	Operation of the South East Prongs Part 1 Waste Fines Storage Facility and associated infrastructure. The works were carried out under works approval W6409/2020/1. Replace the Tom Price Landfill groundwater monitoring bore MB12TPL01 with existing groundwater monitoring bore MB22TP0001.

Category number/s (activities that cause the premises to become prescribed premises)

Table 1: Prescribed premises categories

Prescribed premises category and description	Assessed production or design capacity	Proposed changes to the production or design capacity (amendments only)
Category 5: Processing or beneficiation of metallic or non-metallic ore	40,000,000 tonnes per annum	No change
Category 6: Mine dewatering	11,000,000 tonnes per annual period (Western Turner Syncline Stage 2-B1 and Section 17 Deposits) 7,300,000 tonnes per annual period (Western Turner Syncline Section 10 Deposit) 3,000,000 tonnes per annual period (South East Prongs Deposit)	No change
Category 12: Screening, etc. of material	10,000,000 tonnes per annual period	No change
Category 54: Sewage facility	305 cubic metres per day	No change
Category 64: Class II putrescible landfill site	8,000 tonnes per annual period	No change
Category 73: Bulk storage of chemicals, etc	2,250 cubic metres in aggregate	No change

Legislative context and other approvals		
Has the applicant referred, or do they intend to refer, their proposal to the	Yes ☐ No X	Referral decision No:

EPA under Part IV of the EP Act as a significant proposal?		Managed under Part V ☐ Assessed under Part IV ☐
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes ☐ No X	Ministerial statement No: EPA Report No:
Has the proposal been referred and/or assessed under the EPBC Act?	Yes ☐ No X	Reference No:
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes X No ☐	Certificate of title ☐ General lease ☐ Expiry: Mining lease / tenement ☐ Expiry: Other evidence ☐ Expiry:
Has the applicant obtained all relevant planning approvals?	Yes ☐ No ☐ N/A X	Approval: Expiry date: If N/A explain why?
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes X No ☐	CPS No: 5795 No clearing is proposed under this application.
Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?	Yes ☐ No X	Application reference No: N/A Licence/permit No: N/A
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes X No ☐	Licence/permit No: GWL107418(18)
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes X No ☐	Name: Pilbara Type: Has Regulatory Services (Water) been consulted? Yes X No ☐ N/A ☐ Regional office: North West

Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes X No ☐	Name: Paraburdoo Water Reserve Priority: P1 Are the proposed activities/ landuse compatible with the PDWSA (refer to WQPN 25)? Regulatory Services (Water) have stated "*Existing and future mining proposals are considered compatible with conditions within the water reserve and should be guided by the Water quality protection guidelines for mining and mineral processing 1–11 and other relevant water quality protection notes published by DWER*". Yes X No ☐ N/A ☐
Is the Premises subject to any other Acts or subsidiary regulations (e.g. *Dangerous Goods Safety Act 2004, Environmental Protection (Controlled Waste) Regulations 2004, State Agreement Act xxxx*)	Yes X No ☐	Iron Ore (Hamersley Range) Agreement Act 1963
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes ☐ No X	
Is the Premises subject to any EPP requirements?	Yes ☐ No X	
Is the Premises a known or suspected contaminated site under the *Contaminated Sites Act 2003*?	Yes X No ☐	Classification: Possibly contaminated – investigation required Site ID: 9193 Date of classification: May 2017 Reasoning: Due to the hydrogeochemical properties associated with the interaction of

			Potentially Acid-Forming (PAF) mineral wastes, black shale exposures in wall rock, pit lakes, surface water and groundwater at the Tom Price mine. The SEP pit contains significant exposures of PAF black shale.