



Application for Licence Amendment

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

Licence Number	L4680/1988/13
Licence Holder	FMR Investments Pty Ltd
ACN	009 411 349
File Number	2013/003899-1~9
Premises	Greenfields Processing Site Part mining tenement M15/1836 and Lot 102 on Plan 40393 Great Eastern Highway COOLGARDIE 6429 WA As defined by the Premises maps attached to the Revised Licence in Schedule 1
Date of Report	05/09/2022
Decision	Revised licence granted

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A/MANAGER, RESOURCE INDUSTRIES

REGULATORY SERVICES

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

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1. Decision summary

Licence L4680/1988/13 is held by FMR Investments Pty Ltd (Licence Holder, FMR) for the Greenfields Processing Site (the Premises), located on Lot 102 on Plan 40393, Great Eastern Highway, Coolgardie.

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 construction and operation of the Premises. As a result of this assessment, Revised Licence L4680/1988/13 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 13 May 2022, the Licence Holder submitted an application to the department to amend Licence L4680/1988/13 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought:

- Construction and operation of upstream embankment lift at Cell B and C of Tailings Storage Facility (TSF) 3 from RL402.5m to RL405.0m (Stage 7).

TSF3 is an above ground facility containing three adjacent cells named Cell A, Cell B and Cell C. The Licence Holder has applied for a TSF embankment raise for Cells B and C for ongoing tailings deposition to meet future operational needs. This will include raising the perimeter between containment embankments and cell diving between Cells B and C, decant accessways, decant structures and associated infrastructure. They will utilise dried tailings from TSF3, clayey material from TSF4 and TSF3 and mine waste from other facilities as construction materials. Stage 7 is proposed to provide approximately 7 months of capacity.

Category 5 activities are already authorised under the existing licence, and there will be no change in the assessed design capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which is defined in the licence L4680/1988/13.

2.2.1 Construction

Construction will be undertaken in accordance with the design drawings (Figure 1 and Figure 2) below. At the time of this document, all three cells of TSF3 had a crest level of RL 402.5m. Discharge into Cell A had ceased, and the tailings are in the process of drying. A previous amendment application has been granted by the department for the embankment lift for Cell A and its relating structures including the dividing wall between Cell A and B to a height of RL 405.0m. The stage 7 embankment raise for Cells B and C (from RL 402.5m to 405.0m) will only be undertaken after the Cell A lift, and once the tailings beaches have dried sufficiently enough to safely support the embankments.

The applicant has stated that the main components of the TSF3 Cells B and C Stage 7 embankment raise are as followed:

1. Excavate the dried tailings and clayey borrow material that will be used for the lift
2. Place and compact moisture conditioned dried tailings, mine waste, clayey borrow to form the embankments

3. Undertake QA/QC testing as required using the Australian standards and specification requirements to ensure compliance testing of placed materials
4. Place compacted dried tailings to the decant accessway as part of the embankment formation in order to complete the raise
5. Place compacted road based on embankment crest and decant accessways to form the road running surface
6. Place decant pipes and filter rock around the decant towers to raise the decant facility

The construction of the embankment lifts will be in line with the original report for TSF3. They will be formed on top of the existing embankments and adjacent dried tailings beach. The material of the new embankments and the dividing wall will be sourced from dried tailings and clayey borrow material from the TSFs on site and mine waste sourced from other FMR operated facilities. Decant accessways and associated structures will be raised using well graded mine waste rock and selected filter rock sourced from other FMR facilities. The crest of perimeter embankment, dividing wall and decant accessway will be sheeted with a 0.1m thick wearing course material. The dividing wall will be raised using the centerline construction method. The actual height of the embankment will vary due to natural ground surface variation across the area of the TSF. These variations and other estimated dimensions for all three Cells of TSF3 are listed in Table 1. The capacity of all three Cells is estimated given the following conditions: minimum freeboard of 0.3m, dry tailings production of 1,000,000 tonnes per annum, the density of dry tailings to be 1.4t/m³ and an estimated 1% beach slope.

Table 1. Projected dimensions of TSF3 after Stage 4 of Cell A and Stage 7 of Cells B and C are completed

Properties	Cell A	Cell B	Cell C
Maximum embankment heights, Stage 4/7	9 – 13 m	14 – 18.5 m	12 – 20 m
Upstream, slope angle	1V:2H		
Overall downstream, slope angle	1V:3H		
Embankment crest width	8 m		
Footprint area, Stage 4/7	23.3 ha	7.7 ha	9.0 ha
Tailings storage capacities	815,500 t	269,500 t	315,000 t
Embankment crest levels Stage 4/7	RL 405.0 m		
Embankment crest levels, Final	RL 413.0 m		

Earthworks during the construction phase will mostly include preparatory works, borrow management, moisture conditioning, material placement, embankment raising earthworks, testing and verification to the specification. For the decant structures, construction will also involve installing larger diameter slotted concrete pipes and clean competent rock to surround the decant pipes, accessway and the formation of the access roads.

Throughout the construction period, tailings will continue to be deposited into either of the adjacent cells at TSF3. The combined raise of all three Cells at TSF3 will provide an estimated combined capacity of 16 months.

The embankment raise has been designed and will be constructed to accommodate a 1 in 100-year AEP, 72 hour storm event of 208mm to be temporarily stored within the facilities as long as correct operational controls are followed. These include continuous removal of slurry water surrounding the decant to ensure no breach of licensed freeboard and minimum distance

between perimeter embankment and decant ponds.

2.2.2 Operation

There are no expected departures from the existing operational requirements of the current licence. Tailings will be transported from the process plant to the TSF via HDPE constructed pipeline. When it reaches the TSF, the pipeline will split into two distribution lines which surround the perimeter of the active storage cells.

The deposition will occur over exposed beaches and at low velocity for a period of several days through several spigots (usually 3-4 at a time). Once deposition on each distribution line is complete, the inoperative tailings line will be flushed with return water.

The tailings are deposited sub-aerially from ring mains adjacent to the upstream crest of the embankments. It is discharged through several spigots at any time, located at 20m intervals. The deposition will occur around the perimeter in thin layers not exceeding 0.3m thickness. This will allow each layer of deposited tailings to undergo a drying cycle. By alternating the location of the deposition, it will allow the decant water pond to pool around the main water recovery point. This will help the pond stay away from the perimeter embankments of a minimum distance of 60m.

Inspections are required as per the current licence and will occur for all tailings and water pipelines, discharge locations, tailings deposition, decant systems, internal embankment freeboard, and distance of the decant pond in relation to the decant tower. Operational, safety and environmental aspects will be reviewed during inspection by a suitably experienced and qualified engineer at least once a year.

The operational design of the TSF is constructed to optimise the removal of water from the Cells and return to the processing plant for re-use. By maximising the tailings density, this will help to reduce environmental impact. The water recovery system removes pond water and surface water to be removed by the pumps at the decant towers.

The operational requirements on the current licence specify ongoing monitoring of water balance management through monitoring bores, vibrating wire piezometers and the supernatant pond. Monitoring for volumes of tailings deposited, recovered water from decant towers, and volumes of seepage recovered from seepage sumps and monitoring bores (MB302,MB304,MB305) are all included within the current licence.

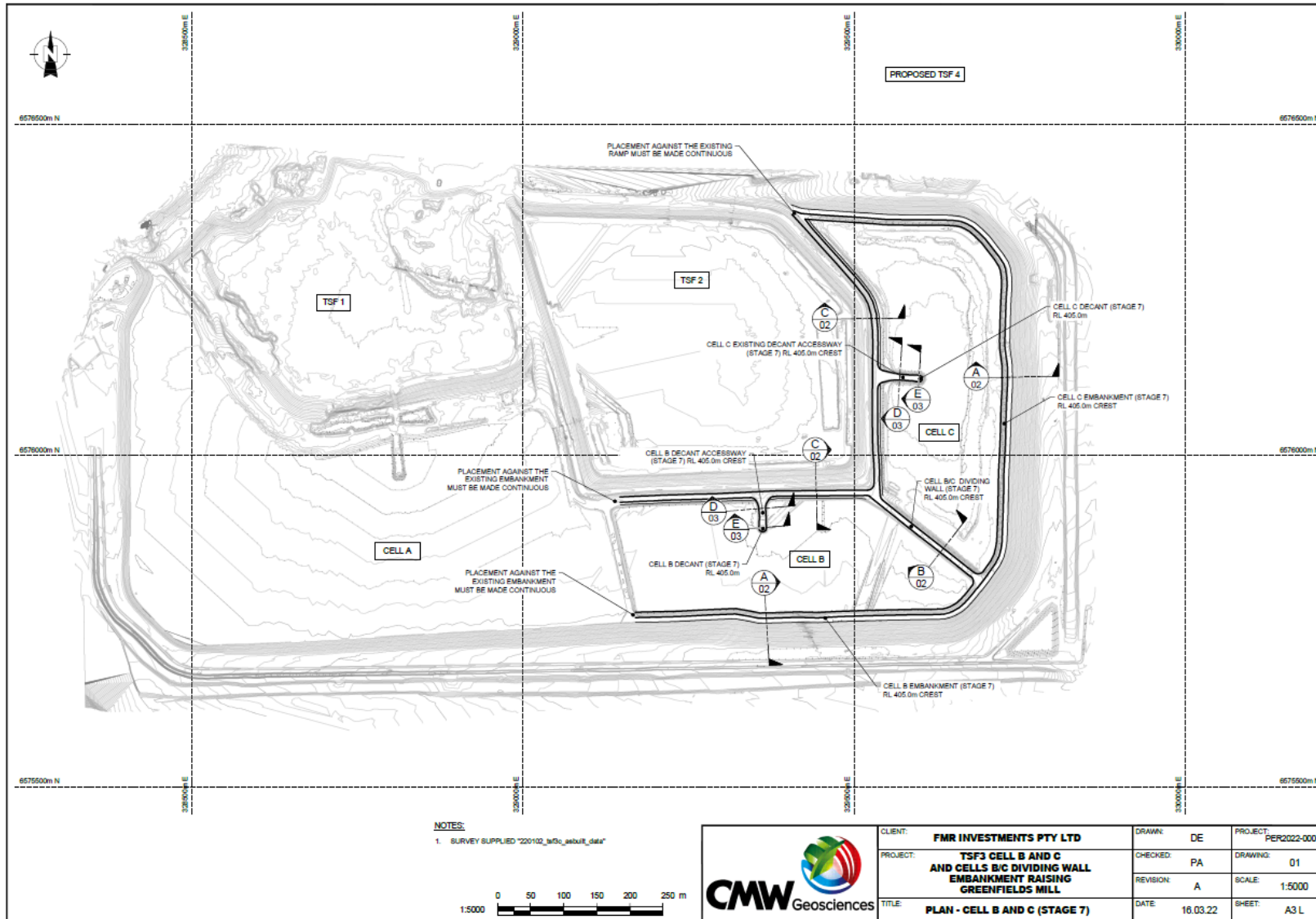


Figure 1: Cell B and C (Stage 7) embankment raise from RL 402.5m to RL 405.0m

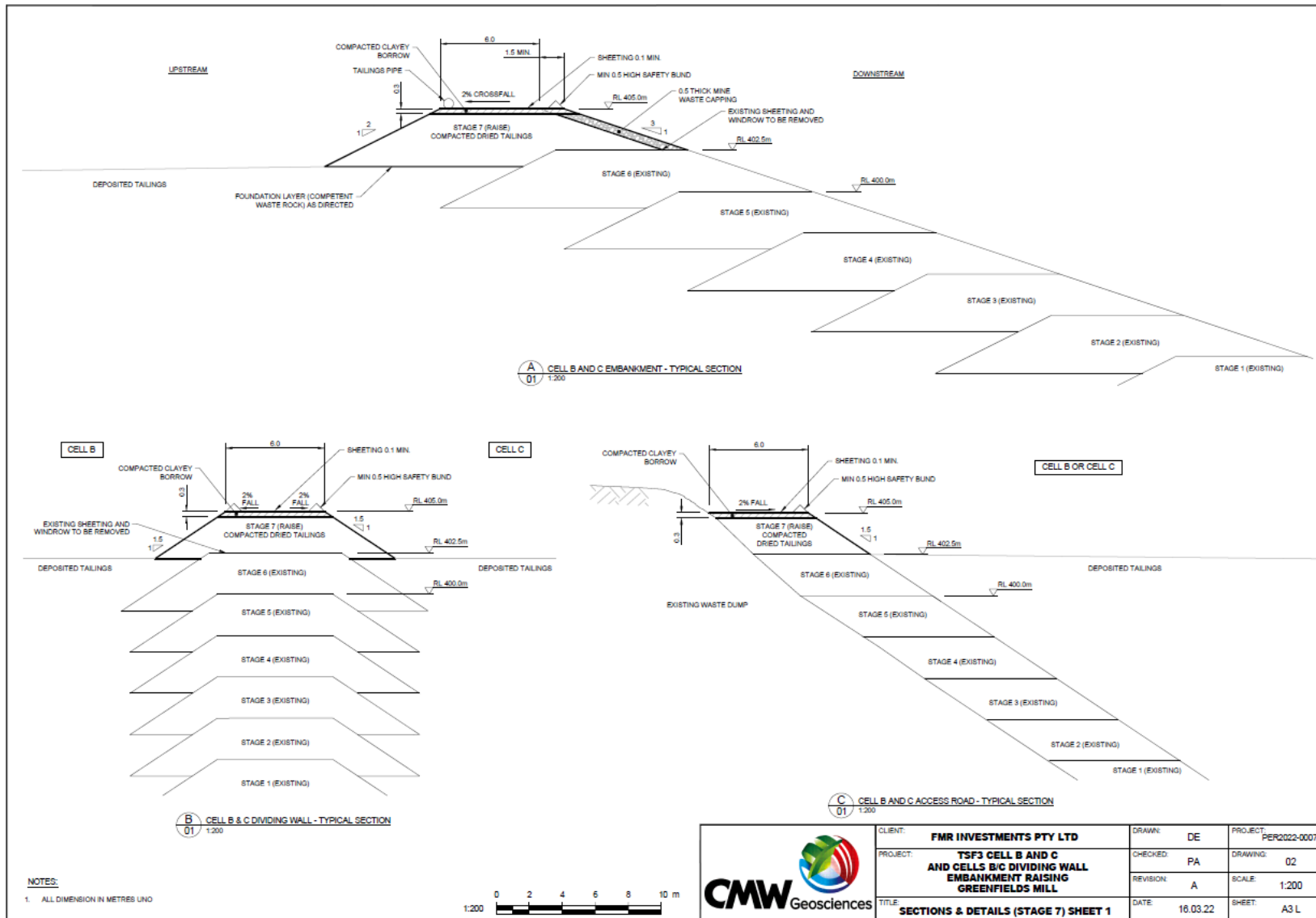


Figure 2. Cell B and C Stage 7 upstream perimeter embankment raise and dividing wall

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 construction and operation which have been considered in this Amendment Report are detailed in Table 2 below. Table 2 also details the proposed control measures the Licence Holder has proposed to assist in controlling these emissions, where necessary.

Table 2. Licence Holder controls

Emission	Sources	Potential pathways	Proposed controls
Construction			
Dust	Construction of tailings embankment and vehicle movements	Air/windborne pathway	<ul style="list-style-type: none"> Use of water carts to control dust
Noise			<ul style="list-style-type: none"> N/A
Operation			
Tailings discharge	Tailings seepage from TSF	Seepage through TSF floor and embankment to groundwater	<ul style="list-style-type: none"> Quarterly groundwater (GW) quality sampling and testing for pH, TDS and WAD cyanide as per licence requirements Monthly monitoring and plotting of the standing water levels (SWL) to assess trends in groundwater movement Minimise decant pond on TSF at all times. Recovery of seepage water back to TSF / directly to the plant
	Overtopping of TSF	Direct discharge to land	<ul style="list-style-type: none"> Ensure the embankment freeboard of 300 mm minimum is not encroached Maintain the decant pond a minimum of 60 m away from the perimeter embankments. Maintaining flow meters to monitor water recovery which is to be checked against the water balance model predictions

Emission	Sources	Potential pathways	Proposed controls
Construction			
	Tailings delivery / return water pipeline failure		<ul style="list-style-type: none"> Routine inspections during each shift of the piping systems and operation of the return water pumps Construction of bunded pipeline corridor. Use of leakage detection system.
	Embankment wall failure		<ul style="list-style-type: none"> Maintaining the water pond around the decant structure below one-quarter of the distance to the perimeter embankment Ensure water never ponds against the perimeter embankments

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 3 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 3: Sensitive human and environmental receptors and distance from prescribed activity

Human receptors	Distance from prescribed activity
Town of Coolgardie	3km south-west of the premises Screened out as a sensitive receptor due to distance.
Pastoral activities	The freehold land on which the TSF is located is surrounded by pastoral leases
Environmental receptors	Distance from prescribed activity
Aboriginal Sites and Heritage Places	<ul style="list-style-type: none"> Kurkutjutana (ID 3009) – 1.3 km southwest of the premise. Kurrkurti (ID 1475) – 2.3 km southwest of the premise. Roundhead/Ngumarn (ID 32761) – 2.5 km west of the premise. Kurkuli/Coolgardie Lookout (ID 32759) – 3.2 km southwest of the premise Coolgardie Stones (ID 1568) – 3.3 km southwest of the premise. Screened out as a sensitive receptor due to distance.
Priority Flora	Several Priority flora species listed in the area around the Coolgardie town site (3km south-west)
Native vegetation	Adjacent native vegetation (along the northern and eastern borders of premises boundary)

Threatened Fauna	Mallefowl (<i>Leipoa ocellata</i>) – classified as Vulnerable, nearest sighting was 2.4km north of premises boundary
Groundwater (GW)	<ul style="list-style-type: none"> • Premise is within the Goldfields Proclaimed Groundwater Area • Maximum GW levels recorded in monitoring bores across site were varied from 4.2 meters below ground level (mbgl) along southern boarder of Cell A to 19.8 mbgl in north-eastern corner of premises. • Max water levels in adjacent bores to Cells B and C were in south-east corner being 10.8 and 10.1 mbgl. • Newly installed bores MB309-312 have water levels recorded monthly from October 2021 with the highest standing water level (SWL) at 15.9 mbgl and an overall rise in levels between 0.1 to 1.0m. • Total dissolved solids (TDS) across site ranged from 6,000 mg/L to 110,000 mg/L • pH of groundwater across site ranged from 3.4 to 7.5 • Groundwater has no potable use with uses limited mainly for mining processing.
Surface water bodies/lines	<ul style="list-style-type: none"> • Brown Lake (ephemeral salt lake) is 5.5km east of the premises boundary <ul style="list-style-type: none"> ○ Forms part of a chain of lakes, including Red Lake, Blue Lake, White Lake and Douglas Lake • There is an ephemeral surface water line which appears to be a tributary for Brown Lake that runs directly through the premises <p>Topography of the area suggests any surface area will run easterly into the Brown Lake catchment.</p>

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 4.

The Revised Licence L4680/1988/13 that accompanies this Amendment Report authorises emissions associated with the operation of the Premises i.e. The conditions in the Revised Licence have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

Table 4. Risk assessment of potential emissions and discharges from the Premises during construction and 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				
Construction								
Construction of tailings embankment for TSF 3 Cells B and C	Dust	Pathway: Air/windborne pathway	Adjacent native vegetation Threatened fauna & Priority flora	Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y	Updated Condition 8: design and construction requirements – dust to be minimized by use of water carts	The Delegated Officer considers the Licence Holders' controls to be sufficient in managing the risk. These have been conditioned in the revised licence as regulatory controls.
	Noise	Impact: environment, health and amenities	Threatened fauna				N/A	N/A
Operation								
Operation of embankment of TSF 3 Cells B and C	Leachate from TSF	Pathway: seepage through TSF walls and floor	Adjacent native vegetation	Refer to Section 3.1	C = Moderate L = Possible Medium Risk	Y	Existing Condition 4: containment infrastructure	Refer to Section 3.3
		Impact: causing mounding of the groundwater table resulting in stress / death of vegetation at surface	Groundwater				Existing Condition 6: seepage management Existing Condition 7: infrastructure inspection Existing Condition 17: seepage recovery Existing Condition 18: GW monitoring – specifically the limits Existing Condition 27: annual TSF audit	

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				
		Impact: to groundwater quality						
	Tailings /return water discharge from pipeline rupture	Pathway: direct discharge to land Impact: contamination of soils, surface water, pastoral leases and amenities	Adjacent native vegetation Pastoral leases Surface water drainage lines		C = Minor L = Possible Medium Risk	Y	Existing Condition 3: pipeline requirements Existing Condition 7: pipeline inspection	There will be no significant changes to the specification of the tailing's delivery pipeline. The Delegated Officer determines that existing licence conditions are acceptable to mitigate risks associated with pipeline rupture.
	Tailings discharge from embankment failure	Pathway: direct discharge to land Impact: contamination of soils, surface water, pastoral leases and amenities	Adjacent native vegetation Pastoral leases		C = Major L = Unlikely Medium Risk	Y	Existing Condition 4: containment infrastructure requirements Existing Condition 5: TSF freeboard limits to contain rainfall events	The Delegated Officer determines proposed applicant controls and existing licence conditions will be acceptable to mitigate risks associated with TSF embankment failure.
			Surface water bodies		C = Moderate L = Unlikely Medium Risk		Existing Condition 6: restrictions on supernatant pond on TSF – distance to embankment walls Existing Condition 7: freeboard & supernatant pond inspection Existing Condition 27: annual TSF audit	The department sought out advice from DMIRS regarding the stability and design of the TSF. DMIRS confirmed that the design of the TSF embankment lifts complies with the relevant <i>Codes of Practice and Guidelines</i>
	Tailings discharge from TSF overtopping	Pathway: direct discharge to land Impact: contamination of	Adjacent native vegetation Pastoral leases		C = Moderate L = Unlikely Medium Risk	Y	Existing Condition 5: freeboard limit Existing Condition 6: supernatant pond requirements Existing Condition 7: freeboard	The Delegated Officer determines proposed applicant controls and existing licence conditions will be acceptable to mitigate risks associated with TSF overtopping.

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				
		soils, surface water, pastoral leases and amenities	Surface water bodies		C = Minor L = Unlikely Medium Risk		inspection Updated Condition 8: construction requirements	

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.

3.3 Detailed risk assessment for seepage from the TSF

3.3.1 Source, Pathway, Receptor

Seepage occurs as a natural process of TSFs during the drying process of tailings slurry once delivered to the facility. TSFs are designed to allow drainage to assist this process in removing excessive moisture in the tailings. As the tailings are dried through evaporation and seepage, they harden, allowing continued tailings deposition at the site. The liquid that is combined with the waste material from the processing plant leaches out from the base of the TSF, contaminating the groundwater below. The general trend of groundwater movement over the premises appears to move in a south / south-east direction.

Groundwater quality

Groundwater is a primary receptor impacted by seepage. Seepage can affect the quality of groundwater as it may consist of higher concentrations of certain metals that are found in waste material. The contamination of groundwater from metals derived from waste material can impact the beneficial uses of that resource. The tailings characteristics has been assessed as being non-acid generating with a low net acid-producing potential (CMW, 2022). The groundwater beneath the premises is generally more saline with very limited uses, mostly for mining purposes.

Groundwater quality monitoring occurs as per current conditions on the licence. Monitoring occurs from 12 bores located along the southern and eastern perimeter of TSF3. Lowest pH was recorded in the south-east of Cell C at 3.4. The salinity data varied greatly across bores between 6,000 to 110,000mg/L. Large variations recorded in the same bore have been indicated to occur due to rainfall infiltrating the bores. Weak Acid Dissociable (WAD) cyanide concentrations remained below the DWER licence limit of 0.5mg/L across the premises. Sampled metal concentrations were generally low with a few exceptions that exceeded limits set in ANZECC guidelines.

Bores in the south-east and north-east of Cell C had recordings of exceedance in Aluminium, Arsenic, Iron and Lead. Manganese levels were recorded as elevated in all bores. Iron and Nickel were recorded in exceedance in bores associated with Cell B.

Groundwater levels

As mentioned above, the natural groundwater of the area has limited uses outside of mining processing. The changes in groundwater from mounding under and around the TSF can cause impacts to adjacent native vegetation. Elevated levels of groundwater due to seepage can impact nearby vegetation by inundation of the root zone by saline water. This can cause severe impacts to health and appearance, and even resulting in death of vegetation. Maximum groundwater levels that were recorded between December 2020 and 2021 varies between 4.2 mbgl to the south of Cell A to 18.9 mbgl in the north-east of Cell C. Historically, SWL have exceeded the 4 mbgl limit in bores along the southern boarder of Cell B, which have since recorded maximum SWL of 10.8 and 11.9 mbgl. Groundwater level trends can be reviewed in Figure 3 and

Figure 4, which provide data from bores associated with Cell B and C respectively. Increasing SWL trends can be observed in all bores associated with these cells, exceeding the licence limit in 2 bores during October 2019 and March 2020. As part of the management plan to ensure more comprehensive monitoring and management of seepage from TSF3, 4 additional monitoring bores were installed south of TSF3. Monitoring of these bores began in October 2021. Since then, the highest SWL recorded in these was 15.8 mbgl to the south-east of the TSF.

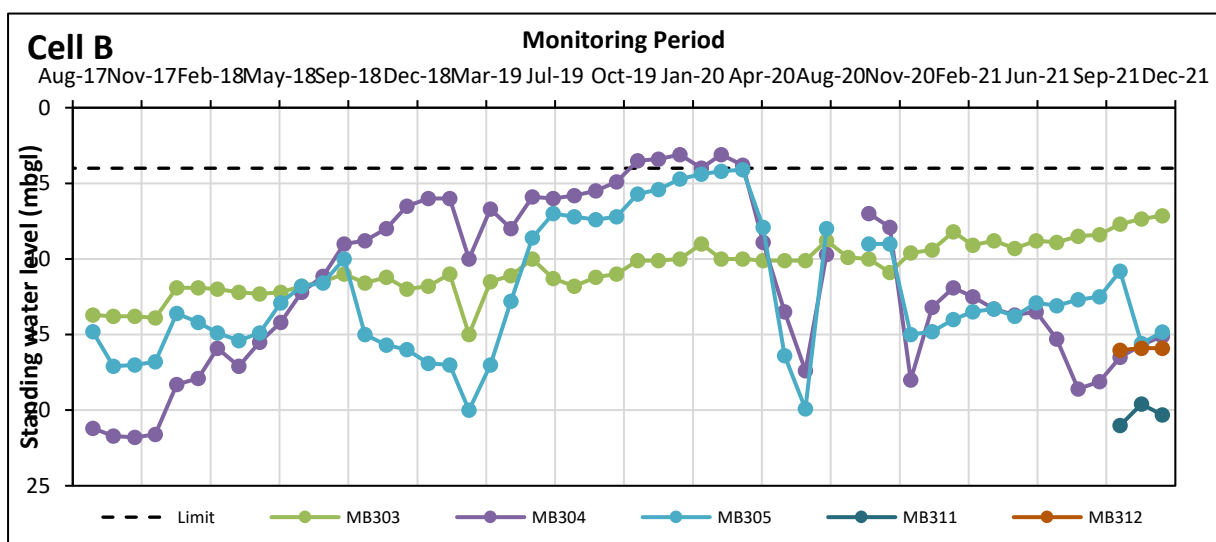


Figure 3. SWL trends in monitoring bores associated with Cell B

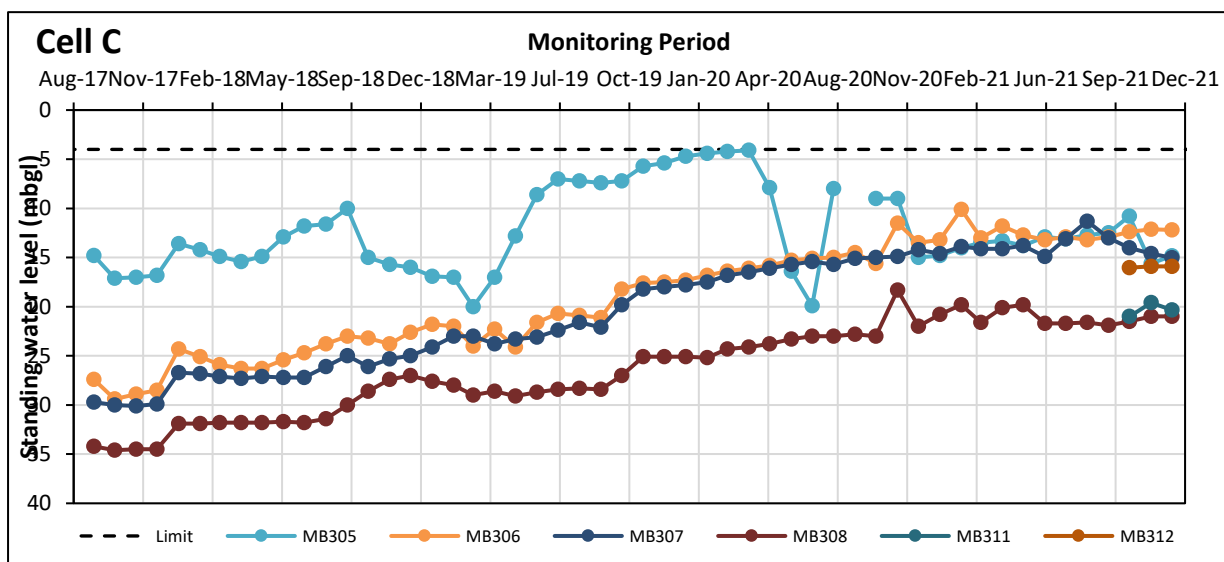


Figure 4. SWL trends in monitoring bores associated with Cell C

3.3.2 Licence Holder's controls

The licence holder has proposed controls to mitigate and reduce the impacts of seepage to the surrounding environment. As per the existing licence, there are conditions to ensure that seepage will be adequately minimised and managed, in addition to reducing the risk of potential tailings discharge through embankment failure. These include:

- Maintaining the water pond around the decant structure to a minimum of 60m away from the perimeter embankment
- Maintaining the flow meters to monitor the water recovery and to be compared against the water balance model predictions
- Routine inspections during each shift of the piping system and the return water pump operation
- Monthly monitoring and plotting of the water levels to assess groundwater movement trends

- Quarterly groundwater quality sampling and testing for pH, TDS and WAD cyanide
- Recovery of seepage water from the TSF transported back to the plant for process use

The four sumps, along with 3 converted monitoring bores, were utilised as part of the seepage management action plan in response to increasing SWL over the licensed limit. During the period of June 2020 and December 2021, a combined total of 184,576 m³ of seepage was recovered and returned back to a HDPE lined water return dam located off the southeast corner of TSF3. Decreased levels of SWL in monitoring bores recorded following this seepage recovery provides evidence of a successful implementation of the seepage recovery measures. The installation of the four bores located approximately 300m south/south-east of TSF3 is used to provide a larger scope of the impacts of seepage. These bores provide monitoring points that observe the extent of the mounding occurring further away from the TSF and provide monitoring points located away from the seepage extraction points to provide a more accurate representation of groundwater levels around the TSF. The groundwater seepage pumping volumes are monitored using flow metering equipment that assists in further data for understanding the movement of seepage required during cell closure. Seepage recovery has been indicated as an important management measure to reduce the impact of seepage.

3.3.3 DWER Assessment

The Delegated Officer has assessed the risk of seepage associated with the TSF embankment lifts for Cells B and C. The construction and operation of an embankment lift will increase the pressure of the hydraulic head, subsequently increasing the potential seepage from the TSF. The Licence Holder has seepage monitoring and management actions to observe the rate of the groundwater mounding and act accordingly. Given the nature of the paddock style TSF and previous monitoring recordings, the likelihood for seepage to occur has been assessed as **possible**. The increasing SWL due to seepage can result in further mounding around the TSF to a level where groundwater will impact the root zone of surrounding vegetation. The 4 mbgl limit has been breached in the past, and although there are new management actions in place, it is possible for this to occur again. The consequence rating for this event is considered **moderate** due to the potential for vegetation stress and death. Therefore, the final risk rating for this risk event has been assessed is **medium**. The Delegated Officer has concluded that the Licence Holder controls, and existing licence conditions which have addressed recommendations from DMIR geotechnical advice and the most recent annual audit of TSF3, are acceptable in sufficiently managing the impacts and mitigating the risk of seepage to receptors. No additional regulatory controls are required to manage seepage.

4. Consultation

Table 5 provides a summary of the consultation undertaken by the department.

Table 5: Consultation

Consultation method	Comments received	Department response
Local Government Authority advised of proposal 30 June 2022.	No comments received	N/A
Department of Mines, Industry Regulation and Safety (DMIRS) advised of proposal 15 June 2022 – <i>geotechnical advice on TSF 3 lift stability concurrently with previous amendment</i>	Geotechnical advice was received from DMIRS on 5 July 2022, confirming that the application mostly complies with the relevant <i>Codes of Practice and Guidelines</i> . They additionally provided recommendations of conditions for consideration which were addressed during a previous amendment.	The department required a signed copy of the “ <i>Certificate of Compliance – Tailings Storage Facility Design</i> ” from the Licence Holder, to ensure full compliance with the relevant <i>Codes of Practice and Guidelines</i> . This was provided to the department on 27 July 2022.
Licence Holder was provided with draft amendment on 29 August 2022.	Licence Holder provided a response on 31 August 2022, providing no additional comments and wishing the waive the consultation period.	The department will proceed with issuing the instrument.

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 6 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 6: Summary of licence amendments

Condition no.	Proposed amendments
Licence History	Addition of this amendment on licence history.
Condition 4 Table 1	Addition to include maximum operational height of TSF3
Condition 8 Table 3	Addition of item 2 and 3: Cell B and C Stage 7 upstream embankment lift (including cell-diving embankment between Cell B and C) and decant raise of TSF3 Cell B and C.
Condition 10 Table 4	Wording adjusted to reflect accurate timeframe from previous amendment granted on the 9 August 2022.
Condition 19, now	Condition 19 now condition 22. New numbering and update to wording format.

condition 22	
Condition 20	Old condition 20 deleted as redundant condition. Revised to current licensing format.
Condition 22, now condition 19	Condition 22 now condition 19. New numbering and update to wording format.
New condition 21	Inclusion of updated standard record condition to current licensing format.
25	Changes to condition 25 to removes specifications about which item of infrastructure to a more general condition regarding all the infrastructure (embankment raises for all TSF3 Cells).
Table 10	Removal of 'usual working days' from Definitions as it does not appear elsewhere in the instrument.
-	Inclusion of Figures 8, 9 and 10 as design drawings for TSF3 Cells B and C (Stage 7) embankment raise.

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. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Risk Assessments*, Perth, Western Australia.
4. CMW Geosciences 2022, *Tailings Storage Facility No.3 Cells B and C Upstream Embankment Raising from RL402.5 m to RL405.0m*.

Appendix 1: Application validation summary

SECTION 1: APPLICATION SUMMARY				
Application type				
Amendment to licence	<input checked="" type="checkbox"/>	Current licence number:	L4680/1988/13	
		Relevant works approval number:		N/A
Date application received		13 th May 2022		
Applicant and Premises details				
Applicant name/s (full legal name/s)		FMR Investments Pty Ltd		
Premises name		Greenfields Processing Site		
Premises location		TSF3 located on Freehold Land (Lot 102 on Plan 40393) 6576117N, 329023 E		
Local Government Authority		Shire of Coolgardie		
Application documents				
HPCM file reference number:		2013/003899-1~9		
Key application documents (additional to application form):		<p>Supporting documents in 2013/003899-1~9:</p> <ul style="list-style-type: none"> • Proof of occupier status – <i>Attachment 1A</i> • Premises Map - <i>Attachment 2</i> • Tailings Storage Facility No.3 Cells B and C • Upstream Embankment Raising from RL402.5m to RL405.0m – Greenfields Mill Design Report for Works Approval Application – <i>Attachment 3B</i> • Siting and location – <i>Attachment 7</i> <p>Application form references following documents:</p> <ul style="list-style-type: none"> • GHD (February 2013), '<i>Tailings Storage Facility 3, Detailed Design Report</i>', prepared for FMR Investments Pty Ltd. • CMW (2020a), '<i>Tailings Storage Facility No.3 Cells A, B and C Upstream Embankment Raising from RL400 m to RL402.5 m, Greenfields Mill</i>' Design Report for Works Approval Application ref. PER2019-0372AB dated February 2020 • GHD geotechnical investigation 2012 • 2020-2021 Monitoring information 		
Scope of application/assessment				
Summary of proposed activities or changes to existing operations.		<p><u>Licence amendment</u></p> <p>The construction and operation of an upstream embankment of TSF3 Cells B and C from RL 402.5 m to RL 405.0 m.</p> <ul style="list-style-type: none"> • Raise perimeter containment embankments and cell dividing embankment between Cells B and C. • 1 x 2.5 m upstream construction techniques used for lifts in accordance with original design concept. • Decant accessway, structures, and associated infrastructure 		

	<p>on Cells B and C will also be raised</p> <ul style="list-style-type: none"> • Will utilise dried tailings from TSF3, clayey material from TSF4 and TSF2, and mine waste from other facilities • Proposed raising will provide approximately 7 months of capacity
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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; premises on which – <ul style="list-style-type: none"> a) Metallic or non-metallic ore is crushed, ground, milled or otherwise processed; or b) Tailings from metallic or non-metallic ore are reprocessed; or c) Tailings or residue from metallic or non-metallic ore are discharged into a containment cell or dam 	1, 000, 000 tonnes per year	N/A

Legislative context and other approvals

Has the applicant referred, or do they intend to refer, their proposal to the EPA under Part IV of the EP Act as a significant proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Referral decision No: Managed under Part V <input type="checkbox"/> Assessed under Part IV <input type="checkbox"/>
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Ministerial statement No: EPA Report No:
Has the proposal been referred and/or assessed under the EPBC Act?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Reference No:
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Certificate of title <input checked="" type="checkbox"/> General lease <input type="checkbox"/> Expiry: Mining lease / tenement <input type="checkbox"/> Expiry: Other evidence <input type="checkbox"/> Expiry:
Has the applicant obtained all relevant planning approvals?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	CPS No: N/A No clearing is proposed. Works will be completed within the existing TSF3 footprint.
Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Application reference No: N/A Licence/permit No: N/A No clearing is proposed
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Application reference No: Licence/permit No: GWL173070(5) Allocation of 1,500,000 KL
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Name: Goldfields Groundwater Area Type: Proclaimed Groundwater Area Has Regulatory Services (Water) been consulted? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Regional office: Goldfields
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Name: N/A Priority: N/A Are the proposed activities/ landuse compatible with the PDWSA (refer to <u>WQPN 25</u>)? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Is the Premises subject to any other Acts or subsidiary regulations (e.g. <i>Dangerous Goods Safety Act 2004, Environmental Protection (Controlled Waste) Regulations 2004, State Agreement Act xxxx</i>)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Is the Premises subject to any EPP requirements?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

<p>Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i>?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>Classification: location to the west of the TSF is classified as <i>Contaminated – remediation required</i></p> <p>Location to the east is classified as <i>Awaiting Classification</i></p> <p>Date of classification: 4/9/2018</p>
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