



Licence number	L6949/1993/8
Licence holder	Sandstone Operations Pty Ltd
ACN	611 811 280
Registered business address	Unit 1, 295 Rokeby Road, Subiaco WA 6008
DWER file number	APP-0026251
Duration	30/09/2013 to 29/09/2032
Date of issue	26/09/2013
Date of amendment	25/03/2025
Premises details	Twin Shafts Treatment Plant Legal description - Part of mining tenements M57/128 and M57/129 SANDSTONE WA 6639 as depicted in Schedule 1

Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i>)	Assessed production / design capacity
Category 5: <i>Processing or beneficiation of metallic or non-metallic ore</i>	<i>500,000 tonnes per annual period</i>

This licence is granted to the licence holder, subject to the attached conditions, on 25 March 2025, by:

**MANAGER, RESOURCE INDUSTRIES
INDUSTRY REGULATION (STATE-WIDE DELIVERY)**

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

Licence history

Date	Reference Number	Summary of Changes
27/07/2007	W4351/1993/1	Works Approval for an in-pit tailings storage facility.
25/09/2008	L6949/1993/7	Licence reissued.
26/09/2013	L6949/1993/8	Licence reissued.
10/11/2016	L6949/1993/8	Licence transfer and an amendment to the sampling frequency requirement for groundwater monitoring bores at the Twins Shafts in-pit TSF. Risk assessment of emission and discharges in accordance with DER's Guidance Statement: Setting Conditions (October 2015)
25/3/2025	L6949/1993/8	Amendment to change registered business address and reduction in care and maintenance of groundwater monitoring frequency from 6 months to 12 months around the Twin Shaft Inpit Tailings Storage Facility.

Interpretation

In this licence:

- (a) the words 'including', 'includes' and 'include' in conditions mean "including but not limited to", and similar, as appropriate;
- (b) where any word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;
- (c) where tables are used in a condition, each row in a table constitutes a separate condition;
- (d) any reference to an Australian or other standard, guideline, or code of practice in this licence:
 - i. if dated, refers to that particular version; and
 - ii. if not dated, refers to the latest version and therefore may be subject to change over time;
- (e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act; and
- (f) unless specified otherwise, all definitions are in accordance with the EP Act.

NOTE: This licence requires specific conditions to be met but does not provide any implied authorisation for other emissions, discharges, or activities not specified in this licence.

Licence conditions

1 General

1.1 Interpretation

1.1.1 In the Licence, definitions from the *Environmental Protection Act 1986* apply unless the contrary intention appears.

1.1.2 For the purposes of this Licence, unless the contrary intention appears:

'Act' means the *Environmental Protection Act 1986*;

'anniversary date' means 30 September of each year;

'annual audit compliance report' means a report in a format approved by the CEO as presented by the Licensee or as specified by the CEO from time to time and published on the Department's website;

'annual period' means a 12 month period commencing from 1 October until 30 September in the following year;

'APHA' means the American Public Health Association: Standard Methods for the Examination of Water and Wastewater;

'AS/NZS 5667.1' means the Australian Standard AS/NZS 5667.1 *Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples*;

'AS/NZS 5667.11' means the Australian Standard AS/NZS 5667.11 *Water Quality – Sampling – Guidance on sampling of groundwaters*;

'averaging period' means the time over which a limit is measured or a monitoring result is obtained;

'care and maintenance' means production has stopped but the site is managed to ensure it remains in a safe and stable condition;

'CEO' means Chief Executive Officer of the Department of Environment Regulation;

'CEO' for the purpose of notification means;

Chief Executive Officer
Department Div.3 Pt. V EP Act
Locked Bag 33 Cloister Square
Perth WA 6850
info@der.wa.gov.au

'Department' means the department established under s.35 of the Public Sector Management Act 1994 and designated as responsible for the administration of Division 3 Part V of the Environmental Protection Act 1986;

'extreme rainfall event' means a 1 in 100 year rainfall event that has a duration greater than 72 hours;

'freeboard' means the distance between the maximum water surface elevations and the top of retaining banks or structures at their lowest point;

'Licence' means this Licence numbered L6949/1993/8 and issued under the Act;

'Licensee' means the person or organisation named as Licensee on page 1 of the Licence;

'mbgl' means metres below ground level;

'mg/L' means milligrams per litre;

'NATA' means the National Association of Testing Authorities, Australia;

'NATA accredited' means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis;

'Premises' means the area defined in the Premises Map in Schedule 1 and listed as the Premises address on page 1 of the Licence;

'quarterly' means quarterly intervals of March, June, September and December in each year;

'Schedule 1' means Schedule 1 of this Licence unless otherwise stated;

'Schedule 2' means Schedule 2 of this Licence unless otherwise stated;

'spot sample' means a discrete sample representative at the time and place at which the sample is taken;

'TSF' means tailings storage facility;

'µS/cm' means micro-Siemens per centimetre; and

'WAD cyanide' means cyanide species liberated at moderate pH of 4.5.

1.1.3 Any reference to an Australian or other standard in the Licence means the relevant parts of the the standard in force from time to time during the term of this Licence.

1.1.4 Any reference to a guideline or code of practice in the Licence means the version of that guideline or code of practice in force from time to time, and shall include any amendments or replacements to that guideline or code of practice made during the term of this Licence.

1.2 Premises operation

1.2.1 The Licensee shall record and investigate the exceedance of any descriptive or numerical limit in this section.

1.2.2 The Licensee shall ensure that all pipelines containing tailings material or tailings return water from the Twin Shaft in-pit TSF are either:

- (a) equipped with telemetry systems and pressure sensors along pipelines to allow the detection of leaks and failures;
- (b) equipped with automatic cut-outs in the event of a pipe failure; or
- (c) provided with secondary containment sufficient to contain any spill for a period equal to the time between routine inspections.

1.2.3 The Licensee shall ensure that waste materials are discharged into dams with the relevant infrastructure requirements and at the location specified in Table 1.2.1 and identified in Schedule 1.

Table 1.2.1: Containment infrastructure		
Containment point reference	Material	Infrastructure requirements
Twin Shaft in-pit TSF	Tailings	A minimum top of embankment freeboard of 750mm is maintained in order to accommodate an extreme rainfall event
Tailings return water pond	Tailings return water from the Twin Shaft in-pit TSF	A minimum top of embankment freeboard of 750mm is maintained in order to accommodate an extreme rainfall event

- 1.2.4 The Licensee shall:
- (a) undertake inspections as detailed in Table 1.2.2;
 - (b) where any inspection identifies that an appropriate level of environmental protection is not being maintained, take corrective action to mitigate adverse environmental consequences as soon as practicable; and
 - (c) maintain a record of all inspections undertaken.

Table 1.2.2: Inspection of infrastructure		
Scope of inspection	Type of inspection	Frequency of inspection
Tailings delivery pipelines	Visual integrity	Daily
Return water lines		
Tailings deposition	Visual to confirm integrity of the TSF internal walls is being maintained	
Embankment freeboard	Visual to confirm required freeboard capacity is available	

- 1.2.5 The Licensee shall ensure the limits specified in Table 1.2.3 are not exceeded.

Table 1.2.3: Production or design capacity limits		
Category¹	Category description¹	Premises production or design capacity limit
5	Processing or beneficiation of metallic or non-metallic ore	500,000 tonnes per annual period

Note 1: *Environmental Protection Regulations 1987, Schedule 1.*

2 Monitoring

2.1 General monitoring

- 2.1.1 The Licensee shall ensure that:
- (a) all water samples are collected and preserved in accordance with AS/NZS 5667.1;
 - (b) groundwater samples for the monitoring of WAD cyanide are collected and preserved in accordance with APHA;
 - (c) all groundwater sampling is conducted in accordance with AS/NZS 5667.11;
 - (d) all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured unless indicated otherwise in the relevant table.
- 2.1.2 The Licensee shall ensure that:
- (a) quarterly monitoring is undertaken at least 45 days apart;
 - (b) 6 monthly monitoring is undertaken at least 90 days apart; and
 - (c) annual monitoring is undertaken at least 9 months apart.

2.1.3 The Licensee shall ensure that all monitoring equipment used on the Premises to comply with the conditions of this Licence is calibrated in accordance with the manufacturer's specifications and the requirements of the Licence.

2.1.4 The Licensee shall, where the requirements for calibration cannot be practicably met, or a discrepancy exists in the interpretation of the requirements, bring these issues to the attention of the CEO accompanied with a report comprising details of any modifications to the methods.

2.2 Process monitoring

2.2.1 The Licensee shall undertake the monitoring in Table 2.2.1 according to the specifications in that table.

Monitoring point reference	Process description	Parameter	Units	Frequency	Method
Twin Shaft in-pit TSF	Discharge of tailings material into the Twin Shaft in-pit TSF	Volumes of tailings deposited	m ³	Continuous	None specified
	Recovery of water from the Twin Shaft in-pit TSF	Volumes of water recovered	m ³	Continuous	None specified

2.3 Ambient environmental quality monitoring

2.3.1 The Licensee shall undertake the monitoring in Table 2.3.1 according to the specifications in that table and record and investigate results that do not meet any limit specified.

Monitoring point reference and location	Parameter	Limit	Units	Averaging period	Frequency
TSWB2, MB1, MB4, BH3, BH4, BH5, TWSB4, BH8, BH9 and BH10	Arsenic	Not applicable	mg/L	Spot sample	Annually while the Premises is in care and maintenance Quarterly all other times
	Copper				
	Iron				
	Zinc				
	Standing water level (SWL) ¹		mbgl		
	Total dissolved solids	6,000	mg/L		
	Weak acid dissociable cyanide (WAD cyanide)	0.5			
	Electrical conductivity		µS/cm		
pH ²	≥6.0 to ≤9.0	Not applicable			

Note 1: SWL shall be determined prior to collection of other water samples.

Note 2: In-field non-NATA accredited analysis permitted.

3 Information

3.1 Records

- 3.1.1 All information and records required by the Licence shall:
- (a) be legible;
 - (b) if amended, be amended in such a way that the original and subsequent amendments remain legible or are capable of retrieval;
 - (c) except for records listed in 4.1.1(d) be retained for at least 6 years from the date the records were made or until the expiry of the Licence or any subsequent licence; and
 - (d) for those following records, be retained until the expiry of the Licence and any subsequent licence:
 - (i) off-site environmental effects; or
 - (ii) matters which affect the condition of the land or waters.
- 3.1.2 The Licensee must submit to the CEO within 90 days after the Anniversary Date, an Annual Audit Compliance Report indicating the extent to which the Licensee has complied with the Conditions in this Licence for the Annual Period.
- 3.1.3 The Licensee shall implement a complaints management system that as a minimum records the number and details of complaints received concerning the environmental impact of the activities undertaken at the Premises and any action taken in response to the complaint.

3.2 Reporting

- 3.2.1 The Licensee must submit to the CEO an Environmental Report by 1/12/2025 and biennially thereafter. The report shall contain the information listed in Table 3.2.1 in the format or form specified in that table for the preceding two annual periods.

Table 3.2.1: Annual Environmental Report		
Condition or table (if relevant)	Parameter	Format or form¹
-	Summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period and any action taken	None specified
-	Brief overview of the Premises and its processes and a current plan of the Premises	None specified
Table 2.2.1	Volumes of tailings deposited into the Twin Shaft in-pit TSF and volumes of water recovered from the Twin Shaft in-pit TSF.	None specified
Table 2.3.1	Monitoring of ambient groundwater quality	None specified
3.1.2	Compliance	AACR
3.1.3	Complaints summary	None specified

Note 1: Forms are in Schedule 2

- 3.2.2 The Licensee shall ensure that the Environmental Report also contains an assessment of the information contained within the report against previous monitoring results and Licence limits.
- 3.2.3 The Licensee shall submit the information in Table 3.2.2 to the CEO according to the specifications in that table.

Table 3.2.2: Non-annual reporting requirements				
Condition or table (if relevant)	Parameter	Reporting period	Reporting date (after end of the reporting period)	Format or form
-	Copies of original monitoring reports submitted to the Licensee by third parties	Not Applicable	Within 14 days of the CEOs request	As received by the Licensee from third parties

3.3 Notification

3.3.1 The Licensee shall ensure that the parameters listed in Table 3.3.1 are notified to the CEO in accordance with the notification requirements of the table.

Table 3.3.1: Notification requirements			
Condition or table (if relevant)	Parameter	Notification requirement¹	Format or form²
1.3.5 and 2.3.1	Breach of any limit specified in the Licence	Part A: As soon as practicable but no later than 5pm of the next usual working day Part B: As soon as practicable	N1
-	Production ceasing for an unspecified period of time	As soon as practicable after the decision has been made.	None Specified
-	Production recommencing	At least 28 days prior to production recommencing.	None specified

Note 1: Notification requirements in the Licence shall not negate the requirement to comply with s72 of the Act

Note 2: Forms are in Schedule 2

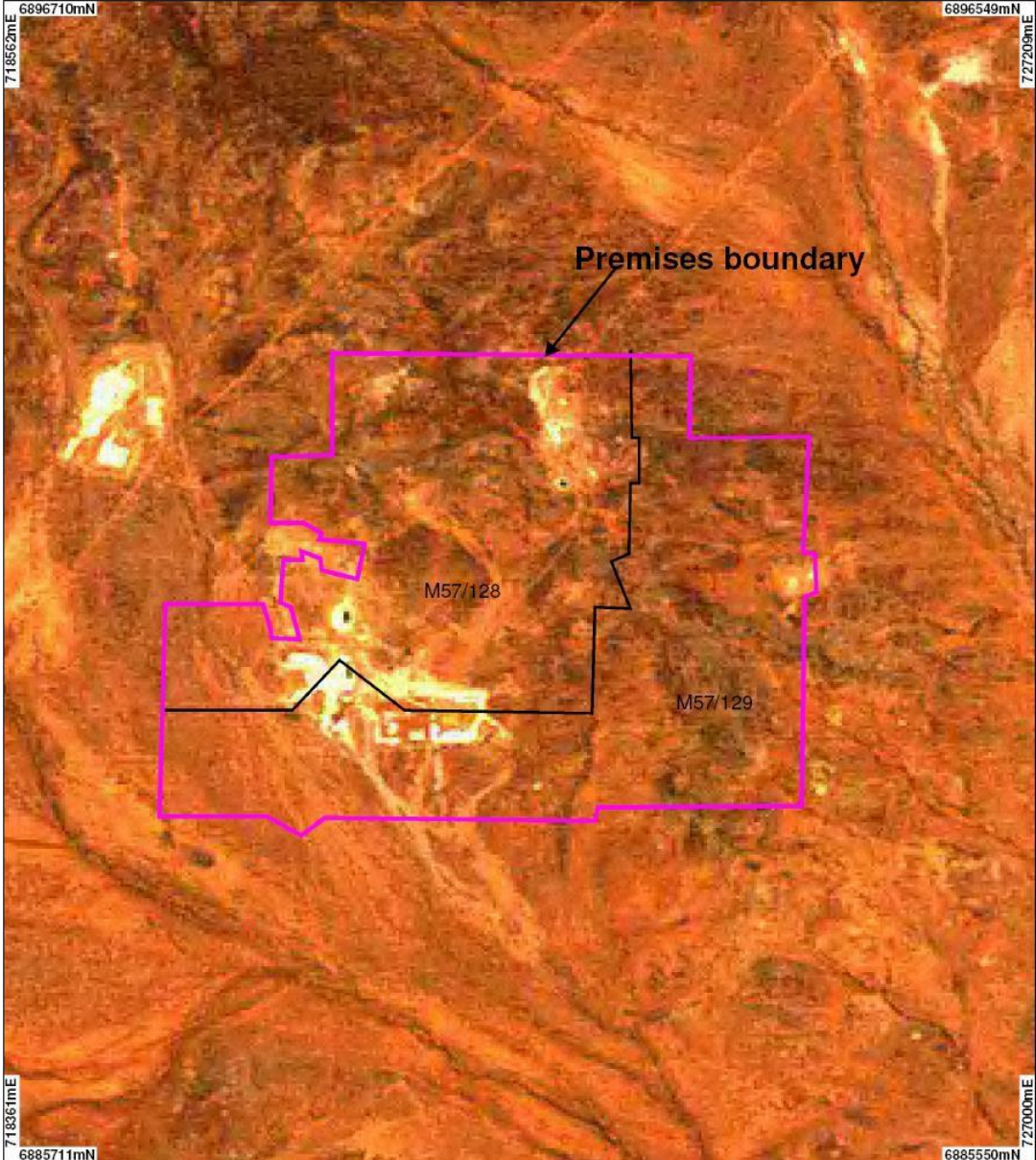
END OF CONDITIONS

Schedule 1: Maps

Premises map

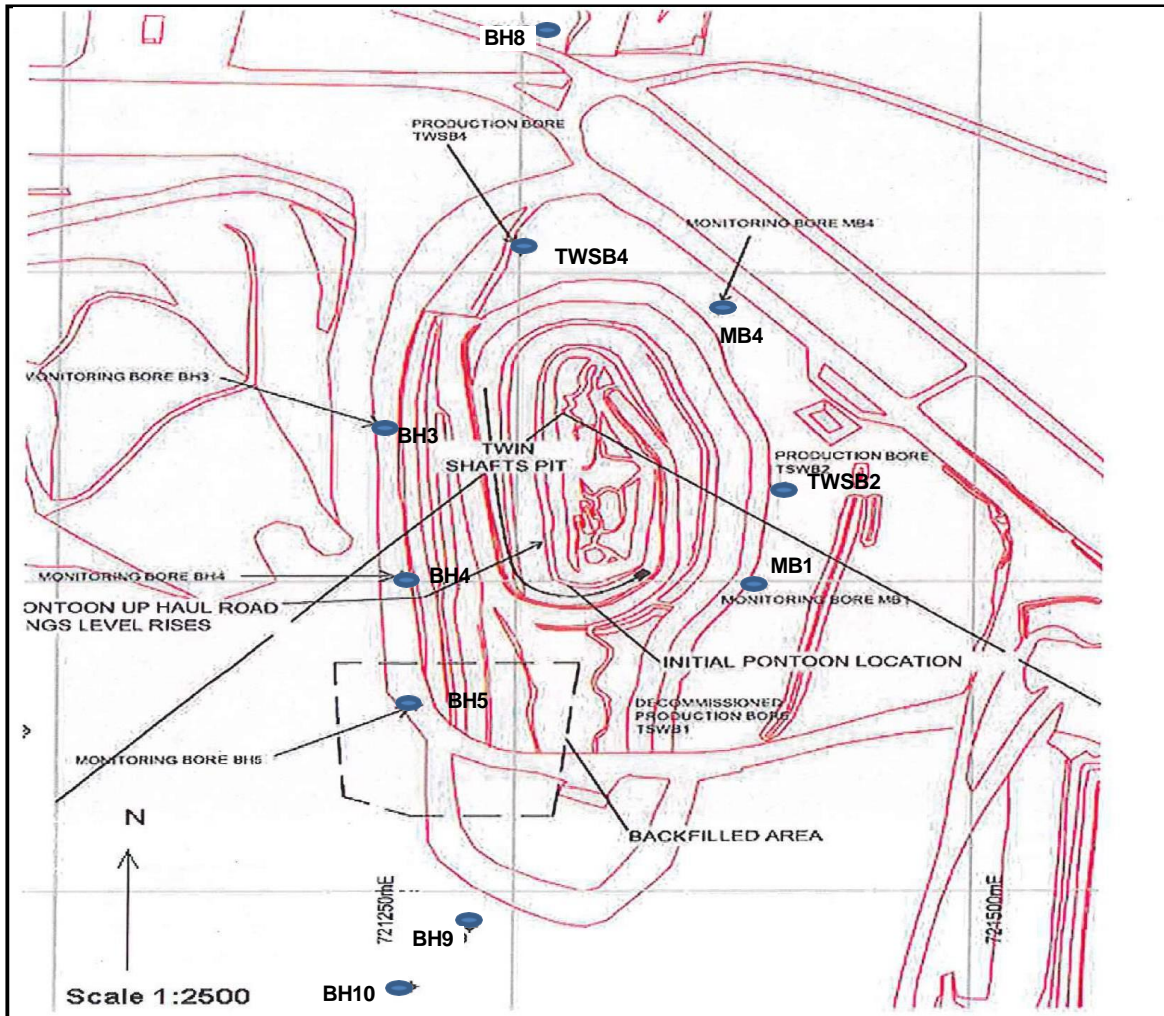
The Premises is shown in the map below. The pink line depicts the Premises boundary.

Twin Shafts Treatment Plant - Premises boundary



Map of monitoring locations

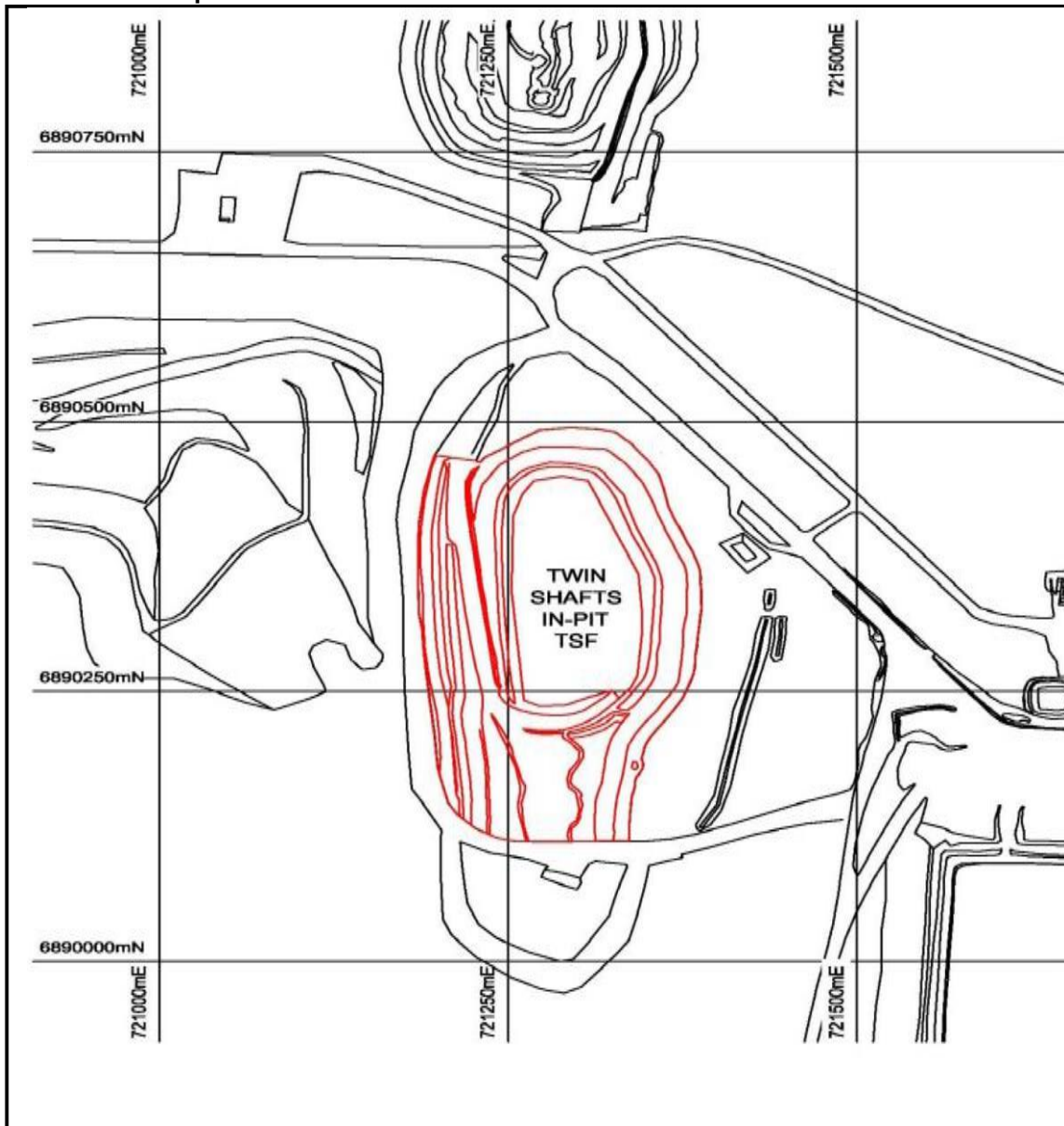
The locations of the monitoring points defined in Table 2.3.1 are shown below.



Map of storage locations

The location of the storage areas defined in Table 1.3.1 are shown below.

Twin Shaft in-pit TSF



Tailings return water pond





Schedule 2: Forms

Licence: L6949/1993/8
Form: GR1
Name: Monitoring of ambient groundwater quality

Licensee: Sandstone Operations Pty Ltd
Period :

Monitoring point	Parameter	Limit	Result	Averaging period	Sample date & times
TSWB2, MB1, MB4, BH3, BH4, BH5, TWSB4, BH8, BH9 and BH10	Arsenic	-	mg/L	Spot sample	
	Copper	-	mg/L		
	Iron	-	mg/L		
	Zinc	-	mg/L		
	Standing water level (SWL) ¹	-	mbgl		
	Total dissolved solids	6,000	mg/L		
	Weak acid dissociable cyanide (WAD cyanide)	0.5	mg/L		
	Electrical conductivity	-	µS/cm		
	pH ²	≥6.0 to ≤9.0	-		

Signed on behalf of Sandstone Operations Pty Ltd: Date:



Licence: L6949/1993/8
 Form: N1

Licensee: Sandstone Operations Pty Ltd
 Date of breach:

Notification of detection of the breach of a limit.

These pages outline the information that the operator must provide.
 Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

Part A

Licence Number	
Name of operator	
Location of Premises	
Time and date of the detection	

Notification requirements for the breach of a limit	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

Part B

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident.	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission.	
The dates of any previous N1 notifications for the Premises in the preceding 24 months.	

Name	
Post	
Signature on behalf of Sandstone Operations Pty Ltd	
Date	