

Annual Dams Safety Standards Report 2021



This report demonstrates the declared dam owner's compliance with the dam safety standards set out in the Dams Safety Regulation 2019 (the Regulation). It covers the named declared dam for the calendar year ending 31 December 2021.

The dam owner (the office holder at the end of this report) attests to the accuracy of the report.

A separate report for each declared dam must be lodged with Dams Safety NSW by 31 March 2022.

Section 1 – Declared dam identification details

Dam name	Cowal Southern Tailings dam - Dam ID 883
Dam owner	Evolution Mining (Cowal) Pty Ltd

Section 2 – Dams safety standards

Consequence category of dam – Regulation, Part 3

The dam consequence category is a rating of the impact that could potentially be caused if the dam failed. It must be assessed:

- within 6 months of the dam being declared
- at least once every 15 years
- after any significant change in the number of people likely to be affected by a dam failure
- or if required by Dams Safety NSW.

[Regulation, subclause 7\(2\)](#)

Dam consequence category	High C since March 2021 - previously Significant
Date of the last consequence category assessment by a competent person	31st March 2021
Has the number of people likely to be affected by a dam failure changed since the last consequence category review?	No
How was this checked?	Personnel numbers and work areas impacted by dam failure have not changed.



For extreme and high consequence dams only

If the consequence category is Extreme, High A, High B, or High C, the consequence category assessment must be reviewed by an independent competent person - [Regulation, subclause 7\(4\)](#)

Date of last independent review of the consequence category assessment	February 2022
Name of independent reviewer (must be a competent person)	Francois van Heerden - SLR Consulting Australia Pty Ltd

Dams safety standard – Dam safety management system - Part 5

The dam safety management system provides a comprehensive and integrated system to manage all aspects of foreseeable risks relating to dam failure. It is designed to be used by the dam owner to ensure, as far as reasonably practicable, the safety of people and property is not put at risk from the dam.

- [Regulation Part 5](#)

Documenting the dam safety management system

Is the dam safety management system fully documented?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If not, what percentage of the dam safety management system documentation is complete?	
How did you confirm this percentage? (eg draft review, version approved)	
Does the dam safety management system apply to more than one dam?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Documenting the dam safety management system

Is the dam safety management system fully implemented for this dam?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If not, what percentage of the dam safety management system is implemented?	
How did you confirm this percentage? (eg internal audit, key staff statements)	



Dam safety management system review

The declared dam owner must ensure the dam safety management system is reviewed each year to ensure it remains effective. [Regulation, clause 17](#)

Date of last safety management system review	November 2021
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Assessment of societal and individual risk rating

The owner of a declared dam (other than a proposed dam) must use the risk management framework to produce a written report on all foreseeable risks to the dam:

- at least once every 5 years
- when a major change to the dam is proposed, and
- when required by Dams Safety NSW.

[Regulation, subclause 15 \(1\)](#)

Date of last risk report	Elements of a risk report have been completed for the STSF. GHD
Individual risk rating of the dam	An Individual Risk Rating has not yet been calculated
Societal risk rating of the dam	Estimated Societal Risk Rating for STSF is approximately one order of
Date of next planned risk report	STSF Risk Report due date: 2024

Other safety requirements – Part 6

Incident reporting

The declared dam owner must report incidents that happen at or in relation to the dam to Dams Safety NSW. [Regulation, clause 19](#)

Number of incidents during the 2021 calendar year	Nil
Topic/subject of each incident(s)	n/a



Safety review

The declared dam owner must ensure a competent person conducts a safety review at least once every 15 years, and as soon as practicable after:

- a deficiency or weakness in the dam is identified
- there is a change in the accepted technology or methods used in one of the relevant specialties or design criteria for dams
- the dam consequence category changes, or
- it is required by Dams Safety NSW.

[Regulation, clause 20](#)

Date of last safety review (Regulation, subclause 20(2))	Comprehensive inspections and annual surveillance reports have been prepared since 2007 after first filling of STSF Stage 1.
Planned date for next safety review	As STSF is part of Integrated Waste Landform (IWL) the Safety

For extreme and high consequence dams only

If the consequence category is Extreme, High A, High B, or High C, the safety review must be reviewed by an independent competent person - [Regulation, subclause 20\(6\)](#)

Name of independent reviewer (must be a competent person)	n/a
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Notification of significant changes to the dam

Before making any significant change to the configuration of the declared dam that may affect the safety of the dam, the dam owner must inform Dams Safety NSW of the proposed change in writing.

[Regulation, clause 21](#)

Has any significant change to the configuration of the dam been made during the 2021 calendar year?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If yes, describe the change	(1) IWL Stage 2 abutment connection into SW corner of STSF
Is any significant change to the configuration of the dam planned?	Yes
If yes, describe the change and when it is planned to happen?	STSF is planned to be fully encompassed by construction of the IWL and and submerged in tailings over the period 2021 through 2032.



Emergency exercises

The declared dam owner must ensure that staff who are involved in the operation of the dam undertake emergency exercises at least once every 3 years. [Regulation, clause 22](#)

Date of last 'theoretical classroom' emergency exercise (Regulation, subclause 22(1))	30th March 2021
Planned date of next 'theoretical classroom' emergency exercise	February 2023

For extreme or high consequence dams only

The declared dam owner must ensure that staff who are involved in operating the dam undertake practical emergency exercises at least once every 5 years, where possible including relevant agencies identified in the emergency plan. [Regulation, subclauses 22 \(3\) and 22 \(4\)](#)

Date of last practical emergency exercise	A practical emergency exercise simulating a TSF failure, including a full site evacuation was conducted in February 2022.
Planned date of next practical emergency exercise	September 2024

Design and construction

This section is for dams in the design/construction/commissioning/decommissioning phase

Dam safety management system for design and construction

Does the dam safety management system cover dam design and construction? Regulation, clause 12(3)	Design of STSF predated the implementation of the Evolution Dam Safety Management System (DSMS). STSF is at capacity and is no longer used for active deposition. Rainwater is pumped from STSF decant pond to maintain it in an essentially dry condition. IWI will
Was the risk management framework used to prepare a risk report at the dam design stage? Regulation, clause 15(2)	No, the STSF designs predate the DSMS.

Certain work must be carried out by a person subject to a quality management system

[Regulation, subclause 23\(1\)](#)

How have you ensured that design and construction are carried out by a person subject to an AS ISO 9001:2016 quality management system?	Yes - design and oversight of construction have been conducted by AECOM who have been certified by Bureau Veritas - AU002936-1
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A competent person must check work involving dam design

[Regulation, clause 24](#)

For extreme or high consequence dams, provide the name of the independent person who checked the design (Regulation, clause 24)	At the time of design, STSF Stage 6 was a Significant Consequence Category Dam.
For dams still in an early design phase, have you planned independent competent person design checks/ reviews?	<input type="checkbox"/> Yes <input type="checkbox"/> No



Attestation

This attestation must be signed by the dam owner office holder(s) as follows:

Dam owner	Attesting office holder(s)
Local council	General Manager
Company	<ul style="list-style-type: none"> • 2 directors, or • 1 director and 1 company secretary • The combined director and company secretary (Where there is only 1 director)
Statutory state-owned corporation	Chief Executive Officer or Managing Director responsible for managing the operation of the statutory state-owned corporation in accordance with the general policies and specific directions of the board
Statutory corporation	Corporation with 2 or more members: <ul style="list-style-type: none"> • President, chairperson or another principal officer of the corporation Sole corporation <ul style="list-style-type: none"> • The person who constituted the constitution • The person managing the affairs of the corporation
Government department	Secretary
Individual	Individual



Declared dam owner office holder(s) attesting to the accuracy of this report

Name and signature of declared dam owner office holder attesting to the accuracy of this report	John Penhall 
Position of the declared dam owner office holder attesting to the accuracy of this report	General Manager - CGO Mine Evolution Mining (Cowel) Pty Ltd
Name and signature of declared dam owner office holder attesting to the accuracy of this report	Evan Elstein 
Position of the declared dam owner office holder attesting to the accuracy of this report	Vice President & Company Secretary Evolution Mining Pty Ltd