# **Annual Dam 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 for each declared dam.

#### Section 1 - Declared dam identification details

Dam name	Liddell Cooling Water Dam
Dam name owner	AGL Macquarie Pty Ltd

#### Section 2 - Dam safety standards

### Consequence category - 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, clause 7(2)

Dam consequence category	Sunny Day Consequence - HIGH A   Flood Consequence - HIGH B
Date of the last	23rd July 2021
consequence category	
assessment by a competent	
person	
Has the number of people	No
likely to be affected by	
a dam failure changed	
since the last consequence	
category review?	
How was this checked?	Review of significant changes to number of persons likely affected by the dam, including review of traffic data, mine operations personnel and downstream



#### 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, clause 7(4)

Date of last independent review of the	25th June 2021
consequence category assessment	
Name of independent reviewer (must	Dr Rainer Berg Senior Technical Director: Hydrology, Storm water and Flooding
be a competent person)	GHD

#### Dam 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.

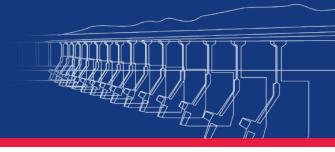
- Regulation Part 5

#### Documenting the dam safety management system

Is the dam safety management system fully documented?	Yes No
If not, what percentage of the	100%
dam safety management system	
documentation is complete?	
How did you confirm this percentage?	AGL Macquarie Dam Safety Management System Document Version 1.1 - review of document that is approved for release.
(eg draft review, version approved)	••
Does the dam safety management	Yes No
system apply to more than one dam?	

#### Documenting the dam safety management system

Is the dam safety management system fully implemented for this dam?	■ Yes No
If not, what percentage of the dam	100%
safety management system is	
implemented?	
How did you confirm this percentage?	Internal review of the AGL Macquarie Dam Safety Management Document compared to the task lists generated for Dam Safety
(eg internal audit, key staff	Management activities.
statements)	



#### Dam safety management system review - Section 17

The declared dam owner must ensure the dam safety management system is reviewed each year to ensure it remains effective. Regulation, Section 17

Date of last safety management	30th October 2021
system review	

#### Assessment of society and individual risk rating - Section 15

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, clause 15 (1)

Date of last risk report	9th November 2021
Individual risk rating of the dam	4.97E-06
Societal risk rating of the dam	3.32E-04
Date of next planned risk report	November 2026

#### Other safety requirements - Part 6

#### **Incident reporting - Section 19**

The declared dam owner must report incidents that happen at or in relation to the dam to Dams Safety NSW. Regulation, Section 19

Number of incidents during the 2021	NIL
calendar year	
Topic/subject of each incident(s)	Not Applicable



#### Safety review - Section 20

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 Section 20

Date of last safety review (Regulation Clause 20(2)	9th November 2021
Planned date for next safety review	November 2036

#### 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, clause 20(6)

Name of independent reviewer	Darren Pemberton Principal Engineer   Facilities Closure Service Area Leader
(must be a competent person)	ATC Williams

#### Notification of significant changes to the dam - Section 21

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 Section 21

Has any significant change to the configuration of the dam been made during the 2021 calendar year?	Yes No
If yes, describe the change	Not applicable - No changes
Is any significant change to the configuration of the dam planned?	No
If yes, describe the change and when it is planned to happen?	Not applicable - No changes





#### **Emergency exercises - Section 22**

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 Section 22

Date of last 'theoretical classroom' emergency exercise (Regulation clause 22(1)	10th November 2021 - All dams earthquake scenario
Planned date of next 'theoretical classroom' emergency exercise	November 2024

## 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 Section 22, clauses (3 & 4)

Date of last practical emergency exercise	30th November 2021 - Piping scenario
Planned date of next practical	November 2026
emergency exercise	

## Section 3 - 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	Not applicable - not in design / construction phase
system cover dam design and	
construction? Regulation, clause 12(3)	
Was the risk management framework	Not applicable - not in design / construction phase
used to prepare a risk report at the	
dam design stage?	
Regulation clause 15(2)	

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

Regulation clause 23(1)

How have you ensured that design	Not applicable - not in design / construction phase
and construction are carried out by a	
person subject to an AS ISO 9001:2016	
quality management system?	





## A competent person must check work involving dam design

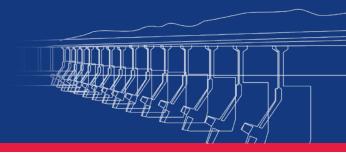
Regulation - Clause 24

For extreme or high consequence	Not applicable - not in design / construction phase
dams, provide the name of the	
independent person who checked the	
design (Regulation clause 24)	
For dams still in an early design phase, have you planned independent competent person design checks/reviews?	Yes No

### **Attestation**

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

Dam owner	Attesting office holder(s)
Local council	General Manager
Company	<ul> <li>2 directors, or</li> <li>1 director and 1 company secretary</li> <li>The combined director and company secretary (Where there is only 1 director)</li> </ul>
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:  • President, chairperson or another principal officer of the corporation  Sole corporation  • The person who constituted the constitution  • The person managing the affairs of the corporation
Government department	Secretary
Individual	Individual



# Declared dam owner office holders attesting to the accuracy of this report

Name and signature of declared dam owner office holder(s) attesting to the accuracy of this report	Yes No chelledallul
Position of the declared dam owner office holder(s) attesting to the accuracy of this report	Melinda Hunter Company Secretary
Name and signature of declared dam owner office holder(s) attesting to the accuracy of this report	J. Bgrold
Position of the declared dam owner office holder(s) attesting to the accuracy of this report	John Fitzgerald Director