

## IGO 2023 TAILINGS DAM DISCLOSURE

### Introduction

Tailing Storage Facilities (“TSF”) are surface impoundments used for the disposal and storage of fine-grained slurried mineral wastes that are discharged from mineral processing facilities following the extraction of the desired minerals from the feed ore. The improper management of TSF impoundments can significantly increase the risk of a catastrophic event impacting human and environmental health.

IGO Ltd wholly owns and operates three nickel assets in Western Australia, including the Nova Nickel-Copper-Cobalt operation, the Forrestania Nickel operation, and the Cosmos Nickel project, with each asset containing a processing plant and TSF. A listing of TSF information for each asset is provided in Table 1.

**Table 1 List of Tailings Dams**

Operation	Asset Status	TSF Name	TSF Status	TSF Design
Nova	Operational	Nova TSF	Active	Paddock, HDPE lined
Forrestania	Operational	Cosmic Boy TSF (North)	Active	Paddock, upstream construction, unlined
Forrestania	Operational	Cosmic Boy TSF (South)	Active	Paddock, upstream construction, unlined
Cosmos	Construction	Cosmos TSF	Inactive	Paddock, upstream construction, unlined

### Tailings Management Systems

The effective management of storage of tailings requires rigorous design practices, comprehensive monitoring and management programs, independent auditing and strict corporate governance.

The Company acknowledges the release of the Global Industry Standard on Tailing Management (GISTM) with the objective to cause no harm to people or the environment through tailing facility design, operation and closure. We have commenced a review and gap analysis of our current processes and standards and will conduct a detailed risk assessment on the outcomes of the review.

All of the aforementioned TSFs are operated subject to the Western Australian Mines Safety and Inspection Act 1994 and the Mining Act 1978 as administered by the Western Australian Department of Mines, Industry Regulation and Safety (DMIRS). DMIRS has produced a code of practice to assist industry to meet the legislative TSF management obligations. IGO conforms to these requirements as independently verified by external specialist tailings management consultants.

Beyond the statutory obligations, all TSFs at IGO-operated sites are subject to IGO’s Environmental **Group Standard 3 – Mineral Waste Management** which applies to management of waste rock and tailings. A copy of this standard is available on the IGO website at <https://www.igo.com.au/site/caring/environment>.

IGO’s Environmental Group Standard 3 specifically addresses the minimum requirements for development of a Mineral Waste Management Plan (MWMP) – also known as a Tailings Management Plan. The MWMP

includes a risk assessment, completed in accordance with IGO's Risk Management Standards, and changes to the design or operation of tailings dams are managed in accordance with IGO's Management of Change Standards.

IGO has established and tested its Emergency and Crisis Management planning to ensure that IGO is well positioned to mitigate potential impacts on our people and the environment in the unlikely event of a dam failure.



**Matt Dusci**  
Acting Managing Director  
& CEO IGO Limited

### List of abbreviations used

ANCOLD	Australian National Committee on Large Dams
IGO	Independence Group NL
JV	Joint Venture
KCB	Klohn Crippen Berger
MCP	Mine Closure Plan
MWMP	Mineral Waste Management Plan (also known as a Tailings Management Plan)
Nova	Nova nickel-copper-cobalt mine
SRK	SRK Consulting
TSF	Tailing storage facilities

**Table 2 IGO 2023 TSF Data**

	Notes	Nova TSF	Cosmic Boy TSF (North)	Cosmic Boy TSF (South)	Cosmos TSF
<b>1. "Tailings Dam" Name/identifier</b>	Note 1	Nova TSF	Cosmic Boy Tailings Storage Facility North Cell	Cosmic Boy Tailings Storage Facility South Cell	Cosmos TSF
<b>2. Location</b>	Note 2	Latitude: -31.826496° Longitude: 123.176961°	Latitude: -32.583420° Longitude: 119.750069°	Latitude: -32.588326° Longitude: 119.750069°	Latitude:-27.590747 Longitude: 120.583462
<b>3. Ownership (March 2019)</b>	Note 3	Owned and Operated (IGO - 100%)	Owned and Operated (IGO - 100%)	Owned and Operated (IGO - 100%)	Owned and Operated (IGO - 100%)
<b>4. Status</b>	Note 4	Active	Active reclaiming for paste	Active	Inactive
<b>5. Date of initial operation</b>	Note 5	2016	2009	2021	2000
<b>6. Is the Dam currently operated or closed as per currently approved design?</b>	Note 6	Yes	Yes	Yes	Yes
<b>7. Raising method</b>	Note 7	Other – constructed to maximum design height and fully lined prior to tailings deposition	Upstream	Upstream	Upstream
<b>8. Current Maximum Height</b>	Note 8	13m	17m	2.5m	12.3m
<b>9. Current Tailings Storage Impoundment Volume</b>	Note 9	Approx. 2,450,000 m <sup>3</sup>	3,420,000 m <sup>3</sup>	290,000 m <sup>3</sup>	1,370,000 m <sup>3</sup>
<b>10. Planned Tailings Storage Impoundment Volume in 5 years' time.</b>	Note 10	Approx. 4,100,000 m <sup>3</sup> [+1,650,000 m <sup>3</sup> ]	3,420,000 m <sup>3</sup>	620,000 m <sup>3</sup>	1,940,000 m <sup>3</sup>
<b>11. Most recent Independent Expert Review</b>	Note 11	Design Basis Review by SRK Consulting (May 2023), Annual Audit 2022 by SRK Consulting.	June 2023	June 2023	December 2022
<b>12. Do you have full and complete relevant engineering records including design, construction, operation, maintenance and/or closure.</b>	Note 12	Yes.	Yes	Yes	Comprehensive but not full and complete.
<b>13. What is your hazard categorisation of this facility, based on consequence of failure?</b>	Note 13	Category 2 (DMIRS) High (ANCOLD)	Category 1 High (DMIRS) Significant (ANCOLD)	Category 2 (DMIRS) Medium (ANCOLD)	Category 1 High (DMIRS) Significant (ANCOLD)

<b>14. What guideline do you follow for the classification system?</b>	Note 14	Facility is classified under both the DMP, 2013 and ANCOLD, 2012 guidelines and standards.	Facility is classified under both the DMP, 2013 and ANCOLD, 2012 guidelines and standards.	Facility is classified under both the DMP, 2013 and ANCOLD, 2012 guidelines and standards.	Facility is classified under both the DMP, 2013 and ANCOLD, 2012 guidelines and standards.
<b>15. Has this facility, at any point in its history, failed to be confirmed or certified as stable, or experienced notable stability concerns, as identified by an independent engineer (even if later certified as stable by the same or a different firm).</b>	Note 15	No.	No	No	No
<b>16. Do you have internal/in house engineering specialist oversight of this facility? Or do you have external engineering support for this purpose?</b>	Note 16	Yes. Internal oversight provided by Processing Manager. External support for design and operations provided by SRK.	Yes. Internal oversight provided by Processing Manager. External support for design and operations provided by Coffey.	Yes. Internal oversight provided by Processing Manager. External support for design and operations provided by Coffey.	Yes. Internal oversight provided by Processing Manager. External support for design and operations provided by Golder WSP and Coffey.
<b>17. Has a formal analysis of the downstream impact on communities, ecosystems and critical infrastructure in the event of catastrophic failure been undertaken and to reflect final conditions? If so, when did this assessment take place?</b>	Note 17	Yes. Most recent assessment in 2019 by SRK.	Yes, 2013	Yes, 2013	Yes 2018
<b>18. Is there a) a closure plan in place for this dam, and b) does it include long term monitoring?</b>	Note 18	Yes & Yes	Yes & Yes	Yes & Yes	Yes & Yes
<b>19. Have you, or do you plan to assess your tailings facilities against the impact of more regular extreme weather events as a result of climate change, e.g. over the next two years?</b>	Note 19	Yes. Facility has no external catchment and operational freeboard to store a rainfall event up to 220% of the design storm (1:100-year, 72-hour).	Yes	Yes	Yes
<b>20. Any other relevant information and supporting documentation.</b>  Please state if you have omitted any other exposure to tailings facilities through any joint ventures you may have.	Note 20	See attached response for further information.			

## Instructions to support completion and associated notes

### Note 1 TSF Name

Requested Information: Please identify every tailings storage facility and identify if there are multiple dams (saddle or secondary dams) within that facility.

IGO notes: The register includes all above ground Tailings Storage Facilities (TSFs) that are, or have been, used to store slurry tailings. In-pit TSFs and stockpiles of dry tailings, e.g., for use as paste backfill production, have not been included due to negligible risk of failure runoff.

### Note 2 Location

Requested Information: Coordinates in decimal degrees taken from Google Earth.

### Note 3 Ownership

Requested Information: Please specify: Owned and Operated, Subsidiary, JV, NOJV.

### Note 4 Status

Requested Information: Status of each TSF has been assigned as one of the following:

- Active: Tailings has been deposited within the last 12-months
- Inactive: Tailings has not been deposited within last 12-months and infrastructure remains in place for tailings deposition to recommence.
- Decommissioned / Care and Maintenance: No more tailings will be deposited in the facility. Some rehabilitation works may have been undertaken but are incomplete.
- Closed: Facility has been rehabilitated in accordance with the closure plan and no further works of significance are likely to be required.

IGO notes: We define closed as: a closure plan was developed and approved by the relevant local government agency, and key stakeholders were involved in its development; a closed facility means the noted approved closure plan was fully implemented or the closure plan is in the process of being implemented. A facility that is inactive or under care and maintenance is not considered closed until such time a closure plan has been implemented.

### Note 5 Date of Initial Operation

Requested Information: The Month/Year when tailings was first deposited into the completed facility reported. For legacy facilities (>25 years since operation ceased), the approximate period for first deposition is reported.

### Note 6 Is the Dam currently operated or closed as per currently approved design?

Requested Information: Yes/No. If 'No', more information can be provided in the answer to Q20

IGO notes: Where an operational or closure design exists, and the facility is generally in agreement with the design, the question has been answered in the affirmative.

### Note 7 Raising Method

Requested Information: Requested Information: Raising method(s) are reported as one of the following categories:

- Downstream – includes filtered tailings dry-stack facilities;
- Centreline;

- Upstream; or,
- Hybrid – includes combinations of different methods.

### **Note 8 Current Maximum Height**

Requested Information: The current height of the largest dam is reported in meters as of June 2023.

### **Note 9 Current tailings storage impoundment volume**

Requested Information: Volume (m<sup>3</sup>).

IGO notes: For facilities with records of deposition, stored volume is based on measured data to end of June 2023 or on most recent assessment of the facility (e.g., annual audit) with a pro-rata estimate to end of June 2023. For facilities without records of deposition, stored volume is based on an estimate of depth of tailings over surface area of facility. These estimates are reported in brackets, e.g., (#####).

### **Note 10 Planned tailings storage impoundment volume in 5 years**

Requested Information: Volume (m<sup>3</sup>) as planned for June 2028.

IGO notes: For active facilities, an estimate of stored volume is based on tailings management plans. All other facilities are assumed to have no change in stored volume.

### **Note 11 Most recent Independent Expert Review**

Requested Information: Date of most recent Independent Expert Review.

IGO notes: For this question we take 'Independent' to mean a suitably qualified individual or team, external to the Operation, that does not direct the design or construction work for that facility. Where completed, the date of the review and name of the reviewer is listed. The type of review is also listed based on the following types:

- **Comprehensive-type:** Detailed review of all functional aspects of the facility design, construction, and operation. May also include additional data collection and analyses as required.
- **Audit-type:** Review of available records and performance data against design and operational criteria. May also include physical inspection of the facility.

### **Note 12 Do you have full and complete relevant engineering records including design, construction, operation, maintenance, and/or closure?**

Requested Information: Yes or No answer.

IGO Notes: We take the word "relevant" here to mean that you have all necessary documents to make an informed and substantiated decision on the safety of the dam, be it an old facility, or an acquisition, or legacy site. Where complete records are available, the question has been answered in the affirmative.

For legacy facilities (>25 years since operation ceased), records are expected to be limited and judgement on the risk profile of the facility has been used to answer the question. Further discussion on the risk profile of legacy facilities is included in Section 4 of this disclosure.

### **Note 13 What is your hazard categorisation of this facility, based on the consequence of failure?**

IGO notes: Hazard categorisation is applied based on the applicable guidelines and standards for each dam. The applicable guidelines and standards are discussed under (Q14) and the relevant hazard categorisation for each dam is listed in the register.

**Note 14 What guideline do you follow for the classification system?**

IGO notes: All of the IGO-operated assets with tailings dams are located in Western Australia, Australia. Applicable guidelines and standards within this jurisdiction include the following:

- Department of Mines and Petroleum<sup>1</sup>, 2013, Tailings storage facilities in Western Australia – code of practice: Resources Safety and Environment Divisions, Department of Mines and Petroleum, Western Australia. 2013
- Australian National Committee on Large Dams (ANCOLD), 2012. Guidelines on Tailings Dams: Planning, Design, Construction, Operation and Closure. May 2012.

The guidelines and standards knowingly applied to each dam are listed.

**Note 15 Has this facility, at any point in its history, failed to be confirmed or certified as stable, or experienced notable stability concerns, as identified by an independent engineer (even if later certified as stable by the same or a different firm).**

Requested information: Yes or No answer. If yes, have appropriately designed and reviewed mitigation actions been implemented?

IGO Notes: Where there has been a known incidence of stability concerns, the question is answered in the affirmative and the date and cause of the concern is noted. Where an affirmative response has been given, the status for rectification of the concern is included.

**Note 16 Do you have internal/in house engineering specialist oversight of this facility? Or do you have external engineering support for this purpose?**

Requested Information: Yes, No or "Both".

IGO notes: Each of IGO's active tailings facilities has an internal designated responsible person. This person is typically not dedicated solely to management of the tailings facility but completes this as part of a wider set of duties and responsibilities. Where a facility has a designated person responsible for oversight of this facility within IGO, the question is answered in the affirmative and the qualifications and experience of the designated person are listed.

Where a facility has recently had involvement from an external consultant to provide specialist advice, the question is answered in the affirmative and the name of the company providing these services is noted.

**Note 17 Has a formal analysis of the downstream impact on communities, ecosystems and critical infrastructure in the event of catastrophic failure been undertaken and to reflect final conditions? If so, when did this assessment take place?**

Requested Information: Please answer 'yes' or 'no', and if 'yes', provide a date.

IGO notes: Where a dam breach assessment has been completed, the question is answered in the affirmative and date of the most recent assessment noted.

**Note 18 Is there a) a closure plan in place for this dam, and b) does it include long term monitoring?**

Requested Information: Please answer both parts of this question (e.g. Yes and Yes).

IGO notes: IGO is required to submit and update a Mine Closure Plan (MCP) for each asset that includes

---

<sup>1</sup> Department of Mines and Petroleum now known as the Department of Mines, Industry Regulation and Safety (DMIRS)

domain specific closure plans including for each TSF facility. The MCP is required to include increasing levels of design detail as an asset moves closer to closure. All MCPs include provision for long-term monitoring during the post-closure phase. Where an MCP exists, the question is answered in the affirmative.

**Note 19 Have you, or do you plan to assess your tailings facilities against the impact of more regular extreme weather events as a result of climate change, e.g. over the next two years?**

Requested Information: Yes or no answer.

IGO notes: Where explicit consideration of climate change impacts has been made in design, operation, or closure of a facility, the question is answered in the affirmative. Where there has been no explicit consideration, but the facility includes adequate contingency in terms of flood storage, the question is also answered in the affirmative with appropriate commentary.

**Note 20 Any other relevant information and supporting documentation.**

Requested Information: Supplementary information as appropriate. IGO notes: Provided in the cover letter and in the table