

CENTAMIN'S COMMITMENT TO SAFE TAILINGS FACILITY MANAGEMENT AND IMPLEMENTATION OF ITS TAILINGS GOVERNANCE FRAMEWORK, DATED 31 AUGUST 2022

Forward from the CEO

As a responsible mining company, Centamin is committed to the Global Industry Standard on Tailings Management ("GISTM") with the objective to cause no harm to people or the environment through tailings facility design, operation and closure. In 2021 we commenced a systematic review of our tailings governance and management framework against the requirements of the GISTM targeting conformance by August 2023.

In late-2019, Centamin disclosed information on its tailings storage facilities ("TSFs") at the request of the Investor Mining and Tailings Safety Initiative¹ and is committed to reviewing and updating this disclosure annually. We are pleased to provide this updated disclosure for 2021 in Annex 1, the content and format of which has been informed by the revised draft disclosure request of the Investor Mining and Tailings Safety released for consultation in January 2022².

In 2021, Centamin had two active TSFs ("TSF1" and "TSF2") in operation at Sukari, both designed using the downstream method of tailings construction. The first, TSF1, has been operating since 2010 is near full capacity while providing intermittent contingency storage in 2021 during the commissioning of TSF2. The second, TSF 2, commenced operation in 2021 and is now fully commissioned to provide tailings storage for the current Life of Mine plan.

Our TSFs are designed and operated in accordance with ANCOLD regulations; meet host country legislative requirements; and are managed through a robust framework of principles, standards and guidelines to ensure structural stability, human safety and environmental protection, whilst maintaining efficient and responsible production.

The TSFs are monitored through a layered assurance system by a team of internal specialists, an external Engineer of Record, an Independent Technical Reviewer and with oversight maintained by the Centamin Executive and Board of Directors.



Martin Horgan, CEO

Tailings Governance

Centamin's is committed to the highest standard of responsible tailings management and employs a robust governance approach based on minimum operating requirements, risk management, review and assurance.

As part of Sukari's risk mitigation process, Critical Risk Standards are in place that define the minimum requirements for the management of critical safety risks. The Tailings Management Critical Risk Standard sets the minimum requirements for the management of tailings to protect human health and the environment through facility design, operation and closure. The Standard also covers incident and emergency response, management of change processes, performance reviews and independent audits.

Each TSF has an Operating Manual covering the operation, monitoring, maintenance, construction, closure and rehabilitation guidelines for the facility; clear definition of responsibility for key personnel; and a Trigger Action Response Plan to effectively assess deviations from standard operating practice and required actions, including what to do in the event of an incident or emergency.

The TSFs are monitored through a layered assurance system by a team of internal specialists, Sukari's formally appointed external Engineer of Record ("EoR") and an Independent Technical Reviewer. Both the EoR and Independent Technical Reviewer are empowered to conduct routine performance and safety reviews of Sukari's Tailings Management System.

Centamin's Board of Directors (the "Board") have ultimate accountability for the safe management of our tailings facilities including, emergency preparedness and response and recovery in the event of failure. The Board is

¹ Global Tailings Portal: www.tailings.grida.no

² [Tailings Disclosure draft 1.4 for review.xlsx \(live.com\)](#)

supported in this role by its Technical and Sustainability Committees, who oversee the development and implementation of the Tailings Management System.

Centamin is currently working through the requirements of the Global Industry Standard on Tailings Management (GISTM) and has committed to conformance with the GISTM by August 2023.

Performance

At Sukari, there are two active TSFs that are both designed and operated to provide permanent and secure containment of all solid tailings material over the Life of Mine. The embankments have been constructed using the downstream method and the facilities comprise an HDPE geomembrane liner to control seepage, reduce the risk of groundwater contamination and maximise water return to the process. To date there has been no reportable incidents associated with the operation of the facilities.

TSF 1 was commissioned during 2010 and has undergone a number of lifts over its operating life to its final height in 2020. In 2021 TSF1 remained active, providing contingency tailings storage for intermittent periods during the commissioning phase of TSF 2 and subsequent construction of Stage 2 and 3 lifts. TSF 1 is now approaching full capacity. TSF 2 stage 1 was completed during 2021 and serves as the primary facility for tailings. TSF 2 will provide 150 million tonne of dry tailings storage over the life of the mine. The facility is designed in accordance with ANCOLD 2021 guidelines and has a dam failure consequence of High A and an environmental spill consequence category of Low. Through its operating life the facility is designed to be raised through 13 stages downstream lifts. The construction of Stage 2 and 3 lifts were completed in early 2022.

The TSFs are designed and operated for no discharge to the environment. Any excess tailings water is contained within the facility and returned to the Process Plant for reuse, or is lost through evaporation. A seepage control system reduces seepage rates to manageable levels and includes: low permeability geomembrane liners; an underdrainage collection and return system; and a leachate collection and return system.

There are 15 monitoring boreholes and 35 piezometers adjacent and downstream to the TSFs. Water samples are analysed weekly by the onsite laboratory and monthly by an independent and accredited offsite laboratory. The test results of all ground water quality are then periodically reviewed independently.

Review and Assurance

To ensure facilities are performing as designed, we have several programmes for inspecting, auditing and reporting on the safety of our tailings facilities.

At Sukari a Tailings Facility Manager is responsible for the management of the TSFs with the daily operations carried out by a dedicated Tailings Facility Operator who conducts daily performance monitoring including visual inspections to confirm the operational and structural integrity of the facility. This is supplemented by routine monitoring and inspections by the Health Safety and Environment department.

In 2021, our Engineer of Record conducted a formal dam safety of the TSFs. In addition, a suitably qualified principal engineer was engaged to perform an independent Technical Review of our TSFs against the applicable design standards and GISTM. The reviews confirmed the operational and structural integrity of the tailings facilities and revealed some areas of improvement which are currently being addressed.

Sukari has a well-developed emergency action plan in the event of any potential breach. The plan is communicated to all employees and contractors and emergency drills are held regularly. The emergency response plan is reviewed internally at least annually.

The information presented in this report is true to the best of the Centamin directors' knowledge and understanding as at the date of this report and based on the governance, technical and internal review systems.

Annex A: Tailings Disclosure Table

1.	Identification	
1.1	Name of operating location or site	Sukari Gold Mines
1.2	Date of establishment of operation or site (year)	2009
1.3	Country of operating location	Arab Republic of Egypt
1.4	Operation elevation (m AMSL)	350m
1.5	Current operation status	Active
1.6	Active date	2009
1.7	Inactive date	N/A
1.8	Closed date (year)	N/A
1.9	Primary commodity	Gold
1.10	Comments on questions in section 1	None
2.	Ownership	
2.1	Operating company name	Sukari Gold Mine ("SGM")
2.2	Address of Operating Company HQ	361 El Horreya Road; Sedi Gaber; Alexandria; Egypt
2.3	Link to company home page	www.centamin.com
2.4	Date of establishment of Operating company (year)	1995
2.5	Owner of operating company if subsidiary	Centamin PLC
2.6	Is this a JV?	Yes. SGM is 50:50 jointly owned by Centamin and the Egyptian Mineral Resource Authority ("EMRA"), a division of the Egyptian government
2.7	Are you operator/non-operator	Operator
2.8	Are you the majority/minority/equal partner?	Equal partner
2.9	Is the operator of the facility committed to the implementation of the GISTM	Yes
2.10	Date by which compliance is expected to be achieved	August 2023
2.11	Link to operator public tailings disclosure	Link
2.12	Comments on questions in section 2	None

3.	GISTM Disclosure Topic	TSF 1	TSF 2
3.1	A description of the tailings facility (TF; information may be obtained from the output of Requirements 4.8 Design Basis Report); please provide links	<p>The overall design objectives for the TSF included:</p> <ul style="list-style-type: none"> • Permanent and secure containment of all solid waste materials; • Optimisation of tailings densities using sub-aerial deposition; • Removal and reuse of free water; • Reduction of seepage; • Ease of operation; and • Ease of closure. <p>Each Tailings Storage Facility consists of a large simple compartment dam with downstream constructed earth fill embankments consisting of waste rock fill, wadi gravels and a sand and gypsum blended soil liner.</p>	
3.1a	TF identifier	TSF 1	TSF2
3.1b	Lat (decimal degrees) of TF	24° 57' 40'' N	24° 55' 58'' N
3.1c	Long (decimal degrees) of TF	34° 41' 56'' E	34° 41' 50'' E
3.1d	Date of initial construction of TF (year)	2010	2021
3.1e	Construction method of TF raises	Downstream	Downstream
3.1f	If TF is hybrid or other please provide details	N/A	N/A
3.1g	Current deposition method	Thickened	Thickened
3.1h	If <i>other</i> deposition method in question 3.1g, please describe	N/A	N/A
3.1j	Current TF status (active, inactive, closed)	Active	Active
3.2	The GISTM Consequence Classification (Requirement 4.1);		
3.2a	Other classification system	ANCOLD	ANCOLD
3.2b	Consequence classification according to nominated scheme	High A	High A
3.2c	Comments on questions in section 3.2	The Dam break assessments included a review of the Population at Risk (PAR), business risk and environmental impact in the event of a dam failure. The assessment, based on ANCOLD guidelines, resulted in an "Environmental Spill Consequence Category" of "Low" and a "Dam Failure Consequence Category" of "High A"	
3.3	Has a risk assessment been undertaken (Requirement 15.1.B.3)	Yes	Yes
3.3a	If a risk assessment summary is available please provide link	Not publicly disclosed at the present time	Not publicly disclosed at the present time
3.3b	Does the TF design and operation account for uncertainties associated with climate change? (Requirements 3.1, 3.3, 3.4, 5.3)	No	No

3.	GISTM Disclosure Topic	TSF 1	TSF 2
3.3c	Comments on questions in section 3.3	The design reports do not consider climate change. In 2021 we assessed the physical risks of climate change to our operations under future emission scenarios aligned with the latest phase of the Climate Model Intercomparison Project (“CIMP6”), comprising projections made with respect to SSP2-4.5 and SSP5-8.5 scenarios. Our business was assessed to be resilient to physical risks for the near-term predictions, indicating that adaptation specifically to mitigate the effects of climate are not required for the current life of Sukari.	
3.4	Is there currently a formal confidential process to investigate employee TF concerns?	Yes	Yes
3.4a	Comments on questions in section 3.4	There are various mechanisms in place for employees to raise concerns, issues or report instances of non-conformance with policy, procedures or standards. Employees are encouraged to use the incident reporting and investigation system which allows for the reporting and investigation of any non-compliances or near-hits and the tracking through to the completion of all corrective and preventative actions. Other mechanisms include the asset-level grievance process or the Whistleblower Hotline, which is managed by an independent third party and provides for concerns to be raised confidentially.	
3.5	Has a TF breach assessment been undertaken (Requirement 2.4)	Yes	Yes
3.5a	If a TF breach assessment summary is available please provide link	Not publicly disclosed at the present time	Not publicly disclosed at the present time
3.5b	Has an impact assessment been conducted to assess human exposure and vulnerability to tailings facility credible flow failure scenarios (Requirement 14.1.B.4)	Yes	Yes
3.5c	If an impact assessment summary is available please provide link	Not publicly disclosed at the present time	Not publicly disclosed at the present time
3.5d	Comments on questions in section 3.5	The assessment includes a review of the Population at Risk (PAR), business risk and environmental impact in the event of a dam failure. The assessment, based on ANCOLD guidelines, resulted in an “Environmental Spill Consequence Category” of “Low” and a “Dam Failure Consequence Category” of “High A”.	
3.6	Please confirm that Dam Break Impact Assessments have been undertaken (consistent with the requirements of the GISTM) (Yes/No)	Yes	Yes
3.6a	Please provide link to Dam break impact assessment summary	Not publicly disclosed at the present time	Not publicly disclosed at the present time
3.6b	Comments on questions in section 3.6	The assessment included a review of the Population at Risk (PAR), business risk and environmental impact in the event of a dam failure. The assessment, based on ANCOLD guidelines, resulted in an “Environmental Spill Consequence Category” of “Low” and a “Dam Failure Consequence Category” of “High A”.	

3.	GISTM Disclosure Topic	TSF 1	TSF 2
3.7	Please indicate the estimated human exposure (i.e. Population at Risk or PAR) within the hazard zone created by credible flow failure scenarios	>100 – 1,000	>100 – 1,000
3.7 a	Comments on question 3.7	The following mine facilities would be at risk if a dam break were to occur: Plant Site, Accommodation, Administration building and access and haul roads adjacent to the TSFs. An assessment of the PAR was undertaken for the dam break results.	
3.8	Current maximum height in meters of embankment or facility	60 meters	41 meters
3.8a	Planned lifecycle maximum height in meters of embankment or facility	60 meters	80 meters
3.8b	Current tonnage of tailings stored in the tailings facility (million metric tonnes).	90 Million Metric tonnes	12.2 Million Metric tonnes
3.8c	Estimated or calculated	Calculated	Calculated
3.8d	Current volume of tailings stored in the tailings facility (million cubic meters).	69.2 Mm ³	9.4 Mm ³
3.8e	Estimated or calculated	Calculated	Calculated
3.8g	Expected ultimate tonnage of tailings that will be stored in the tailings facility at the end of the lifecycle (million metric tonnes).	91 Million Metric tonnes	150 Million Metric tonnes
3.8h	Expected ultimate volume of tailings that will be stored in the tailings facility at the end of the lifecycle (million cubic meters).	70 Mm ³	115 Mm ³
3.8i	When is the TF expected end of lifecycle	To be confirmed	2033
3.8j	Comments on questions in section 3.8	3.8g –In 2021 TSF1 remained active, providing contingency tailings storage for intermittent periods during the commissioning phase of TSF 2 and subsequent construction of Stage 2 and 3 lifts. 3.8i. Subject to the results of decommissioning studies	
3.9	Are annual (or more frequent) tailings performance and construction reviews conducted by the Engineer of Record or senior independent technical reviewer (Requirement 10.4).	Yes	Yes
3.9a	If tailings performance and construction review summary is available please provide link	Not publicly disclosed at the present time	Not publicly disclosed at the present time

3.	GISTM Disclosure Topic	TSF 1	TSF 2
3.9b	Are Dam Safety Reviews (DSRs) (or Tailings Stewardship reviews as referenced in ICMM's Tailings Management Good Practice Guide) conducted at a frequency commensurate with the Consequence Classification of the facility (Requirement 10.5)?	Yes	Yes
3.9c	If a DSR summary is available please provide link	Not publicly disclosed at the present time	Not publicly disclosed at the present time
	Has an Independent Tailings Review Board (ITRB) or senior independent technical reviewer been appointed to support governance of the tailings facility (GISTM Requirement 8.7)?	Yes	Yes
3.9d	Date most recent independent review	December 2021	December 2021
3.9e	Date next independent review	Q4 2023	Q4 2023
3.9f	Comments on questions in section 3.9	Our Engineer of Record conducted a formal dam safety audit of the TSFs in 2021. We also engaged a suitably qualified principal engineer to perform an Independent Technical Review of our TSFs against the applicable design standards and the GISTM. The audit and review confirmed the operational and structural integrity of the tailings facilities, but did reveal deficiencies in some elements of the tailings management system for redress in 2022.	
3.10	Are there monitoring programmes in-place inclusive of environmental and geotechnical stability, and are results reported at the frequency required to meet company and regulatory requirements (Requirement 7.5)?	Yes	Yes
3.10a	If a summary of monitoring programmes is available please provide a link	2021 Sustainability Report, pg 69: https://www.centamin.com/media/2539/cey-2021-sustainability-report.pdf ESG Dashboard: https://www.centamin.com/media/2856/sustainability-dashboard-2021_final-3.xlsx	
3.10b	Comments on questions in section 3.10	To ensure facilities are performing as designed, we have several programmes for monitoring and evaluating the safety of our tailings facilities. Operation of the TSFs is managed by a dedicated team of people who conduct daily performance monitoring including visual inspections to confirm the operational and structural integrity of the facility. This is supplemented by routine occupational safety and environmental monitoring and inspections by the HSE department. In 2021, the monitoring results were routinely reviewed by our Engineer of Record and an Independent Technical Reviewer in the conduct of their review.	

3.	GISTM Disclosure Topic	TSF 1	TSF 2
3.11	Do you conform to the requirements of Principle 1 of the GISTM with regard to respecting the rights of project-affected people and meaningfully engaging with them at all phases of the tailings facility lifecycle?	Yes	Yes
3.11a	If answering <i>equivalent</i> in question 3.11 please provide details	N/A	N/A
3.11b	Comments on questions in section 3.11	Centamin's Human Rights policy sets out our commitment to respect the human rights of our workforce, affected communities and the rights of all individuals with whom we interact. We are committed to adopting and implementing policies, practices and systems based on the UN Guiding Principles on Business and Human Rights. In addition, Centamin's Social Responsibility Policy ("Policy") sets out our commitment to social responsibility, encompassing land use, livelihoods and resettlement, community health and safety, cultural heritage, stakeholder engagement, grievance management, and our efforts to create and maintain mutually beneficial and respectful relationships with our host communities.	
3.12	Please provide operator contact details for the social monitoring/community engagement/consultation programme so that local stakeholders have the ability to contact the operator directly.	Country Manager: Mr Amr Hassouna T: +203 5411 259 E: pgm@centamin.com	
3.13	Is there an Emergency Preparedness and Response Plan (EPRP) for the tailings facility (Requirement 13.1 and 13.2) ?	Yes	Yes
3.13a	Has the EPRP been implemented (requirement 13.3)?	Yes	Yes
3.13b	Please provide a link to the plan	Not publicly disclosed at the present time	Not publicly disclosed at the present time
3.13c	Comments on questions in section 3.13	Each TSF has an associated Trigger Action Response Plan to effectively assess deviations from standard operating practise and required actions, including what to do in the event of an incident or emergency.	
3.14	Does the Operator have adequate financial capacity (including insurance to the extent commercially reasonable) to cover estimated costs of planned closure, early closure, reclamation, and post-closure of the tailings facility and its appurtenant structures (Requirement 15.1.B.10)?	Yes	Yes

3.	GISTM Disclosure Topic	TSF 1	TSF 2
3.14a	Is the financial assurance for closure assessed annually as part of an independent financial audit?	Yes	Yes
3.14b	Comments on questions in section 3.15	As a publicly listed company and to comply with reporting and financial assurance obligations, Centamin is required to disclose the cost liability, or Asset Retirement Obligation (“ARO”) for the closure and decommissioning of its operational assets, and rehabilitation of the impacted area. The ARO is independently reviewed and updated on an annual basis.	
3.15	Do you have a publicly-posted policy and commitment to the safe management of tailings facilities, to emergency preparedness and response, and to recovery after failure (Requirement 8.1)?	No	No
3.15a	Please provide a link to the policy	Centamin does not have a specific publicly-posted policy related to tailings facilities, however our commitment to the safe management of tailings facilities is stated in our Environment Policy, annual Sustainability Report and this annual disclosure. Environment Policy: https://www.centamin.com/media/2450/cey-environment-policy-2021_en.pdf 2021 Sustainability Report, pg. 69: https://www.centamin.com/media/2539/cey-2021-sustainability-report.pdf	
3.16	Are there mechanisms such that incentive payments or performance reviews for roles with responsibility for tailings facilities are based, at least in part, on public safety and the integrity of the tailings facility (Requirement 8.3)?	Executive Directors and employees eligible for our bonus scheme are incentivised to take accountability for health, safety and sustainability performance through Centamin’s compensation structure. Health, safety and sustainability metrics represented 15% of the actual performance bonus payment in 2021, which includes: zero reportable environmental or social incidents; a reduction to the environmental and social incident frequency rate; and a reduction to the Lost Time and Total Recordable Injury frequency rate (LTIFR and TRIFR).	
4.1	Additional notes	None	None