## **Tailings Management Information Sheet**

### **Overview**

Lundin Mining is committed to the safe and responsible management of tailings facilities, to emergency preparedness and response, to post-incident recovery, to compliance with applicable legislative and regulatory requirements, permit conditions, and to our Code of Conduct, Ethical Values and Anti-Corruption Policy.

Lundin Mining employs a comprehensive and integrated approach to tailings management. This provides us with confidence that potential safety, environmental and social impacts can be reliably identified and minimized.



Efficient mining and mineral processing, along with disposal underground where practicable, allow our operations to minimize the quantities of tailings stored on surface. Our operations aim to minimize associated risk with a clear understanding of the tailings characteristics, the facility construction materials, and the final settings in which they are placed.

### Lundin Mining's Tailings Facilities

Lundin Mining operates six mines with seven active tailings facilities and uses two widely accepted methods of tailings disposal:

(1) underground disposal involves mixing tailings with products, such as sand or cement, followed by disposal as a paste backfill or hydraulic backfill in previously mined areas of underground mines; and

(2) surface disposal involves placement in engineered surface impoundments or, in the case of Eagle, in a previously mined open pit.

Of the six Lundin Mining operations, Eagle Mine is the only operation that does not have a constructed tailings impoundment with dams.

Across the other operations, the active tailings facilities use various construction techniques for the main and secondary or perimeter dams. Lundin Mining also maintains and monitors six inactive/closed tailings facilities, one of which is a rockfill combination centreline and downstream design followed by rockfill upstream raises and buttresses (Enemossen tailings facility at Zinkgruvan).



All tailings facilities are operated or closed as per the currently approved design. Full and complete engineering records including design, construction, operation, maintenance and/or closure exist for all tailings facilities except for the inactive Enemossen facility at Zinkgruvan, and the closed Ojos del Salado facilities at the Candelaria Mining Complex. The three Ojos del Salado tailings facilities are legacy sites that ceased operations in the 1960s. The Ojos del Salado tailings facilities were fully closed in 2012 as per an approved engineered closure plan.

A full list of tailings facilities that Lundin Mining manages, including information on construction method, maximum dam height and volume, can be found in the table on Pages 4 and 5.

### Tailings Management at Lundin Mining

Surface tailings impoundments can represent some of the most significant safety and environmental related risks for the mining industry. Lundin Mining takes considerable care to ensure our tailings facilities have robust and resilient designs, built in accordance with leading industry practices and standards, well operated and maintained, inspected, independently reviewed, and carefully monitored.

#### **Policies and Standards**

Lundin Mining's Responsible Mining Policy and Responsible Mining Management System (RMMS) include tailings specific principles and standards. All Lundin Mining's operations manage their tailings in

## **Tailings Management Information Sheet**

accordance with the Tailings Management Standard, updated in 2021 to align to the Global Industry Standard on Tailings Management (GISTM).

lundin mining

The Tailings Management Standard requires that for all tailings facilities throughout the entire lifecycle, from planning and design, construction, operation, closure, and post-closure, implementation of leading practices will be carried out to:

- Protect the health and safety of our people and host communities;
- Minimize harm to the environment;
- Ensure all aspects comply with Lundin Mining policies and standards and accepted international practice;
- Ensure all aspects comply with commitments to stakeholders; and
- Ensure leadership, personal commitment, and accountability from all employees, consultants, and contractors is embedded throughout all aspects of tailings management.



#### Governance

Lundin Mining's oversight of all tailings facilities includes a three lines model. The first line starts with the operational management and engineering teams at the sites which includes a Responsible Tailings Facility Engineer.

At the corporate level, Lundin Mining has a specialized tailings team, which serves as a dedicated technical resource for the site operators and engineers and serves as the second line. The corporate team does not have day-to-day operating pressures and exists to provide assurance and technical leadership related to tailings management.

For assurance, the corporate team manages the Independent Tailings Review Board (ITRB) program and works closely with the sites and external Engineers of Records to make sure any recommended actions are completed in a timely manner. This team develops guidance and tools that support consistent implementation of the Tailings Management Standard across the company. The team also stays abreast of current and emerging technologies and leading international practices around tailings facility design and management. The corporate team provides advice to the sites and supports the Accountable Executive by communicating on assurance activities and any findings as well as preparing Board materials.

As a third line, the corporate team arranges audits to verify consistent implementation and conformance with the Tailings Management Standard including the relevant management systems to assure effectiveness.



#### Monitoring and Surveillance

A requirement of the Tailings Management Standard is for all operations to conduct regular geotechnical, hydrogeological, and environmental monitoring to meet regulatory requirements and prevent the uncontrolled release of tailings and/or water to the environment.

All operations employ monitoring and surveillance systems which may include surface prisms, piezometers, inclinometers, remote sensing and other technologies to monitor tailings dams and water levels. Trigger action response plans (TARPs) provide clear guidance on how to respond to pre-determined trigger levels for surveillance activities.

All tailings facilities have a closure plan which includes long-term monitoring requirements. The monitoring plan for the closed Ojos del Salado tailings facilities at the Candelaria Mining Complex was reviewed in 2021 and additional dam safety instrumentation was installed.

#### **Responsible Tailings Facility Engineer**

All operations are required to identify a responsible person to ensure ownership and proper management of

## **Tailings Management Information Sheet**

the tailings facility. The Responsible Tailings Facility Engineer (RTFE) ensures procedures for each facility, including an Operating, Maintenance, and Surveillance (OMS) Manual and Emergency Preparedness and Response Plan, are regularly documented, and made available to operations personnel. The responsible person is an appropriately qualified, experienced, and site-dedicated individual employed directly by the operation.

#### **Staff Inspections**

Tailings dams are regularly inspected by trained operators and technical staff, sometimes as frequently as several times daily, with formal documented staff inspections at least quarterly.

#### **Engineer of Record**

Each tailings facility has an appropriately qualified, licensed, and experienced third-party geotechnical engineer to act as an Engineer of Record in the relative jurisdiction.

#### Dam Safety Inspections and Performance Reviews

Formal dam safety inspections and performance reviews are conducted at least annually by the Engineer of Record, and reports are issued to the RTFE for action on recommendations.



#### **Dam Safety Review**

Independent dam safety reviews are conducted by qualified multi-disciplinary technical specialists as frequently as every five years.

#### **Independent Tailings Review Boards**

Lundin Mining's Tailings Management Standard includes a requirement for regular independent third-party tailings review boards, which are recognized as a leading practice for effective tailings management.

ITRBs were established for all tailings facilities in 2022.

In addition to the annual site visit, online progress meetings with the ITRBs and Engineer of Record are completed throughout the year to closely track progress made on outstanding recommendations.



#### Implementing the GISTM

Lundin Mining is committed to the implementation of the GISTM, which is the first global standard on tailings management.

The Lundin Mining Tailings Management Standard was updated in 2021, and the Responsible Mining Policy was updated in 2022 to align with the GISTM requirements.

In 2022, Lundin Mining completed third party gap assessments against the GISTM, and by 2023, achieved full GISTM conformance for the active tailings facilities across Candelaria and Chapada.

In 2024, Lundin Mining achieved full GISTM conformance for both active facilities at Caserones. For Neves-Corvo, all GISTM requirements have been met, or met with a plan in place. Lundin Mining's active tailings facilities at Eagle and Zinkgruvan, which are classified as lowerconsequence facilities, are expected to conform with the GISTM in 2025.

/s/ Juan Andrés Morel

**Juan Andrés Morel** Executive Vice President, COO and Accountable Executive



### Lundin Mining Tailings Facility Inventory

Operation	Tailings Facility Name	Current Number of Tailings Dam Structures	Location	Ownership Structure	Status	Years of Operation	Construction Method	Max Dam/Stack Height (2024)	Tailings Storage Volume (2024)	Authorized Tailings Storage Volume	Most Recent Independent Tailings Review	Most Recent Breach Analysis
Candelaria	Los Diques	One main dam and two perimeter dams	Latitude: 27°32'10.9"S Longitude: 70°19'20.7"W	Owned (80%) and Operated	Active	2018 to Present	Downstream	102 m	147 Mt (estimate 90 Mm <sup>3</sup> )	600 Mt (estimate 339 Mm³)	June 2024	July 2021
	Candelaria	One main dam and three perimeter dams	Latitude: 27°30′17.87″S Longitude: 70°18′40.19″W	Owned (80%)	Inactive	1994 to 2019	Downstream	164 m	551 Mt (estimate 311 Mm³)	564 Mt (estimate 319 Mm³)	June 2024	July 2023
	San Esteban	Two rehabilitated legacy dams (Main and auxiliary)	Latitude: 27°29'7.11″S Longitude: 70°17'29.97″W	Owned (80%)	Closed	2006 to 2010	Centerline	45 m	2 Mm <sup>3</sup>	Same as current	June 2024	Closed facility with no water cover. Credible failure/flow potential to be evaluated.
	Ojos del Salado – North	Two rehabilitated legacy dams (No. 4 & 6)	Latitude: 27°29'25.18"S Longitude: 70°15'43.60"W	Owned (80%)	Closed	Operated until the 1960s and closed in 2012	Centerline	22 m	less than 1 Mm <sup>3</sup>	Same as current	June 2024	Closed facility with no water cover. Credible failure/flow potential to be evaluated.
	Ojos del Salado – Central	One rehabilitated legacy dam (No. 5)	Latitude: 27°29'40.43"S Longitude: 70°15'41.26"W	Owned (80%)	Closed	Operated until the 1960s and closed in 2012	Centerline	20 m	less than 1 Mm <sup>3</sup>	Same as current	June 2024	Closed facility with no water cover. Credible failure/flow potential to be evaluated.
	Ojos del Salado – South	Three rehabilitated legacy dams (No. 1 to 3)	Latitude: 27°29′45.59″S Longitude: 70°15′36.44″W	Owned (80%)	Closed	Operated until the 1960s and closed in 2012	Centerline	34 m	less than 1 Mm <sup>3</sup>	Same as current	June 2024	Closed facility with no water cover. Credible failure/flow potential to be evaluated.
Caserones	La Brea	One main dam	Latitude: 28°8′7.58″S Longitude: 69°37′40.26″W	Owned (70%) and Operated	Active	2014 to Present	Downstream	238 m	118 Mm <sup>3</sup>	478 Mt (estimate 300.6 Mm <sup>3</sup> )	February 2025	February 2024
	El Tambo	Cycloned sand stack	Latitude: 28°11'46.01"S Longitude: 69°33'59.76"W	Owned (70%) and Operated	Active	2014 to Present	Sand stack	135 m <sup>(4)</sup>	47 Mm <sup>3</sup>	570 Mt (estimate 338 Mm³)	February 2025	April 2023
Chapada	Chapada	One main dam and two perimeter dams	Latitude: 14°13'4.18″S Longitude: 49°24'13.37″W	Owned and Operated	Active	2007 to Present	Centerline	50 m	260 Mm <sup>3</sup>	271 Mm <sup>3</sup>	August 2024	September 2024
Eagle	Humboldt	No dams, tailings are stored sub-aqueously in an old open pit	Latitude: 46°29′26.57″N Longitude: 87°54′8.70″W	Owned and Operated	Active	2014 to Present	N/A	N/A	2.8 Mm <sup>3</sup>	5.8 Mm <sup>3</sup>	September 2024	July 2021
Neves-Corvo	Cerro do Lobo	One main dam, eight perimeter dams, and eight internal berms/tiers	Latitude: 37°33'36.99"N Longitude: 7°56'6.43"W	Owned and Operated	Active	1988 to Present	Downstream / Upstream <sup>(1)</sup>	42 m	38 Mm <sup>3 (3)</sup>	50 Mm <sup>3</sup>	November 2024	May 2021
Zinkgruvan	Enemossen East	Two main dams	Latitude: 58°46'38.28"N Longitude: 15°6'24.23"E	Owned and Operated	Active	2017 to Present	Hybrid combination of Centerline & Downstream	26 m	3.6 Mm <sup>3</sup>	4.7 Mm <sup>3</sup>	October 2024	September 2024
	Enemossen	Two main dams and six perimeter dams	Latitude: 58°46'41.76"N Longitude: 15°5'48.58"E	Owned	Inactive	1977 to 2017	Hybrid combination of Centerline & Downstream / Upstream <sup>(2)</sup>	35 m	12 Mm <sup>3</sup>	Same as current	October 2024	March 2016

Notes:

(1) Includes internal upstream thickened tailings discharge rockfill berms/tiers

(2) Rockfill combination centerline and downstream design followed by rockfill upstream raises and buttresses

(3) Combined volume of co-disposed tailings and mine waste rock

(4) Maximum vertical thickness of the stack

**Tailings Management Information Sheet** 

Operation	Tailings Facility Consequence Classification		Classification System	Internal/in-house Engineering Specialist Oversight of this Facility; or, External Engineering Support	Extreme Design Flood Event	Past Stabiliza
Candelaria	Los Diques	Low <sup>(5)</sup>	Global Industry Standard on Tailings Management (2020)		Facility is designed to store the Probable Maximum Precipitation (PMP) flood event	None
	Candelaria	Extreme	Global Industry Standard on Tailings Management (2020)		Facility is designed to store the PMP flood event	None
	San Esteban	TBC following credible failure/flow potential evaluation	Global Industry Standard on Tailings Management (2020)	Both (External Engineer of Record and internal	Facility closed with a dry cover	In 2019, the E size of the pro supported by accordingly, a
	Ojos del Salado – North	TBC following credible failure/flow potential evaluation	Global Industry Standard on Tailings Management (2020)	Corporate Tailings team)	Facility closed with a dry cover	None
	Ojos del Salado – Central TBC following credible failure/flow potential evaluation		Global Industry Standard on Tailings Management (2020)		Facility closed with a dry cover	None
	Ojos del Salado – South	TBC following credible failure/flow potential evaluation	Global Industry Standard on Tailings Management (2020)		Facility closed with a dry cover	None
Caserones	La Brea	Extreme	Global Industry Standard on Tailings Management (2020)	Both (External Designer and internal Corporate	Facility is designed to store the PMP flood event	None
	El Tambo	Extreme	Global Industry Standard on Tailings Management (2020)	Tailings team)	Facility is designed so a clear water pond will not develop during normal operations and during the extreme flood event.	In 2019, an up measures to post-seismic o
Chapada	Chapada	Extreme	Global Industry Standard on Tailings Management (2020)	Both (External Engineer of Record and internal Corporate Tailings team)	Emergency spillway is designed to pass the 1/10,000-year flood event	In 2022, as a p section of the
Eagle	Humboldt	Low	Global Industry Standard on Tailings Management (2020)	Both (External Engineer of Record and internal Corporate Tailings team)	Facility is designed to store the snowmelt PMP flood event	None
Neves-Corvo	Cerro do Lobo	Very High	Global Industry Standard on Tailings Management (2020)	Both (External Engineer of Record and internal Corporate Tailings team)	Emergency spillway is designed to pass the 1/10,000-year flood event	None
Zinkgruvan	Enemossen East	High	Global Industry Standard on Tailings Management (2020)		Emergency spillway is designed to pass the PMP flood event	None
	Enemossen	High	Global Industry Standard on Tailings Management (2020)	Both (External Engineer of Record and internal Corporate Tailings team)	Emergency spillway is designed to pass the 1/10,000-year flood event	Between 197 which require localized sink successfully r dams to mair supernatant v The Enemoss Enemossen E Enemossen N

Notes:

(5) Since the current configuration of the tailings facility does not include any credible catastrophic failure modes, the GISTM Consequence Classification is "Low". However, the Consequence Classification is subject to change for future phases.

## **Tailings Management Information Sheet**

ation Measures of Note

OR completed an updated stability analysis for the closure condition to verify the eliminary constructed stabilizing buttress. The updated stability analysis was *a* revised geotechnical characterization. The stabilizing buttress was modified and construction was completed between October 2019 and April 2020.

pdated design included a reinforcement buttress and other improvement ensure minimum factor of safety criteria were met for static, pseudo-static, and conditions. The construction of the buttress has been completed.

precautionary measure, a reinforcement buttress was added along a localized Main Dam to improve stability safety factors under liquefied conditions.

7 and 2019, a total of 14 incidents were reported on the two main tailings dams ed action. These included localized failures, crest settlement and the formation of holes on the downstream shell of the two main dams. All have since been repaired. In addition, dewatering wells and pumps were installed on the two main ntain a depressed phreatic surface and low seepage gradients, and the water surface was pushed away from dam crests with tailings beaches.

en tailings facility is inactive having been replaced by Enemossen East in 2017. East is buttressing one of the Enemossen main tailings dams and the planned Jorth tailings facility will buttress the other Enemossen main tailings dam.