September 27, 2024

Re: Summary of Lupin Mine Dam Safety Review and Dam Safety Inspection Recommendation Management Plan

Stantec, the Engineer of Record for the Tailings Containment Area (TCA) conducts Dam Safety Inspections (DSIs) on an annual basis. Mandalay also commissioned a third-party Dam Safety Review (DSR) in 2023, conducted by SLR Consulting.

Table 1, attached to this letter represents a compilation of the 2023 recommendations from the DSI and the DSR conducted that year. The table also presents Mandalay Resources' ongoing actions or commitments to upcoming work related to the recommendations. A target date for when the recommendation can be considered for "closed-out" based on the committed actions is presented.

Mandalay will further update this management plan when the 2024 DSR report is received from Stantec.

Sincerely,

Frazer Bourchier

Table 1 - Summary of Lupin Mine Dam Safety Review and Dam Safety Inspection Recommendation Management Plan

Tracking Number	Recommendation	Commitment/Action	Tracking Date
DSR-2024-001	Assess the liquefaction potential for the tailings. As there is potential for the frozen deposited tailings to thaw and it is known that at least M Dam is founded on tailings, the liquefaction potential should be assessed to understand whether the tailings could flow in a dam breach scenario.	Mandalay will undertake a liquefaction assessment of the tailings in M Dam by early 2025.	May 2025
DSR-2024-002	Perform dam stability analysis of M Dam considering thawed conditions and verify whether the dam is underlain by tailings. If tailings are present under the dam, consider an Undrained Strength Analysis of thawed tailings.	Mandalay will undertake a stability analysis of M Dam by early 2025.	May 2025
DSR-2024-003	Conduct a dam breach analysis for the TCA. Presently the highest consequence would be a perimeter dam breach releasing contact water into the downstream environment. In the long-term and depending on the findings of the liquefaction potential assessment, a dam breach could release liquefiable tailings into the downstream environment.	Following the 2025 construction season, the need for a dam breach assessment will be determined by the EoR and the Lupin technical team as the site moves to passive closure, and with the benefit of insights gained from additional and ongoing geotechnical assessments currently planned or underway at the Lupin site, including the liquefaction assessment, stability assessment, and risk assessment.	December 2025
DSR-2024-004	Construct a temporary emergency spillway to reduce the risk of dam overtopping before the closure spillway is constructed. The closure spillway could make use parts of the temporary emergency spillway (e.g., the outlet channel). In effect, parts of the closure spillway would be constructed now and later the spillway invert would be lowered to the closure elevation.	This is planned to be completed in 2025	October 2025
DSR-2024-005	Design erosion resistant slopes or drainage features for the dams to ensure long term physical stability of the TCA.	This design work will be completed in 2024 and 2025 and the resulting activities will be executed in 2025	October 2025
DSR-2024-006	Adopt large magnitude events (in exceedance of those required according to the HPC) for seismic and flood design criteria for closure.	These will be incorporated into final closure designs for 2025 work	June 2025
DSR-2024-007	Perform a formal risk assessment for the TCA and document with a risk register. This risk assessment must recognize both the physical and interconnected geochemical risks and cover the transition from active closure to passive closure.	This is planned to be completed in 2024 or early 2025	May 2025
DSR-2024-008	Update or develop a new OMS Manual for the TCA that reflects the current status of the site and is updated regularly as site conditions change and the site transitions to a state of passive closure.	This will be updated for use during the 2025 construction season. It will likely be required to be updated again when the site enters passive closure.	May 2025
DSR-2024-009	Update the Emergency Response Plan to provide clarity and direction for dam safety emergencies.	This will be updated for use during the 2025 construction season.	March 2025
DSR-2024-010	Develop a dam safety corporate policy and identify a responsible tailings facility engineer and accountable executive.	Mandalay has dam safety policies at each of its operations and will develop one for Lupin. Mandalay will identify a responsible tailings facility engineer for the 2025 construction season. Mandalay will identify a accountable executive for the 2025 construction season; name to be confirmed in 2025, but it will likely be the CEO or COO.	May 2025
DSI-2023-001	[Dam 1A] Continue to monitor erosional features for progressive deterioration. If no deterioration is observed, make repairs during final spillway construction. Repair the centre siphon if additional dewatering capacity is anticipated. Monitor for increased animal activity and consider backfilling burrows.	Ongoing: Dam 1A was monitored daily from June 24 to August 5, 2024, and will continue to be monitored during active reclamation activities. Siphons were not operated in 2024.	Final Spillway Construction - TBD
DSI-2023-002	[Dam 1B] Monitor for increased animal activity and consider backfilling burrows.	Ongoing: Dam 1B was monitored daily from June 24 to August 5 and August 28 to September 8, 2024, and will continue to be monitored during active reclamation activities.	October 2025

	Recommendation	Commitment/Action	Tracking Date
DSI-2023-003	[Dam 1C] Continue to monitor erosional features for progressive deterioration. Consider backfilling and compacting erosional features with well-graded esker sand and gravels and consider removing windrows from dam crest.	Ongoing: Dam 1C was monitored daily from June 24 to August 5 and August 28 to September 8, 2024, and will continue to be monitored during active reclamation activities. Windrows removed from Dam Crest in 2024	October 2025
DSI-2023-004	[Dam 2] Continue to monitor erosional features for progressive deterioration. Consider backfilling and compacting erosional features with well- graded esker sand and gravels and consider removing windrows from dam crest. Pump water from seepage collection system back to Pond 2 (or other suitable location in the TCA).	Ongoing: Dam 2 was monitored daily from June 24 to August 5 and August 28 to September 8, 2024, and will continue to be monitored during active reclamation activities. New thermistor installed in 2024.	October 2025
DSI-2023-005	[Dam 3] Monitor tension cracks and erosional features for progressive deterioration. Consider backfilling and compacting features and regrade if features persist. Monitor for increased animal activity and consider backfilling burrows.	Ongoing: Dam C was monitored daily from June 24 to August 5 and August 28 to September 8, 2024, and will continue to be monitored during active reclamation activities.	October 2025
DSI-2023-006	[Dam 4] Consider backfilling and compacting erosional features and consider removing windrows from dam crest. Repair the thermistor if practicable.	Ongoing: Dam 4 was monitored daily from June 24 to August 5 and August 28 to September 8, 2024, and will continue to be monitored during active reclamation activities. Windrows removed in 2024. Thermistor was repaired in 2024.	October 2025
DSI-2023-007	[Dam 5] Continue to monitor erosional features for progressive deterioration.	Ongoing: Dam 5 was monitored daily from June 24 to August 5 and August 28 to September 8, 2024, and will continue to be monitored during active reclamation activities.	October 2025
DSI-2023-008	[Dam 6] Continue to monitor erosional features for progressive deterioration. Consider backfilling and compacting features and removing windrows from dam crest.	Ongoing: Dam 6 was monitored daily from June 24 to August 5 and August 28 to September 8, 2024, and will continue to be monitored during active reclamation activities. Repaired erosional feature and removed windrows on July 31 2024	October 2025
DSI-2023-009	[Dam 3D] Continue to monitor the historical wave-action erosion and erosional features for any progressive deterioration.	Ongoing: Dam 3D was monitored daily from June 24 to August 5 and August 28 to September 8, 2024, and will continue to be monitored during active reclamation activities.	October 2025
DSI-2023-010	[Dam J] Continue to monitor the historical wave-action erosion for progressive deterioration. Update the Pond 1 closure elevation listed on the detailed design drawings to reflect recent discussions and design changes.	Ongoing: Dam J was monitored daily from June 24 to August 5 and August 28 to September 8, 2024, and will continue to be monitored during active reclamation activities. The crest of Dam J was resurfaced with Grader in 2024. Pond 1 closure elevation will be confirmed and/or updated in early 2025	October 2025
DSI-2023-011	[Dam K] Continue to monitor these rills and the re- sloped embankment for progressive deterioration. Complete repairs to the damaged thermistor.	Ongoing: Dam K was monitored daily from June 24 to August 5 and August 28 to September 8, 2024, and will continue to be monitored during active reclamation activities. Thermistor was repaired. New thermistor installed.	October 2025
DSI-2023-012	[Dam L] Monitor erosional features for progressive deterioration. Consider backfilling and compacting features and removing windrows from dam crest. Continue to monitor the outfall structure for deformation and/or performance issues. Work with the EoR and DSR Engineer to develop a long-term strategy to mitigate freshet-related erosion at the Cell 3 drainage swale.	Ongoing: Dam L was monitored daily from June 24 to August 5, 2024 and August 28 to September 8, and will continue to be monitored during active reclamation activities. A long-term strategy to mitigate freshet-related erosion at the Cell 3 drainage swale is in the progress of development.	October 2025
DSI-2023-013	[Dam M] Continue to monitor the Cell 5 outfall structure for deformation and/or performance issues. Complete resloping of the downstream embankment to the design 2.1H:1V. Continue to monitor fresh and historical erosional features for progressive deterioration. If no progressive deterioration is observed, complete repairs to these features during re-sloping activities. Consider updating the stability model and designs	Ongoing: Dam M was monitored daily from June 24 to August 5 and August 28 to September 8, 2024, and will continue to be monitored during active reclamation activities.	October 2025

	Recommendation	Commitment/Action	Tracking Date
	to reflect the in-situ conditions at M Dam. Add 1 m of clean fill on the exposed tailings between the Pond 2 closure shoreline and the M Dam design toe. Update the Pond 2 closure elevation in the detailed design to reflect changes.	Dam M resloping and tailings cover installation is scheduled to be executed during the 2025 construction season. Pond 2 Closure elevation will be confirmed and/or updated in early 2025.	
DSI-2023-014	[Dam N] Consider having a water quality specialist interpret the laboratory and field parameter results and identify potential improvements. Continue to monitor cell cover, N Dam, and the added diversion ditch for progressive deterioration.	Ongoing: Dam N was monitored daily from June 24 to August 5 and August 28 to September 8, 2024, and will continue to be monitored during active reclamation activities.	October 2025
DSI-2023-015	[Divider Dykes] Continue to monitor the spillway for deformation and/or performance issues.	Ongoing: The Divider Dyke was monitored daily from June 24 to August 5 and August 28 to September 8, 2024, and will continue to be monitored during active reclamation activities.	October 2025