2024 Doris, Madrid, and Boston Annual Geotechnical Inspection Recommendations Implementation Plan

17-Mar-24

Recommendation Number	Infrastructure	Recommendation (SRK)	Action Plan/Follow-up (AEM)	Status	Target Completion Date
2023-AGI-23	Diversion Berm	▪ Cover exposed diversion berm geotextile, and consider reestablishing the design slope.	AEM plans to cover the exposed geotextile and consider reestablishing the design slope based on the results of regular visual inspections. The Diversion berm is currently performing adequately.	Ongoing work	
2023-AGI-24		Consider methods to limit future migration of waste rock to the upstream side of the diversion berm	Based on the results of visual monitoring, AEM will plan and implement mitigation methods to prevent waste rock from reaching the upstream side of the berm.	Ongoing work	
2023-AGI-25	Pad T Waste Rock Pile	The stability of the pile should be reassessed following resumption of operations or if any significant changes occur before that time. If material from Pad T is to be used for other works on site, the material should be sourced from the south pile crest, currently the steepest portion of the slope, in an effort to further reduce the height and slope of the pile and incrementally increase the factor of safety.	AEM will continue to monitor the site annually to look for any signs of instabilities. The stability of the pile will be reassesed following the resumption of operations. When and if required, material from the Pad will be sourced strategically to increased the factor of safety of the steepest slopes.	-	
2024-AGI-07	7.5ML Tank Farm	Review and implement recommendations provided by SRK geotechnical engineer (rock mechanics).	AEM will review and implement reccomendations as appropriate.	Not started	Q4 2025
2023-AGI-27		▪ Continue to limit vehicle travel in the tank farm secondary containment area, and when vehicle travel is required, care should be taken to avoid driving on the toe of the slopes to prevent over-liner damage.	In summer 2023, AEM restricted access to vehicle traffic to the tank farm. In 2025 AEM plans to increase signage in the area. AEM also will continue to limit access to the tank farm in 2025, and care will be taken not to drive near the toe of the slopes diuring maintenance work.	Ongoing work	
2024-AGI-08		Examine the updated 2024 LiDAR data to assess cover depth and apply additional crushed material where design thickness specifications are not met.	The 2024 Lidar data will be reviewed and compared to design thickness specifications.	Not started	Q4 2025
2023-AGI-28	Pad B	Consider establishing a new survey pin to replace the displaced PH2 location, particularly if inconsistent readings or issues with GPS reception is noted in future. The new location must be near the southwest corner of the concrete powerplant pad near the crest of the slope where the placed pad fill is thickest.	AEM will reestablish the design slope at the oversteepened southeast section.	Not started	Q2 2025
2024-AGI-09		Implement survey procedures with recorded control point check shots to provide survey error verification.	AEM will aim to implement survey procedures in 2025. In addtion to survey monitoring, the location will be inspected monthly by site staff.	Not started	Q4 2025
2023-AGI-30	Helipad	▪ Continue to monitor the area near the sinkhole, including under the nearby buildings, and pump the sump to reduce the water level in the pad. If water ponding is observed upstream of the helipad, consider pumping that water away to reduce the source of waterflow and thermal loading. ▪ If additional settlement or sinkholes are observed, implement additional mitigation strategies such as ditching or pumping to decrease ponding water and infiltration into the rock fill at the upslope side of the pad.	AEM has a plan in place to monitor the area near the sinkhole during the snow free months. The sump will be monitored and pumped out as required. Sinkhole susceptibility of the helipad area has also been considered in AEMs 2024/2025 snow management plan, and efforts will be made to minimize the amount of snowmelt water reporting to the area. During periods of high surface water flow, the area upstream of the helipad will be monitored, and active management of the surface water will be employed as required.	Ongoing work	
2024-AGI-10		When high frequency (500 Hz) GPR surveys on the airstrip are completed, consider completing a survey of the helipad.	A GPR survey of the helipad ~~concurrent with the airstrip~~ will be considered for 2025.	Not started	Q3 2025

2023-AGI-31	Doris Contact Water Pond	In order to prevent thermal erosion and thawing of the contact water pond liner tie-in leading to loss of pond containment, backfill the area of ponded water in the southwest corner of the pond with overburden material and establish a pumping location away from the edges of the pond to prevent ponding water (and the subsequent heat transfer) along the thermal protection layer Place overburden in a manner that prevents water from flowing along the thermal protection layer and divert the water flowing along the north edge of the pond towards the pumping location. Attempt another repair of the SRK-12-GTC-DH01 GTC connector with a new trident connector from the supplier (RST Instruments) along with the repair of other site wide GTCs.	AEM will continue to monitor this area in 2025. If the ponded water against the thermal protection layer of the liner tie-in is noted to be a persistent condition, and a risk to the integrity of the liner system is identified, then mitigation work will be carried out in accordance with this recommendation. Another repair will be attempted of SRK-12-GT-DH01. Instrumentation repairs will be complete in order of priority.	Not started	Target: Q3 2025 (repairs to be completed in order of priority)
2024-AGI-11		Consider installation of a datalogger at SRK-12-GTC-DH02 and SRK-12-GTC-DH03 to increase the resolution of the thermal data collected in this location.	AEM will consider the installation of a datalogger. Instrumentation upgrades will be completed in order of priority.	Not started	
2024-AGI-12		Although minimum monitoring frequency stated in the water license has been met for active cables, consider increasing frequency to maintain resolution of data.	AEM will consider increasing the frequency of monitoring based on the monitoring data results and related risk level.	Not started	
2023-AGI-32	Sediment Pond	▪ Inspect the liner for additional defects and confirm elevation of any observed defect is above the overflow culvert elevation. The holes and cuts observed in the liner should be repaired by a specialty liner contractor if they are determined to be impacting the performance of the pond.	AEM will continue to inspect the liner for signs of damage. Damage or defects will be repaired if they are determined to be impacting the performance of the pond.	Ongoing work	
2023-AGI-33	Doris Sumps	▪ Take measures to prevent water from ponding on the tundra around the sumps. Monitor for bypass of sumps and backfill around the sumps where needed to direct all water into the sumps. Ensure water within the sumps is pumped down, and when pumping water from one sump to the other, ensure that the discharge pipe is discharging into the sump rather than the tundra near the sump to reduce thermal erosion of the tundra in the area around the sumps.	(CONSIDER: AEM is planning to review this area for potential modifications to improve water management in 2025. As part of this,)AEM will continue to inspect the sumps for bypass and ponding water on the tundra. When the sumps are active, inspections will be conducted to ensure hoses are discharging into sumps or containment structures and not the tundra.	Ongoing work	
2024-AGI-12	Doris Creek Bridge Abutments	–Repair or replace the ground temperature cable connections to ensure continuity of monitoring of the abutments, as required by the Water License.	Another repair will be attempted of SRK10-DCB2 Instrumentation repairs will be complete in order of priority.	Not started	Target: Q3 2025 (repairs to be completed in order of priority)
2023-AGI-36	Vent Raise Pad	The tension cracks on the gravel pad should be monitored for additional changes.	AEM will continue monitoring of tension cracking on the gravel pad.	Ongoing work	
2023-AGI-37		A potential phased approach concentrating on the area directly upstream of the vent raise and reducing ponding on the vent raise pad were the preferred options for the vent raise surface water diversion project	AEM and SRK have discussed potential to phase surface water management work around the vent raise area. It is expected that this work will begin in 2025 or 2026.	Not started	
2024-AGI-13		Review and implement recommendations provided by SRK geotechnical engineer (rock mechanics).	AEM will review and implement reccomendations as appropriate based on risk and priority.	Not started	Q4 2025
2023-AGI-39	Doris Crown Pillar Recovery Trench	Continue to restrict access to the area The sinkholes are conical in nature and area and appear to indicate migration of materials into void space within the backfill. A plan should be made to safely backfill and monitor the area before any general access is re-established	AEM will continue to restrict access to the area. Before access is re-established a plan will be developed to mitigate risks associated with sinkholes in the crown pillar area.	Ongoing work	Prior to opening area to realgar traffic/personnel
2024-AGI-14		Implementation of the vent raise surface water diversions, may reduce the likelihood of further sinkhole formation. Consider increasing the priority of the Doris CPRT surface water diversion berm.	AEM employs a risk-based approach to project planning. Risk mitigation associated with the construction of the surface water diversion berm will be evaluated.	Ongoing work	
2023-AGI-40		Based on the visual inspection the airstrip appears to be in satisfactory condition, however, visual inspection cannot rule out the formation of sinkholes in the future. Additionally, the placement of crush material limited what could be seen over the surface of most of the airstrip. Conduct regular visual inspections prior to flights. As noted in previous inspections, the cracking observed along the slopes of the airstrip is expected to be due to thaw settlement. Limiting disturbance to the permafrost on either side of the airstrip and taking steps to reduce the water flowing or ponding along the airstrip will likely reduce the required maintenance. Site can also consider	AEM has a plan in place to monitor the area near the upstream (east) side of the airstrip during the snow free months and particularly during periods of high surface water accumulation. Sinkhole susceptibility of the airstrip has also been considered in AEMs 2024/2025 snow management plan, and efforts will be made to minimize the amount of snowmelt water reporting	Ongoing work	

2023-AGI-40	Airstrip and Aprons	strategic placement of additional fill material at the western toe of the airstrip in areas to limit permafrost degradation and move ponded water further from the toe of the airstrip. Continue dewatering the upstream ponds early in freshet, limiting potential for thaw. Site should continue to limit traffic near the crest and shoulders of the airstrip (particularly outside of the runway lights), especially during the summer and early fall when the active layer is deepest.	be made to minimize the amount of snowmelt water reporting to the area. The snow management strategy will consider the impacts to the permafrost of gravel on the tundra. During periods of high surface water flow, the area upstream of the airstrip will be monitored, and active management of the surface water will be employed as required.	Ongoing work	
2023-AGI-41		▪ If functional, monthly monitoring of the site wide thermistor located near the airstrip (SRK-22) should be resumed for at least one year to determine if there are any changes in the ground temperature regime in the area.	AEM will attempt to read the thermistor in summer 2025. If the attempt is successful, the available data will be reviewed in con juunction with historical to determine if changes have occurred in the ground temperature regime.	Not started	Q3 2025
2024-AGI-15		The point reflectors identified by the GPR within the airstrip fill are at depths greater than 1.9 meters, these areas should be inspected and monitored regularly for signs of surface expression. In addition, they should be investigated further using GPR techniques available on site (500 MHz Noggin GPR used to conduct ice surveys for exploration)	AEM will plan to inspect these areas reguarly, and target summer 2025 for a follow-up GPR survey using the 500 MHz GPR.	Not started	Q3 2025
2023-AGI-42		▪ The design slope of the east side of the airstrip, along the access road, should be reestablished and markers should be placed during to winter to prevent additional undercutting of the slope due to snow clearing.	Based on the results of visual monitoring, AEM will consider re-establishing the design slope of the east side of the access road if it is determined that the oversteepened slope poses a risk to the performance of the airstrip.	Ongoing work	
2023-AGI-43	Marine Outfall Berm	Replace the missing riprap. Consider placing riprap at the end of the berm where wave erosion has displaced some of the rock fill. Blast matting could serve as temporary protection. Consider incorporating repairs into future Jetty modifications.	AEM will monitor the performance of the marine outfall berm in 2024, if impacts to the performance of the berm are noted (cracking, settlement, etc.) then measures will be taken to mitigate risk to the berm.	Ongoing work	
2023-AGI-44	20 ML Tank Farm	Inspect liner crest and avoid causing further erosion of materials	During future dewatering work, water will be discharged with the consideration of not impacting the tank farm berm.	Ongoing work	
2022-AGI-29		Continue to monitor the crushed rock overliner material and replace material with regular maintenance as required. Crushed rock should be compacted.	AEM will continue to inspect the condition and thickness of the overliner material, overliner material maintenance will be carried out as required, and any damage to the liner will be reqpaired as required. Crushed rock will be placed in a manner to minimize damage to the underlying liner.	Ongoing work	
2024-AGI-16		Review and implement recommendations provided by SRK geotechnical engineer (rock mechanics).	AEM will review and implement reccomendations as appropriate based on risk and priority.	Not started	Q4 2025
2024-AGI-17		Review cover thickness with new 2024 LiDAR to confirm cover thickness. Reestablish liner cover where below design thickness.	The 2024 Lidar data will be reviewed and compared to design thickness specifications.	Not started	Q4 2025
2022-AGI-31	Quarry 1 (50 ML) Tank Farm	Review cover thickness with new 2024 LiDAR to confirm cover thickness. Reestablish liner cover where below design thickness.	The 2024 Lidar data will be reviewed and compared to design thickness specifications.	Not started	Q4 2025
2024-AGI-18	Waste Rock Pile	Relocate cuttings placement to the south side of the WRP to direct seepage to the CWP and proposed larger capacity Sump 1	The cuttings placement has been relocated as reccomended.	Complete	Q1 2025
2023-AGI-46	Madrid Contact Water Pond	Site should monitor the folds and wrinkles in the geomembrane as that is the area where cracks or holes are most likely to form. Increase monitoring frequency of surficial settlement points (Monthly between May and November) to provide better resolution on the displacements observed.	AEM will continue to inspect the geomembrane as part of the regular visual inspections at the Madrid CWP. The exisitng Madrid CWP is planned to be decommisioned in Q2 2025.	-	
2023-AGI-47	Sumps	▪ Site needs to take steps to ensure that the sumps do not overflow.	AEM has a plan in place to complete upgrades (increase capacity and capture) to sumps to improve their performance. High priority upgrades at the Sump 1 and Sump 1B locations are scheduled to be completed prior to freshet 2025. Additional upgrades will be complete as required.	In progress	Q2 2025
2024-AGI-19		Consider modifying operational practices such as dewatering the sump into the early winter to minimize water within the sump, and steaming out the frozen water prior to freshet. Where possible, implement the proposed increased capacity sumps to alleviate operational challenges.	See above, AEM is implementing sumps with increased capacity.	In progress	Q2 2025
2023-AGI-48		▪ The area around the southeast most sump (Sump 4) should be backfilled so that water does not pond outside of the sump thermally erode the surrounding permafrost.	AEM will take steps to mitigate ponding and permafrost impacts in the area around sump 4. Sump improvements will be complete in order of priority.	Not started	Q2 2026
		The following recommendations from the 2022 Investigation should be carried forward:			

2022-AGI-38	Madrid Portal Pad and Waste Rock Pile Access Road	▪ Consider.. The slopes of the waste rock access road should be resloped (to a gentler grade) to mitigate the tension cracks. Until resloping occurs, the area should be marked to prevent vehicles from travelling too close to the edge onto these soft shoulders. ▪ Visual monitoring of the portal pad and remediated area should occur monthly between May and September (when clear of snow). Visual monitoring should look for signs of increasing rates of thermal degradation and any signs of erosion.	AEM will continue to monitor the slopes of the access road and the remediated area of the portal pad in 2024. If safety issues arise due to settlement associated with thermal degradation, appropriate measures will be taken (restricted access, limit traffic to centre of road, maintenance or mitigation work on slopes).	Ongoing work	
2024-AGI-20	Naartok Crown Pillar Recovery Trench (Naartok East Pit)	Review the water balance and updated stage storage volumes within Naartok pit to ensure adequate storage volume is available to avoid overtopping or flow into the underground portal (22.5 masl)	AEM is in the process of review the updated water balance and storage volumes for the NECPRT. Water management at this location will be included in the 2025 freshet management plan to ensure that water is managed safely and in accordance with the water license and water management plan.	In progress	Q3 2025
2024-AGI-21		Mining operations staff should be trained to complete daily visual monitoring of the overburden slope above the portal ramp.	The NECPRT area is inspected daily by the mining operations staff prior to commencing work. The daily inspection includes a visual scan of the overburden slope on the east side of the portal ramp. In 2025 the site geotechnical engineer (EIT) communicated with mine ops enervisors the requirement to	Complete	Q2 2025
2022-AGI-37		Ongoing monitoring of the fixed survey points should continue, to monitor the stability of the covered overburden slopes. (Monthly, May to October) Water level peak (post-freshet) within the trench should be maintained below the elevation of the overburden-bedrock interface (20 masl) to prevent thawing of the overburden slope and risk to the underground portal.	Freshet planning has started for 2025 and the water levels within Naartok pit will be managed effectively. AEM will plan to resume survey monitoring of the overburden slopes at Naartok Pit. Visual inpsections will continue in 2025.	In progress	
2023-AGI-51		▪ A cover should be constructed for the newly installed ground temperature cable and the excess cable should be carefully fed into the drill casing.	AEM will consider constructing a more permanent cover of the newly installed ground temperature cable	Not started	
2023-AGI-53	Doris-Windy All Weather Road Bridges and Arched Culvert	▪ Agnico Eagle should consider conducting an inspection of all bridge structures and confirm the structural implications of these missing or loose bolts, particularly before resuming heavy haul use of the bridges.	AEM will ensure that an inspection to confirm the structural performance of the bridges prior to their re-use in mining operations.	Not started	Prior to resuming mining operations
2023-AGI-54		The ground temperature cable SRK-10-DWB2 should be inspected and the connector replaced or the cable should be connected to a datalogger.	Another repair will be attempted of SRK-10-DWB2 Instrumentation repairs will be complete in order of priority.	Not started	Target: Q3 2025 (repairs to be completed in order of priority)
2024-AGI-22		Although minimum monitoring frequency stated in the water license has been met for active cables, consider increasing frequency to maintain resolution of data.	AEM will consider increasing the frequency of monitoring based on the monitoring data results and related risk level.	Not started	
2023-AGI-55		▪ Site should consider backfilling the area of ponded water near the abutment of Bridge 2 with ROQ.	AEM will consider backfilling the area of ponded water near the abutment of Bridge 2 with ROQ if the ponded water is identified as a risk to the performance of the nearby bridge abutment.	Not started	As required

2024 TIA Annual Geotechnical Inspection Recommendations Implementation Plan

14-Mar-25

Recommendation Number	Infrastructure	Description	Recommendation (SRK)	Action Plan/Follow-up (AEM)	Status	Target Completion Date
2023-AGI-01	General TIA Recommendations	Tailings Operating, Maintenance and Surveillance (OMS) Manual and Emergency Response Plan (ERP)	Update the OMS manual to include the Interim Dike as-built details and Interim Dike monitoring SOP, saline pond management and any changes to the water management strategy or TARPs related to the construction of the Interim Dike. Update the monitoring SOPs for the North and South Dam to reflect all current monitoring instrumentation and procedures. SRK must finalize the document if revisions are made to the existing document. Update the OMS manual to include any of the changes/revisions not captured in the current version of the OMS, including the South Dam toe berm, Emergency Overflow Channel implementation timing and any changes because of the dam hazard classification review. OMS Manual, TARPs and Emergency Response Plan should be reviewed with the Agnico Eagle site staff annually, or after revisions; to ensure all staff are properly informed and trained on the contents of these documents.	The TIA OMS manual will be updated for 2024 to include all changes/revisions not captured in previous updates. The Interim Dike and associated monitoring program, and changes to the water management strategy will be included in the 2024 update of the TIA OMS Manual. AEM is planning upgrades to the instrumentation at the TIA in 2025, updates to monitoring SOP are planned following the upgrades. The OMS manual will be reviewed again in 2025 following the next update of the manual. The next update of the manual is schedule for March 2025. The updated manual will be included in the 2024 Hope bay Annual Report.	In progress	Q1 2025
2023-AGI-02		Independent Dam Safety Review and Risk Assessment	Continue to address recommendations from the DSR, where appropriate. In line with recommendations from the DSR, the dam hazard classification should be reviewed prior to resuming operations, and the review should consider the 2023 CDA Technical Bulletin on Environmental Consequence Classification.	AEM has made significant progress addressing the DSR recommendations. The formal risk assessment that was initiated in 2023, was not completed due to the need to focus on managing risk associated with the North Dam thermal performance. The risk assessment is planned to be resumed once the risk at the North Dam has been mitigated. AEM is currently also planning a risk assessment to address future changes to the mine site, this exercise will be completed in 2025 and will include the TIA. The dam hazard classification will be reviewed prior to resuming operations.	In progress	Prior to resuming operations
2023-AGI-03		Compliance with Monitoring Frequency Requirements	Recommended monitoring frequencies have been met in most categories, however three survey monitoring events we missed and some of the newly installed ground temperature cables are read infrequently. AEM should aim to improve the frequency of the monitoring events in 2025. Formalize and implement the monitoring program for the Interim Dike. Update the OMS manual and monitoring SOPs to include any new or updated instrumentation	AEM will aim to improve the frequency of survey monitoring in 2025 to meet OMS requirements. The utilization of drone surveys is being considered for 2025 monitoring work.	Ongoing work	
2022-AGI-08	North Dam Inspection and Review of Monitoring Data	Overall Inspection of the North Dam	Previous recommendations unchanged. Additional recommendations include: Disturbance of the tundra above the west abutment was previously noted (SRK, 2023b). No signs of permafrost degradation were observed in 20234, however the areas should continue to be monitored periodically and mitigation measures implemented if changes are observed. Tundra dieback observed along the upstream toe should include monitoring for erosion or increased permafrost thaw settlement in the future.	See 2023 AGI Recommendations Implementation Plan	Ongoing work	
2023-AGI-04		Ground Temperature Cables (GTCs)	Continue to closely monitor warming conditions along upstream side of the North Dam and continue to monitor the results, adhere to the TARPs, plan/implement additional review meetings, analysis and implement responses/mitigations accordingly.	The monitoring and management of the performance of the North Dam remains a high priority for AEM in 2025. Review meetings with the technical team will continue to be planned as necessary. Further analysis and mitigation measures will be undertaken in response to observed conditions, recommendations from the EOR, Design Engineer and Independent Review Board, and in accordance with the TIA OMs Manual.	Ongoing work	
			Continue downloading data every two weeks until observed warming conditions subside.	Data will be downloaded every 2 weeks until warming conditions subside in accordance with the Doris TIA OMS Manual.	Ongoing work	
2024-AGI-01			Consider implementing dataloggers for all new GTCs, and continue manual spot readings until dataloggers are installed. Cover the dam face GTCs with non-woven geotextile and a thin layer of rock for protection and to improve the quality of the temperature readings.	AEM will consider implementing dataloggers for priority GTCs. The dam face GTC was removed in fall 2024 (as it was a temporary isntallation). If it is redeployed in 2025, AEM will consider establishing protection for the GTC using geotextile	Ongoing work	
2024-AGI-02		GTC Datalogger Battery	Recharge the CR-1000 Batteries as the voltage of CR-1000#2 Battery is below 12.0V	AEM will monitor battery voltage and datalogger performance and recharge the batteries as required.	Ongoing work	

2024-AGI-03		Thermosyphons	Troubleshoot and repair the active refrigeration system prior to the end of the passive thermosyphon cooling period (Typically ending in April) Update the OMS to include considerations for the operations, maintenance and monitoring of the hybrid thermosyphon cooling system. After at least one full season of operation, review the performance of the active cooling system and assess the effectiveness of the system.	AEM has a plan in place to service the thermsosyhons prior to the 2025 active cooling period.	Q2 2025	
2023-AGI-05		Inclinometers	Updated recommendation: Record the inclinometer casing groove directions annually for at least three years to verify if there is any ongoing rotation. Take groove direction readings relative to the line of inclinometer casings (perpendicular to crest).	A-direction azimuths will be collected during an annual monitoring inspection in 2025.	Not started	Q3 2025
2023-AGI-06		Survey Monitoring Points	Integrate new upstream surficial survey points into the North Dam monitoring SOP update.	The new upstream points and other new instrumentation will be integrated into the next revision of the North Dam monitoring SOP.	Not started	Q1 2025
2024-AGI-04			Re-establish the surficial survey points that were damaged due to snow removal and consider installing flags to prevent future damage when heavy equipment is working nearby.	AEM will plan to re-establsih the survey points at the North Dam. Maintenance work at the North Dam will be completed in order of priority.	Not started	Q3 2025
2023-AGI-07		Monitoring of Flowing Water at the Toe of the North Dam	The v-notch weir at the toe of the dam does not provide accurate flow measurements and does not cause substantial ponding in the area. Consider decommissioning if disturbance to the toe of the dam can be minimized, or it may be left in place provided signs of thermal degradation at the toe is not observed. If a change in typical water flow rates is observed (subjective) this should be noted on the visual inspection form.	AEM site staff will evaluate in 2025 whether the weir can be removed without significant tundra disturbance at the toe of the dam. This area is inspected as part of the weekly walkover inspections. Any changes to flow rate will be recorded on the inspection form.	Ongoing work	
2023-AGI-08	South Dam Inspection and Review of Monitoring Data	Annual Inspection of the South Dam	The Phase 2 abutment tension cracks (outside of the lateral Phase 1 tailings extent) should continue to be monitored and plans to mitigate this if the cracking progresses to the point where progressive thaw slumps could be expected.	AEM will monitor the cracks in 2025 and plan for mitigation if progressive failure of the berm slope is expected. It should be noted that localized cracking/instability observed in the berm slope do not indicate overall stability concerns for the South Dam.	Ongoing work	
2023-AGI-09			Avoid tailings excavation or farming within 100 m of South Dam to maintain beach lengths	AEM will avoid farming within 100 m of South Dam to maintain beach lengths	Ongoing work	
2024-AGI-05			Continue the tailing dust related monitoring program and consider adding dust fall monitoring as appropriate.	AEM will continue to implement tailings dust monitoring, building on increased monitoring efforts from 2024. The 2025 dust monitoring is epxected to include helicopter or drone imagery. Further dust fall monitoring will be considered.	Ongoing work	
2023-AGI-10		Ground Temperature Cables (GTCs) and D405 Dataloggers	New GTCs installed in November 2023 should be protected and connected to dataloggers. Data collected/transmitted should be integrated into the overall monitoring system. Ensure the new and existing datalogger transmission subscriptions are maintained.	AEM has a plan in place to protect the new GTCs and connect them to existing dataloggers. However the main datalogger at this location became inoperable in 2024, and a replacement has been ordered to be connected in Q2 2025. Once connected, the new GTCs will be integrated into the overall monitoring system. Maintenance work at the North Dam will be completed in order of priority. Existing transmission subscription has been renewed for 2025.	In progress	Q2 2025
2023-AGI-11			Recharge, replace or repair the dataloggers or battery where the battery voltage is draining. A drained battery may lead to stopped data transmission or datalogger malfunction.	With the input of the instrumentation supplier, AEM will work to replace or repair dataloggers where the battery voltage is draining. Replacement batteries have been procured and will be installed in Q2 or Q3 2025. In general instrumentation repairs will be completed in order of priority.	In progress	Q2 or Q3 2025
2023-AGI-12			Protect any exposed cables or cables with limited gravel cover that may be prone to damage from snow clearing and other activities, by placement of boulders or other barricade. Inspect the South Dam after spring melt, especially looking for any exposed or damaged ground temperature cables. This will allow for preventative maintenance and placement of protective material to be done if exposed cables are observed, which will help to limit the potential for damage from wildlife.	Exposed or damaged cables will be recorded during the weekly visual walkover inspections, and maintenance will be carried out as required.	As required	
2023-AGI-13		Survey Monitoring	Review and document existing tension cracks for future tracking of progression.	Existing tension cracks will be documented in the 2025 annual inspection.	Not started	Q3 2025
2024-AGI-06			Survey frequencies and completeness and quality of surveys require improvement.	AEM will aim to improve the frequency of survey monitoring in 2025 in alignment with OMS requirements. The utilization of drone surveys is being considered for 2025 monitoring work.	Ongoing work	

2023-AGI-15	Interim Dike Inspection	Interim Dike	The Interim Dike and WECC was constructed on frozen unconsolidated tailings and are sensitive to foundation thaw. In order to maximize the lifespan, consider backfilling the trench left by the thawed Aquadam bladder should be backfilled. This will thermally protect the north rock berm which supports the GCL containment layer. Settlement is expected if the foundation thaws. Due to the level of expected maintenance which may be required (typically following freshet), consider planning for these maintenance activities. Tension cracks observed should be visually monitored for indications of additional or progressive slumping and repaired if observed. Vehicle or equipment traffic should be directed to remain at least 3 meters back from the crest of the dike to avoid additional loading	In summer 2024, AEM site staff completed a significant portion of the reccomended mitigation work at the Interim Dike. The aquadam trench was refilled for the western portion of the dike alignment, and the upstream crest was regraded along the entire length of the structure. AEM did not elect to backfill the remaining portion of the quadam trench due to the presensce of ice within the trench. AEM will consider fully backfilling the trench in 2025 provided that the remaining ice has melted, building on work completed to stabilize the upstream crest completed in 2024. Maintenance work will be completed based on priority and based on the results of monitoring and visual inspection. The objective of the work will be to thermally protect the north rock berm. Maintenance of the Interim Dike has been considered and planned with the objective of maximizing the performance and lifespan of the structure. In 2025 AEM will direct vehicle traffic to 3m away from the Aquadam trench and upstream dike crest, to be documented in the next revision of the TIA OMS manual.	Complete	
2023-AGI-16			A thorough inspection and detailed topographic survey of the Interim Dike should be carried out following freshet to observe how the structure performed, following a full year of operations. Formalize, implement and document the monitoring program for the Interim Dike including monitoring of displacement, foundation thermal conditions, water level in the Saline Pond (south side of the dike) and	A Lidar survey was completed in 2024 that inlcuded the interim dike. In 2025 the Lidar data will be compared to as-built records of the Interim Dike The current monitoring program for the Interim Dike includes routine visual inspections, spot readings of ground temperature, and intermittent survey checks. The monitoring and operating criteria (including water levels) will be included in the next revision of the TIA OMS Manual, scheduled for March 2024. The monitoring and operating criteria will be reviewed annually.	In progress	Q3 2025
2023-AGI-17		Interim Dike Water Elevation Control Channel (WECC)	The spillway is obstructed by a road without culverts, necessitating the pond to be kept low enough to accommodate the freshet. It's important to check the elevation of the dike and assess storage capacity. If tailings are farmed from the tailings Area beach of overburden piles during the winter or spring, a grading or farming plan should be in place to avoid unintended impacts to the Interim Dike.	AEM has a plan in place to continue ditching work and rehandle the construction stockpiles. If executed, the work will be completed in Spring 2025, prior to freshet. Prior to freshet, the water level behind the interim dike has been pumped down to allow for the accomodation of freshet flows. Pumping was compelted in fall 2024. The WECC will be inspected following freshet, and appropriate maintenance work will be scheduled.	Complete	Q2 2024
2022-AGI-13	Water Management Infrastruc	Emergency Dump Catch Basins	No changes to the past recommendations.	See 2022 AGI Recommendations Implementation Plan	Not started	Prior to resuming operations
2024-AGI-06		TIA Shoreline	Visually inspect the shoreline from a helicopter and/or drone aerial photo to confirm no retrogressive thaw slumps have occurred.	The shoreline will be visually inspectedvia helicopter during the 2025 Annual insepction.	Not started	Q3 2025
2023-AGI-19		Pipelines (Reclaim, Tailings Deposition and TIA Discharge)	No changes to the past recommendations.	See 2023 AGI Recommendations Implementation Plan	Ongoing work	
2023-AGI-20		TIA Reclaim System and WTP (710 Pumphouse)	Backfill the over stripped toe below the WTP slope with Run-of-Quarry (ROQ) material. Monitor the dozer tracks for signs of increased thermal erosion, and place rock fill should be placed within the track marks to limit ponding. .	AEM will develop a plan to backfill the overstripped toe near the WTP slope. In the meantime, the area will be monitored. The ruts will continue to be monitored. If the risk of progressive erosion or permafrost degradation is identified, then mitigation measures will be employed.	Ongoing work	
2023-AGI-21		TIA Operational Water Balance and Level Targets	No changes to the past recommendations.	See 2023 AGI Recommendations Implementation Plan	Ongoing work	