

## **Appendix 10**

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# **Meadowbank and Whale Tail 2023 Annual Geotechnical Recommendation Implementation Plan**

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## Meadowbank 2023 Annual Geotechnical Recommendations Implementation Plan

Priority Level (1)	Location	Year (2)	Recommendation	Action Plan/Follow-up	Status
2	Baker Lake Fuel Farm	2018/2019	A hole in the exposed geomembrane (300 mm diameter hole) was observed at Baker Lake on the south southwestern corner of Tank 3 at the top of the slope. The hole in the geomembrane should be repaired to ensure a good performance of the retention basin. It is also recommended to cover the exposed area with geotextile and fill material to re-establish the liner protection. Update (2022): Still the case in 2022: the geomembrane was damaged again at the same location. It should be repaired and covered with geotextile and granular material.	Update (2020): the hole has been repaired, the liner must be covered. Update (2021 ): the geomembrane was damaged again at the same location. Will be repaired and covered with geotextile and granular material. Update (2022-2023): The Baker Lake Fuel Farm repair program was delayed due to a combination of challenges in securing suppliers and operational issues, and will be completed in 2024. In the meantime, Agnico continues to monitor the situation to avoid risks of underperformance.	Not started
2	Baker Lake Fuel Farm	2020	Repair hole in liner at the southwestern corner of the containment cell of the Jet A fuel tanks. Update (2022): Still the case in 2022: the repairs done on two holes in this area did not hold and the geomembrane is open. A third rip was observed on top of the slope in the same sector.	Update (2021). Outstanding recommendation from 2020. Will be done in 2022. Update (2022-2023): The Baker Lake Fuel Farm repair program was delayed due to a combination of challenges in securing suppliers and operational issues, and will be completed in 2024. In the meantime, Agnico continues to monitor the situation to avoid risks of underperformance.	Not started
4	Stormwater Dike	2018	Assess whether the design criteria will still be met with different final tailings elevations on both sides of the dike (possible impact on seepage low and freezeback). Can be done by EoR but must be reviewed by designer.	Will be addressed in the update of the Engineering of the landform of the South Cell Update (2022): The TSF Closure Landform study is ongoing and is looking at this aspect.	Ongoing
2	Baker Lake Tank Farm	2021	A fuel leak was reported by AEM in 2020 from one of the old fuel tanks. The geomembrane could be damaged by fuel contact under the granular cover. The geomembrane should be exposed for visual inspection in the leak area, repaired if needed, and covered again. Update (2022): Still the case in 2022.	An investigation of the geomembrane condition in the leak area will be completed to assess its condition. When the liner team is onsite they will assist in a visual inspection of the liner. Update (2022-2023): The Baker Lake Fuel Farm repair program was delayed due to a combination of challenges in securing suppliers and operational issues, and will be completed in 2024. In the meantime, Agnico continues to monitor the situation to avoid risks of underperformance.	Not started
3	Baker Lake Tank Farm	2018	Cover the exposed liner on northern side of Tank 5. 2022 Update (2022): Still exposed geomembrane on the north and south side of Tanks 1 to 4, in the northeastern corner of Tank 4, and newly exposed geomembrane on the south side of Tanks 5 and 6.	Update (2020): only northeastern corner of Tank 4 still has exposed liner to be covered. Update (2021): Still exposed geomembrane on the south side of Tanks 1 to 4, and in the northeastern corner of Tank 4. Will be covered. Update (2022-2023): The Baker Lake Fuel Farm repair program was delayed due to a combination of challenges in securing suppliers and operational issues, and will be completed in 2024. In the meantime, Agnico continues to monitor the situation to avoid risks of underperformance.	Not started
2	Saddle Dam 4	2021	A section of pipe with a metal connector and a metal rod are present on the liner and should be removed to avoid damaging the liner.	The situation with the piping with a metal connector and a metal rod on the liner will be investigated in the spring and a remediation plan will be made.	Not started

2	Stormwater Dike	2023	A faulty, open seam is observed around Sta. 10+600. It is recommended to repair this seam by welding it closed before tailings deposition resumes in the North Cell.	Update (Summer 2023) : this defect was fixed during the hole repair campaign of SWD in 2023 where more than 20 patches were done.	Completed
2	Baker Lake Fuel Farm	2023	A leak of diesel fuel from tote containers temporary stored between Tanks 5 and 6 was observed in the containment area. The leak must be cleaned up and the granular backfill replaced as needed.	AEM's Environment team was coordinating the response to the spill Update (Summer 2023): spill have been cleaned up, water and fuel was pumped out of the enclosure and disposed of at MbK site.	Completed
3	Baker Lake Fuel Farm	2023	A rip in the exposed HDPE liner was observed at the top of the slope south of Tank 3. It is recommended to repair the liner and restore the protective granular cover.	AEM will repair the hole in fall 2024.	Not started
3	Saddle Dam 4	2023	Water has been discharged on the granular cover of the SD4 East tie-in, causing channeling against the liner and fine filter and protective till material to erode. It is recommended to move the discharge point further towards the South Cell, over the rockfill section of the granular cover, to avoid channeling and erosion.	Tailings were deposited into the South Cell in close proximity of SD4 East tie-in. AEM will inspect the area next summer to assess if the situation is still present.	Ongoing
3	Saddle Dam 1	2023	The liner is ripped under one of the piles of granular material on SD1 at the top of the slope. It is recommended to repair the liner and inspect for possible further damage under the material.	AEM will repair the liner before resuming the tailings deposition in the North Cell.	Not started
4	All Weather Access Road	2018	The erosion of the culverts is stable. The progression of the erosion of culverts PC-17A (8+830), PC-11 (39+552), R14 (67+840), R18-B (82+500), R-20 (85+490), R-23 (93+600), and R24 (98+100) should be monitored at freshet for any signs of progression or washout since signs of water flowing under the road were observed at these locations.	Close monitoring of the culverts will be performed by AEM and repairs will be initiated if required in a timely manner.	Not started
4	All Weather Access Road	2018	For some culvert locations, monitoring is recommended to investigate whether flow occurs through the culvert (i.e., during the freshet). If insufficient capacity to handle flows is observed, or water circulates under the road, it is recommended to clear obstructions or repair the culverts. Particularly monitor R-00A (2+550), PC-14 (4+260), unnamed culvert at 5+700, PC-10 (36+865), and PC-16 (54+950).	Close monitoring of the culverts will be performed by AEM at freshet and repairs will be initiated if required in a timely manner.	Not started

4	Quarries and Eskers	2018	Presence of unstable blocks and loose rocks along steep walls and unstable slopes was observed in Quarries 3, 7, 9, 10, 12, 16, 18, and 23, as well as all eskers and quarries along Whale Tail Mine Road except Esker #5. It is recommended that workers be cautious in these quarries and are aware of the potential hazard.	AEM is performing scaling of the quarries whenever work needs to be initiated in one of these locations or before a location is reactivated. This action will continue in the future.	Ongoing
4	Vault Road	2018	Three culverts were installed on Vault Road (coordinates 640 964 E / 7 217 466 N). As previously observed in past annual inspections, the three culverts were partially collapsed in the middle and showed signs of erosion at the inlet. This is currently not a significant issue, but it is recommended to monitor the culverts at freshet to ensure they provide sufficient capacity and that erosion is not occurring.	Close monitoring of the culverts will be performed by AEM and repairs will be initiated if required in a timely manner.	Ongoing

## Whale Tail 2023 Annual Geotechnical Recommendations Implementation Plan

Priority Level (1)	Location	Year <sup>(2)</sup>	Recommendation	Action Plan/Follow-up	Status
3	Whale Tail Dike	2021	Updated (2022): Several piezometers show unexplained trends, which mechanisms need to be investigated to rule out the development of adverse conditions: - PZ 0+260 P3A and B exhibit a yearly pressure rise in the fall. - PZ 0+360 P1C exhibits a unique high-pressure trend that seems to be seasonal. - PZ 0+550 P1C and 0+701 P1C are newly installed and showed large fluctuations in the winter of 2022. - PZ 0+701 P2D is newly installed and had high pressure fluctuations between August 2021 and March 2022.	The unexplained trends PZ 0+260 P3A and B, PZ 0+360 P1C, PZ 0+550 P1C, PZ 0+701 P1C, and PZ 0+701 P2D exhibit are being investigated to determine the mechanism responsible.	Ongoing
3	Whale Tail Tank Farm	2022	Some granular material is missing on the liner anchor on the eastern corner. It is recommended to repair this area.	Granular material will be added on the liner anchor on the eastern corner of the Whale Tail tank farm where some is missing.	Open
3	Ore Stockpile Saline Ditch	2023	The liner is exposed and ripped at the top of the slope in the south part of the ditch. It is recommended to repair the liner and restore the granular protection.	The damaged liner is at the elevation of the liner anchor in the berm on the outer side of the ditch. The damage does not compromise the performance of the structure. Agnico will perform maintenance on this section of the channel during summer 2024.	Open
3	UG Ore Saline ditches	2023	The liner is exposed and ripped at the top of the slope in the south part of the ditch at around Sta. 0+070. It is recommended to repair the liner and restore the granular protection.	AEM is of the opinion that the exposed and ripped liner does not put at risk the infrastructure performance as it is in the berm anchor above the operational level of the ditch. AEM to monitor the area closely at next freshet and if required will repair the ditch.	Not started
3	Whale Tail Mine Road	2019	Obstructed and damaged culverts were observed at some locations: #5 (117+525), #7 (118+013), #7-2 (118+016), #13 (120+615), #27-2 (123+300), #45 (125+710), #48 (127+203), #54 (128+388), #55 (128+440), #64 (129+920), #65 (130+924), #83 (136+300), #85 (136+671), #86 (136+740), #88 (136+861), #89 (137+180), #93 (138+100), #97 (138+436), #98 (138+482), #101 (139+025), #105 (140+555), #112 (142+630), #113 (142+736), #115 (142+865), #116 (142+940), #117 (143+173), #118 (143+433), #133 (148+141), #150 (152+171 to 152+179), #151 (152+562), #160 (155+966), #163 (156+474), #192 (163+190), #234 (170+385), #241 (171+235), #268 (175+774), #278 (177+870), #283 (178+965), and #284-2 (179+072). If insufficient capacity to handle the flow is observed at locations where culverts are obstructed or damaged, it is recommended to clear the obstructions or repair the culvert. It is still recommended to monitor culverts #167 (41+843) and #232 (53+928) where there are signs of water flowing below the culverts.	Close monitoring of the culverts will be performed by AEM at freshet and repairs will be initiated if required in a timely manner.	Not started