7.0 CONCLUSION AND GENERAL RECOMMENDATIONS

The design of the North Cell Internal Structure includes a drainage system composed of seven ditches and four sumps and was developed in view of the role of the dike in the North Cell closure. During the operation of the dike, the construction of these elements can be phased according to the needs in terms of seepage control and water management, while always respecting the design basis criteria. During the 2018 construction season in view of the operation of the dike, it is acceptable to build only a preliminary ditch downstream of the western part of the dike, which at closure will be finalized as Ditch 2, as well as two sumps downstream of the southeastern part of the dike instead of one single Sump 4. These two sumps will be built in existing topographic low points where water is ponding, and thus pumped out as needed to control seepages in this area. The works were completed during the summer of 2018, at a time of year when water accumulation and seepages are low. It should be kept in mind that additional works during the 2018-2019 winter may be required to prepare for the 2019 freshet. The changes made to the original design of the sump and ditches around the North Cell Internal structure are temporary only. The changes are considered acceptable as the site is in operation and the site engineering team is inspecting daily the performance of the surface water management system. Review of the water management system for closure and post-closure phases is mandatory so that it meets the original design intent. The required drainages elements will need to be built at a later date, according to the closure design and drawings issued for construction

REGISTERED PROFESSIONAL ENGINEER
Y. BOULIANNE
LICENSEE
2018-11-29
NT/NU

Marion Habersetzer, M.Sc.
Mine Waste Group

Yves Boulianne, P.Eng.
Associate, Senior Geotechnical Engineer

MH/YB/kd

Attachement : Figure 3: Initial Design of the North Cell Internal Structure and As-built Footprint

References

Golder, 2018. *Detailed Engineering of Internal Structure*, ref. 1784383-Rev0, April 2018.

https://golderassociates.sharepoint.com/sites/1897439/preparation of deliverables/1897436-1582-tm-rev0 memo ditches and sumps nc/rev0/1897439-1582-tm-rev0 memo ditches and sumps nc.docx

PERMIT TO PRACTICE
GOLDER ASSOCIATES LTD.
Signature
Date 2018-11-29
PERMIT NUMBER: P 049
NT/NU Association of Professional Engineers and Geoscientists

637 000 E | 637 500 E | 638 000 E

7 217 000 N | 7 216 500 N | 7 216 000 N | 7 215 500 N

SUMP 3

DITCH 3

DITCH 2

SUMP 2

CYANIDE BURNING PAD

NORTH CELL

SADDLE DAM 1

SADDLE DAM 2

TAILINGS POND

SUMP 4

DITCH 4

DITCH 1

SUMP 1

STORMWATER DIKE

LEGEND

- SUMPS APPROXIMATIVE LOCATION
- DITCH APPROXIMATIVE LOCATION
- 1+000 INITIAL ALIGNMENT
- **1+000** REVISED ALIGNMENT
- NORTH CELL INTERNAL STRUCTURE, AS BUILT (El.152 m)
- NORTH CELL INTERNAL STRUCTURE, AS BUILT (El.154 m)
- FILTER SYSTEM

0 100 200
1:5 000 MÈTRES

CLIENT
AGNICO EAGLE MINES LIMITED

CONSULTANT
GOLDER

YYYY-MM-DD	2018-08-16
DESIGNED	S. Barbeau
PREPARED	A. Touchette
REVIEWED	Y. Boulianne
APPROVED	Y. Boulianne

PROJECT
MEADOWBANK MINE, NUNAVUT
NORTH CELL INTERNAL STRUCTURE

TITLE
INITIAL DESIGN OF THE NORTH CELL INTERNAL STRUCTURE AND AS-BUILT FOOTPRINT

PROJECT NO.	PHASE	REV.	FIGURE
1897439	5000	0	3

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

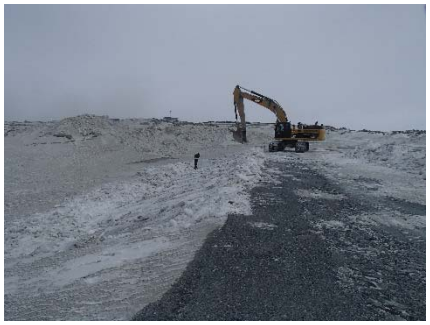
25 mm
0

APPENDIX C

Construction Photographs

APPENDIX C-1

Central Dike Stage 6 Photographs



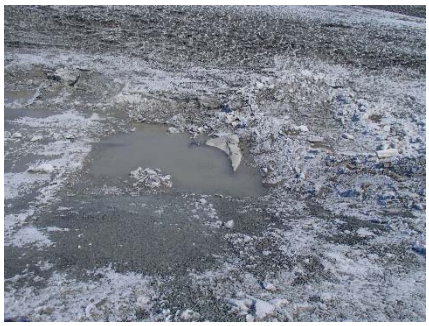
SD3-297 (2018-05-14), looking SE from Sta. 20+730/-10 m. Removal of snow on the upstream slope of SD3-with an excavator, from Sta. 20+640 to 20+760 m.

SD3-298 (2018-05-16), looking S from Sta. 20+680/-88 m. Removal of snow on the upstream slope of SD3-above El. 142 m, from Sta. 20+620 m to 20+780 m.

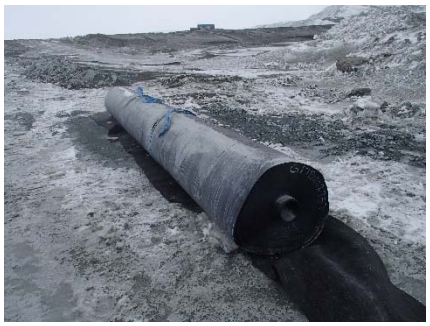
SD3-299 (2018-05-16), looking NW from Sta. 20+620/-26 m. Scarification of the frozen ultramafic volcanic (UM) rockfill on the crest with a dozer for the anchoring trench excavation between Sta. 20+605 m and 20+780 m.

SD3-300 (2018-05-16), looking NW from Sta. 20+790/-33 m. Excavation of the LLDPE geomembrane crest anchoring trench with an excavator from Sta. 20+675 m to 20+780 m.

SD3-301 (2018-05-17), looking SE from Sta. 20+660/-22 m. Excavation of the LLDPE geomembrane crest anchoring trench with an excavator from Sta. 20+655 m to 20+675 m.

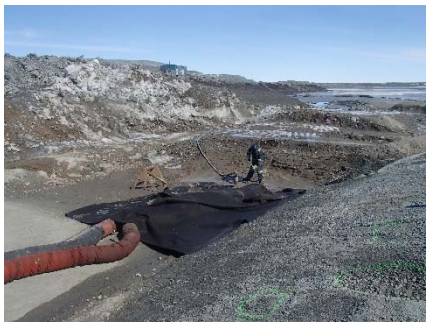


SD3-302 (2018-05-18), looking NE from Sta. 20+595/-42 m. View of water ponding on the first compacted sieved till layer of upstream toe liner tie-in. A portion of exposed damaged LLDPE liner is visible.



SD3-303 (2018-05-21), looking N from Sta. 20+780/-15 m. View of a LLDPE liner roll stored on geotextile.

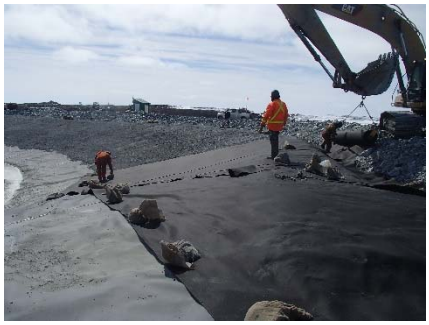
SD3-304 (2018-05-21), looking SE from Sta. 20+620/-36 m. Smoothing of the surface of the fine filter with an excavator on top of the upstream slope from Sta. 20+600 m to 20+780 m.



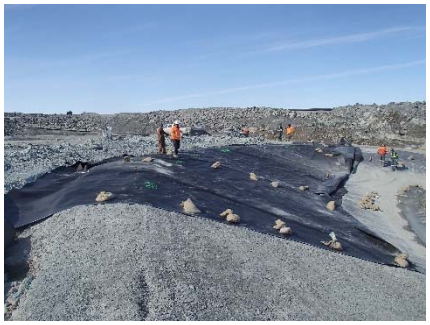
SD3-305 (2018-06-05), looking NE from Sta. 20+590/-48 m. Dewatering of the water ponding on the first compacted sieved till layer of upstream toe liner tie-in. A Genset Frost-fighter is heating the sieved till layer and a pump is evacuating the water.

SD3-306 (2018-06-06), looking S from Sta. 20+780/-25 m. Correction of the surface of the fine filter in the upstream slope and the top of the first class compacted sieved till layer with an excavator from Sta. 20+803 m to 20+793 m.

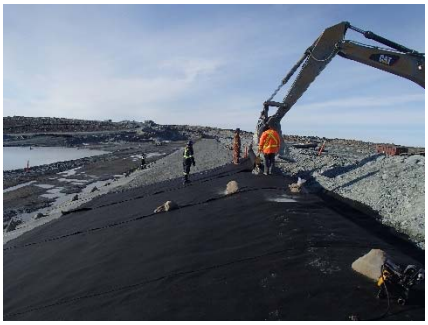
SD3-307 (2018-06-06), looking N from Sta. 20+800/-25 m. View of the liner bedding ready for geosynthetics installation.



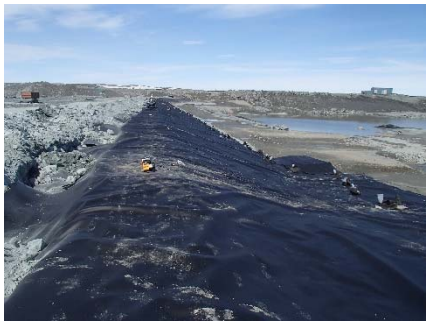
SD3-308 (2018-06-06), looking SW from Sta. 20+620/-48 m. Installation of the geotextile on the upstream slope 3H:1V between El. 143 m and 145 m from Sta. 20+620 m to 20+630 m.



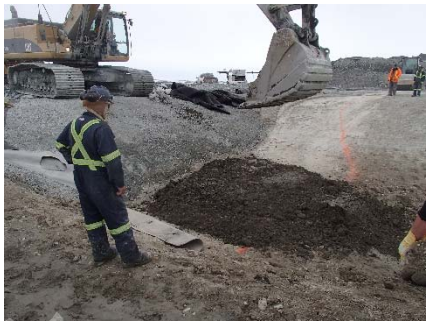
SD3-309 (2018-06-06), looking N from Sta. 20+640/-26 m. Installation of the LLDPE liner on the upstream slope 3H:1V between El. 143 m and 145 m from Sta. 20+620 m to 20+630 m (panel numbers 934 to 939).



SD3-310 (2018-06-07), looking S from Sta. 20+635/-24 m. Installation of the geotextile on the upstream slope 3H:1V between El. 143 m and 145 m from Sta. 20+630 m to 20+800 m.

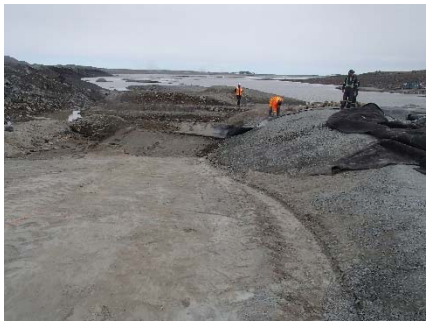


SD3-311 (2018-06-07), looking N from Sta. 20+810/-26 m. Installation of the LLDPE liner on the upstream slope 3H:1V between El. 143 m and 145 m from Sta. 20+630 m to 20+800 m (panel numbers 939 to 964).

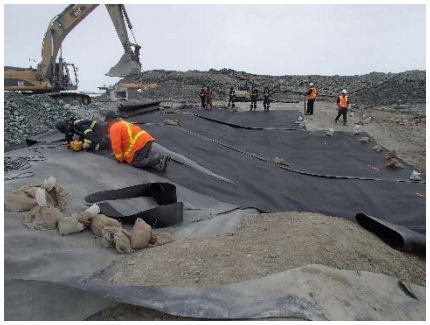


SD3-312 (2018-06-08), looking W from Sta. 20+610/-48 m. Placement of a 0.15 m thick lift of compacted sieved till from Sta. 20+596.4 m to 20+601.6 m (o.s. -42.6 to -46.3 m) to fill the depression in the compacted sieved till layer.

SD3-313 (2018-06-08), looking S from Sta. 20+600/-52 m. Compaction of the 0.15 m-thick lift of compacted sieved till with a 10-tonne smooth-drum compactor without vibration (4 passes) from Sta. 20+596 m to 20+601 m.

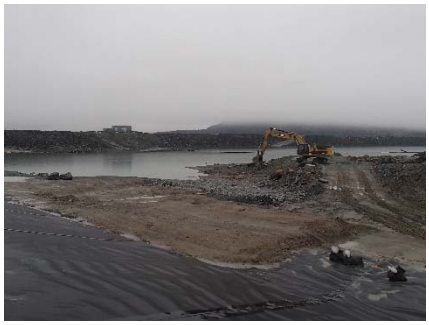


SD3-314 (2018-06-08), looking E from Sta. 20+590/-32 m. View of the liner bedding ready for geosynthetics installation.

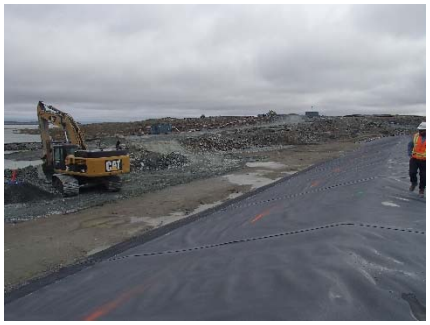


SD3-315 (2018-06-08), looking W from Sta. 20+615/-46 m. Installation of the geotextile on the upstream slope 3H:1V between El. 143 m and 145 m from Sta. 20+593 m to 20+610 m and installation of the LLDPE liner on the upstream slope 3H:1V between El. 143 m and 145 m from Sta. 20+593 m to 20+610 m (panel numbers 965 to 967).

SD3-316 (2018-06-09), looking NW from Sta. 20+610/-45 m. Repairs on the extrusion fillet seam between LLDPE panel 965 and the existing LLDPE panel at Sta. 20+600 m (approx.).

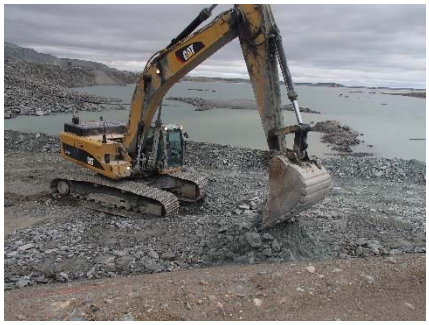


SD3-317 (2018-07-07), looking E from Sta. 20+800/-22 m. Reworking of the access to SD3.



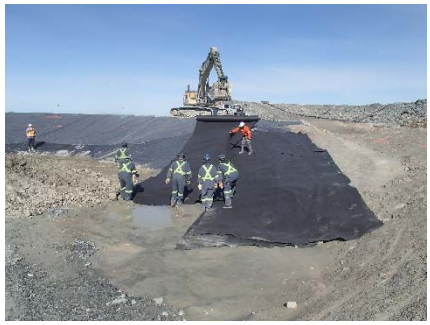
SD3-318 (2018-07-07), looking SE from Sta. 20+710/-24 m. Placement of IV rockfill in the water up to El. 142m with an excavator from Sta. 20+785 m to 20+730 m, at the bottom of the upstream slope of SD3 to widen the rockfill layer and allow access to the erosion protection.

SD3-319 (2018-07-08), looking NE from Sta. 20+740/-31 m. Placement of IV rockfill in the water up to El. 142m with an excavator from Sta. 20+730 m to 20+610 m, at the bottom of the upstream slope of SD3 to widen the rockfill layer and allow access to the erosion protection.

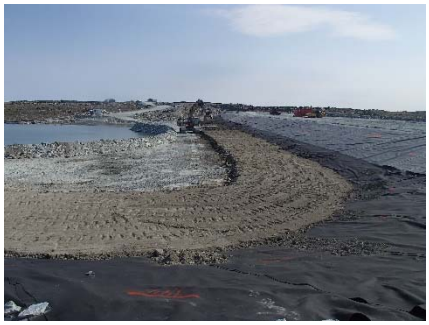


SD3-320 (2018-07-08), looking E from Sta. 20+620/-67 m. Placement of a 1 m thick (approx.) lift of fine IV rockfill over the compacted till in the upstream slope from El. 142 m to 144 m with an excavator from Sta. 20+600 m to 20+610 m.

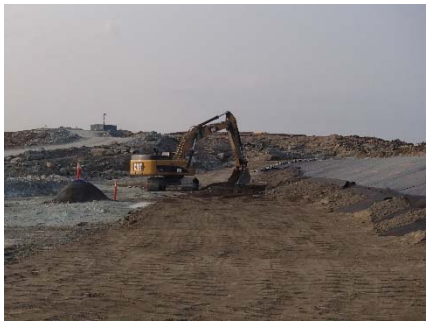
SD3-321 (2018-07-09), looking SW from Sta. 20+610/-56 m. Water ponding at El. 142m on the compacted sieved till layer of the upstream toe liner tie-in at approx. Sta. 20+620 m to 20+630 m was pumped.



SD3-322 (2018-07-09), looking W from Sta. 20+625/-63 m. Installation of two layers of geotextile on the upstream slope 3H:1V between El. 142 m and 143 m (approx.) from Sta. 20+610 m to 20+800 m.



SD3-323 (2018-07-09), looking S from Sta. 20+610/-43 m. Placement of the first 0.5 m thick lift of low quality till (0-150 mm) from El. 142 m to 142.5 m from Sta. 20+610 m to 20+715 m.

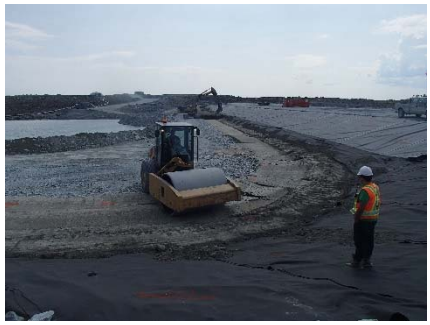


SD3-324 (2018-07-10), looking S from Sta. 20+680/-39 m. Placement of a 0.5 m thick lift of low quality till (0-150 mm) from El. 142 m to 142.5 m from Sta. 20+715 m to 20+760 m.

SD3-325 (2018-07-10), looking S from Sta. 20+610/-43 m. Placement of a first 0.5 m thick lift of fine rockfill (0-500 mm) upstream of the low quality till from El. 142 m to 142.5 m from Sta. 20+610 m to 20+760 m.

SD3-326 (2018-07-11), looking N from Sta. 20+820/-34 m. Placement of the 0.5 m thick lift of low class till, fine filter, coarse filter and fine rockfill on the upstream slope of the upstream toe liner tie-in with an excavator from Sta. 20+780 to 20+810 m.

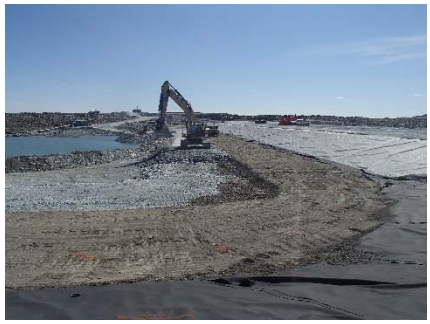
SD3-327 (2018-07-11), looking S from Sta. 20+610/-43 m. Compaction of the 0.5 m lift of low quality till (0-150 mm) at El. 142.5 m with a 10-tonne smooth-drum compactor with vibration (4 passes) from Sta. 20+610 m to 20+615 m and from Sta. 20+635 m to 20+760 m.



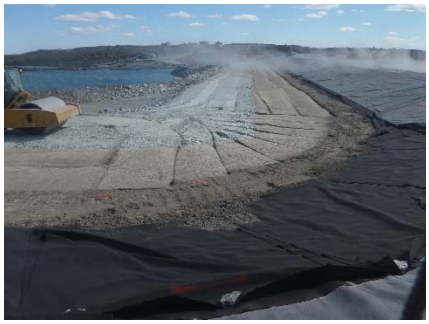
SD3-328 (2018-07-11), looking N from Sta. 20+820/-34 m. Compaction perpendicularly to the longitudinal axe of Saddle Dam 3 of the 0.5 m lift of low quality till (0-150 mm) at El. 142.5 m with a 10-tonne smooth-drum compactor without vibration (4 passes) from Sta. 20+615m to 20+635 m.

SD3-329 (2018-07-11), looking N from Sta. 20+820/-34 m. Placement of a 0.5 m thick lift of low quality till (0-150 mm) from El. 142.5 m to 143 m from Sta. 20+610 m to 20+760 m.

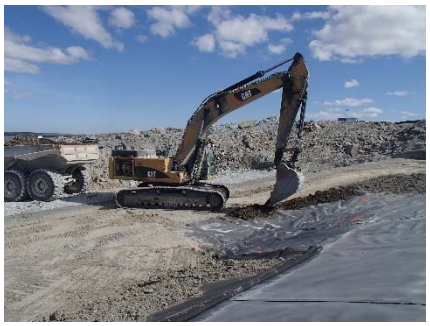
SD3-329 (2018-07-11), looking N from Sta. 20+820/-34 m. Placement of a 0.5 m thick lift of low quality till (0-150 mm) from El. 142.5 m to 143 m from Sta. 20+610 m to 20+760 m.



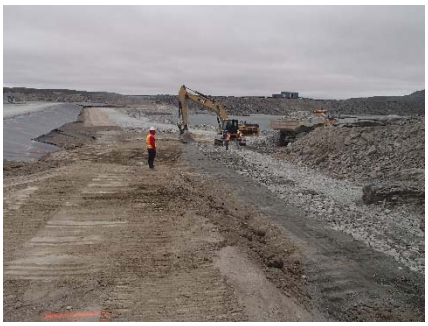
SD3-330 (2018-07-12), looking S from Sta. 20+610/-43 m. Placement of a second 0.5 m thick lift of fine rockfill (0-500 mm) upstream of the low quality till (0-150mm) from El. 142.5 m to 143 m from Sta. 20+610 m to 20+760 m.



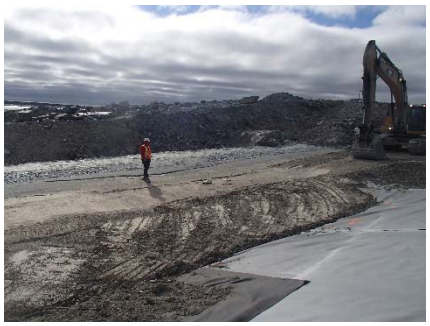
SD3-331 (2018-07-12), looking S from Sta. 20+610/-43 m. Compaction of the 0.5 m lift of low quality till (0-150 mm) at El. 143 m with a 10-tonne smooth-drum compactor with vibration (4 passes) from Sta. 20+610 m to 20+760 m.



SD3-332 (2018-07-12), looking SE from Sta. 20+775/-23 m. Placement of a first 0.5 m thick lift of compacted sieved till over the LLDPE geomembrane on the upstream toe liner tie-in with an excavator from Sta. 20+775 m to 20+800 m.

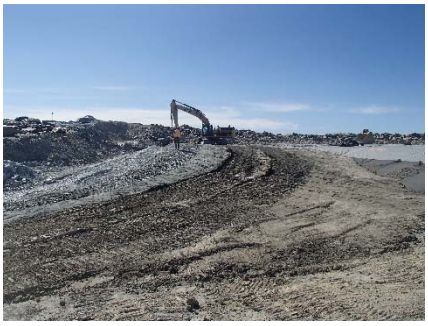


SD3-333 (2018-07-13), looking N from Sta. 20+817/-29 m. Placement of a second 0.5 m thick lift of fine rockfill on the upstream slope of the upstream toe liner tie-in with an excavator from Sta. 20+775 m to 20+800 m.



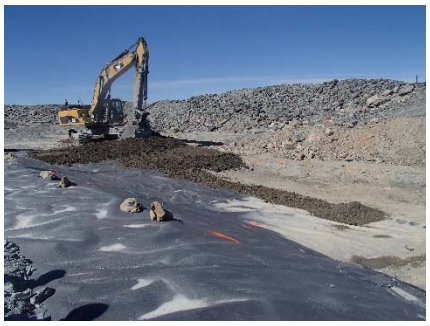
SD3-334 (2018-07-13), looking SE from Sta. 20+780/-26 m. Compaction of the second 0.5 m thick lift of compacted sieved till and third lift of fine filter, coarse filter and fine rockfill of the upstream toe liner tie-in with a 10 tonne smooth-drum compactor with vibrations from Sta. 20+770 m to 20+800 m.

SD3-335 (2018-07-14), looking N from Sta. 20+815/-27 m. Placement of a third 0.5 m thick lift of compacted sieved till on the upstream toe liner tie-in with an excavator from Sta. 20+760 m to 20+810 m.



SD3-336 (2018-07-14), looking S from Sta. 20+755/-48 m. Placement of a fourth 0.5 m thick lifts of fine filter, coarse filter and fine rockfill on the upstream slope of the upstream toe liner tie-in with an excavator from Sta. 20+770 to 20+800 m.

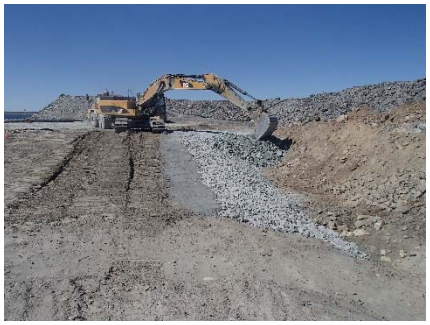
SD3-337 (2018-07-14), looking S from Sta. 20+760/-37 m. Compaction of the fourth 0.5 m thick lifts of fine filter, coarse filter and fine rockfill on the upstream slope of the upstream toe liner tie-in with a 10 tonne smooth-drum compactor with vibrations (4 passes) from Sta. 20+770 to 20+800 m.



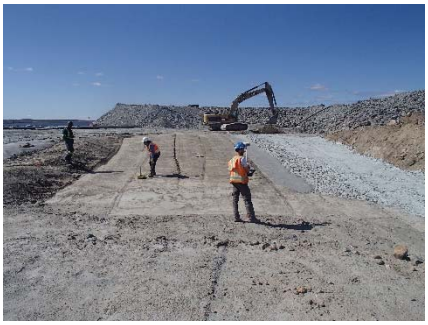
SD3-338 (2018-07-14), looking NW from Sta. 20+610/-43 m. Placement of a first 0.5 m thick lift of compacted sieved till over the LLDPE geomembrane on the upstream toe liner tie-in with an excavator from Sta. 20+588 m to 20+599 m.

SD3-339 (2018-07-15), looking E from Sta. 20+600/-29 m. Compaction of a first 0.5 m thick lift of compacted sieved till on the upstream toe liner tie-in with an excavator from Sta. 20+588 m to 20+599 m.

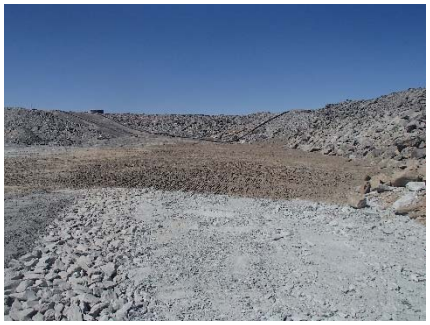
SD3-340 (2018-07-15), looking S from Sta. 20+750/-40 m. Compaction of the third 0.5 m thick lift of compacted sieved till on the upstream toe liner tie-in with an excavator from Sta. 20+760 m to 20+820 m.



SD3-341 (2018-07-15), looking W from Sta. 20+600/-59 m. Placement of a first 0.5 m thick lift of fine rockfill on the upstream slope of the upstream toe liner tie-in with an excavator from Sta. 20+588 m to 20+599 m.



SD3-342 (2018-07-15), looking W from Sta. 20+600/-58 m. View of the compaction test and view of the filling of the depression between SD2 and SD3 with low quality till up to El. 145 m.



SD3-343 (2018-07-16), looking W from Sta. 20+590/-40 m. View of the depression between SD2 and SD3 backfilled with low quality till up to El. 145 m.

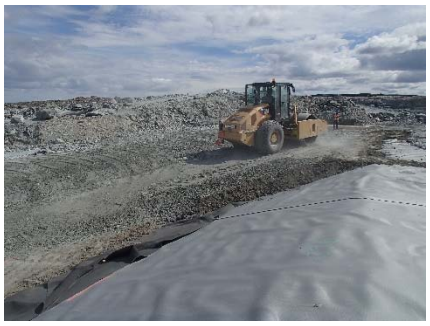
SD3-344 (2018-07-16), looking S from Sta. 20+610/-43 m. Placement of a third 0.5 m thick lift of low quality till (0-150 mm) from El. 142.5 m to 143 m from Sta. 20+570 m to 20+590 m.

SD3-345 (2018-07-17), looking NW from Sta. 20+760/-42 m. Placement of a fourth 0.5 m thick lift of low quality till (0-150 mm) from El. 143 m to 143.5 m from Sta. 20+619 m to 20+777 m.

SD3-346 (2018-07-17), looking E from Sta. 20+760/-21 m. Placement of a third 0.5 m thick lift of fine UM rockfill (0-500 mm) upstream of the low quality till (0-150mm) from El. 143 m to 143.5 m from Sta. 20+668 m to 20+777 m.

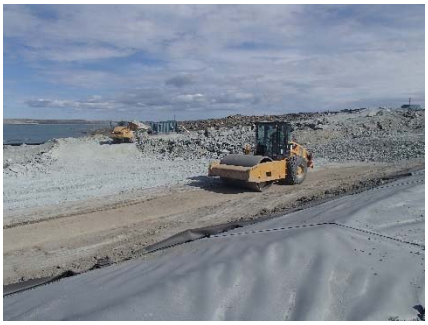
SD3-347 (2018-07-18), looking W from Sta. 20+640/-41 m. Placement of a third 0.5 m thick lift of fine UM rockfill (0-500 mm) upstream of the low quality till (0-150mm) from El. 143 m to 143.5 m from Sta. 20+688 m to 20+619 m.

SD3-348 (2018-07-18), looking E from Sta. 20+760/-25 m. Placement of a 0.5 m thick layer of compacted sieved till on the upstream slope of SD3 with an excavator from Sta. 20+777 m to 20+807 m. No large rock was allowed to be placed against the LLDPE liner.

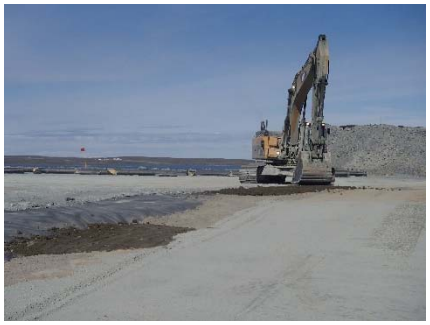


SD3-349 (2018-07-18), looking SE from Sta. 20+765/-29 m. Compaction of the 0.5 m thick lift of fine filter on the top of the upstream toe liner tie-in with a 10 tonne smooth-drum compactor with vibration (4 passes) from Sta. 20+777 m to 20+807 m.

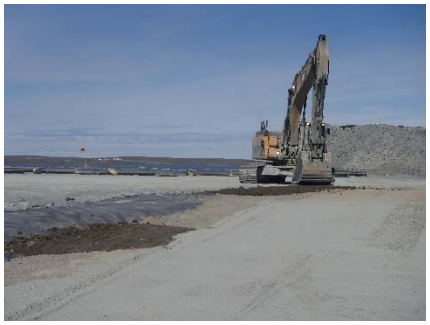
SD3-350 (2018-07-18), looking SE from Sta. 20+740/-24 m. Placement of a 0.5 m thick lift of coarse filter on the top of the fine filter on the upstream toe liner tie-in with an excavator from Sta. 20+777 m to 20+807 m.



SD3-351 (2018-07-18), looking SE from Sta. 20+740/-24 m. Compaction of the 0.5 m lift of low quality till (0-150 mm) at El. 143.5 m with a 10-tonne smooth-drum compactor with vibration (4 passes) from Sta. 20+619 m to 20+777 m.



SD3-352 (2018-07-19), looking SW from Sta. 20+600/-59 m. Corrections to the layer of compacted sieved till placed against the upstream slope from Sta. 20+599 m to 20+613 m.

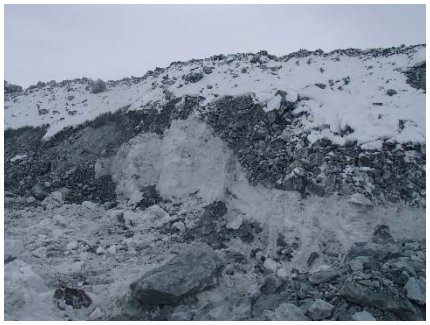


SD3-353 (2018-07-22), looking SW from Sta. 20+580/-49 m. View of SD3 at the end of the 2018 construction phase.

APPENDIX C-2

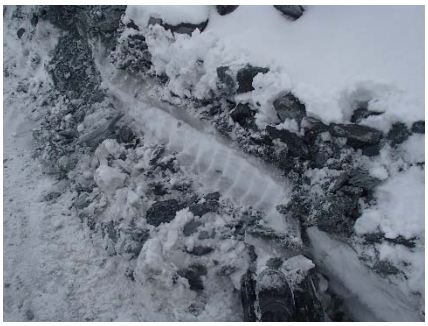
Saddle Dam 3 finalization of Stage 3 Photographs

NCIS-001 (2018-05-19). View of a test pit in the UM rockfill lift at El. 152 m: a thick layer of snow (2 m) underlies the rockfill.

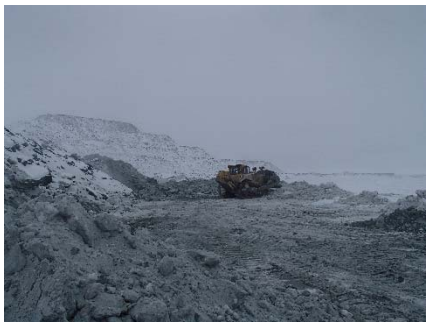


NCIS-002 (2018-05-19). View of the scraped upstream side of the UM rockfill lift at El. 152 m: n thick layer of snow (1.5 m) underlies the rockfill.

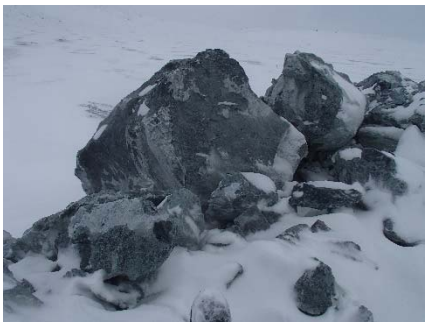
NCIS-003 (2018-05-19). Excavation of the snow-rich upstream toe material on an average width of 2 to 3 m with an excavator.



NCIS-004 (2018-05-19). View of the scraped upstream side of the UM rockfill lift at El. 152 m further to the north: the snow layer is only observed at the toe and is approximately 0.5 m thick.



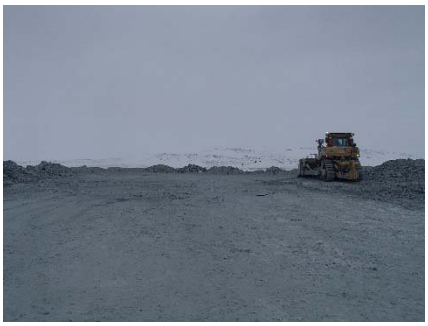
NCIS-005 (2018-05-19). Removal of the excavated material, pushed with a dozer towards the center of the North Cell to clear the upstream toe.



NCIS-006 (2018-05-19). View of oversize boulders on the UM rockfill lift at El. 152 m.

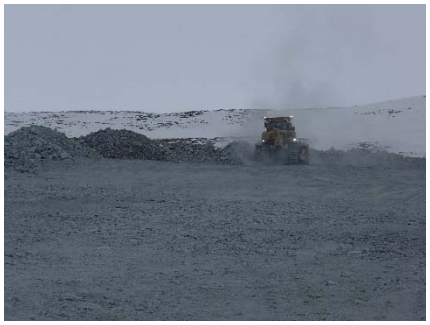
NCIS-007 (2018-05-20). Profiling of the upstream slope (3H:1V) from El. 150 to 152 m with an excavator.

NCIS-008 (2018-05-20). Placement a 2 m thick (approx.) lift of UM rockfill from El. 150 m to El. 152 m (approx.) with a dozer. The material is of good quality and is well graded.



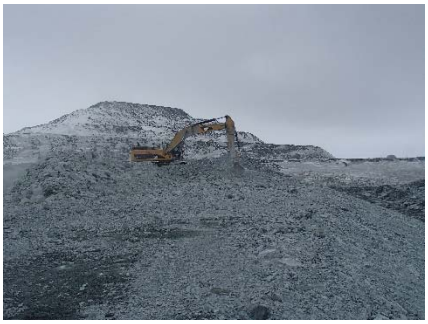
NCIS-009 (2018-05-21). Placement a 2 m thick (approx.) lift of UM rockfill from El. 150 m to El. 152 m (approx.) with a dozer from Sta. 1+880 m to 1+825 m (o.s. unavailable).

NCIS-010 (2018-05-21). Profiling of the upstream slope (3H:1V) from El. 150 to 152 m with an excavator from Sta. 2+777 m to 2+400 m.

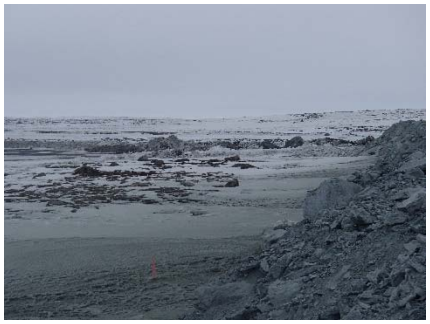


NCIS-011 (2018-05-22), looking SW from Sta. 2+000 m. Placement a 2 m thick (approx.) lift of UM rockfill from El. 150 m to El. 152 m (approx.) with a dozer from Sta. 1+880 m to 1+767 m (o.s. unavailable).

NCIS-012 (2018-05-22), looking NW from Sta. 2+000 m. Profiling of the upstream slope (3H:1V) from El. 150 to 152 m with an excavator from Sta. 2+325 m to 2+275 m (approx.).



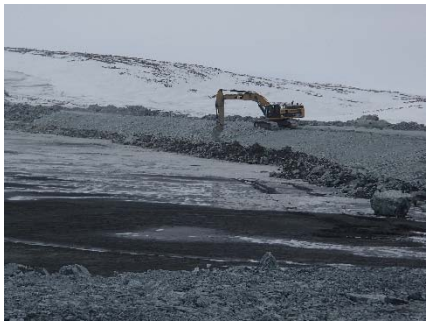
NCIS-013 (2018-05-22), looking NE from Sta. 2+600 m. Correction of the crest elevation with an excavator to achieve a closer elevation to 152 m around Sta. 2+650 m.



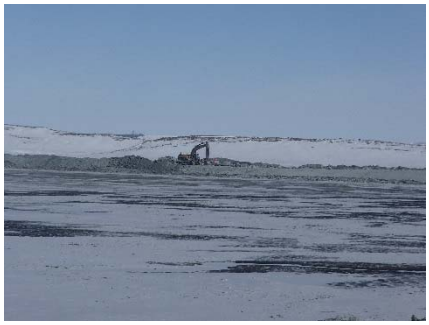
NCIS-014 (2018-05-22), looking SE from Sta. 1+900 m. View of the natural soil on which the 2015 capping is built.

NCIS-015 (2018-05-22), looking S from Sta. 1+850 m. View of the 200 mm deep test pit excavated into the natural soil. A thin layer or organic soil overlies frozen till.

NCIS-016 (2018-05-23), looking SE from Sta. 1+750 m. View of the Iron Formation rockfill (PAG material) piles on the North Cell Internal Structure.



NCIS-017 (2018-05-24), looking SW from Sta. 2+290 m. Profiling of the upstream slope (3H:1V) from El. 150 to 152 m with an excavator from Sta. 2+138 m to 1+989 m.

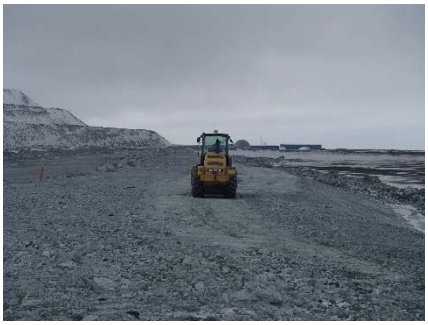


NCIS-018 (2018-05-25), looking NW from Sta. 2+310 m. Profiling of the upstream slope (3H:1V) from El. 150 to 152 m with an excavator from Sta. 1+989 m to 1+860 m.

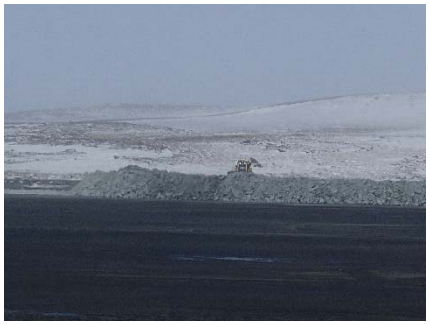
NCIS-019 (2018-05-26), looking SW from Sta. 2+100 m. Profiling of the upstream slope (3H:1V) from El. 150 to 152 m with an excavator from Sta. 1+860 m to 1+678 m. The portion between Sta. 1+900 m and 1+800 m, where the structure is built on the natural ground, was not profiled.

NCIS-020 (2018-05-27), looking S from Sta. 1+570 m. Placement a 2 m thick (approx.) lift of UM rockfill from El. 150 m to El. 152 m (approx.) with a dozer from Sta. 1+564 m to 1+535 m (o.s. unavailable).

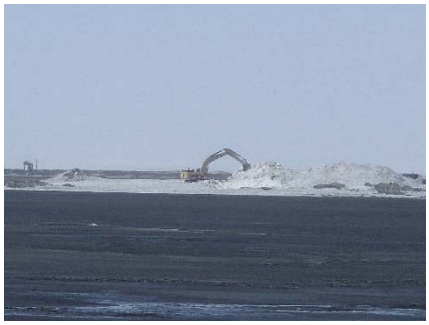
NCIS-021 (2018-05-28), looking S from Sta. 1+550 m. Placement a 2 m thick (approx.) lift of UM rockfill from El. 150 m to El. 152 m (approx.) with a dozer from Sta. 1+535 m to 1+500 m (o.s. unavailable).



NCIS-022 (2018-05-30), looking SE from Sta. 2+245 m. Compaction of the 2 m lift (approx.) of ultramafic (UM) rockfill at El. 152 m with a 10-tonne smooth-drum compactor with vibration (6 passes) between the haul truck traffic lane and the upstream slope from Sta. 2+625 to 1+625 m (o.s. unavailable).



NCIS-023 (2018-05-31), looking W from Sta. 2+570 m. Placement of a 2 m thick (approx.) lift of UM rockfill from El. 150 m to El. 152 m (approx.) with a dozer from Sta. 1+500 m to 1+450 m (o.s. unavailable). The material is of good quality and is well graded.

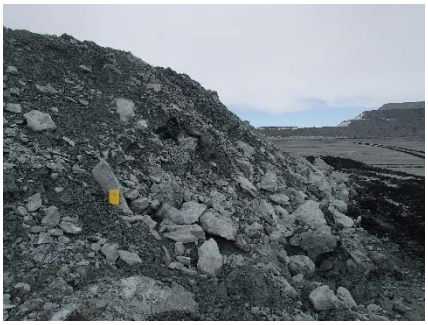


NCIS-024 (2018-05-31), looking SW from Sta. 2+570 m. Removal of the snow bank in the footprint with an excavator from Sta. 1+160 m to 1+120 m (approx.).

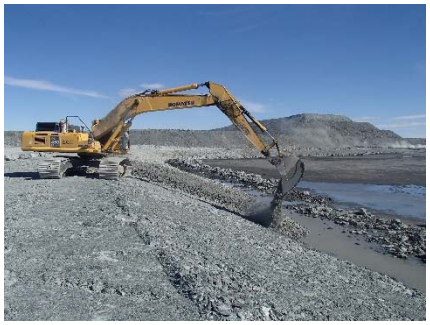
NCIS-025 (2018-06-01), looking SE from Sta. 1+475 m. Placement of a 2 m thick (approx.) lift of UM rockfill from El. 150 m to El. 152 m (approx.) with a dozer from Sta. 1+450 m to 1+390 m (o.s. unavailable). The material is of good quality and is well graded.

NCIS-026 (2018-06-06), looking S from Sta. 1+440/+2 m. Placement of a 2 m thick (approx.) lift of UM rockfill from El. 150 m to El. 152 m (approx.) with a dozer from Sta. 1+390 m to 1+365 m (+10 m to -29 m).

NCIS-027 (2018-06-07), looking E from Sta. 1+360/+67 m. Placement of a 2 m thick (approx.) lift of UM rockfill from El. 150 m to El. 152 m (approx.) with a dozer from Sta. 1+365 m to 1+360 m (+9 m to -28 m).



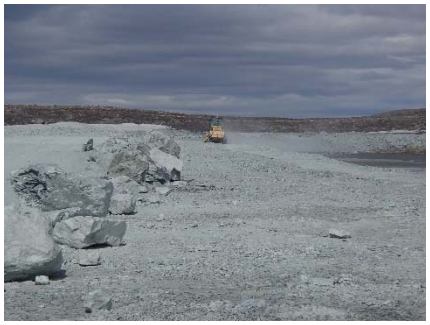
NCIS-028 (2018-06-09), looking E from Sta. 1+340/+3 m. View of the UM rockfill lift approximately 3.2 m thick.



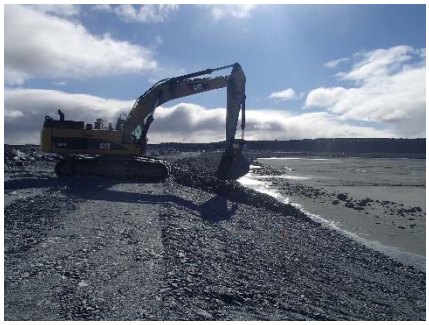
NCIS-029 (2018-06-19), looking SE from Sta. 2+120/-27 m. Placement of a 0.5 m thick lift of coarse filter in the upstream slope from El. 150 m to 152 m with an excavator from Sta. 2+280 m to 2+105 m.

NCIS-030 (2018-06-20), looking W from Sta. 2+140/-29 m. Placement of a 0.5 m thick lift of coarse filter in the upstream slope from El. 150 m to 152 m with an excavator from Sta. 2+105 m to 1+930 m. Notice the presence of water ponding at the bottom of the slope.

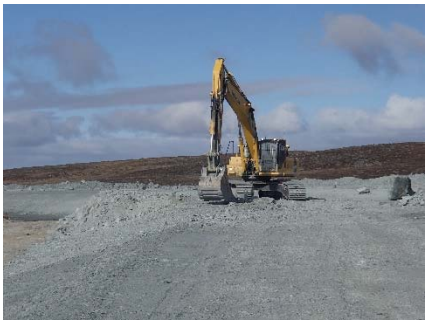
NCIS-031 (2018-06-20), looking SW from Sta. 1+880/-21 m. Final clean-up of the dike footprint with an excavator to reach a good quality bedrock from Sta. 1+800 to 1+850 m (o.s. -42 to -33 m).



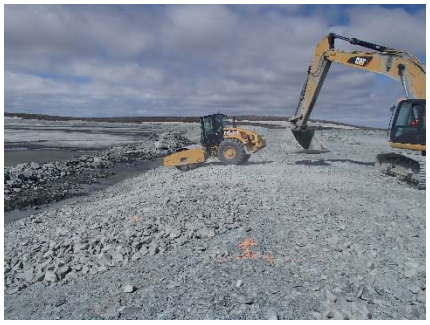
NCIS-032 (2018-06-20), looking N from Sta. 1+400/-24 m. Compaction of the 2 m lift (approx.) of ultramafic (UM) rockfill at El. 152 m with a 10-tonne smooth-drum compactor with vibration (6 passes) between the haul truck traffic lane and the upstream slope from Sta. 1+660 to 1+380 m (o.s. -45 to -24 m).



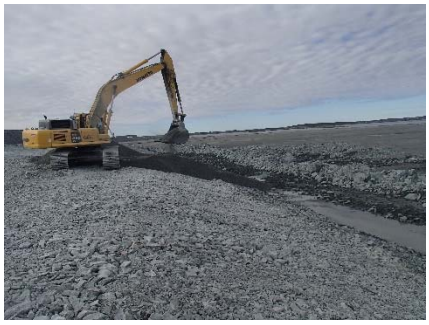
NCIS-033 (2018-06-21), looking E from Sta. 1+900/-21 m. Placement of a 0.5 m thick lift of coarse filter in the upstream slope from El. 150 m to 152 m with an excavator from Sta. 1+930 m to 1+715 m.



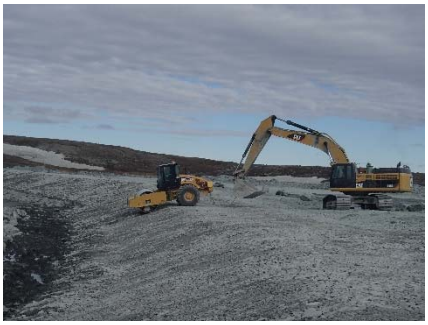
NCIS-034 (2018-06-21), looking W from Sta. 1+900/-21 m. Profiling of the upstream slope (3H:1V) from El. 150 to 152 m with an excavator from Sta. 1+860 m to 1+750 m.



NCIS-035 (2018-06-21), looking N from Sta. 2+550/-25 m. Compaction of the 0.5 m lift (approx.) of coarse filter between El. 150 and 152 m with a 10-tonne smooth-drum compactor (4 passes) in the upstream slope from Sta. 2+524 m to 2+450 m.

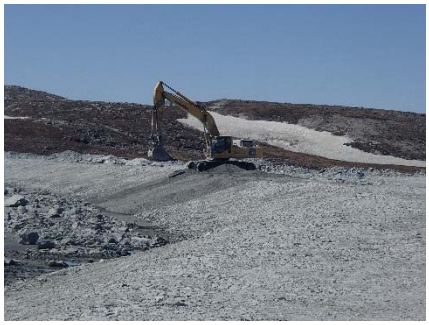


NCIS-036 (2018-06-22), looking SE from Sta. 1+900/-21 m. Placement of a 0.5 m thick lift of fine filter over the coarse filter in the upstream slope from El. 150 m to 152 m with an excavator from Sta. 2+542 m to 2+475 m.

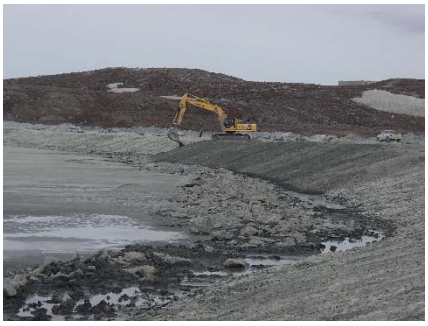


NCIS-037 (2018-06-22), looking NW from Sta. 1+550/-25 m. Compaction of the 0.5 m lift (approx.) of coarse filter between El. 150 and 152 m with a 10-tonne smooth-drum compactor (4 passes) in the upstream slope from Sta. 2+450 to 1+805 m.

NCIS-038 (2018-06-22), looking SE from Sta. 2+510/-28 m. Compaction of the 0.5 m lift (approx.) of fine filter between El. 150 and 152 m with a 10-tonne smooth-drum compactor (4 passes) in the upstream slope from Sta. 2+542 m to 2+475 m.

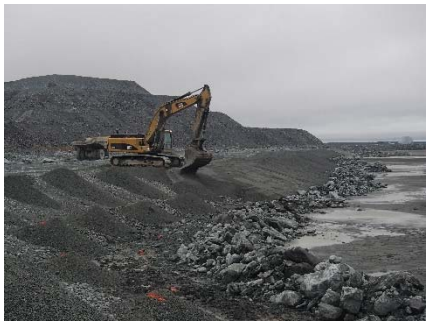


NCIS-039 (2018-06-23), looking W from Sta. 2+200/-24 m. Placement of a 0.5 m thick lift of fine filter over the coarse filter in the upstream slope from El. 150 m to 152 m with an excavator from Sta. 2+460 m to 2+475 m and from Sta. 2+065 m to 1+980 m.

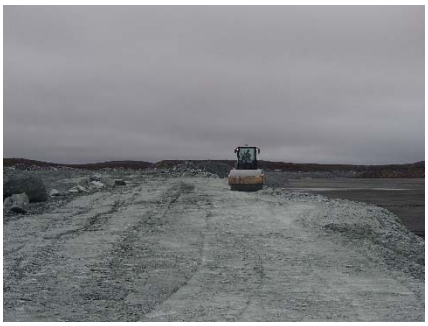


NCIS-040 (2018-06-24), looking W from Sta. 2+185/-25 m. Placement of a 0.5 m thick lift of fine filter over the coarse filter in the upstream slope from El. 150 m to 152 m with an excavator from Sta. 2+305 m to 2+460 m and from Sta. 1+980 m to 1+835 m.

NCIS-041 (2018-06-24), looking S from Sta. 1+220/-7 m. Placement of a 1.5 to 2 m thick (approx.) lift of UM rockfill from El. 148 m to El. 150 m (approx.) with a dozer from Sta. 1+197 m to 1+150 m (-7 m to -41 m).

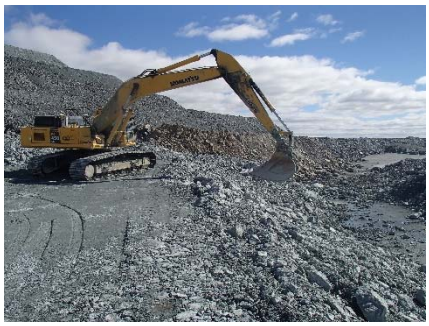


NCIS-042 (2018-06-25), looking SE from Sta. 2+210/-27 m. Placement of a 0.5 m thick lift of fine filter over the coarse filter in the upstream slope from El. 150 m to 152 m with an excavator from Sta. 2+305 m to 2+040 m.



NCIS-043 (2018-06-25), looking N from Sta. 1+250/-38 m. Compaction of the 1.5 to 2 m lift (approx.) of ultramafic (UM) rockfill at El. 150 m with a 10-tonne smooth-drum compactor with vibration (6 passes) between the haul truck traffic lane and the upstream slope from Sta. 1+330 to 1+200 m (o.s. -53 to -24 m).

NCIS-044 (2018-06-25), looking S from Sta. 1+200/-19 m. Placement of a 1.5 to 2 m thick (approx.) lift of UM rockfill from El. 148 m to El. 150 m (approx.) with a dozer from Sta. 1+150 m to 1+120 m (-92 m to +10 m). The material is of good quality and is well graded.



NCIS-045 (2018-06-25), looking S from Sta. 2+760/-40 m. Profiling of the upstream slope (3H:1V) from El. 150 to 152 m with an excavator from Sta. 2+715 m to 2+825 m.