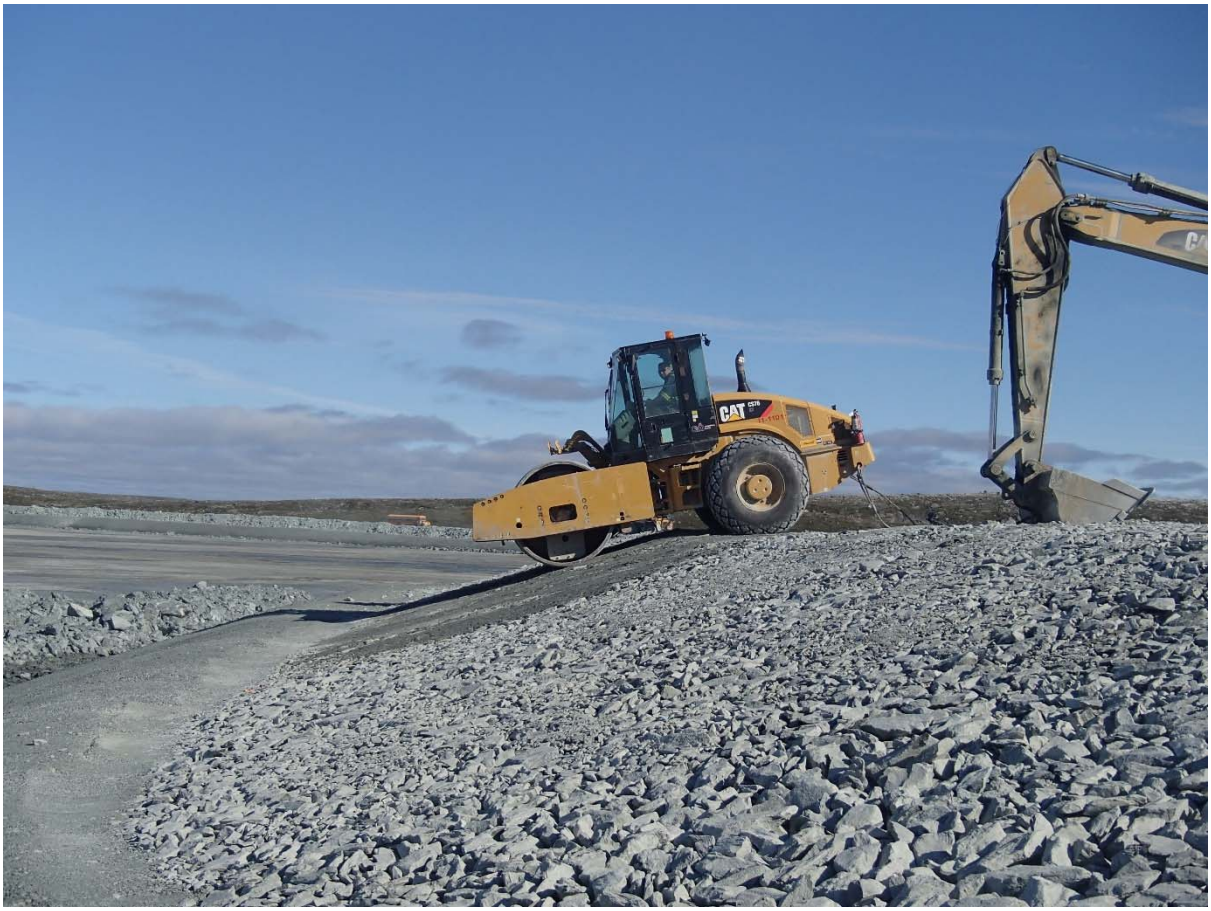
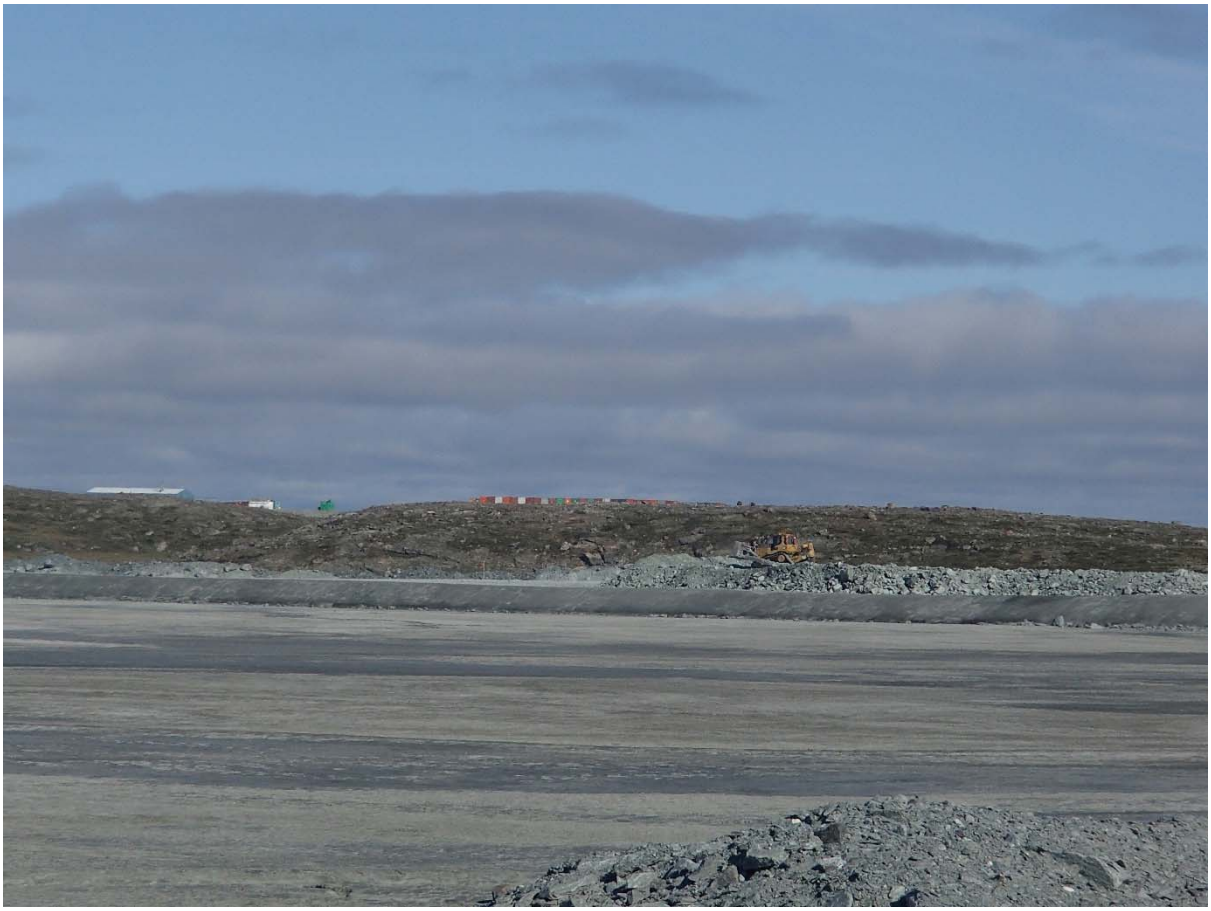
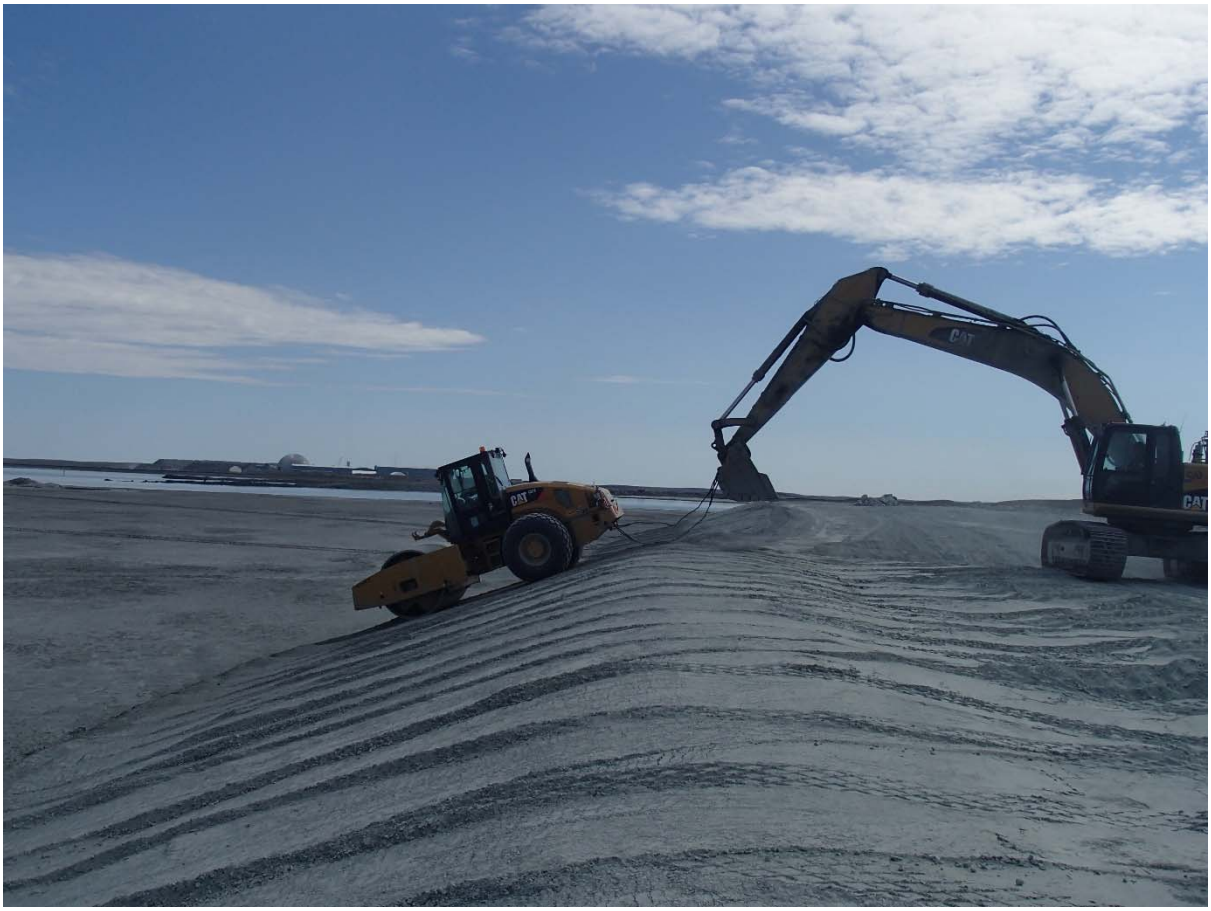


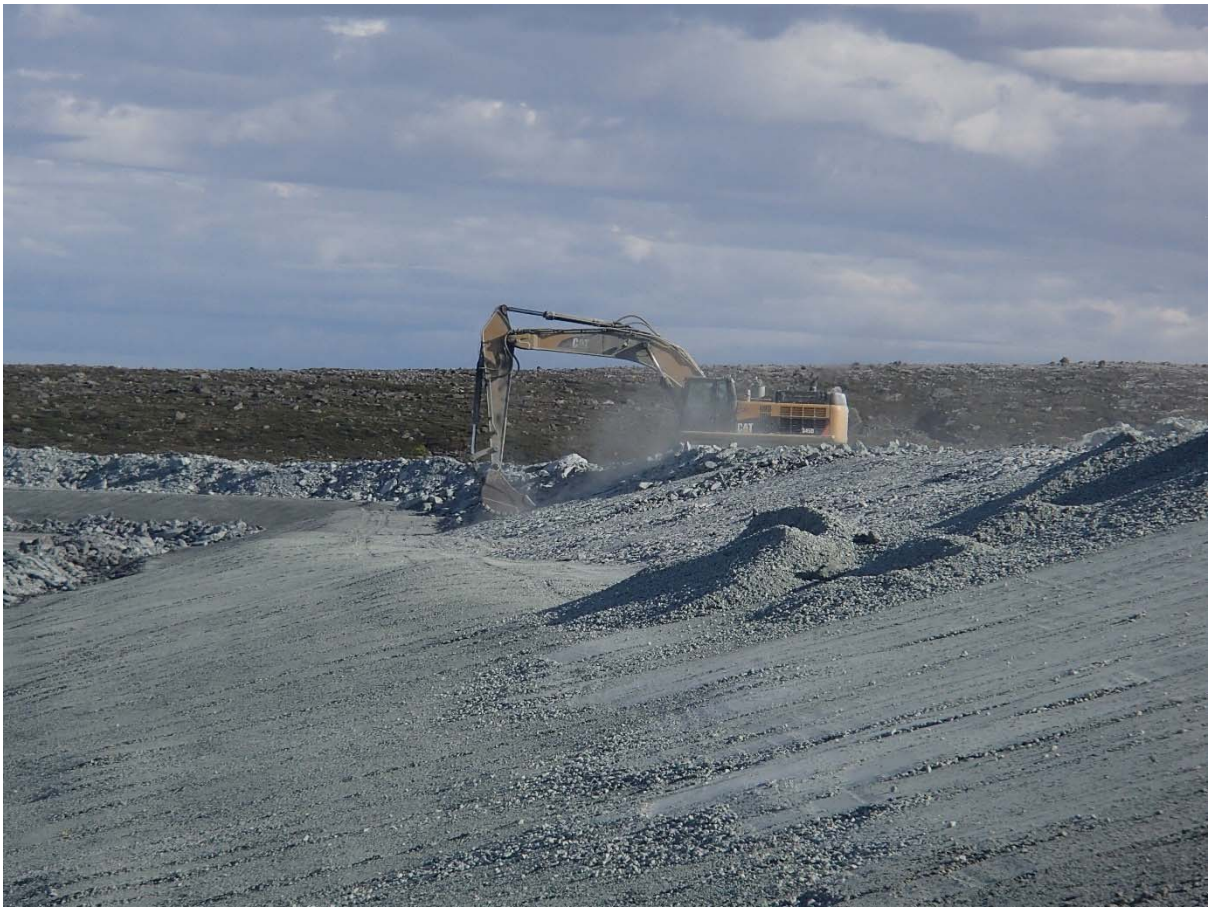
Photograph NCIS-105: From Sta. 2+630/-34 m (approx.), looking NW. Compaction of the 0.5 m lift (approx.) of coarse filter between El. 152 m and 154 m with a 10-tonne smooth-drum compactor with vibration (4 passes) in the upstream slope from Sta. 2+710 m to 2+411 m.



Photograph NCIS-106: From Sta. 2+620/-35 m (approx.), looking NW. Placement of a 2 m thick (approx.) lift of UM rockfill from El. 152 m to El. 154 m (approx.) with a dozer from Sta. 1+947 m to 1+863 m (+14 m to -26 m). The material is of good quality and is well graded.



Photograph NCIS-107: From Sta. 1+380/-38 m (approx.), looking S. Compaction of the 0.5 m lift (approx.) of fine filter between El. 150 m and 152 m with a 10-tonne smooth-drum compactor with vibration (4 passes) in the upstream slope from Sta. 1+251 m to 1+1+660 m.



Photograph NCIS-108: From Sta. 2+490/-32 m (approx.), looking N. Profiling of the upstream slope (3H:1V) from El. 152 to 154 m with an excavator from Sta. 2+159 m to 2+409 m.

Photograph NCIS-109: From Sta. 2+450/-21 m (approx.), looking N. Placement of a 0.5 m thick lift of coarse filter in the upstream slope from El. 152 m to 154 m with an excavator from Sta. 2+293 m to 2+411 m.

REGISTERED PROFESSIONAL ENGINEER
Y. BOULIANNE
LICENSEE
NT/NU
2018-07-23

Marion Habersetzer, M.Sc.
Mine Waste Group

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Associate, Senior Geotechnical Engineer

MH/YB/

https://golderassociates.sharepoint.com/sites/1897439/preparation of deliverables/weekly reports/2018-07-16 to 2018-07-22/1897439-1577-tm-rev0 qa weekly report north cell 2018-07-16 to 2018-07-22.docx

PERMIT TO PRACTICE
GOLDER ASSOCIATES LTD.
Signature
Date 2018-07-23
PERMIT NUMBER: P 049
NT/NU Association of Professional Engineers and Geoscientists

QA WEEKLY REPORT

DATE July 30th 2018 1897439-1577-TM-Rev0

TO Patrice Gagnon, Pier-Éric McDonald
Agnico Eagle Mines Ltd, Meadowbank Division

CC Frédérick Bolduc, Alexandre Lavallée

FROM Marion Habersetzer **EMAIL mhabersetzer@golder.com**

QA WEEKLY REPORT FROM JULY 23RD TO JULY 29TH– TSF NORTH CELL CONSTRUCTION MEADOWBANK (1897439)

This document summarizes QA activities performed by Golder from July 23rd to July 29th, 2018 inclusively, related to the construction activities of the North Cell Internal Structure at the Meadowbank mine site.

Unless otherwise specified, the construction activities use the centreline of the structures for a dike crest elevation of 152 m for reference (refer to the Drawings). The description of activities refers to the stations and offsets from the centreline (e.g., Sta. 0+500/-50 m). The "+" and "-" symbols indicate the location of the work downstream and upstream of the centreline, respectively.

1.0 GOLDER PERSONNEL ON SITE

Golder personnel on site during this reporting period is summarized in Table 1.

Table 1: Golder Personnel on Site

Name	Comments
Marion Habersetzer	QA Manager

2.0 HEALTH AND SAFETY

H&S meetings were held with AEM and FGL/SANA during the daily construction meetings. Minutes from these meetings are recorded and stored in Golder's on-site office. The key H&S elements for the reporting period were as follows:

- Dust is still an issue on the construction field; be vigilant by staying out of the dust cloud near construction activities and road circulation.
- Coactivity on the dike: be aware of blind spots and safe spots, keep good communication and visual contact with the operators.
- Possible ground instability and rockfalls can happen in the downstream slope of the North Cell Internal Structure, which is not profiled. Workers on foot in the slope and at the toe must be careful.
- The rain is an issue, the muddy and very slippery ground causes a high risk of slips and falls. Extra caution must be applied when walking or driving on wet surfaces.

3.0 SUMMARY OF MAIN DISCUSSIONS IN CONSTRUCTION MEETINGS

Construction meetings were held daily during the reporting period and were attended by the QA Manager. The following items were discussed:

General

- The QA Manager and the foreman defined on the field the footprint of the ditch and the sumps.
- The QA and QC personnel were present during the excavation of the sumps. The QA Manager required that the width of the sumps (perpendicular to the North Cell Internal Structure and RF1/RF2) and its depth be limited in order to avoid risking damaging the till and erosion protection layers placed on the upstream slope of RF1/RF2, below the tailings. Instead, the sumps were lengthened (parallel to the dikes) to provide the same volume.
- The sumps were excavated over several days, in order to leave time for the frozen bottom of the excavation to thaw. Corrections were made to the north sump to obtain a correct depth after the thawed tailings had slightly moved.
- The granular material placed as erosion protection in the sumps and ditch excavated in the tailings is till sieving reject material. A 0.3 m thick layer was placed over the slopes and bottom of the excavations. This is an adaptation for the operation stage from the original design requiring 0.5 m of coarse filter in the sumps, and 0.3 m of fine filter in the ditches. This material is considered good quality for this use, and this adjustment will save some coarse filter material.
- A culvert was installed in the ditch at Sta. 1+450 m to rebuild the access to the North Cell Internal Structure over the ditch.
- Given a shortage of UM rockfill, at the request of AEM, the UM rockfill coming from the pit was used in priority on the deposition points, while stockpiled UM rockfill was used on deposition points when no pit feed was available, in order to be ready for deposition on August 1st. Rockfill placement on the crest of the dike resumed once the deposition points were completed.

- The QA Manager noticed boulder nests on the upstream slope of the rockfill around Sta. 1+830 m (see photograph below). Fine material was subsequently mixed in during slope profiling of this section.
- Haul trucks have trafficked the entire width of the UM rockfill platform at El. 154 m except the downstream berm. Since the downstream berms represent a smaller width than trafficable safely by the compactor, and since no further raise is planned above El. 154 m, it is acceptable not to compact the portion of the UM rockfill platform underneath the downstream berms.
- The pipe which crosses the North Cell Internal Structure will not be moved, instead the deposition will be slightly adjusted to avoid raising this section of the dike to El. 154 m.
- At the request of the QA Manager, the ditch was excavated deeper in the southern section on the rockfill capping, as water was ponding around the culvert and did not seem to flow out southwards.

Follow-up

- The deposition points design by AEM was forwarded to the construction team for construction. Each point consists in a 5x6 m UM rockfill pad.

4.0 SUMMARY OF CONSTRUCTION ACTIVITIES AND TEST RESULTS

Periodic QA inspections to monitor the construction activities and progress were performed by the QA Manager; these are summarized in the tables below. For the location and extent of the construction works, refer to the enclosed plans.

Table 2: QA Observations for the North Cell Internal Structure

Activity or Area	Comments
Crest	■ Placement of a 2 m thick (approx.) lift of UM rockfill from El. 152 m to El. 154 m (approx.) with a dozer from Sta. 1+863 m to 1+660 m (+14 m to -31 m). The material is of good quality and is well graded. The placement of UM rockfill on the structure is complete. ■ Construction of a UM rockfill ramp at the end of the lift at El. 154 m at Sta. 1+660 m with a loader. ■ Removal of excess UM rockfill left on the crest after profiling of the upstream slope. The material was pushed in the downstream slope.
Upstream	■ Compaction of the 0.5 m lift (approx.) of fine filter between El. 150 m and 152 m with a 10-tonne smooth-drum compactor with vibration (4 passes) in the upstream slope from Sta. 1+251 m to 1+100 m.

Activity or Area	Comments
	■ Profiling of the upstream slope (3H:1V) from El. 152 to 154 m with an excavator from Sta. 2+159 m to 1+660 m. ■ Placement of a 0.5 m thick lift of coarse filter in the upstream slope from El. 152 m to 154 m with an excavator from Sta. 2+293 m to 1+826 m. The material visually seemed well graded and of good quality. ■ Compaction of the 0.5 m lift (approx.) of coarse filter between El. 152 m and 154 m with a 10-tonne smooth-drum compactor with vibration (4 passes) in the upstream slope from Sta. 2+293 m to 1+826 m. ■ Placement of a 0.5 m thick lift of fine filter in the upstream slope from El. 152 m to 154 m with an excavator from Sta. 2+460 m to 1+830 m. The material visually seemed well graded and of good quality. ■ Compaction of the 0.5 m lift (approx.) of fine filter between El. 152 m and 154 m with a 10-tonne smooth-drum compactor with vibration (4 passes) in the upstream slope from Sta. 3+141 m to 1+830 m. ■ Construction of the deposition points (UM rockfill) at Sta. 2+220 m, 2+440 m, 2+610 m, 2+790 m, 1+985 m, 1+725 m and 1+455 m.
Downstream	■ Placement of UM rockfill to build an access ramp on the tailings downstream of the North Cell Internal Structure to provide access to the sumps area (eastern side of the structure). The rockfill was taken in the downstream slope of the dike and from the material removed from the upstream slope. ■ Construction of a UM rockfill access ramp on the tailings to excavate the ditch (western side of the structure). ■ Excavation of a 0.8 m (approx.) deep, 1 m wide shallow ditch in the rockfill capping and the tailings with an excavator from Sta. 1+650 m to 1+300 m. A culvert was installed at Sta. 1+460 m. ■ Excavation of a 1.5 m (approx.) sump in the tailings (north sump) with an excavator from Sta. 3+010 m to 3+030 m (o.s. +27 to +30 m). The bottom of the excavation was frozen. ■ Excavation of a 1.5 m (approx.) deep sump (south sump) in the tailings with an excavator from Sta. 3+345 m to 3+365 m (o.s. +24 to +32 m). The bottom of the excavation was frozen.

Activity or Area	Comments
	■ Profiling of the slopes of the two sumps with an excavator to approx. 2H:1V and placement of a 0.3 m thick (approx.) layer of till sieving reject material on the bottom and on the slopes of the sumps. The material visually seemed well graded and of good quality. ■ Corrections to the north sump: removal of approx. 0.5 m of tailing and till sieving reject material on the bottom of the excavation.

5.0 SAMPLING, LABORATORY AND FIELD TESTING

Table 3 and Table 4 present the samples collected or tested by the QA and QC.

Table 3: Samples Taken by the QC

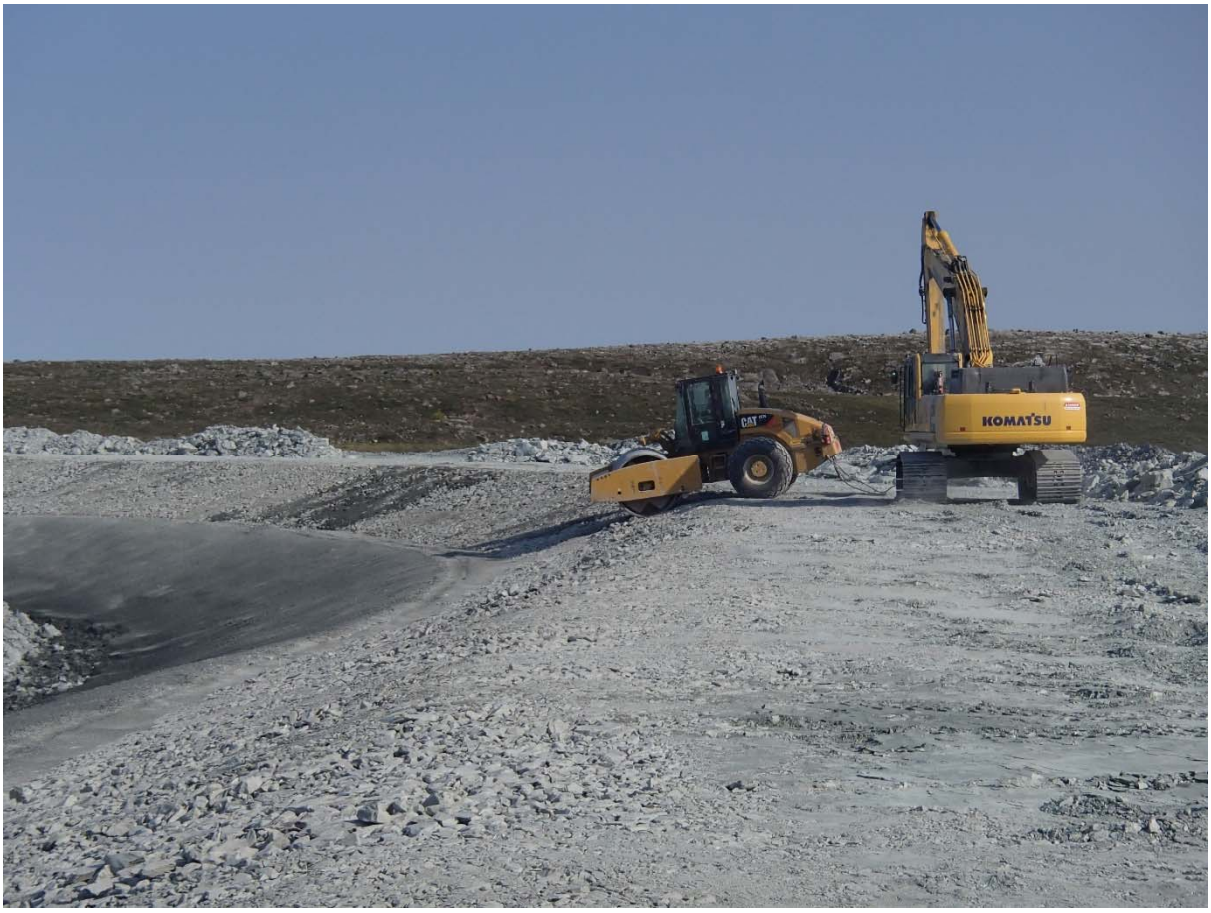
Sample ID	Date Sampled	Date Tested	Fill Material Type	Location (Station/Offset Elevation)	Test	Testing Result
FF-419-2018	2018-07-21	2018-07-23	Fine Filter	North cell Internal Structure (in place) 2+690/-13 m, El. 154 m	Gradation	Compliant
					Water content	2.9%
FF-421-2018	2018-07-24	2018-07-25	Fine Filter	North Cell Internal Structure (in place) Sta. 2+160/-25 m, El. 154 m	Gradation	Compliant
					Water content	2.66%
FF-422-2018	2018-07-25	2018-07-27	Fine Filter	North Cell Internal Structure (in place) Sta. 2+040/-19 m, El. 154 m	Gradation	Compliant
					Water content	2.93%

Sample ID	Date Sampled	Date Tested	Fill Material Type	Location (Station/Offset Elevation)	Test	Testing Result
FF-423-2018	2018-07-25		Fine Filter	North Cell Internal Structure (in place) Sta. 2+060/-19 m, El. 154 m	Gradation	Compliant
					Water content	1.90%

Table 4: Samples Taken by the QA

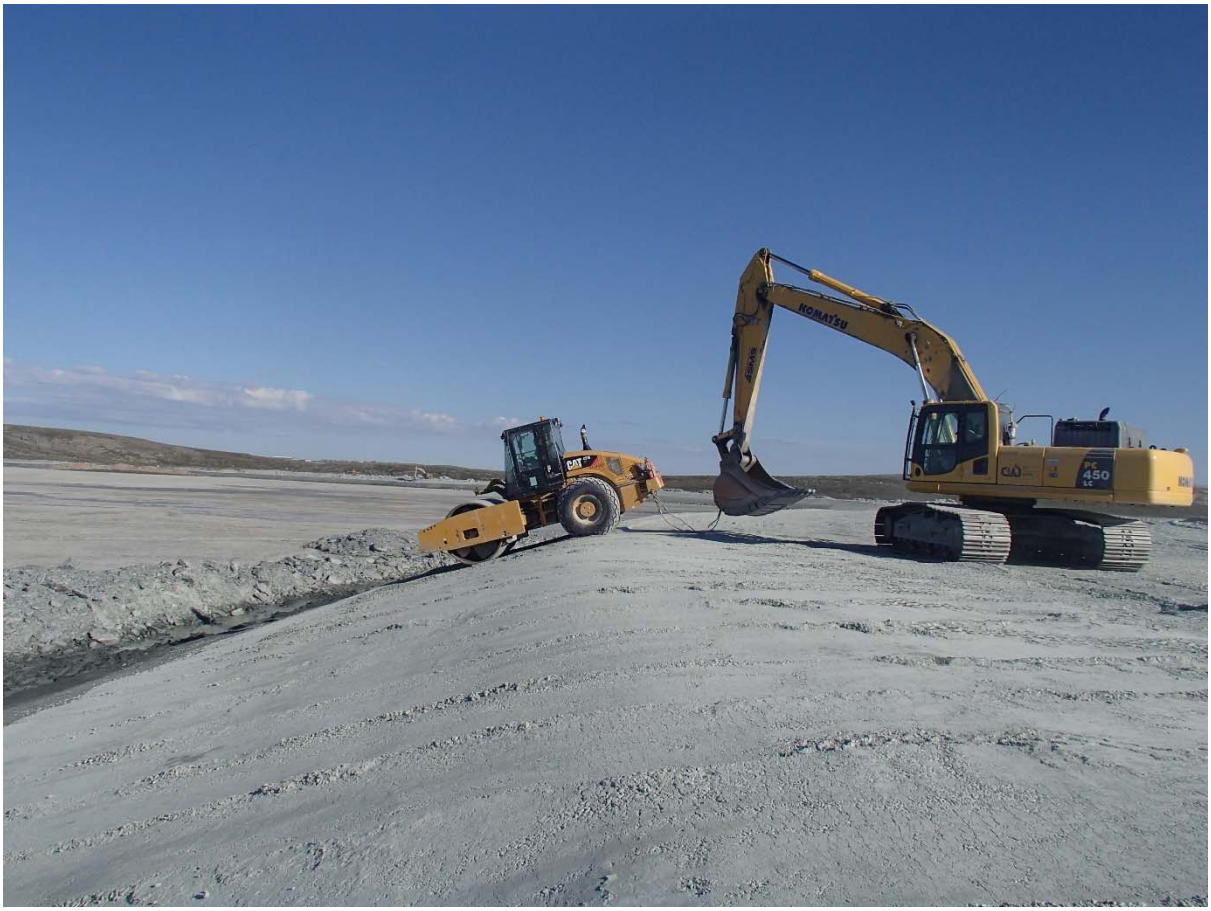
Sample ID	Date Sampled	Date Tested	Fill Material Type	Location (Station/Offset Elevation)	Test	Testing Result
FF-420-2018	2018-07-21	2018-07-23	Fine Filter	North cell Internal Structure (in place) 2+690/-13 m, El. 154 m	Gradation	Slightly too many large particles, but accepted provided the material is well-graded.
					Water content	3.35%

6.0 PHOTOGRAPHS

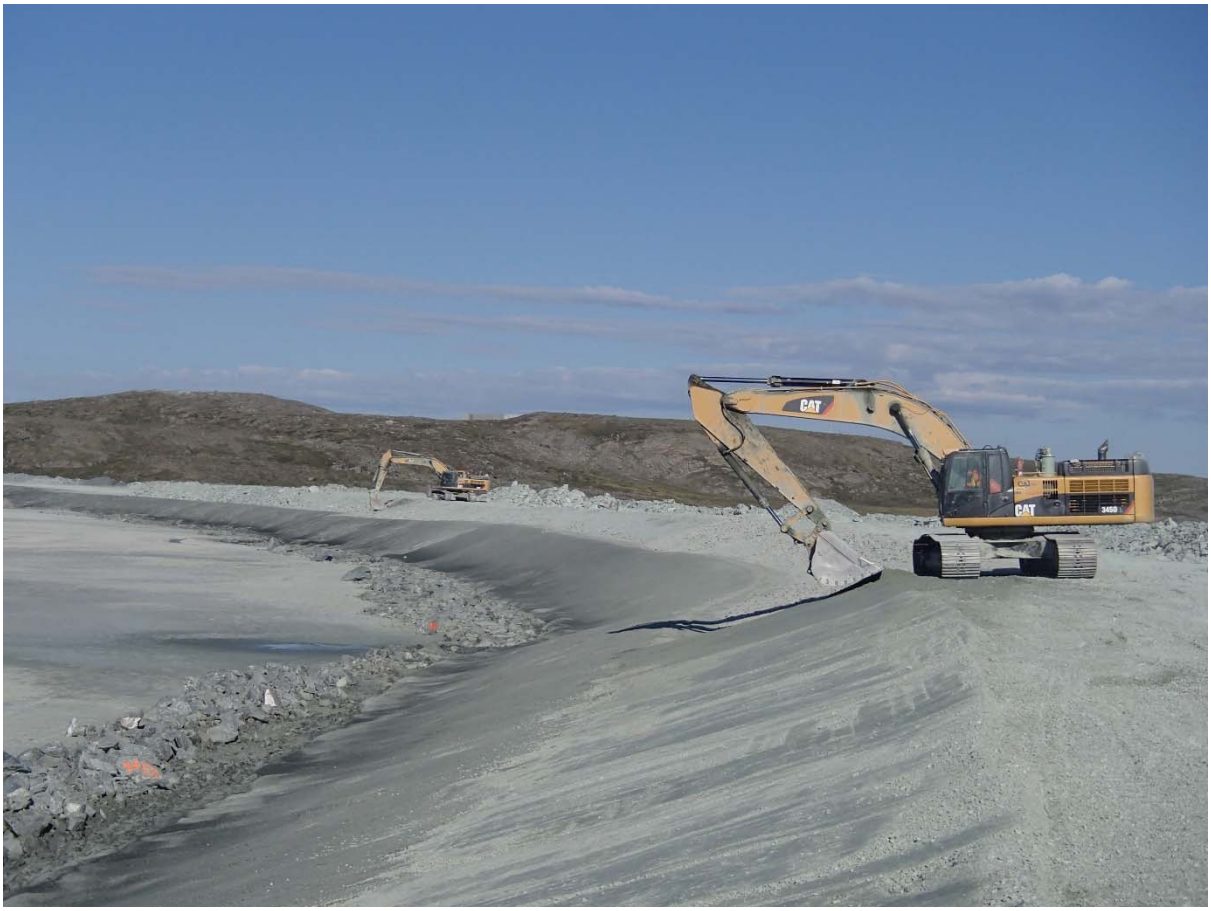


Photograph NCIS-110: From Sta. 2+320/-22 m (approx.), looking N. Compaction of the 0.5 m lift (approx.) of coarse filter between El. 152 m and 154 m with a 10-tonne smooth-drum compactor with vibration (4 passes) in the upstream slope from Sta. 2+293 m to 2+080 m.

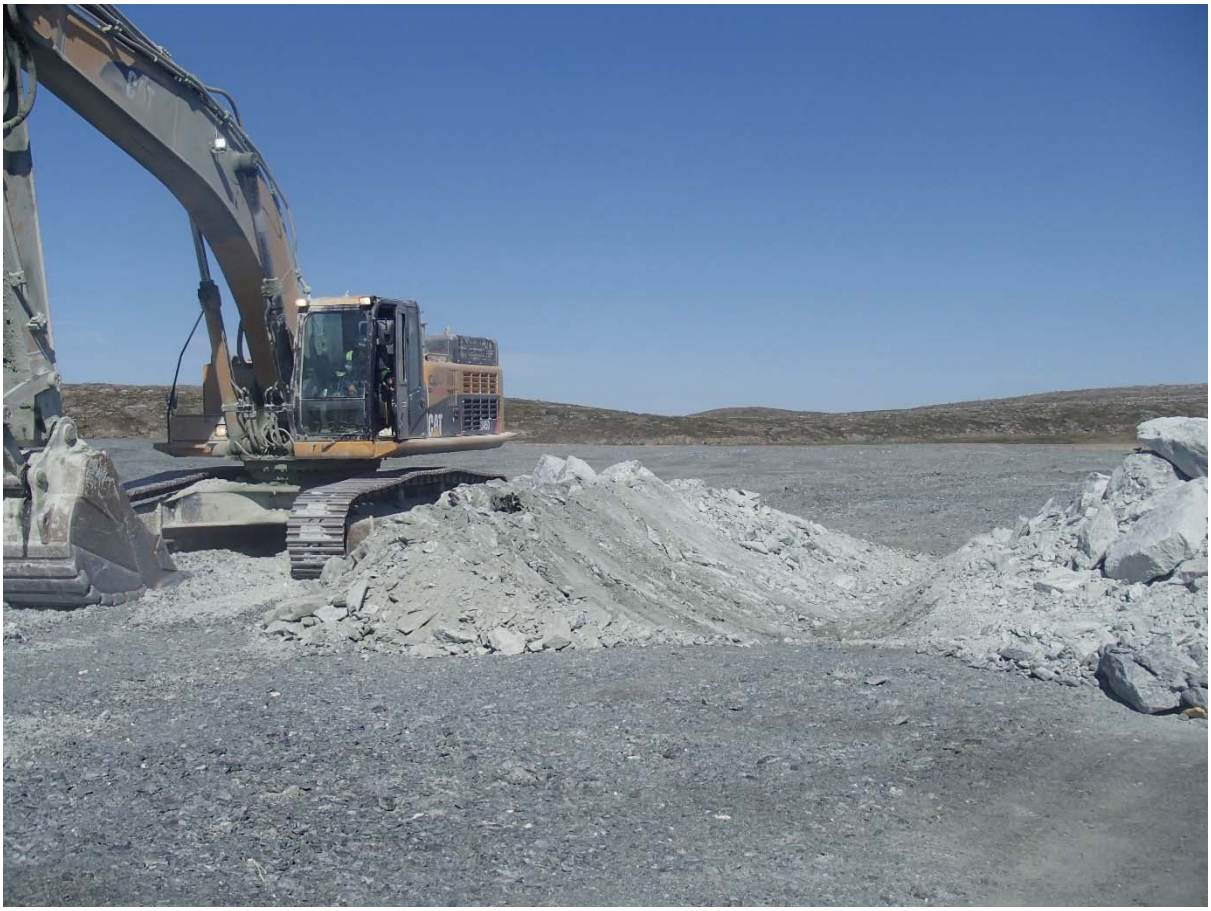
Photograph NCIS-111: From Sta. 2+320/-22 m (approx.), looking NW. Profiling of the upstream slope (3H:1V) from El. 152 to 154 m with an excavator from Sta. 2+159 m to 2+000 m and placement of a 0.5 m thick lift of coarse filter in the upstream slope from El. 152 m to 154 m with an excavator from Sta. 2+293 m to 2+080 m.



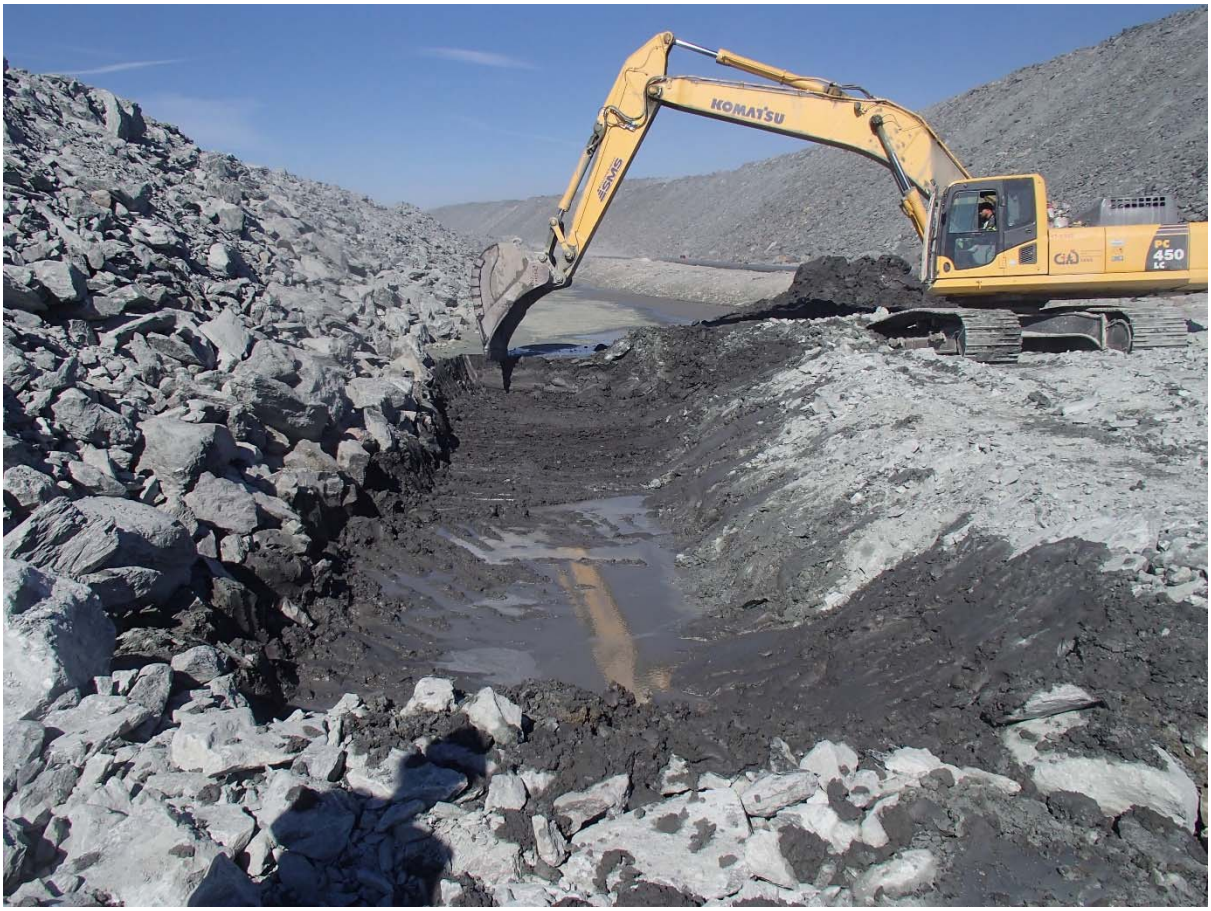
Photograph NCIS-112: From Sta. 2+610/-29 m (approx.), looking N. Compaction of the 0.5 m lift (approx.) of coarse filter between El. 152 m and 154 m with a 10-tonne smooth-drum compactor with vibration (4 passes) in the upstream slope from Sta. 2+080 m to 2+000 m.



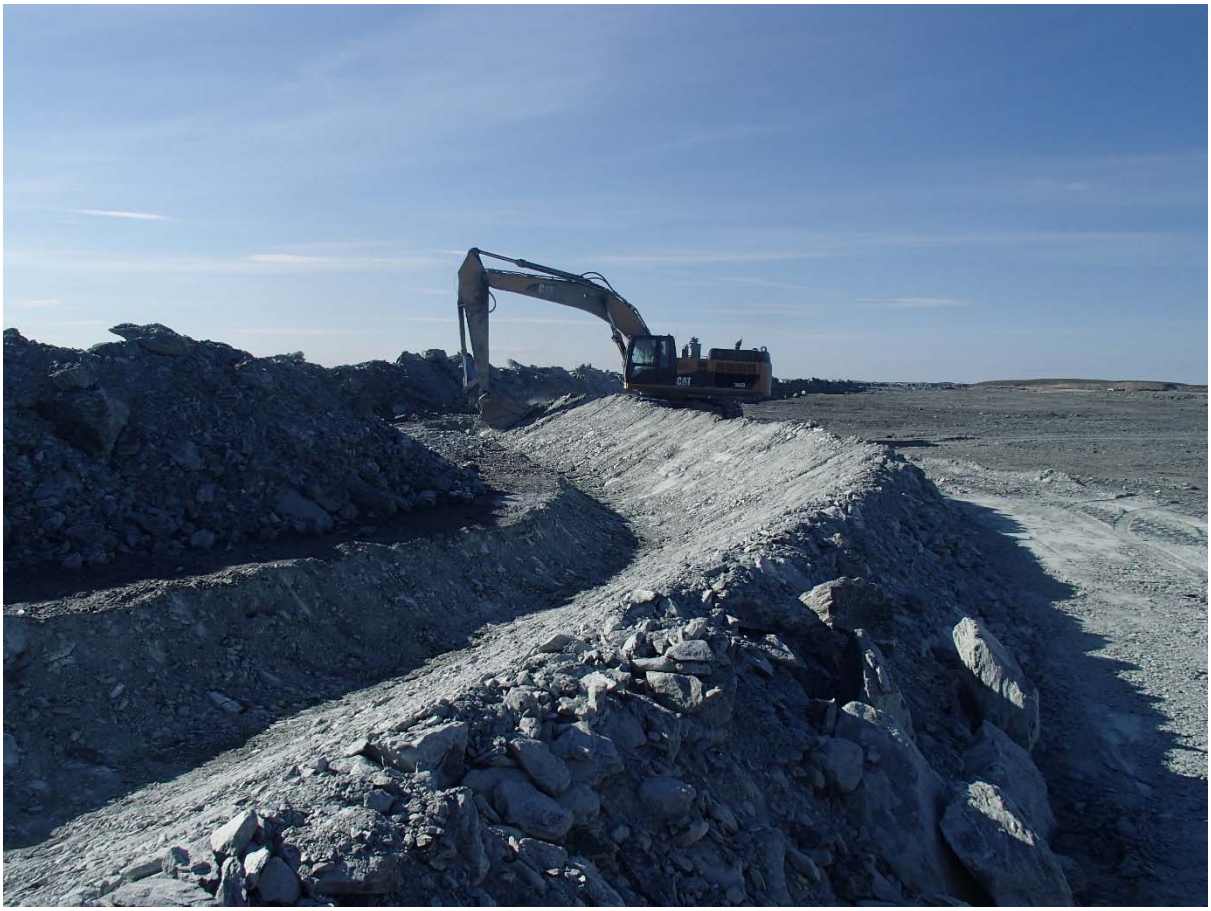
Photograph NCIS-113: From Sta. 2+220/-26 m (approx.), looking SW. Profiling of the upstream slope (3H:1V) from El. 152 to 154 m with an excavator from Sta. 2+000 m to 1+185 m and placement of a 0.5 m thick lift of fine filter in the upstream slope from El. 152 m to 154 m with an excavator from Sta. 2+300 m to 2+090 m.



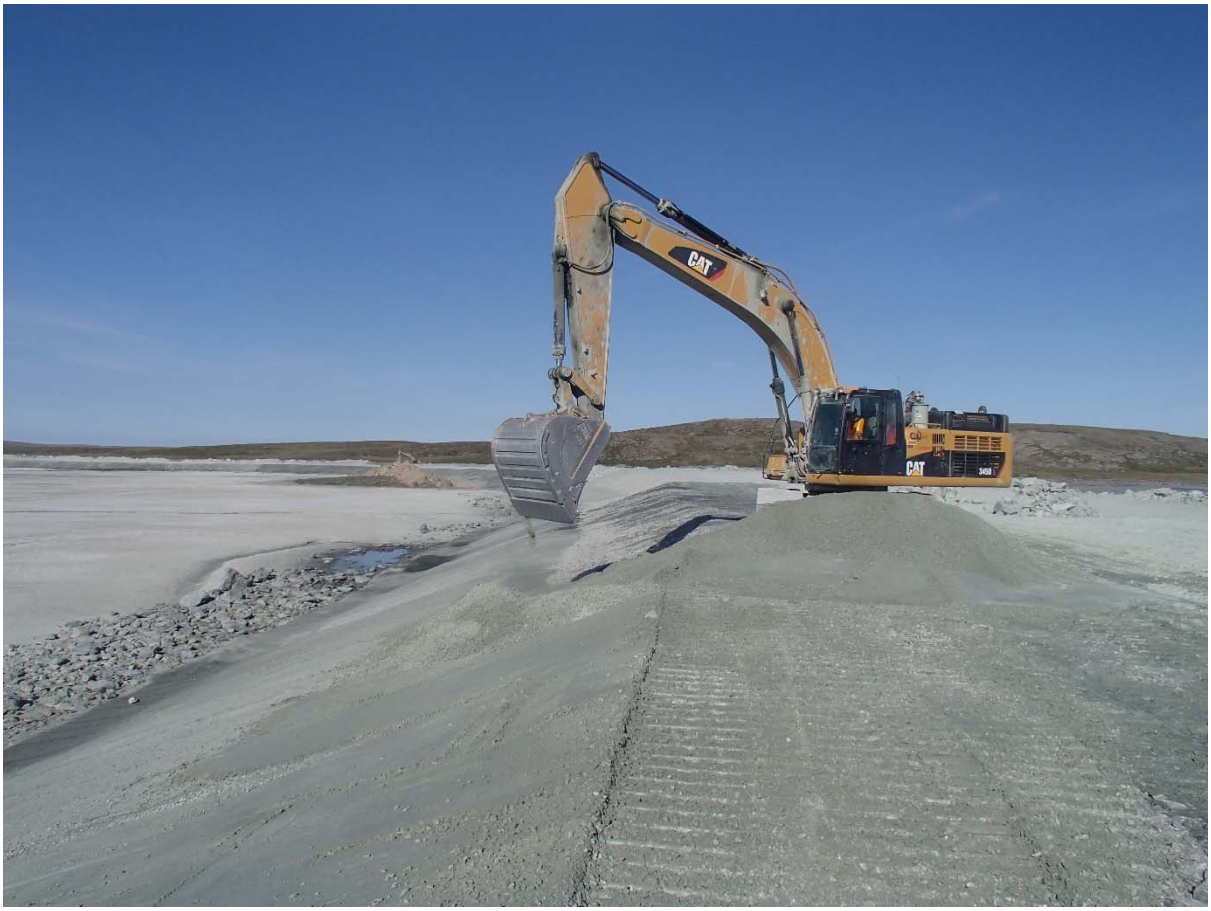
Photograph NCIS-114: From Sta. 1+700/-34 m (approx.), looking N. Excavation of a 0.8 m (approx.) deep, 1 m wide shallow ditch in the rockfill capping with an excavator from Sta. 1+500 m to 1+650 m.



Photograph NCIS-115: From Sta. 3+040/-33 m (approx.), looking NE. Excavation of a 1 m (approx.) sump in the tailings with an excavator from Sta. 3+010 m to 3+030 m (o.s. +27 to +30 m). The bottom of the excavation was frozen.

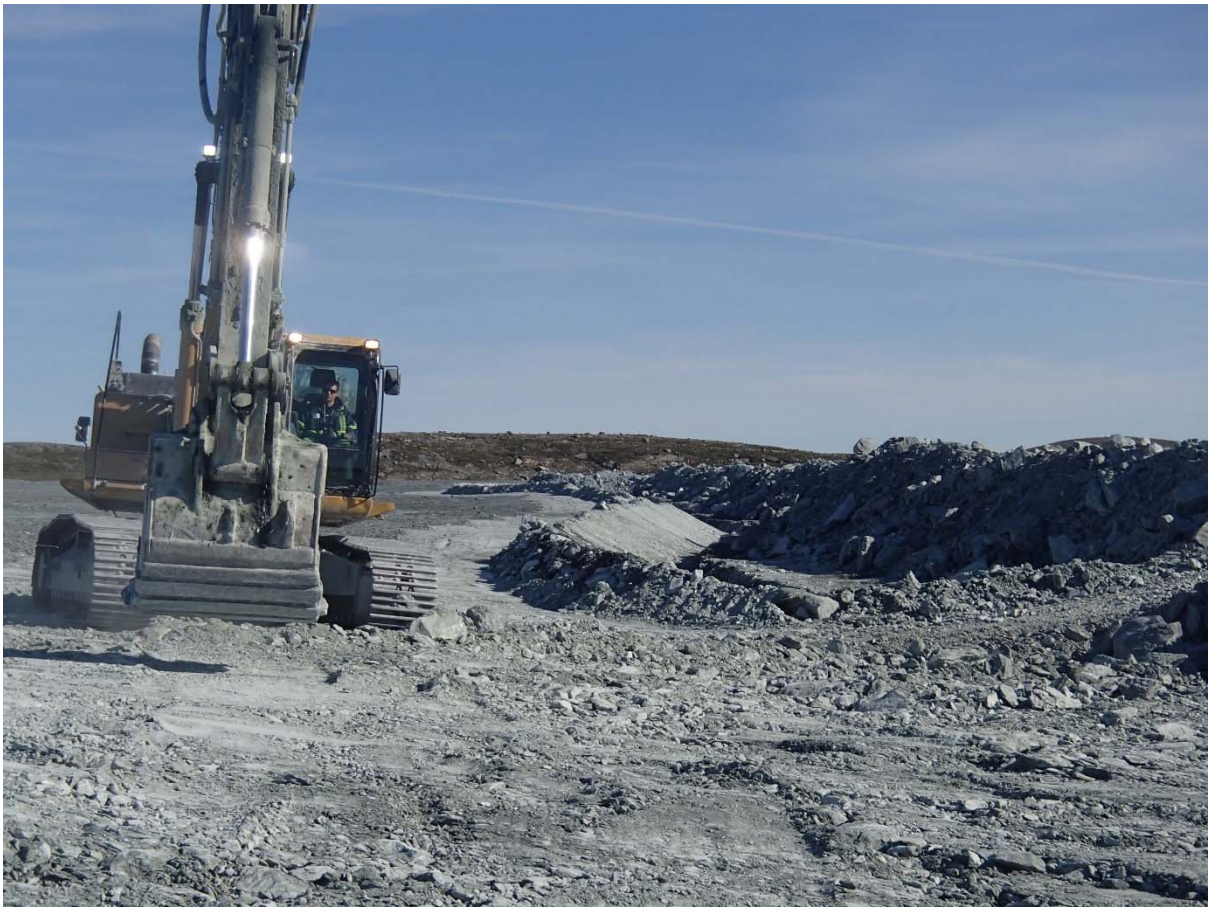


Photograph NCIS-116: From Sta. 1+700/+37 m (approx.), looking SE. Excavation of a 0.8 m (approx.) deep, 1 m wide shallow ditch in the rockfill capping with an excavator from Sta. 1+500 m to 1+455 m.

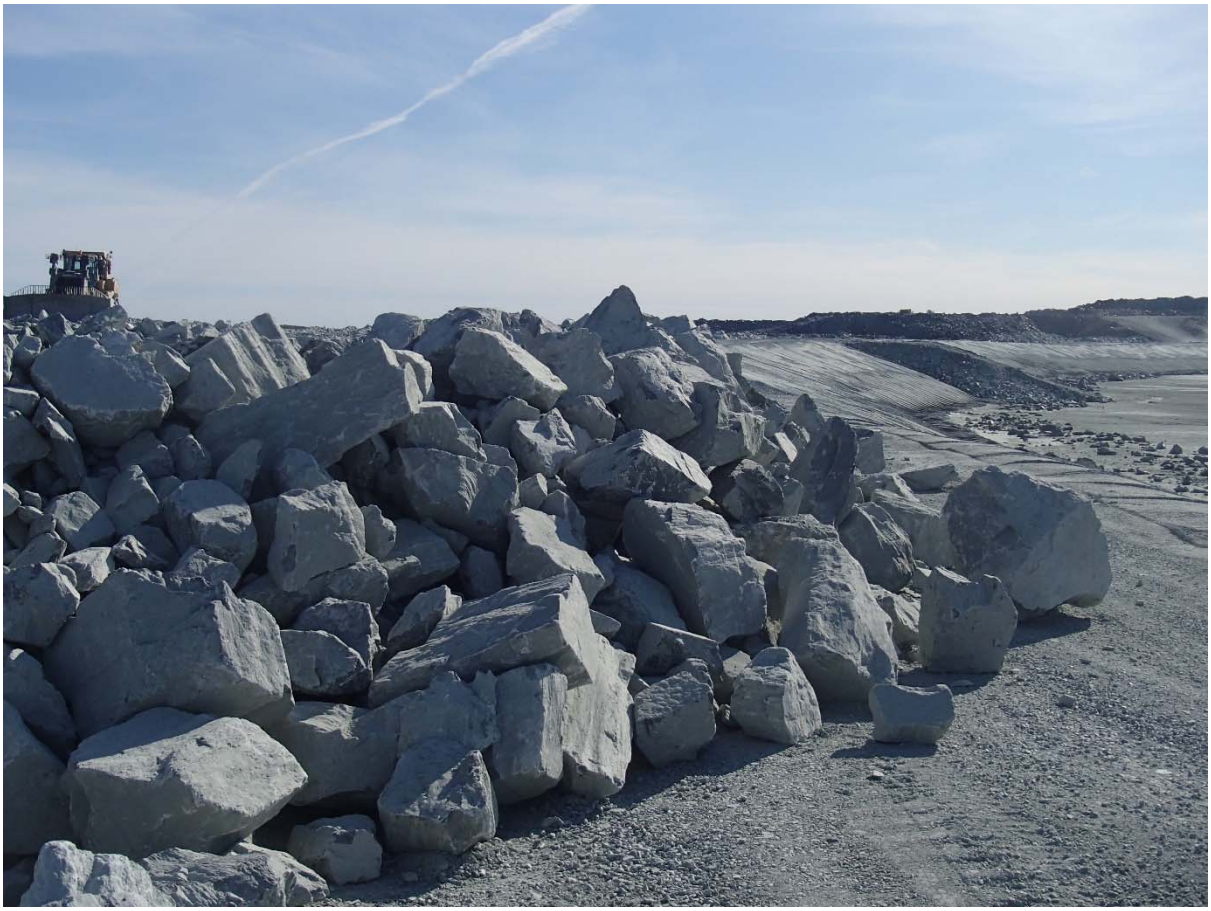


Photograph NCIS-117: From Sta. 2+050/-25 m (approx.), looking SW. Placement of a 0.5 m thick lift of fine filter in the upstream slope from El. 152 m to 154 m with an excavator from Sta. 2+090 m to 1+890 m.

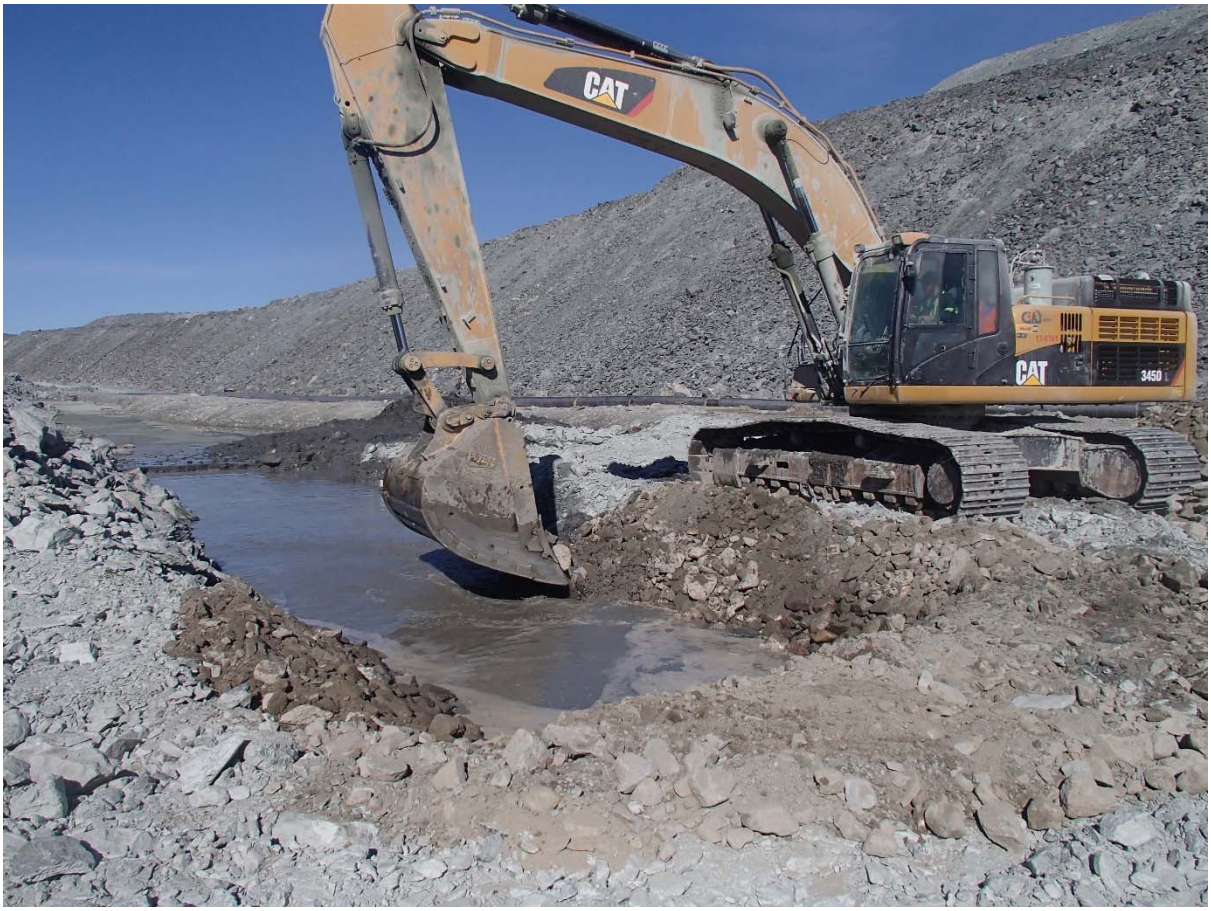
Photograph NCIS-118: From Sta. 1+500/-37 m (approx.), looking S. View of a deposition point.



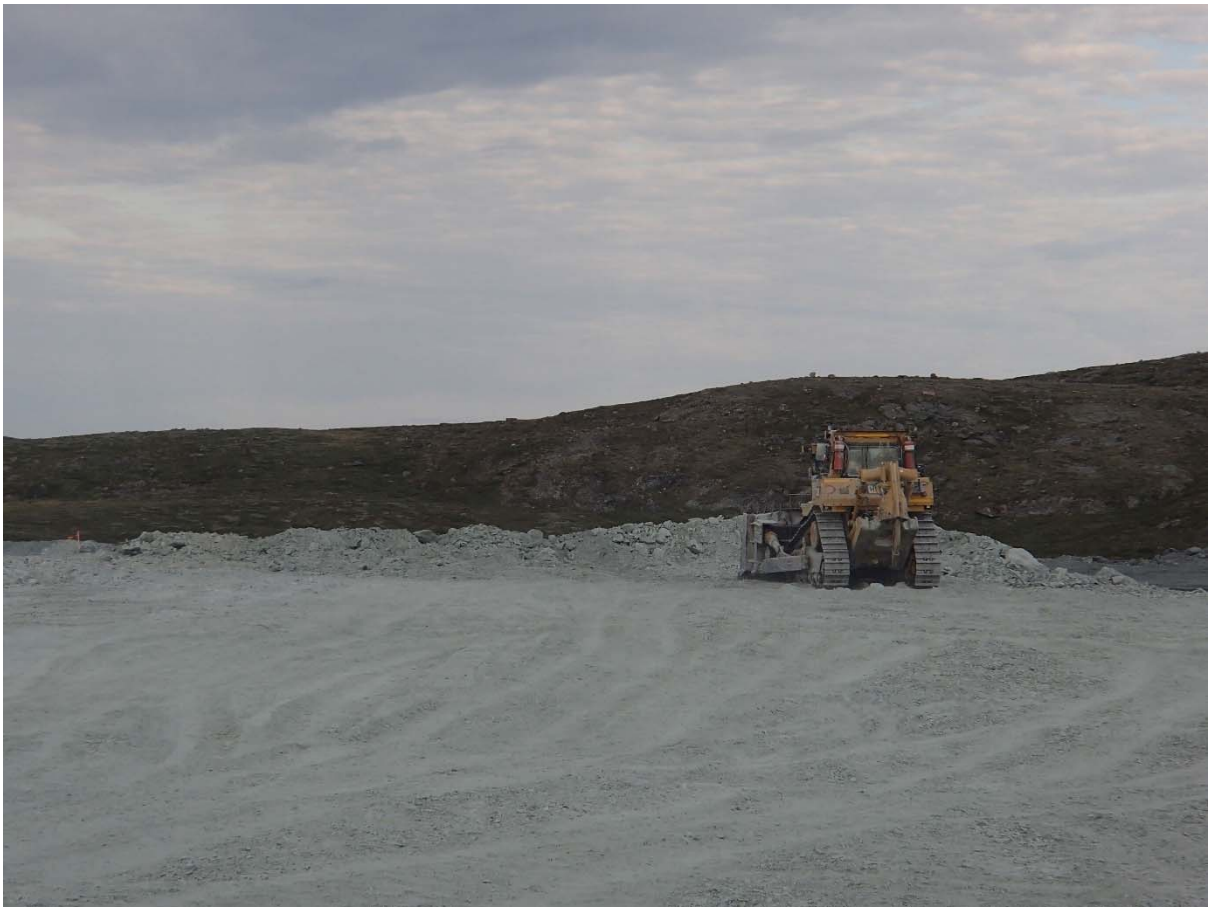
Photograph NCIS-119: From Sta. 1+430/-22 m (approx.), looking N. Excavation of a 0.8 m (approx.) deep, 1 m wide shallow ditch in the rockfill capping with an excavator from Sta. 1+455 m to 1+400 m.



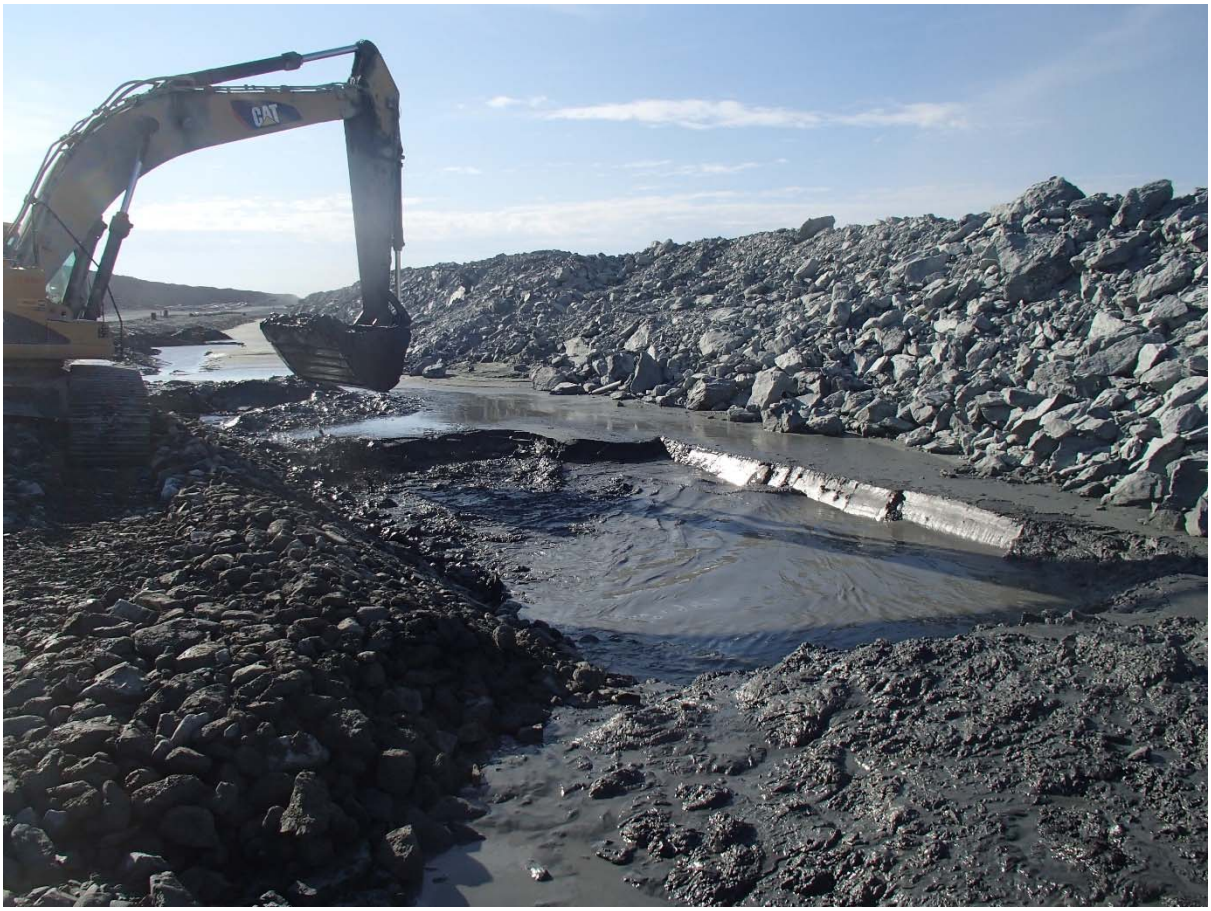
Photograph NCIS-120: From Sta. 1+830/-27 m (approx.), looking NE. View of an accumulation of boulders on the upstream slope of the NCIS.



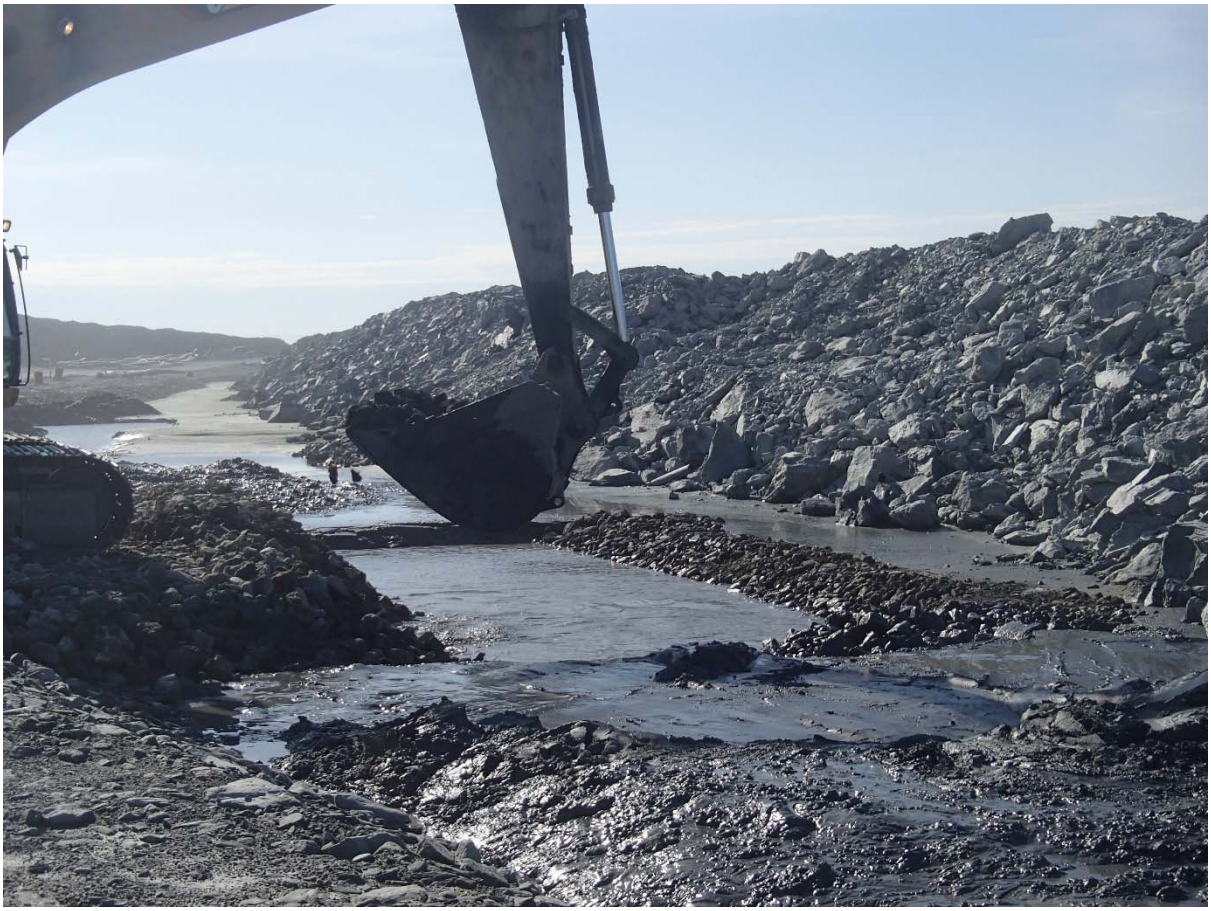
Photograph NCIS-121: From Sta.3+050/+26 m (approx.), looking NE. Placement of a 0.3 m thick (approx.) layer of till sieving reject material on the bottom and on the slopes of the sump.



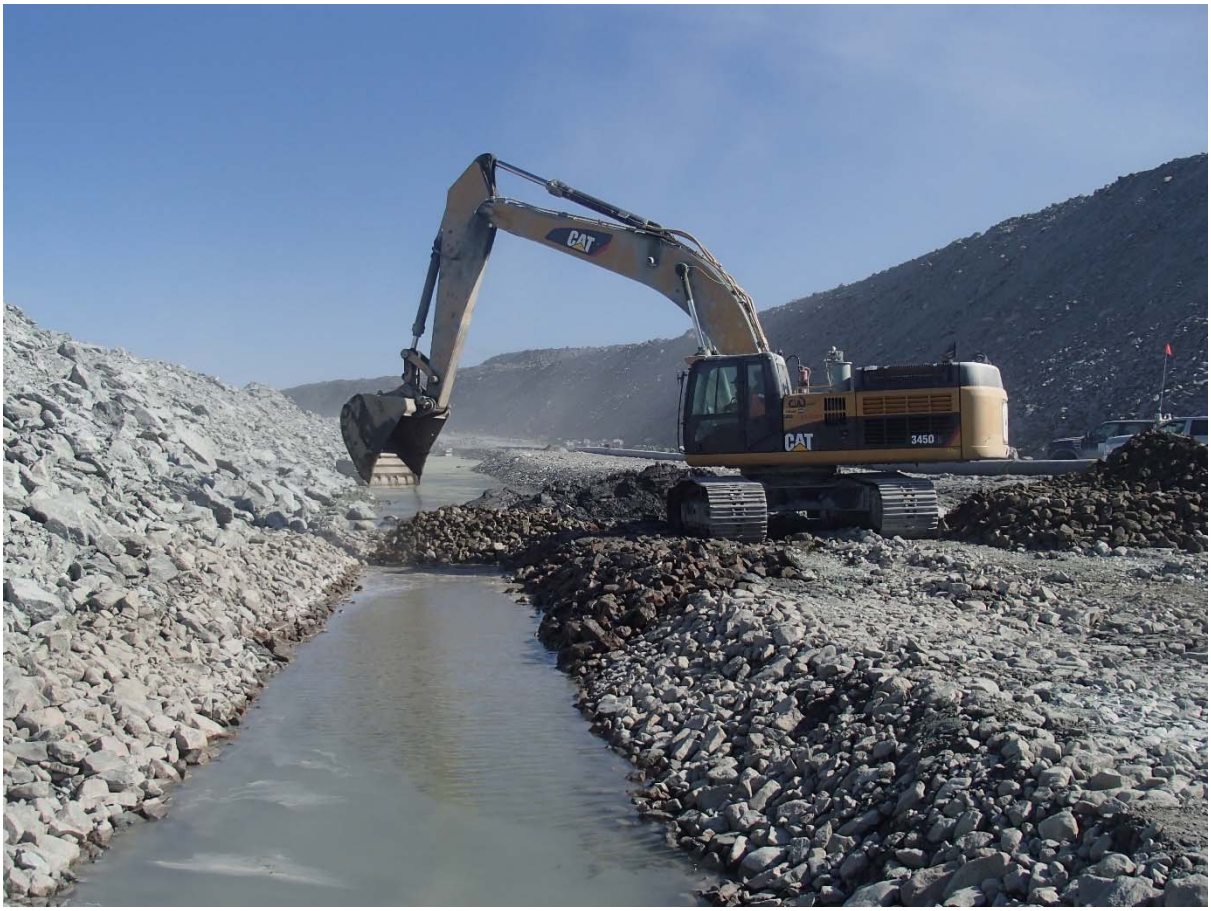
Photograph NCIS-122: From Sta. 1+960/-6 m (approx.), looking W. Placement of a 2 m thick (approx.) lift of UM rockfill from El. 152 m to El. 154 m (approx.) with a dozer from Sta. 1+830 m to 1+860 m (+8 m to -23 m).



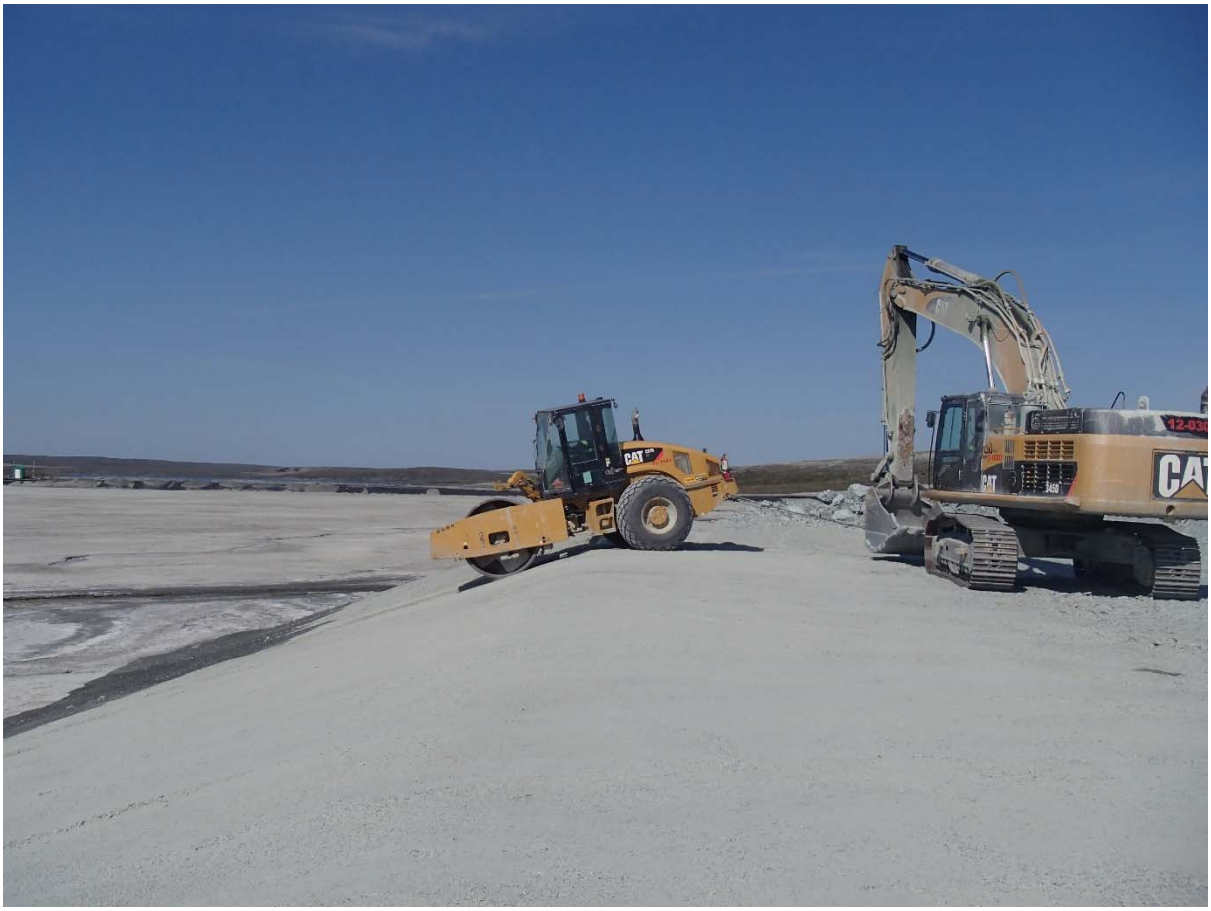
Photograph NCIS-123: From Sta. 3+340/+33 m (approx.), looking S. Excavation of a 1 m (approx.) deep sump (south sump) in the tailings with an excavator from Sta. 3+345 m to 3+365 m (o.s. +24 to +32 m). The bottom of the excavation was frozen.



Photograph NCIS-124: From Sta. 3+340/+33 m (approx.), looking S. Placement of a 0.3 m thick (approx.) layer of till sieving reject material on the bottom and on the slopes of the south sump.

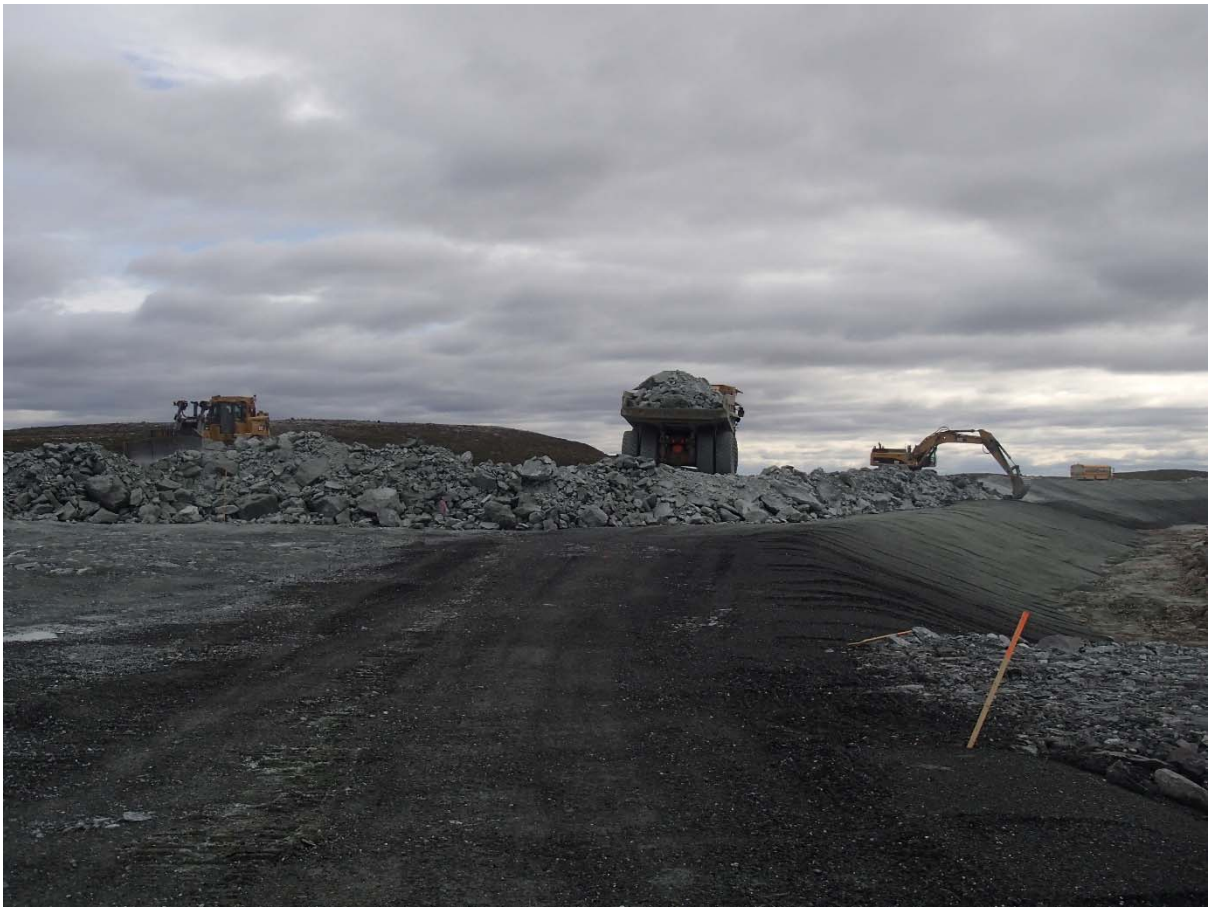


Photograph NCIS-125: From Sta. 3+050/+26 m (approx.), looking NE. Corrections to the north sump: removal of approx. 0.5 m of tailing and till sieving reject material on the bottom of the excavation. The erosion protection material was replaced.

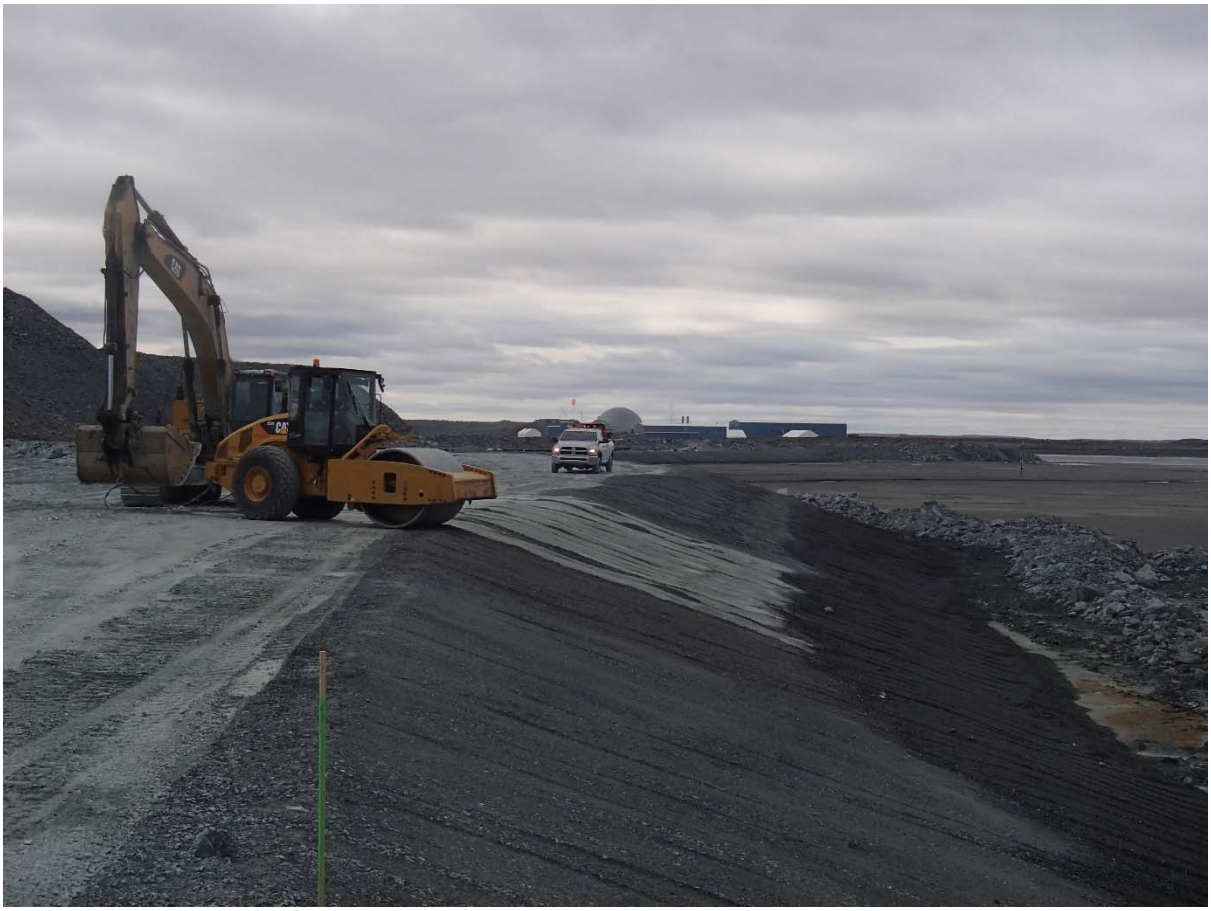


Photograph NCIS-126: From Sta. 1+140/-98 m (approx.), looking W. Compaction of the 0.5 m lift (approx.) of coarse filter between El. 150 m and 152 m with a 10-tonne smooth-drum compactor with vibration (4 passes) in the upstream slope from Sta. 1+240 m to 1+100 m.

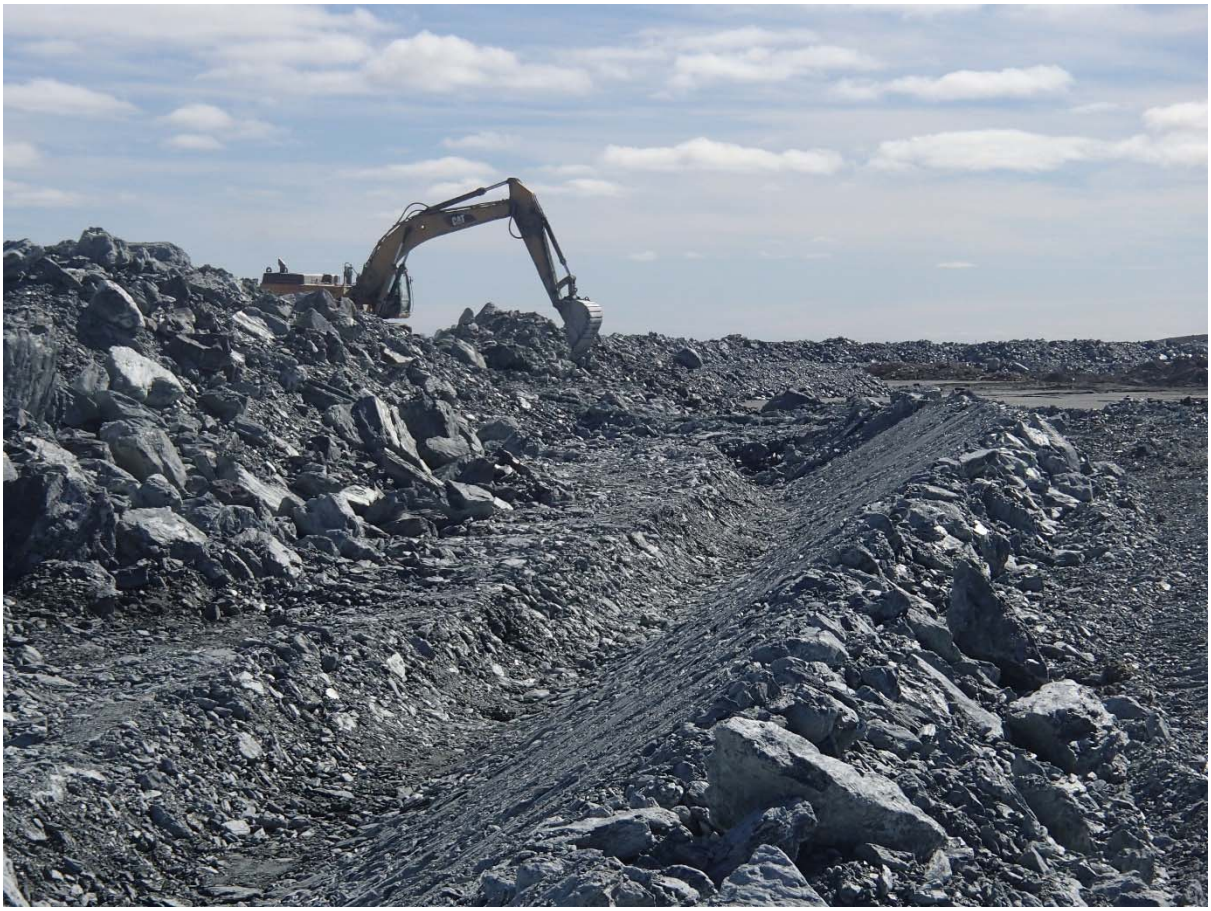
Photograph NCIS-127: From Sta. 1+470/+20 m (approx.), looking SW. View of the culvert installed in the ditch at Sta. 1+460 m.



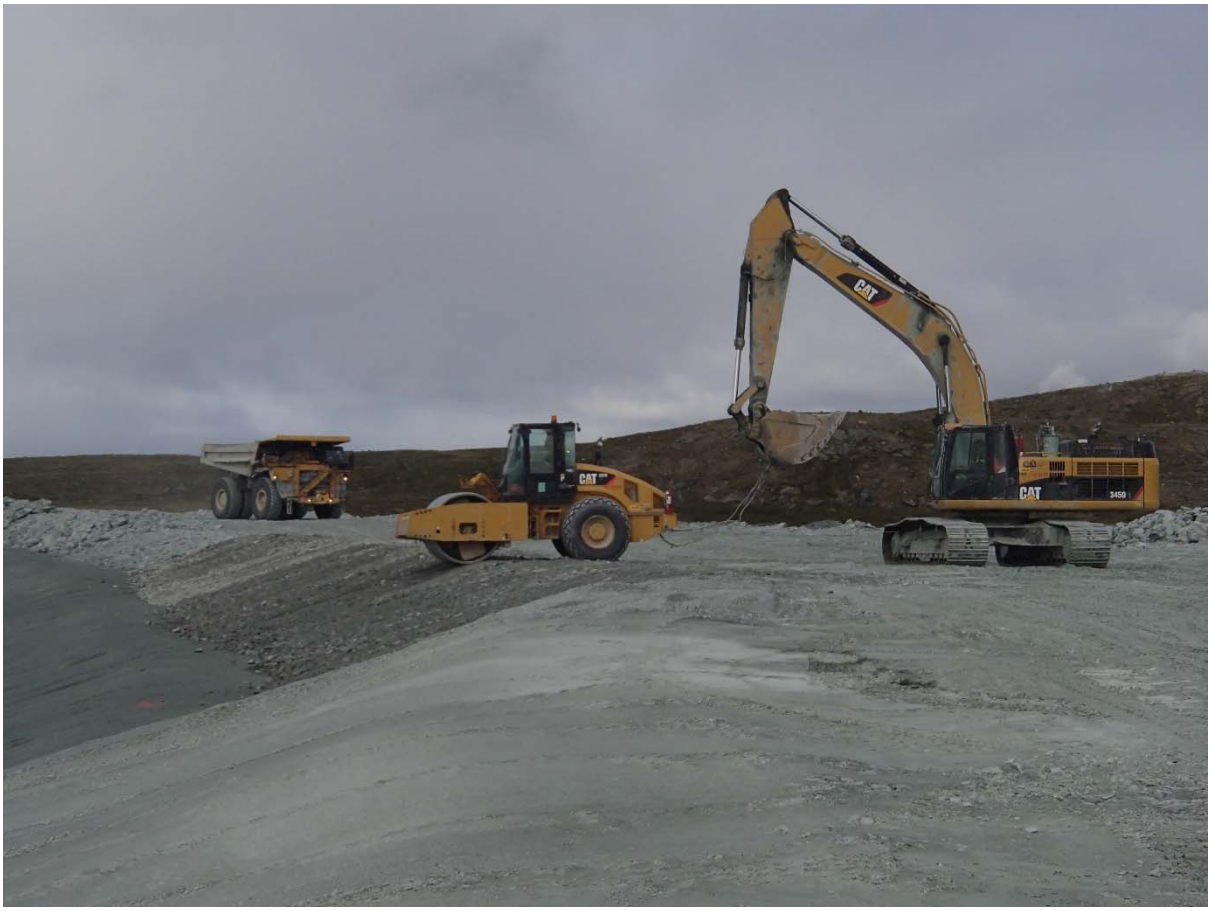
Photograph NCIS-128: From Sta. 1+680/-42 m (approx.), looking NE. Placement of a 2 m thick (approx.) lift of UM rockfill from El. 152 m to El. 154 m (approx.) with a dozer from Sta. 1+830 m to 1+660 m (+8 m to -31 m) and profiling of the upstream slope (3H:1V) from El. 152 to 154 m with an excavator from Sta. 1+880 m to 1+780 m.



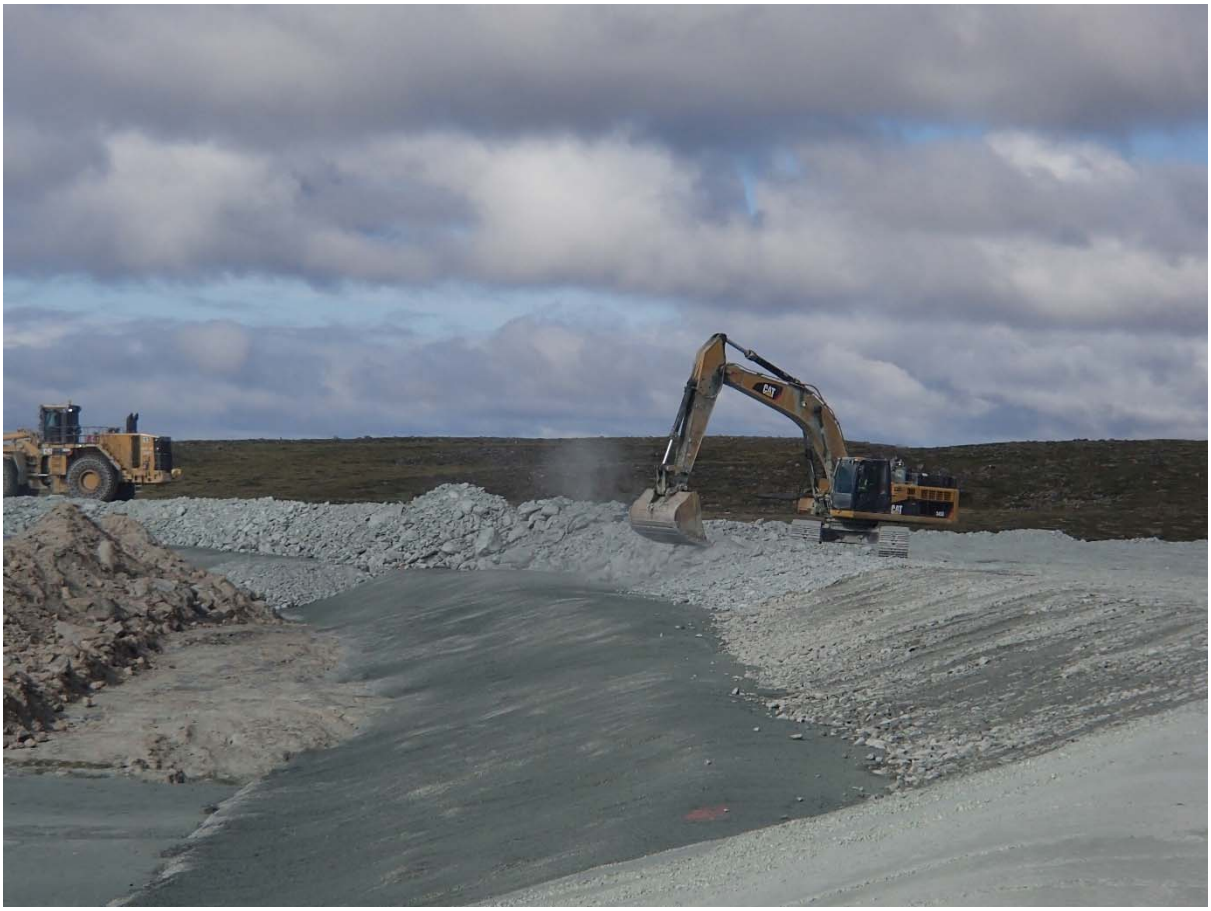
Photograph NCIS-129: From Sta. 2+450/-21 m (approx.), looking S. Compaction of the 0.5 m lift (approx.) of fine filter between El. 152 m and 154 m with a 10-tonne smooth-drum compactor with vibration (4 passes) in the upstream slope from Sta. 2+220 m to 1+940 m.



Photograph NCIS-130: From Sta. 1+446/+16 m (approx.), looking S. Excavation of a 0.8 m (approx.) deep, 1 m wide shallow ditch in the rockfill capping with an excavator from Sta. 1+380 m to 1+300 m.



Photograph NCIS-131: From Sta. 1+940/-20 m (approx.), looking W. Compaction of the 0.5 m lift (approx.) of coarse filter between El. 152 m and 154 m with a 10-tonne smooth-drum compactor with vibration (4 passes) in the upstream slope from Sta. 1+890 m to 1+826 m.



Photograph NCIS-132: From Sta. 1+940/-20 m (approx.), looking W. Profiling of the upstream slope (3H:1V) from El. 152 to 154 m with an excavator from Sta. 1+780 m to 1+660 m.

Photograph NCIS-133: From Sta. 1+820/-28 m (approx.), looking W. Placement of a 0.5 m thick lift of coarse filter in the upstream slope from El. 152 m to 154 m with an excavator from Sta. 1+890 m to 1+826 m.

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https://golderassociates.sharepoint.com/sites/1897439/preparation of deliverables/weekly reports/2018-07-23 to 2018-07-29/1897439-1577-tm-rev0 qa weekly report north cell 2018-07-23 to 2018-07-29.docx

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QA WEEKLY REPORT

DATE August 6th 2018 1897439-1577-TM-Rev0

TO Patrice Gagnon, Pier-Éric McDonald
Agnico Eagle Mines Ltd, Meadowbank Division

CC Frédérick Bolduc, Alexandre Lavallée

FROM Marion Habersetzer **EMAIL mhabersetzer@golder.com**

QA WEEKLY REPORT FROM JULY 30TH TO AUGUST 2ND– TSF NORTH CELL CONSTRUCTION MEADOWBANK (1897439)

This document summarizes QA activities performed by Golder from July 30th to August 2nd, 2018 inclusively, related to the construction activities of the North Cell Internal Structure at the Meadowbank mine site.

Unless otherwise specified, the construction activities use the centreline of the structures for a dike crest elevation of 152 m for reference (refer to the Drawings). The description of activities refers to the stations and offsets from the centreline (e.g., Sta. 0+500/-50 m). The "+" and "-" symbols indicate the location of the work downstream and upstream of the centreline, respectively.

1.0 GOLDER PERSONNEL ON SITE

Golder personnel on site during this reporting period is summarized in Table 1.

Table 1: Golder Personnel on Site

Name	Comments
Marion Habersetzer	QA Manager (departure on August 2nd)

2.0 HEALTH AND SAFETY

Health and safety meetings were held with AEM and FGL/SANA during the daily construction meetings. Minutes from these meetings are recorded and stored in Golder's on-site office. The key health and safety elements for the reporting period were as follows:

- The rain is an issue; the muddy and very slippery ground causes a high risk of slips and falls. Extra caution must be applied when walking or driving on wet surfaces.
- Coactivity on the dike: be aware of blind spots and safe spots, maintain good communication and visual contact with the operators.
- On July 28th, a haul truck hit a pick-up truck parked in its blind spot. It was reiterated to always perform a walkaround inspection of the vehicle before starting the work shift, or resuming work after lunch.
- Dust is an issue on the construction field; be vigilant by staying out of the dust cloud near construction activities and road circulation.

3.0 SUMMARY OF MAIN DISCUSSIONS IN CONSTRUCTION MEETINGS

Construction meetings were held daily during the reporting period and were attended by the QA Manager. The following items were discussed:

General

- The QA Manager reiterated that filter materials must be placed with the excavator in the upstream slope in a way to limit segregation as much as possible.
- Teranap liner panels were installed on the deposition points.
- The QA and QC personnel left the site on August 2nd. Only minor fine filter compaction works and corrections to the south sump remained to be done and should be completed on that day.

4.0 SUMMARY OF CONSTRUCTION ACTIVITIES AND TEST RESULTS

Periodic QA inspections to monitor the construction activities and progress were performed by the QA Manager; these are summarized in the tables below. For the location and extent of the construction works, refer to the enclosed plans.

Table 2: QA Observations for the North Cell Internal Structure

Activity or Area	Comments
Upstream	■ Completion of the profiling of the upstream slope (3H:1V) from El. 152 to 154 m with an excavator from Sta. 1+740 m to 1+640 m. ■ Placement of a 0.5 m thick lift of coarse filter in the upstream slope from El. 152 m to 154 m with an excavator from Sta. 1+826 m to 1+660 m. The material visually seemed well graded and of good quality.

Activity or Area	Comments
	■ Compaction of the 0.5 m lift (approx.) of coarse filter between El. 152 m and 154 m with a 10-tonne smooth-drum compactor with vibration (4 passes) in the upstream slope from Sta. 1+826 m to 1+660 m. ■ Placement of a 0.5 m thick lift of fine filter in the upstream slope from El. 152 m to 154 m with an excavator from Sta. 1+830 m to 1+660 m. The material visually seemed well graded and of good quality.
Downstream	■ Construction of a UM rockfill access ramp on the tailings to excavate the ditch. ■ Excavation of a 0.8 m (approx.) deep, 1 m wide shallow ditch in the tailings with an excavator from Sta. 1+300 m to 1+100 m. ■ Placement of a 0.3 m thick (approx.) layer of till sieving reject material on the bottom and on the slopes of the ditch with an excavator from Sta. 1+300 m to 1+000 m. The material visually seemed well graded and of good quality.

5.0 SAMPLING, LABORATORY AND FIELD TESTING

Table 3 and Table 4 present the samples collected or tested by the QA and QC.

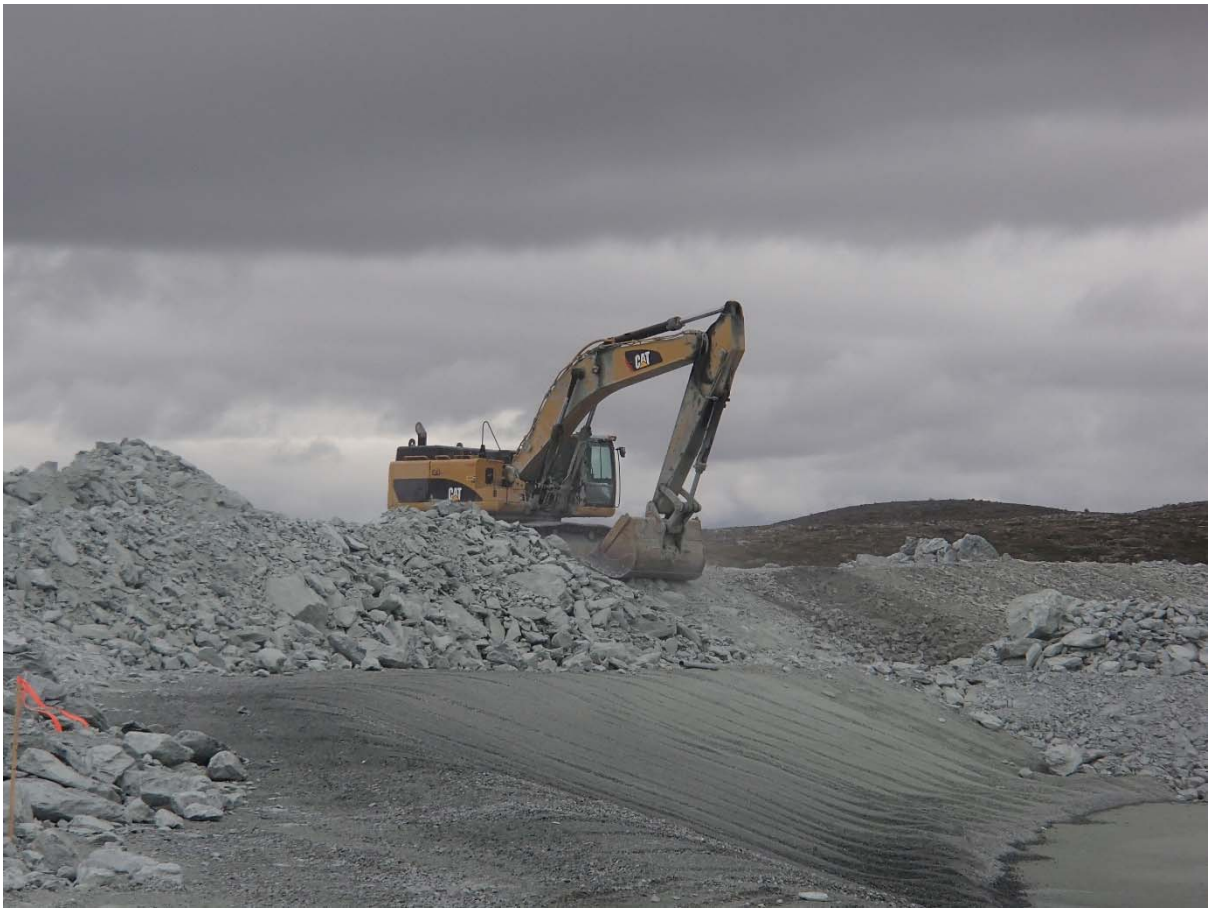
Table 3: Samples Taken by the QC

Sample ID	Date Sampled	Date Tested	Fill Material Type	Location (Station/Offset Elevation)	Test	Testing Result
FF-424-2018	2018-07-30	2018-07-01	Fine Filter	North Cell Internal Structure (in place) Sta. 1+820/-22, El. 154 m	Gradation	Slightly too much fines, but still acceptable
					Water content	2.83%

Table 4: Samples Taken by the QA

Sample ID	Date Sampled	Date Tested	Fill Material Type	Location (Station/Offset Elevation)	Test	Testing Result

6.0 PHOTOGRAPHS



Photograph NCIS-134: From Sta. 1+630/-32 m (approx.), looking NE. Completion of the profiling of the upstream slope (3H:1V) from El. 152 to 154 m with an excavator from Sta. 1+700 m to 1+660 m.