

**APPENDIX C**

# Construction Photographs



**2001: (2021-02-20), looking NE from Sta. 0+100. CAT dozer removing snow within footprint of upstream shell at Dyke D1.**



**2002: (2021-02-20), looking N from Sta. 0+160. CAT dozer continuing to remove snow and organics within footprint of downstream shell at Dyke D1.**



**2003: (2021-02-21), looking NE from west dyke access. CAT grader improving road access along west abutment of IVR Dyke.**



**2004: (2021-02-21), looking E from Sta. 0+160. Additional snow and ice removed within footprint of downstream shell for road access.**



**2005: (2021-02-21), North Esker stockpile located within the WSRF, view looking S. Large amounts of snow and ice were observed over Zone 4 material.**



**2006: (2021-02-22), Tetra Tech QC sampling Zone 2A filter material from southern face of existing stockpile.**





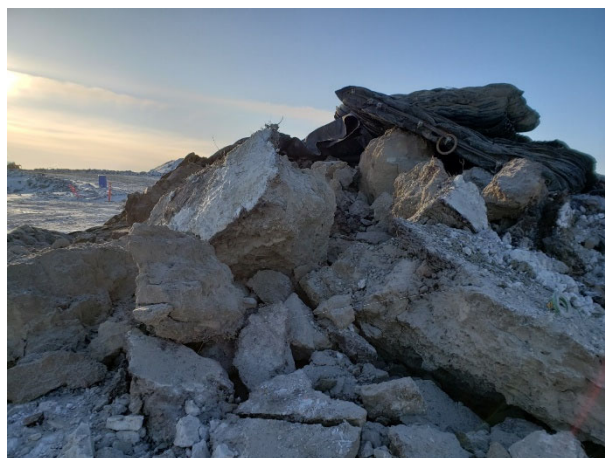
2007: (2021-02-22), looking E from Sta. 0+060. Surveyor laying out drill pattern in preparation for drilling activities scheduled for tomorrow.



2008: (2021-02-23), looking W from Sta. 0+120. KCG drilling holes through overburden in advance of blasting for key trench at the IVR Dyke.



2010: (2021-02-24), looking E from Zone 3 stockpile at WSRF. KCG loader creating test pad for Zone 3 material.



2011: (2021-02-24), looking W from Sta. 0+130. Overburden exposed from this afternoon's blast, no visible ice lenses observed.



2012: (2021-02-24), looking S from Sta. 0+135. KCG continuing to drill holes for second blast.



2013: (2021-02-25), looking E from Sta. 0+115. Key trench excavation from first blast between Sta. 0+117 and Sta. 0+129.





2015: (2021-02-26), looking SE from Sta. 0+130. CAT excavator placing blast mats over geotextile in preparation for second blast schedule for tomorrow.



2016: (2021-02-26), looking E from Sta. 0+140. KCG drilling holes for third key trench blast.



2017: (2021-02-27), looking NE from Sta. 0+150. KCG drilling remaining for third key trench blast.



2018: (2021-02-27), looking E from Sta. 0+140. CAT excavator working to remove blast mats over second key trench blast between Sta. 0+129 and Sta. 0+149.



2019: (2021-02-28), looking W from Sta. 0+150. Status of excavation from second cut for key trench excavation.



2020: (2021-02-28), looking E from Sta. 0+150. Holes drilled in advance of third blast for key trench construction.





**2021: (2021-03-01), looking NE from Sta. 0+120. KCG excavating blasted overburden material from second blast for key trench.**



**2022: (2021-03-01), looking W from Sta. 0+170. Dyno loading drill pattern for third key trench blast.**



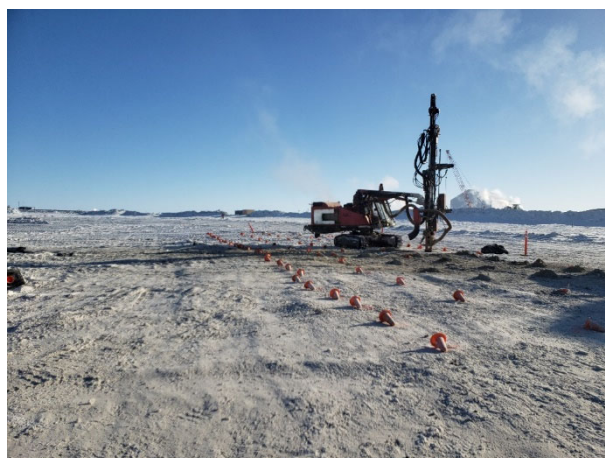
**2023: (2021-03-01), looking E from Sta. 0+125. Blast mats installed over drill pattern in preparation for third key trench blast.**



**2024: (2021-03-02), looking E from Sta. 0+160. KCG continuing to drill holes for fourth key trench blast.**



**2025: (2021-03-02), looking E from Sta. 0+0+145. CAT excavator removing blast mats at the IVR Dyke.**



**2026: (2021-03-03), looking E from Sta. 0+200. KCG continuing to drill holes for key trench blast.**





2027: (2021-03-03), looking N from Sta. 0+230. KCG continuing to drill holes for fifth key trench cut.



2028: (2021-03-03), looking N at Zone 2A stockpile. Test pad for fine filter Zone 2A material.



2029: (2021-03-04), looking W from Sta. 0+0+160. Key trench excavation prepared between Sta. 0+130 and Sta. 0+160.



2030: (2021-03-04), looking E from Sta. 0+140. KCG starting to place first 250 mm lift of Zone 2B FFAB material along floor of key trench.



2031: (2021-03-04), looking N at mixing station. KCG producing Zone 2 B FFAB material at the mixing pad.



2032: (2021-03-04), looking SE from Sta. 0+0+185. CAT excavator removing blast mats at the IVR Dyke.

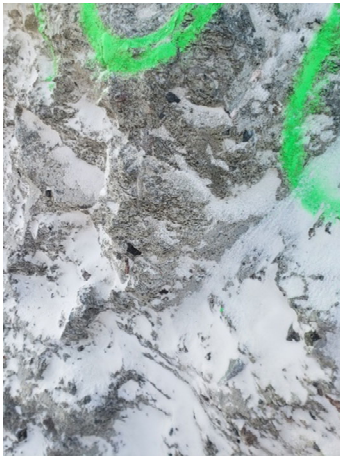




**2033: (2021-03-04), looking N from Sta. 0+140. Upstream side wall of key trench excavation: small ice lenses (1-4 mm) observed.**



**2034: (2021-03-04), looking S from Sta. 0+145. Downstream side wall of key trench excavation: small ice lenses (1-2 mm) observed.**



**2035: (2021-03-04), looking E from Sta. 0+155. Downstream side wall of key trench excavation small ice lenses (1-2 mm) observed throughout till overburden.**



**2036: (2021-03-05), looking E from Sta. 0+130. CAT excavator placing Zone 2B FFAB material within footprint of key trench.**



**2037: (2021-03-05), looking S from Sta. 0+190. KCG labourers preparing foundation of key trench.**



**2038: (2021-03-05), looking SW from Sta. 0+170. Orange stars highlight a 100-150 mm thick lens of fine-grained ice rich material along downstream sidewall of excavation.**





**2039: (2021-03-05), looking SE from Sta. 0+150. KCG compacting first placed lift of FFAB material.**



**2040: (2021-03-05), looking E from Sta. 0+220. CAT excavator placing blast mats for fifth key trench blast.**



**2041: (2021-03-05), looking W from Sta. 0+190. KCG compacting second placed lift of FFAB material.**



**2042: (2021-03-07), looking E from Sta. 0+130. CAT excavator removing snow from yesterday's blizzard.**



**2043: (2021-03-07), looking E from Sta. 0+275. CAT excavator removing snow along tie in between sequence 6 and 7 in advance of drilling.**



**2044: (2021-03-07), looking NW from Sta. 0+140. Smooth drum roller compacting placed lift of Zone 2B FFAB material.**





2045: (2021-03-07), looking NE from Sta. 0+130. KCG labourer removing snow along trench excavation side walls in advance of Zone 2B FFAB placement.



2046: (2021-03-07), looking W from Sta. 0+145. CAT excavator placing 250 mm lift of Zone 2B FFAB material.



2047: (2021-03-08), looking E from Sta. 0+130. Zone 2B FFAB material placed to approx. elev. 160.0 m (2.5 m below existing ground). Area approved for placement of fine filter.



2048: (2021-03-08), looking NE from Sta. 0+170. Additional snow to be removed along upstream excavation wall in advance of Zone 2A (fine filter) material placement.



2049: (2021-03-08), looking E from Sta. 0+185. KCG continuing to prepare floor of key trench in advance of Zone 2B FFAB material placement.



2050: (2021-03-08), looking E from Sta. 0+180. Key trench foundation approved between Sta. 0+180 and Sta. 0+205.





**2051: (2021-03-08), looking E from Sta. 0+206. Additional ice and loose bedrock to be removed during key trench foundation preparation.**



**2052: (2021-03-10), looking E from Sta. 0+207. Ice after excavating down 0.3 m.**



**2053: (2021-03-10), looking E from Sta. 0+205. Key trench foundation approved, Sta. 0+205 to 0+227.**



**2054: (2021-03-10), looking E from Sta. 0+225. High spot of subgrade foundation (50 mm too high).**



**2055: (2021-03-10), looking W from Sta. 0+0+180. Fill placement approved for placement of Zone 2A on top of Zone 2B from Sta. 0+180 to Sta. 0+205.**



**2056: (2021-03-11), looking E from Sta. 0+200. Wind deposited snow on trench walls to be cleaned prior to fill.**





**2057: (2021-03-11), looking E from Sta. 0+230. Small pocket of ice (<0.5 square meters) observed in trench floor, typical of this section.**



**2058: (2021-03-11), looking E from Sta. 0+227. Final foundation approved for placement of Zone 2B material.**



**2059: (2021-03-11), looking W from Sta. 0+220. Installation of horizontal thermistor.**



**2060: (2021-03-11), looking W from Sta. 0+200. Excavator cleaning loose material, snow and dust from back-break area of trench wall.**



**2061: (2021-03-12), looking N from Sta. 0+0+226. Ice seam in upstream trench.**



**2062: (2021-03-12), looking W from Sta. 0+0+260. Ice lenses in downstream trench wall from Sta. 0+260 to 0+250.**





2063: (2021-03-12), looking E from Sta. 0+260. Ice lenses in downstream trench wall from Sta. 0+260 to Sta. 0+270.



2064: (2021-03-12), looking S from Sta. 0+0+260. Close up view of ice lens in downstream trench wall.



2065: (2021-03-12), looking SW from Sta. 0+254. Boulder sticking out of trench floor.



2066: (2021-03-12), looking W from Sta. 0+241. Approved fill placement from Sta. 0+180 to Sta. 0+241.



2067: (2021-03-12), looking SE from Sta. 0+250. Approved key trench subgrade foundation from Sta. 0+248 to Sta. 0+280.



2068: (2021-03-13), looking W from Sta. 0+280. Key trench subgrade foundation approved from Sta. 0+280 to Sta. 0+300.





**2069:** (2021-03-13), looking W from Sta. 0+300. Ice lenses in trench wall from Sta. 0+280 to Sta. 0+300.



**2070:** (2021-03-13), Close-up of key trench floor sample taken from Sta. 0+300.



**2071:** (2021-03-14), looking W from Sta. 0+270. Zone 2A material placed to original ground level.



**2072:** (2021-03-14), looking E from Sta. 0+0+320. Bedrock in key trench foundation.



**2073:** (2021-03-15), looking W from Sta. 0+340. Bedrock in key trench.

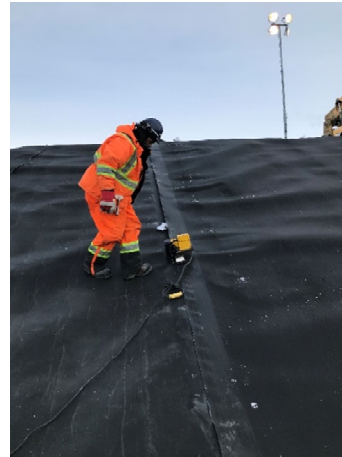


**2074:** (2021-03-15), Damage to liner roll during transport.





2075: (2021-03-15), looking E from Sta. 0+170. Approved surface for liner placement



2076: (2021-03-15), looking N from Sta. 0+180. Liner welding



2077: (2021-03-15), looking E from Sta. 0+170. Liner installation.



2078: (2021-03-16), looking E from Sta. 0+210. Snow on geotextile/LLDPE liner bedding surface



2079: (2021-03-16), looking N from Sta. 0+210. Bedding surface for geotextile/LLDPE liner after cleaning snow



2080: (2021-03-16), Calibration weld of LLDPE liner.





2081: (2021-03-16), Tensiometer peel test on calibration sample.



2082: (2021-03-16), Calibration peel test fracture result.



2083: (2021-03-16), looking W from Sta. 0+250. Geotextile installation on lower key trench slope



2084: (2021-03-16), looking E from Sta. 0+0+315. Cleaning, placement & compaction of Zone 2B (FFAB) material over bedrock section of key trench

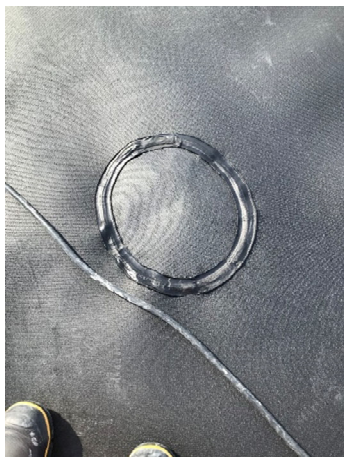


2085: (2021-03-16), looking SE from Sta. 0+240. Excavator cleaning of bedding surface for LLDPE liner at bottom of slope.



2086: (2021-03-17), looking S from Sta. 0+265. Extrusion weld of R3 on Panel 14.





2087: (2021-03-17), looking E from Sta. 0+265. Extrusion weld of R3 on Panel 14.



2088: (2021-03-17), looking S from Sta. 0+265. Vacuum box test on patch R3, Panel 14.



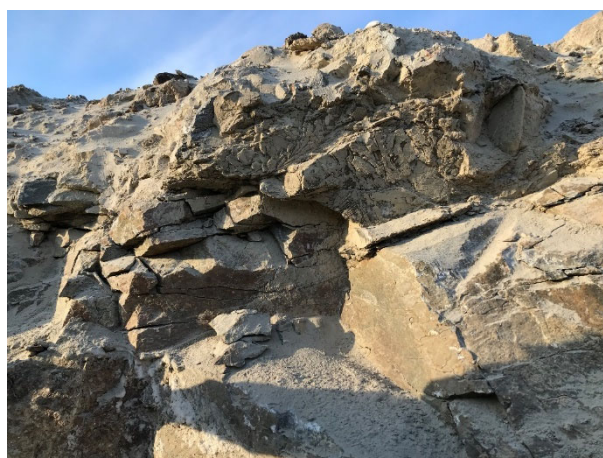
2089: (2021-03-17), looking W from Sta. 0+200. Placement of Zone 2B (FFAB) over LLDPE liner.



2090: (2021-03-17), looking E at Mixing Station. Stockpile of Zone 2B FFAB material.



2091: (2021-03-17), looking W from Sta. 0+377. Bedrock in key trench foundation approved for placement of Zone 2B material.



2092: (2021-03-17), looking N from Sta. 0+365. Close-up of weathered/fractured zone of bedrock in key trench wall.





**2093: (2021-03-18), looking SW from Sta. 0+320.  
Placement of Zone 4 on top of Zone 2B overlying liner.**



**2094: (2021-03-18), looking SE from Sta. 0+372.  
Cleaning of bedrock surface in key trench.**



**2095: (2021-03-18), looking E from Sta. 0+377.  
Approved key trench foundation, Sta. 0+377 to 0+388.**



**2096: (2021-03-18), looking E at Mixing Station.  
Additional bentonite mixing station set up to mix 4% and 6% bentonite FFAB separately.**



**2097: (2021-03-19), looking W from Sta. 0+315.  
Approved bedding surface for  
geotextile/geomembrane.**



**2098: (2021-03-19), looking NW from Sta. 0+310.  
Installation of geotextile under LLDPE liner.**





2099: (2021-03-19), looking W from Sta. 0+310. Damage to seam P16/17 due to stuck welder



2100: (2021-03-19), looking S from Sta. 0+310. Extrusion welded patch R4 on seam P16/17



2101: (2021-03-20), looking S from Sta. 0+408. Approved key trench bedrock foundation, Sta. 0+408 to Sta. 0+423.



2102: (2021-03-20), looking NE from Sta. 0+165. Zone 2A and Zone 4 on top of LLDPE liner, Sta. 0+165 to Sta. 0+300.



2103: (2021-03-21), looking W from Sta. 0+423. Key trench bedrock foundation from Sta. 0+423 to Sta. 0+445.



2104: (2021-03-21), looking W from Sta. 0+300. Placement of Zone 2B in key trench.





**2105: (2021-03-22), looking W from Sta. 0+0+165. Approved downstream dam footprint foundation between Sta. 0+165 and Sta. 0+318.**



**2106: (2021-03-22), looking W from Sta. 0+130. Rebuilding over excavated section between Sta. 0+130 to 0+160.**



**2107: (2021-03-22), looking W from Sta. 0+450. Key trench filled in with snow.**



**2108: (2021-03-23), looking E from Sta. 0+375. Additional snow removed under Zone 2A material along crest.**



**2111: (2021-03-24), looking E from Sta. 0+315. Fill placement of Zone 2B material under liner.**



**2112: (2021-03-24) Liner QC conducting first calibration test at 7 AM, loads at failure in peel and shear were greater than minimum values presented in Technical Specifications.**





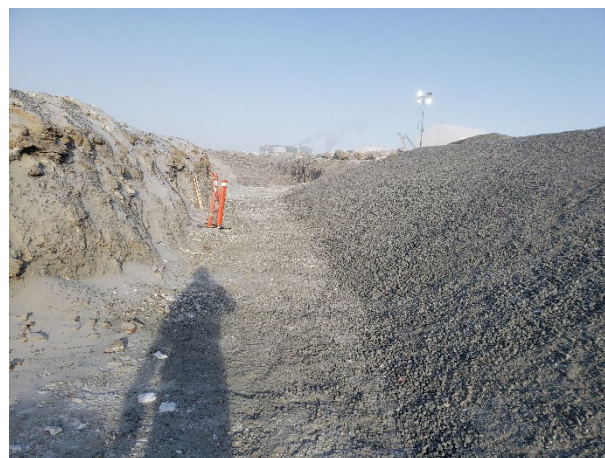
**2113: (2021-03-24), looking NW from Sta. 0+175. Excavator shaping Zone 2A to design lines at approx. Sta. 0+175.**



**2114: (2021-03-24), looking S from Sta. 0+320. FC liner welding LLDPE liner Sta. 0+321 between panel seams P23/P24.**



**2115: (2021-03-24), looking W from Sta. 0+335. Geotextile installed over LLDPE liner between approx. Sta. 0+335 and Sta. 0+315.**



**2116: (2021-03-24), looking W from Sta. 0+154. Slope of Zone 2A material under liner at approx. Sta. 0+165.**



**2117: (2021-03-24), looking S from Sta. 0+170. FC liner removing 'smooth' portion of panel P01 at approx. Sta. 0+170 due to damage along seam caused by excavator during snow removal.**



**2118: (2021-03-24), looking SW from Sta. 0+165. FC liner installing LLDPE between approx. Sta. 0+165 and Sta. 0+135.**





**2119: (2021-03-24), looking W from Sta. 0+165. Geotextile installed over LLDPE liner between approx. Sta.0+165 and Sta. 0+135.**



**2120: (2021-03-24), looking E from Sta. 0+315. Snow removed along lower portion of downstream trench excavation sidewall and base of Zone 2B in preparation for Zone 2B placement over installed LLDPE.**



**2121: (2021-03-24), looking W from Sta. 0+405. QC conducting compaction testing on placed Zone 2B material.**



**2122: (2021-03-25), looking SE from Sta. 0+330. Approved placement of Zone 2B material over LLDPE liner.**

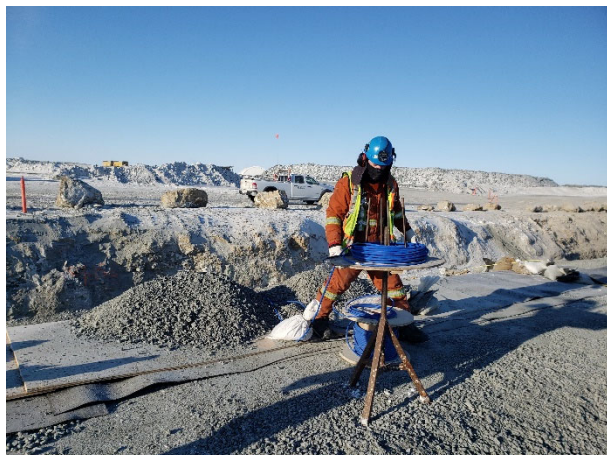


**2123: (2021-03-25), looking W from Sta. 0+395. Excavator shaping Zone 2A to design lines.**



**2124: (2021-03-25), looking W from Sta. 0+110. Excavator continuing to prepare key trench foundation.**





2125: (2021-03-25), looking SW from Sta. 0+135. AEM installing thermistor along installed LLDPE.



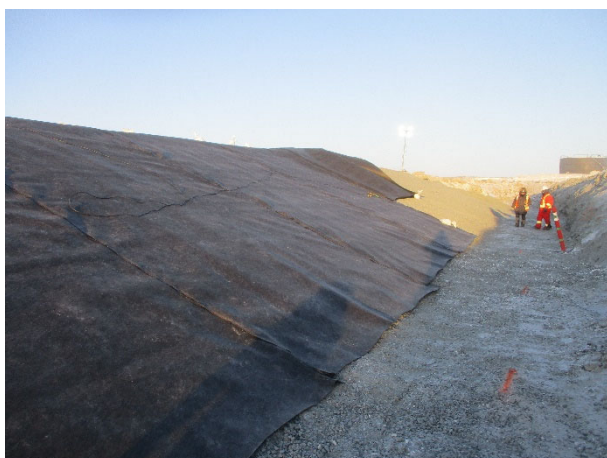
2126: (2021-03-25), looking E from Sta. 0+320. Excavator placing Zone 2A over installed LLDPE.



2127: (2021-03-25), looking E from Sta. 0+115. Prepared section of key trench.



2128: (2021-03-25), looking W from Sta. 0+320. Excavator placing Zone 3 over Zone 2A/2B.



2129: (2021-03-25), looking E from Sta. 0+400. Geotextile installed between Sta. 0+385 and Sta. 0+400 in advance on LLDPE liner installation.



2130: (2021-03-25), looking SW from Sta. 0+150. FC liner installing LLDPE between Sta. 0+150 and Sta. 0+170.





**2131: (2021-03-26), looking W from Sta. 0+180.**  
Approved placement of Zone 2A material over LLDPE liner.



**2132: (2021-03-26), looking E from Sta. 0+200.**  
Excavator placing Zone 1 rockfill within footprint of downstream shell.



**2133: (2021-03-26), looking W from Sta. 0+060.**  
Excavator continuing to prepare key trench foundation.



**2134: (2021-03-26), looking W from Sta. 0+130.** Snow removed over previously placed Zone 2B in preparation for additional placement during nightshift.



**2135: (2021-03-27), looking W from Sta. 0+400.**  
Approved placement of Zone 2A material over LLDPE liner.



**2136: (2021-03-27), looking E from Sta. 0+450.**  
Excavator preparing key trench foundation.





**2137: (2021-03-27), looking SW from Sta. 0+110. QC representative conducting PNG testing on placed Zone 2A material.**



**2138: (2021-03-27), looking E from Sta. 0+085. Approved section of key trench foundation.**



**2139: (2021-03-28), looking E from Sta. 0+130. Excavator placing lift of Zone 2A material.**



**2140: (2021-03-28), looking SW from Sta. 0+260. KCG placing Zone 1 for construction of downstream shell.**



**2141: (2021-03-28), looking E from Sta. 0+135. KCG labourers removing snow along toe of Zone 2A in advance of LLDPE installation.**

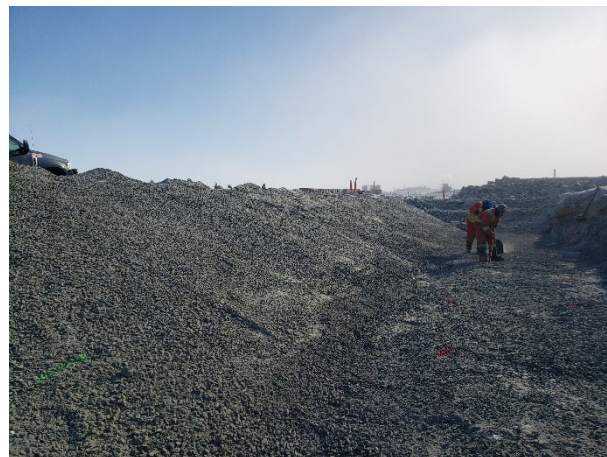


**2142: (2021-03-28), looking NW from Sta. 0+140. FC liner installing geotextile.**





**2143: (2021-03-28), looking W from Sta. 0+135. FC liner installing LLDPE liner.**



**2144: (2021-03-29), looking E from Sta. 0+120. Approved placement of Zone 2A/2B over LLDPE liner.**



**2145: (2021-03-29), looking SE from Sta. 0+140. Excavator removing snow along crest and downstream side walls of trench excavation.**



**2146: (2021-03-29), looking S from Sta. 0+085. KCG labourer using plate tamper to compact first lift of Zone 2B over bedrock.**



**2147: (2021-03-29), looking SW from Sta. 0+065. Excavator preparing key trench foundation.**



**2148: (2021-03-29), looking E from Sta. 0+080. Prepared section of key trench foundation.**





2149: (2021-03-29), looking N from Sta. 0+100. KCG utilizing smooth drum roller to compact placed Zone 2A material.



2150: (2021-03-30), looking NW from Sta. 0+060. Excavator removing blasted material to prepare key trench foundation.



2151: (2021-03-30), looking SE from Sta. 0+090. Excavator placing Zone 2A material.



2152: (2021-03-30), looking SW from Sta. 0+435. KCG labourers removing ice and snow within footprint of key trench.



2153: (2021-03-30), looking S from Sta. 0+438. Ice pocket observed in bedrock along base of key trench.



2154: (2021-03-30), looking E from Sta. 0+420. Approved section of key trench.





**2155: (2021-03-31), looking SW from Sta. 0+055. KCG continuing to clean key trench between Sta. 0+055 and Sta. 0+045.**



**2156: (2021-03-31), looking SE from Sta. 0+430. KCG utilizing plate tamper to compact low spots in key trench.**



**2157: (2021-03-31), looking W from Sta. 0+050. Approved section of key trench foundation.**



**2158: (2021-03-31), looking W from Sta. 0+100. Approved section of Zone 2A/2B under liner.**



**2159: (2021-03-31), looking SW from Sta. 0+450. Excavator utilizing blow pipe to clean key trench foundation.**

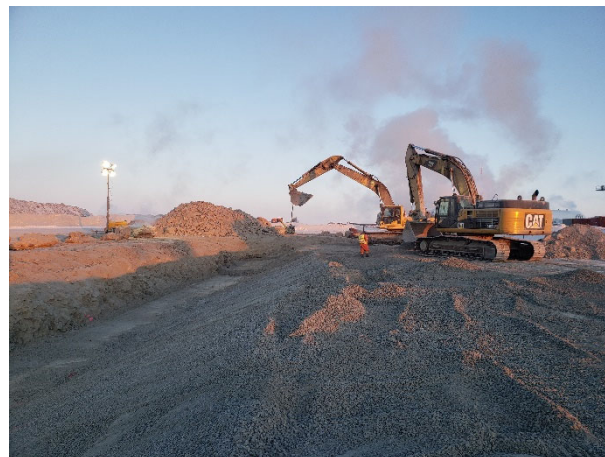


**2160: (2021-03-31), looking W from Sta. 0+65. KCG compacting placed lift of Zone 2B material.**





2161: (2021-03-31), looking E from Sta. 0+089. LLDPE liner installed between approx. Sta. 0+120 and Sta. 0+089.



2162: (2021-04-01), looking W from Sta. 0+60. KCG placing lift of Zone 2B material.



2163: (2021-04-01), looking E from Sta. 0+050. Excavator sloping Zone 2B under liner slope to design lines.



2164: (2021-04-01), looking E from Sta. 0+080. KCG removing snow along downstream key trench excavation wall.



2165: (2021-04-01), looking W from Sta. 0+070. Approved placement of Zone 2A/2B under liner.



2166: (2021-04-01), looking E from Sta. 0+450. Approved section of key trench.





**2167: (2021-04-01), looking W from Sta. 0+455. Ice pocket 4.2 meters below ground surface.**



**2168: (2021-04-01), looking NW from Sta. 0+070. FC Liner installing LLDPE liner panels.**



**2169: (2021-04-02), looking SE from Sta. 0+070. Komatsu excavator removing snow along downstream crest of key trench.**



**2170: (2021-04-02), looking SW from Sta. 0+065. Approved placement of Zone 2A/2B material.**



**2171: (2021-04-02), looking E from Sta. 0+460. KCG compacting placed Zone 2B material.**



**2172: (2021-04-02), looking SE from Sta. 0+090. KCG placing Zone 3 for key trench backfill.**





**2173: (2021-04-02), looking W from Sta. 0+040. Komatsu excavator loading rock truck with stockpiled overburden material.**



**2174: (2021-04-03), looking SW from Sta. 0+440. Key trench filled with snow following winter storm.**



**2175: (2021-04-04), looking W from Sta. 0+320. Komatsu excavator removing snow upstream of hinge point.**



**2176: (2021-04-04), looking W from Sta. 0+360. Zone 1 rockfill sloped to design lines at approx. Sta. 0+360, view looking W.**



**2177: (2021-04-04), looking E from Sta. 0+200. Dozer placing lift of Zone 1 rockfill at approx. Sta. 0+200, view looking E.**



**2178: (2021-04-04), looking SE from Sta. 0+185. KCG compacting placed lift of Zone 1 rockfill material at approx. Sta. 0+185, view looking SE.**





2179: (2021-04-04), looking SE from Sta. 0+185. CAT excavator removing snow within footprint of downstream shell near existing thermistor.



2180: (2021-04-05), looking E from Sta. 0+310. Lift of Zone 3 and Zone 2A placed during KCG nightshift.



2181: (2021-04-05), looking SW from Sta. 0+200. KCG removing snow over previously placed Zone 2A.



2182: (2021-04-05), looking SE from Sta. 0+165. CAT excavator sloping Zone 1 rockfill to design lines along upstream slope.



2183: (2021-04-06), looking W from Sta. 0+195. Snow removed over Zone 2A in advance of Zone 3 placement.



2184: (2021-04-06), looking E from Sta. 0+100. Excavator sloping Zone 1 in advance of Zone 3 placement.





**2185: (2021-04-07), looking E from Sta. 0+465. Key trench foundation approved from Sta. 0+465 to Sta. 0+482.**



**2186: (2021-04-07), looking W from Sta. 0+200. Placement of Zone 3 material on upstream side of liner.**



**2187: (2021-04-08), looking W from Sta. 0+300. Placement of Zone 2A under liner.**



**2188: (2021-04-08), looking E from Sta. 0+080. Spillway area cleaned of snow**



**2189: (2021-04-09), looking E from Sta. 0+200. Snow being removed along upstream under liner hinge.**



**2190: (2021-04-09), looking W from Sta. 0+200. Sloping of Zone 2A upstream under liner.**





**2191: (2021-04-10), looking E from Sta. 0+482.**  
Approved key trench bedrock foundation surface, Sta. 0+482 to Sta. 0+515.



**2192: (2021-04-10), looking N from Sta. 0+500.** Ice-filled joint at Sta. 0+500 (joint #4 on bedrock map).



**2193: (2021-04-10), looking W from Sta. 0+515.**  
Approved key trench bedrock foundation, Sta. 0+482 to Sta. 0+515.



**2194: (2021-04-10), looking W from Sta. 0+526.**  
Approved key trench bedrock foundation from Sta. 0+515 to Sta. 0+526. Ice pockets visible on left and right sides of photograph.



**2195: (2021-04-10), looking E from Sta. 0+515.**  
Termination of dam alignment (Eastern abutment) in key trench.



**2196: (2021-04-10), looking E from Sta. 0+520.** Closely spaced joint set/fracture zone on downstream side of key trench foundation.





**2197: (2021-04-11), looking W from Sta. 0+526. Placement of Zone 2A (FF) in key trench, Sta. 0+482 to Sta. 0+526.**



**2198: (2021-04-11), looking S from Sta. 0+75. Spillway under construction.**



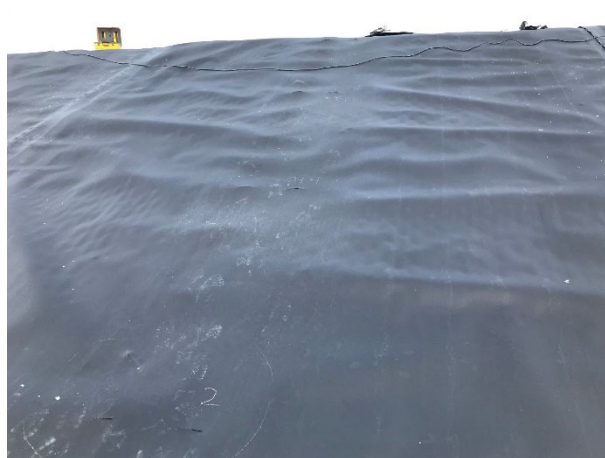
**2199: (2021-04-12), looking E from Sta. 0+400. Zone 2A in key trench sloped 3H:1V in preparation for LLDPE liner installation.**



**2200: (2021-04-12), looking W from Sta. 0+0+400. Crest of dam.**



**2202: (2021-04-13), looking E from Sta. 0+403. Installed LLDPE liner, between Sta. 0+403 to Sta. 0+437.**



**2203: (2021-04-13), looking N from Sta. 0+420. Forklift holes on panel P59.**





**2204: (2021-04-13), looking N from Sta. 0+420. Patches R14-R17 on panel P59.**



**2205: (2021-04-14), looking S from Sta. 0+0+437. Liner installation, between Sta. 0+437 to Sta. 0+519.**



**2206: (2021-04-14), looking W from Sta. 0+437. Placement of Zone 2B and Zone 2A on top of LLDPE liner.**



**2209: (2021-04-16), looking E from Sta. 0+515. East dyke abutment.**



**2210: (2021-04-16), looking E from Sta. 0+0+230. Trench for LLDPE liner tie-in.**



**2211: (2021-04-17), Liner trimmings showing damaged hinge weld.**





**2212:** (2021-04-17), looking E from Sta. 0+200. Exposed hinge weld damage.



**2213:** (2021-04-17), looking W from Sta. 0+205. Extrusion weld repair of damaged hinge weld.



**2214:** (2021-04-17), looking E from Sta. 0+205. Hinge weld repair.



**2215:** (2021-04-17), looking E from Sta. 0+220. Snow removal and tie-in trench preparation for LLDPE liner installation.



**2216:** (2021-04-18), looking W from Sta. 0+310. Zone 2B on top of LLDPE liner hinge and Zone 2A placement on slope.



**2217:** (2021-04-18), looking W from Sta. 0+280. Esker material placed and sloped.





2218: (2021-04-18), looking E from Sta. 0+340. LLDPE liner installation.



2219: (2021-04-19), looking W from Sta. 0+320. Zone 4 on upstream side of dyke.



2220: (2021-04-19), looking W from Sta. 0+250. Zone 3 placed on upstream slope.



2221: (2021-04-20), looking E from Sta. 0+130. Komatsu excavator placing Zone 2B over liner.



2222: (2021-04-21), looking W from Sta. 0+450. Komatsu excavator trimming Zone 2A slope to design lines.



2223: (2021-04-21), looking SE from Sta. 0+460. FC Liner installing LLDPE for upper slope.





**2224: (2021-04-21), looking E from Sta. 0+130. Komatsu excavator placing Zone 4 material upstream of installed LLDPE liner.**



**2225: (2021-04-21), looking E from Sta. 0+500. Komatsu excavator placing Zone 2A along east abutment in advance of liner placement.**



**2226: (2021-04-21), looking E from Sta. 0+400. FC liner conducting extrusion weld between installed LLDPE liner panels.**



**2227: (2021-04-21), looking W from Sta. 0+100. KCG utilizing smooth drum roller to compact placed Zone 4 material.**



**2228: (2021-04-21), looking SW from Sta. 0+380. Komatsu excavator placing Zone 3 along dyke crest over installed LLDPE liner.**



**2229: (2021-04-22), looking W from Sta. 0+490. FC liner installing geotextile over Zone 2A material.**





**2230: (2021-04-22), looking E from Sta. 0+500. KCG removing snow and ice over LLDPE liner in advance of extrusion weld.**



**2231: (2021-04-22), looking W from Sta. 0+050. Komatsu excavator placing Zone 2A along west abutment for upper liner slope.**



**2232: (2021-04-22), looking SE from Sta. 0+483. Extrusion weld between panels P124/P125.**



**2233: (2021-04-22), looking E from Sta. 0+500. FC liner conducting extrusion weld on LLDPE panels.**



**2234: (2021-04-22), looking W from Sta. 0+520. Geotextile installed over LLDPE liner placed along east abutment.**



**2235: (2021-04-22), looking S from Sta. 0+080. Komatsu excavator removing snow and ice from foundation of key trench.**





**2236: (2021-04-23), looking S from Sta. 0+080. Komatsu excavator placing Zone 2A over spillway slopes.**



**2237: (2021-04-23), looking N from Sta. 0+080. Approved placement of Zone 2A in spillway channel.**



**2238: (2021-04-23), looking SW from Sta. 0+080. GBM installed along spillway channel.**



**2239: (2021-04-23), looking W from Sta. 0+080. FC Liner heat welding GBM panels P1/P2.**



**2240: (2021-04-24), looking W from Sta. 0+080. FC liner installing geotextile through spillway channel.**



**2241: (2021-04-24), looking N from Sta. 0+080. FC Liner heat welding GBM panels P10/P11.**





**2242: (2021-04-24), looking S from Sta. 0+080. Approved placement of GBM through spillway channel.**



**2243: (2021-04-24), looking W from Sta. 0+375. Komatsu excavator removing snow over footprint of upstream shell in advance of Zone 4 placement.**



**2244: (2021-04-25), looking W from Sta. 0+325. Komatsu excavator placing Zone 1 rockfill.**



**2245: (2021-04-25), looking S from Sta. 0+080. CAT excavator placing Zone 2A (FF) over installed geotextile/GBM.**



**2246: (2021-04-25), looking N from Sta. 0+080. CAT excavator placing Zone 1 rockfill to construct east sidewall of spillway.**



**2247: (2021-04-25), looking NW from Sta. 0+280. KCG utilizing smooth drum roller to compact placed Zone 1 rockfill.**





**2248: (2021-04-26), looking W from Sta. 0+120. Komatsu excavator shaping Zone 1 to design lines.**



**2249: (2021-04-26), looking W from Sta. 0+45. CAT excavator bucket packing placed lift of Zone 2A material.**



**2250: (2021-04-26), looking W from Sta. 0+270. Dozer spreading Zone 1 material.**



**2251: (2021-04-27), looking E from Sta. 0+200. Komatsu excavator sloping upstream Zone 1 to design lines.**

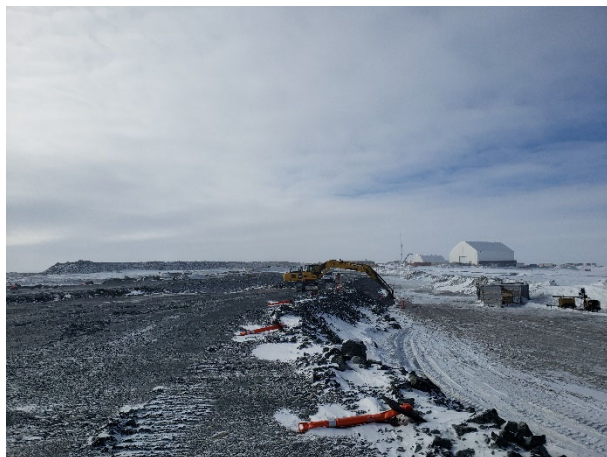


**2252: (2021-04-27), looking W from Sta. 0+050. CAT excavator placing Zone 1 along west abutment.**



**2253: (2021-04-28), looking W from Sta. 0+430. CAT excavator removing snow/ice within footprint of Zone 1 rockfill.**





**2254: (2021-04-28), looking W from Sta. 0+225. Komatsu excavator shaping upstream Zone 1 slope to design lines.**



**2255: (2021-04-29), looking W from Sta. 0+515. CAT excavator placing Zone 2A over installed LLDPE liner along dyke crest.**



**2256: (2021-04-29), looking W from Sta. 0+515. CAT excavator placing Zone 3 over previously placed Zone 2A.**



**2257: (2021-04-29), looking NW from Sta. 0+400. Komatsu excavator shaping downstream Zone 1 slope to design lines.**



**2258: (2021-04-29), looking W from Sta. 0+200. Dozer spreading lift of Zone 1 (rockfill).**



**2259: (2021-04-29), looking E from Sta. 0+090. Zone 2A and Zone 3 placed over existing LLDPE liner.**





**2260: (2021-04-30), looking E from Sta. 0+490. Komatsu dozer placing Zone 1 (rockfill) material for thermal berm along east abutment.**



**2261: (2021-04-30), looking E from Sta. 0+300. Komatsu excavator shaping upstream Zone 1 (rockfill) to design lines.**



**2262: (2021-05-01), looking E from Sta. 0+450. Komatsu excavator shaping upstream Zone 1 slope to design lines.**



**2263: (2021-05-01), looking SE from Sta. 0+410. Upstream Zone 1 slope shaped to design lines.**



**2264: (2021-05-01), looking N from Sta. 0+085. CAT excavator placing Zone 1 (rockfill) for thermal berm.**



**2265: (2021-05-01), looking W from Sta. 0+060. CAT excavator removing snow within footprint of spillway.**





**2266:** (2021-05-02), looking SE from Sta. 0+090. KCG utilizing smooth drum roller to compact placed Zone 1.



**2267:** (2021-05-02), looking N from Sta. 0+500. Komatsu loader loading rock truck with overburden/rock upstream of dyke.



**2268:** (2021-05-02), looking W from Sta. 0+200. Komatsu excavator finalizing upstream slope at approx. Sta. 0+200, view looking W.



**2269:** (2021-05-03), looking E from Sta. 0+500. Loader loading rock truck with overburden/waste rock material downstream of IVR dyke.



**2270:** (2021-05-03), looking NE from Sta. 0+490. Komatsu dozer flattening snow stockpiles upstream of the IVR Dyke.



**2271:** (2021-05-03), looking E from Sta. 0+300. Komatsu excavator leveling dyke crest.





**2272: (2021-05-03), looking E from Sta. 0+125.  
Upstream Zone 1 sloped to design lines.**



**2273: (2021-05-03), looking E from Sta. 0+200.  
Downstream Zone 1 sloped to design lines.**