MONTHLY DIKE PERFORMANCE REPORT

Dike: D-CP5	
Date: April 2019	**Temps:** Min = -30.0°C Max = -1.4°C Mean = -16.2°C
Season: Ice	**Signature:**

MONITORING/INSPECTION SUMMARY	Daily	Weekly	Monthly
Ground Temperature Readings			✓
Survey Monuments			✓
Water/Ice Elevations			✓
Visual Inspection			

GROUND TEMPERATURES

- The average temperature across all horizontal beads within the key trench is **-9.10°C** (May 4, 2019). Temperatures have continued to slightly decrease over the past month (since April 2) by **-0.17°C** at an average rate of change of -0.01°C/day. Compared to last year (May 4, 2018), average key trench temperatures continue to be cooler **(-0.74°C)**.
- Vertical GTC's show frozen temperatures throughout the dike at all cable locations, although a warming trend is observed throughout all dike material and upper underlying ground.

SURVEY MONUMENTS

- The only remaining survey monument (M2) at D-CP5 showed 6 mm of vertical downwards movement in the month of April. While this movement is unlikely considering the frozen condition of the dike, survey data has been included with this report for completeness.

WATER/ICE ELEVATIONS

- The elevation of upstream ice taken May 3, 2019 is **65.65 m**, which is 0.51 m above the maximum operating level before freshet. Although above the maximum operating levels before freshet, the current ice elevation is 0.29 m lower than this time in 2018, and shows essentially no change over the past month.

VISUAL INSPECTIONS

- No visual inspections were undertaken in April. The 4" line from underground to the newly constructed SP2 remained around the southern abutment of the dike.

RECOMMENDATIONS

- Confidence in the survey monument data collected to date remains low. It is strongly recommended that a new survey of the dike surface be undertaken during the summer of 2019 using the control point that was used during dike construction. Continued efforts to obtain meaningful monthly survey data will be made, and alternative methods of monitoring displacement will also be investigated.