

Photograph Pond 4 – 5: Displacement of the upstream toe adjacent to the northern abutment observed first in-2023. DDMI to continue to monitor to assess movement. No new observed displacement in 2024.



Photograph Pond 4 – 6: View along the north end of the downstream slope of Pond 4 Dam. Slope appears in good condition.



Photograph Pond 4 – 7: A21 pipeline blocking the Pond 4 spillway, similar to previous years.

Pond 5

| Inspection By: | Jeffrey Kwok and Jack Hindmarsh | Inspection Date: | August 19, 2024 |
|---------------------|---------------------------------|------------------|-----------------|
| Accompanied By: | Dan Guigon, DDMI | | |
| Weather Conditions: | Fine / Cloudy | Temperature: | 15°C |

| INSPECTION ITEM | YES | NO | РНОТО | COMMENTS AND OTHER DATA |
|---|-------------|-----------------------|-------------------|---|
| 1. DAM CREST 1.1 Surface Cracking 1.2 Settlement 1.3 Lateral Movement 1.4 Reservoir Level & Freeboard 1.5 Distance to Pond 1.6 Other Unusual Conditions | x | x x x x x | 1,4 | Crest is in good condition. Buttressed downstream by a haul road. Pond water level kept low with pumping during East Dam Buttress foundation improvement works for closure. |
| 2. UPSTREAM SLOPE 2.1 Signs of Erosion 2.2 Signs of Movement (Deformation) 2.3 Cracks 2.4 Other Unusual Conditions | x x x | x | 1,2,3,4,5, 6,7 | The impoundment area of Pond 5 was being excavated to remove ice-rich till and replace with rockfill to improve the foundation of the future East Dam closure buttress. Upstream slope movement occurred in 2020 and 2023. No further movement was apparent during the 2024 inspection. Liner was exposed and cut to install a relief valve in 2020 and 2023 to release pressure buildup on downstream side of the liner. Sediment and water had been ponding on the crest of the toe berm where runoff from the South Haul Road discharges into Pond 5. Improvements were made in 2022/2023 however sediment loading appears to continue. |

| INSPECTION ITEM | YES | NO | РНОТО | COMMENTS AND OTHER DATA |
|---|-----|-----|-------|---|
| 3. DOWNSTREAM SLOPE | | | | |
| 3.1 Signs of Erosion | | Х | | |
| 3.2 Signs of Movement (Deformation) | | Х | | Pond 5 dam is buttressed downstream |
| 3.3 Cracks | | Х | _ | by the South Haul Road. |
| 3.4 Seepage or Wet Areas | | Х | | |
| 3.5 Other Unusual Conditions | | Х | | |
| 4. DOWNSTREAM TOE AREA | | | | |
| 4.1 Seepage from Dam | | Х | | |
| 4.2 Signs of Turbidity in Seepage Water | | N/A | | |
| 4.3 Snow Accumulation | | Х | _ | Downstream toe area not inspected due |
| 4.4 Vegetation & Ice Features | | Х | | to electric cables on tundra. |
| 4.5 Discoloration | | Х | | |
| 4.6 Other Unusual Conditions | | Х | | |

| 5. EMERGENCY SPILLWAY 5.1 Surface Condition Issues 5.2 Signs of Erosion 5.3 Signs of Movement (Deformation) 5.4 Cracks 5.5 Settlement 5.6 Vegetation 5.7 Presence of Debris or Blockage 5.8 Slope Protection 5.9 Instability of Side Slopes 5.10 Other Unusual Conditions | | N/A | _ | No spillway currently exists. Water management controlled by pumping. |
|---|---|--------|---|---|
| 6. INSTRUMENTATION 6.1 Thermistors 6.2 Settlement Monuments 6.3 Other | х | X X | | |

7. NOTES

Excavation works were underway in the Pond 5 impoundment area to improve the foundation for the future East Dam closure buttress.

Pond 5 liner had slumped in 2020 and again in 2023 due to high precipitation (2020) and inferred ingress into the downstream fill from a leaking pipe (2023). The liner movement ceased in both cases when pressure behind the liner was released by DDMI making a small cut into the liner. Additionally, DDMI ceased routing water through the inferred leaking pipe after the 2023 movement. No further movement of the liner or the liner cover material was observed during the 2024 inspection.

Runoff from the South Haul Road is discharged into Pond 5 resulting in water and sediment ponding along the crest of the toe berm. The outflow was improved since the 2022 inspection; however, sediment appears to continue to build up on the toe berm and may increase the potential for further slumping of the liner cover. The culvert should be extended upstream of the toe berm to avoid further ponding on the toe berm or erosion.

The water level in Pond 5 is maintained low to allow excavation for the foundation improvement of the future East Dam closure buttress.

Pond 5 does not have an emergency spillway.

Recommendations:

- Develop a mitigation plan or a water management plan for Pond 5 to manage water below damaged liner and meet the design intent.
- Prevent South Haul Road culvert from discharging directly on the Pond 5 toe berm cause saturation of the berm.

Inspector's Signature:

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Date:

November 15, 2024





Photograph Pond 5 – 1: View to the north along the upstream face of Pond 5 dam. Additional pumping deployed to draw down reservoir and ground water for ground improvement construction for the East Dam closure buttress.



Photograph Pond 5 – 2: Toe berm at North abutment of Pond 5 dam. The liner and liner cover were repaired in this area in 2016/2017. Some isolated minor cracking noted in 2024.



Photograph Pond 5 - 3: Torn or exposed liner observed in 2020 along approximate crest of Pond 5 dam, where ramp to pump house has been graded and cleared of snow in winter for access. Liner not observed in 2024.



Photograph Pond 5 – 4: Overview of Pond 5 dam. Ground improvement works underway to remove ice-rich till from the East Dam closure buttress footprint. Sumps constructed to manage water ingress to excavation.



Photograph Pond 5 – 5: View of upstream slope of Pond 5 Dam where liner slid down slope in 2020 exposing geotextile. Similar condition to 2023 observed in 2024.



Photograph Pond 5 – 6: View of southern end of Pond 5 Dam upstream slope toe berm, where cracking developed during 2023 freshet was observed during the 2023 inspection. No new displacement noted in 2024.



Photograph Pond 5 – 7: South Haul Road runoff outflow pipe discharges onto the Pond 5 toe berm where sediment has been deposited and water is ponding on the toe berm. Outflow has improved since 2022 but sediment continues to build up on the toe berm. Area is impacted by the East Dam closure buttress ground improvement works.

Pond 7

| Inspection By: | Jeffrey Kwok and Jack Hindmarsh | Inspection Date | :August 19, 2024 |
|---------------------|---------------------------------|-----------------|------------------|
| Accompanied By: | Dan Guigon, DDMI | | |
| Weather Conditions: | Fine / Cloudy | Temperature: | 15°C |

| INSPECTION ITEM | YES | NO | рното | COMMENTS AND OTHER DATA |
|---|--------|------------------------------|-------|--|
| DAM CREST 1.1 Surface Cracking 1.2 Settlement 1.3 Lateral Movement 1.4 Reservoir Level & Freeboard 1.5 Other Unusual Conditions | x x | x x x | 1 | Crest has been drilled to aid in facilitating thaw of dam fill in preparation for breaching for closure. Signage and delineators mark edge of liner. Electrical cable from wind farm and cribbing along downstream crest. Pond is maintained very low. |
| 2. UPSTREAM SLOPE 2.1 Signs of Erosion 2.2 Signs of Movement (Deformation) 2.3 Cracks 2.4 Other Unusual Conditions | | X X X X | 3,5 | Pond is maintained very low. Similar in level to pond observed in 2023. Main pump is located upstream in low area where water collects naturally. Slope is in good condition, similar to previous years. Some debris evident from higher water levels in past year. Till blanket at south abutment was in good condition. |
| 3. DOWNSTREAM SLOPE 3.1 Signs of Erosion 3.2 Signs of Movement (Deformation) 3.3 Cracks 3.4 Seepage or Wet Areas 3.5 Other Unusual Conditions | | x x x x x | 2, 4 | Downstream crest and slope in good condition, similar to previous years. Observed from crest of dam due to access constraints. |
| 4. DOWNSTREAM TOE AREA 4.1 Seepage from Dam 4.2 Signs of Turbidity in Seepage Water 4.3 Snow Accumulation 4.4 Vegetation & Ice Features 4.5 Discoloration 4.6 Other Unusual Conditions | | X N/A X X X X | 2, 4 | Observed from crest of dam due to access constraints. Boulder field, observed to be dry. |

| INSPECTION ITEM | YES | NO | рното | COMMENTS AND OTHER DATA |
|---|--------|--------------------------------------|-------|--|
| 5. EMERGENCY SPILLWAY 5.1 Surface Condition Issues 5.2 Signs of Erosion 5.3 Signs of Movement (Deformation) 5.4 Cracks 5.5 Settlement 5.6 Vegetation 5.7 Presence of Debris or Blockage 5.8 Slope Protection 5.9 Instability of Side Slopes 5.10 Other Unusual Conditions | x x | X X X X X X X X | 1, 2 | Boulders placed as berm across spillway, cribbing, and electrical cable across spillway. Some small vegetation beginning to establish on downstream side of spillway channel. |
| 6. INSTRUMENTATION6.1 Thermistors6.2 Settlement Monuments6.3 Other | | X X X | | |

7. NOTES

The crest of Pond 7 has been drilled to facilitate thaw in the dam rockfill in preparation of breaching as part of the closure works. Breaching is expected in Q4 2024.

Minimal water in pond, similar to 2023. Pond does not encroach on the upstream toe, however a recent highwater mark is visible just above the rockfill toe berm. The main pump is located upstream in low area where water collects naturally.

Till blanket at the south abutment was in good condition, similar to previous years. A berm is in place at crest to restrict vehicles travelling over the till blanket.

Cones and signs are in place along the edge of the liner crest to prevent vehicles from driving over the liner.

There are no recommendations for Pond 7.

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Date: Nov

November 15, 2024



Photograph Pond 7 – 1: View along Pond 7 crest looking south. Boulders placed as berm across spillway. Berm is in place to protect cribbing for high voltage cable and optic-fibre to wind tower along downstream crest. Cones were placed along edge of liner crest to prevent vehicles from driving over the liner. Crest was drilled to facilitate thaw to improve excavation conditions for the planned breach of Pond 7.



Photograph Pond 7 – 2: View of the downstream slope and south abutment of Pond 7 dam. Condition is similar to previous years and appears in good condition.



Photograph Pond 7 – 3: View of the south abutment till blanket on upstream slope of Pond 7 dam. Pond volume is minimal and similar to observations in 2023.



Photograph Pond 7 – 4: View of the downstream slope of Pond 7 Dam; looking north from the south abutment.



Photograph Pond 7 – 5: Rutting at upstream crest and on slope. Appears to be historic vehicles/equipment tracks and possibly some erosion and remains consistent to previous years. Debris noted on upstream slope in 2024 indicates recent high water level.

Pond 10

| Inspection By: | Jeffrey Kwok and Jack Hindmarsh | Inspection Date | :August 19, 2024 |
|---------------------|---------------------------------|-----------------|------------------|
| Accompanied By: | Dan Guigon, DDMI | | |
| Weather Conditions: | Fine / Cloudy | Temperature: | 15°C |

| INSPECTION ITEM | YES | NO | РНОТО | COMMENTS AND OTHER DATA |
|---|--------|--|-------|---|
| 1. DAM CREST 1.1 Surface Cracking 1.2 Settlement 1.3 Lateral Movement 1.4 Reservoir Level & Freeboard 1.5 Distance to Pond 1.6 Other Unusual Conditions 2. UPSTREAM SLOPE | x x | x x x x | 1,2,5 | Crest is in good condition. Pond level kept low; water does not encroach on dam. Small vegetation growing on the crest at southeast end of dam, similar to previous years. Erosion of crest, upstream slope and liner cover near access ramp to Pond 10 pump at northwest abutment area. This area should be re-graded. Ditch from access road is directing runoff into the |
| 2.1 Signs of Erosion2.2 Signs of Movement (Deformation)2.3 Cracks2.4 Other Unusual Conditions | x | X X X | 3,5,6 | pond. Erosion of crest, upstream slope and liner cover near access ramp to Pond 10 pump at northwest abutment area. This area is to be re-graded and armoured to prevent continued scouring. |
| 3. DOWNSTREAM SLOPE 3.1 Signs of Erosion 3.2 Signs of Movement (Deformation) 3.3 Cracks 3.4 Seepage or Wet Areas 3.5 Other Unusual Conditions | | X X X X X | 4 | Downstream slope in good condition. |
| 4. DOWNSTREAM TOE AREA 4.1 Seepage from Dam 4.2 Signs of Turbidity in Seepage Water 4.3 Snow Accumulation 4.4 Vegetation & Ice Features 4.5 Discoloration 4.6 Other Unusual Conditions | | X N/A X X X X | 4 | Downstream toe could not be inspected due to high-voltage electrical cables on the tundra. No signs of seepage were observed from the downstream crest of the dam. |
| 5. EMERGENCY SPILLWAY 5.1 Surface Condition Issues 5.2 Signs of Erosion 5.3 Signs of Movement (Deformation) 5.4 Cracks 5.5 Settlement 5.6 Vegetation 5.7 Presence of Debris or Blockage 5.8 Slope Protection 5.9 Instability of Side Slopes 5.10 Other Unusual Conditions | × | X X X X X X X X X X | 1,2 | Spillway invert is undulating, not flat. However, DDMI survey confirmed overall surface grades downstream. Some vegetation growing on the sides of the spillway swale, similar to previous years. |
| 6. INSTRUMENTATION6.1 Thermistors6.2 Settlement Monuments6.3 Other | | X X X | | N/A |

7. NOTES

There is a small amount of water in the pond similar to previous years. Water does not encroach on the dam upstream toe.

Erosion has developed in the northwest corner of the facility where runoff from the truck-shop area routes into the pond/sump. Condition appears similar to 2023.

Recommendations:

 Area in northwest corner to be re-graded to maintain design crest and the eroded liner cover material on the upstream slope replaced and /or rip rap armoured to reduce future erosion in this area.

| Inspector's Signature: | Ally 125 | Date: | November 15, 2024 |
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Photograph Pond 10 – 1: View to the north along the crest of Pond 10 showing spillway. Dam crest and slope are in good condition, minor vegetation.



Photograph Pond 10 – 2: View of Pond 10 spillway looking south. Spillway surveyed in 2023 to assess if current geometry aligns with design.



Photograph Pond 10 – 3: View along the crest and upstream slope of Pond 10 Dam, looking southeast. Crest and slope in good condition. Pond level is kept low and but appeared higher than in 2023.



Photograph Pond 10 – 4: View to the northwest along the crest and downstream slope of Pond 10 dam. Downstream slope in good condition. Downstream toe could not be inspected due to high-voltage electrical cables on the tundra.



Photograph Pond 10 – 5: View of upstream slope and crest of Pond 10 dam at north abutment area. Minor rutting and erosion were noted on the upstream slope in 2019. Extent of erosion was similar to conditions observed in 2023.



Photograph Pond 10 – 6: View of upstream slope of Pond 10 dam from pump access near south abutment, pond level is kept low and back from upstream toe. Pond level observed higher in 2024.

Pond 11

| Inspection By: | Jeffrey Kwok and Jack Hindmarsh | Inspection Date | August 19, 2024: |
|---------------------|---------------------------------|-----------------|------------------|
| Accompanied By: | Dan Guigon, DDMI | | |
| Weather Conditions: | Fine / Cloudy | Temperature: | 15°C |

| INSPECTION ITEM | YES | NO | РНОТО | COMMENTS AND OTHER DATA |
|--|-----|-------------|---------|---|
| 1. DAM CREST | | | | |
| 1.1 Surface Cracking 1.2 Settlement | | x x | 2 4 7 | Crest is in good condition. Pond level kept low; water does not operage on dom |
| 1.5 Lateral Movement | × | Х | 3, 4,7 | One small piece of expand liner noted |
| 1.5 Distance to Bond | Ŷ | | | One small piece of exposed liner noted in read base |
| 1.6 Other Unusual Conditions | Ŷ | | | in road base. |
| 2. UPSTREAM SLOPE 2.1 Signs of Erosion 2.2 Signs of Movement (Deformation) 2.3 Cracks 2.4 Other Unusual Conditions | x | x x x | 1, 2, 5 | Upstream slope and toe are in good condition. Vegetation, mainly grass on upstream slope near toe as observed in previous years. Some debris on upstream slope near south abutment in area previously used for snow disposal. |
| 3. DOWNSTREAM SLOPE | | | | |
| 3.1 Signs of Erosion | | X | | Slope was in good condition. |
| 3.2 Signs of Movement (Deformation) | | X | 6 | Minor small vegetation on slope, similar |
| 3.3 Cracks | | X | | to previous years. |
| 3.4 Seepage of Wel Areas | | | | |
| | | ~ | | |
| 4. DOWNSTREAM TOE AREA | | x | | |
| 4 2 Signs of Turbidity in Seepage Water | | N/A | | |
| 4.3 Snow Accumulation | | X | 6 | Very minor ponding; less than previous |
| 4.4 Vegetation & Ice Features | | X | · · | years. No visible flow. |
| 4.5 Discoloration | | х | | |
| 4.6 Other Unusual Conditions | | х | | |
| 5. EMERGENCY SPILLWAY | | | | |
| 5.1 Surface Condition Issues | | Х | | |
| 5.2 Signs of Erosion | | | | Boulders placed in the opening as |
| 5.3 Signs of Movement (Deformation) | Х | Х | | safety berm have shifted down the |
| 5.4 Cracks | | Х | 7 | slope and remain in similar position to |
| 5.5 Settlement | | Х | | |
| 5.6 Vegetation | | Х | | Minor crossion observed on downstream |
| 5.7 Presence of Debris or Blockage | Х | | | willot erosion observed on downstream crest at spillway, similar to 2023 |
| 5.8 Slope Protection | | Х | | ciest at spinway, similar to 2025. |
| 5.9 Instability of Side Slopes | | Х | | |
| 5.10 Other Unusual Conditions | | X | | |
| 6. INSTRUMENTATION | | | | |
| 6.1 Thermistors | | | | |
| 6.2 Settlement Monuments | | | | |
| 6.3 Other | | Х | | |

7. NOTES

Pumps maintain low water level in the pond.

No seepage was observed downstream of dam.

Minor erosion on downstream side of spillway should be monitored. Boulders placed across spillway opening prior to 2022 for safety purposes have shifted down the slope.

Small aeras of liner have been exposed in the running surface of the road. Liner has been observed previously, prior to 2022. If they areas of liner continue to be uncovered, additional road base may be required to be placed.

There are no recommendations for Pond 11.

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Date:

November 15, 2024



Photograph Pond 11 – 1: View of Pond 11 upstream slope. Water level kept low by the pumping system as observed in previous years. Upstream slope is in good condition. Vegetation encroaching on toe.



Photograph Pond 11 – 2: View along the upstream slope of Pond 11 dam. Slope is in good condition. Some debris material visible on upstream, likely use of Pond 11 for snow clearing storage, similar to previous years.



Photograph Pond 11 – 3: View looking east (2023 photo) and north (2024 photo) along the crest of Pond 11 dam. Crest is in good condition.



Photograph Pond 11 – 4: View looking south along the crest of Pond 11 dam. Three areas observed of small pieces of exposed liner at crest on the road's running surface; similar to those observed previously.



Photograph Pond 11 – 5: View of Pond 11 upstream slope and toe near the south abutment. Slope is in good condition and pond observed at a similar level in 2024 to previous years.



Photograph Pond 11 – 6: View of Pond 11 downstream slope and toe. Slope is in good condition. Very minor ponding at downstream toe; less than previous years.


Photograph Pond 11 – 7: Slot cut in downstream safety berm for spillway. Boulders placed as safety berm across spillway. Some minor erosion observed on downstream crest of spillway in 2024 similar to 2023 (inset).

Pond 12

| Inspection By: | Jeffrey Kwok and Jack Hindmarsh | Inspection Date | August 19, 2024 |
|---------------------|---------------------------------|-----------------|-----------------|
| Accompanied By: | Dan Guigon, DDMI | | |
| Weather Conditions: | Fine / Cloudy | Temperature: | 15°C |

| INSPECTION ITEM | YES | NO | РНОТО | COMMENTS AND OTHER DATA |
|---|-------------|---------------------------------|---------|---|
| DAM CREST 1.1 Surface Cracking 1.2 Settlement 1.3 Lateral Movement 1.4 Reservoir Level & Freeboard 1.5 Distance to Pond 1.6 Other Unusual Conditions | X X X | X X X | 3, 6 | Crest is in good condition. A light vehicle road (AN Road) exists along the crest on the east side of the Pond 12 dam. Pond level low at time of inspection; approximately 100 m upstream from upstream toe. |
| 2. UPSTREAM SLOPE 2.1 Signs of Erosion 2.2 Signs of Movement (Deformation) 2.3 Cracks 2.4 Other Unusual Conditions | x | X X X | 1, 2, 4 | Upstream slope repairs completed in 2023 following 2023 inspection. Slope now in good condition. |
| 3. DOWNSTREAM SLOPE 3.1 Signs of Erosion 3.2 Signs of Movement (Deformation) 3.3 Cracks 3.4 Seepage or Wet Areas 3.5 Other Unusual Conditions | | × × × × | 3, 5 | Downstream slope is in good condition. A light vehicle road (AN Road) exists along the downstream east side of the Pond 12 dam. |
| 4. DOWNSTREAM TOE AREA 4.1 Seepage from Dam 4.2 Signs of Turbidity in Seepage Water 4.3 Snow Accumulation 4.4 Vegetation & Ice Features 4.5 Discoloration 4.6 Other Unusual Conditions | | X N/A X X X X | 3 | Downstream toe is in good condition, mainly boulder field in area downstream of AN road. No ponded water observed from dam crest. |
| 5. EMERGENCY SPILLWAY 5.1 Surface Condition Issues 5.2 Signs of Erosion 5.3 Signs of Movement (Deformation) 5.4 Cracks 5.5 Settlement 5.6 Vegetation 5.7 Presence of Debris or Blockage 5.8 Slope Protection 5.9 Instability of Side Slopes 5.10 Other Unusual Conditions | x | × × × × × × × | 6 | Notch cut in downstream safety berm to create spillway. Upstream of spillway obstructed by water pump line along crest. |
| 6. INSTRUMENTATION 6.1 Thermistors 6.2 Settlement Monuments 6.3 Other | | X X X | | |

7. NOTES

The upstream slope and pond liner was damaged in 2022 and repaired after the 2023 annual inspection. The upstream slope of Pond 12 now appears in good condition.

The water level within the pond is low and does not encroach on the dam and was approximately 100 m upstream of the dam toe.

The crest was observed to be in good condition, with no settlement or cracks, however, the emergency spillway is partially obstructed by a water pump pipeline placed along the upstream extent of the dam crest and disused pipe.

Recommendation:

 Place pipe on blocks or cribbing to allow flow under the pipe through the emergency spillway, and/or remove pipe, prior to freshet.

| Inspector's Signature: | Ally 125 | Date: | November 15, 2024 |
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|------------------------|----------|-------|-------------------|



Photograph Pond 12 – 1: View to the west along the upstream slope of Pond 12. Repairs to upstream slope were underway during 2023 inspection and completed by the 2024 inspection. Water level in pond is maintained low.



Photograph Pond 12 – 2: View to the east along the upstream slope of Pond 12. Repairs underway during the 2023 inspection and completed by the 2024 inspection.



Photograph Pond 12 – 3: View to the west along the crest of Pond 12 dam and downstream area (AN access road) (2023 photo) and to the southeast (2024 photo). Crest and downstream slope in good condition.



Photograph Pond 12 – 4: View to the north from Pond 12 dam crest looking upstream to pump shack. Pond level is low. Water does not encroach on the dam.



Photograph Pond 12 – 6: Notches cut in downstream berm (Pond 12 dam crest) to form spillway. Spillway reinstated after repair works, however, redundant and pipe line partially obstructs spillway alignment.

Pond 13

| Inspection By: | Jeffrey Kwok and Jack Hindmarsh | Inspection Date | August 19, 2024 |
|---------------------|---------------------------------|-----------------|-----------------|
| Accompanied By: | Dan Guigon, DDMI | | |
| Weather Conditions: | Fine / Cloudy | Temperature: | 15°C |

| ILU | NO | PHUIU | COMMENTS AND OTHER DATA |
|-------------|---|--|--|
| x x x | x x x | 1, 3, 6, 7 | Water level similar to the water level observed in previous years. Liner at the anchor trench on the crest is exposed near the centre of the dam in two areas, similar to previous years. Small sink holes that were identified in 2023 appear to be in similar condition in 2024. |
| | X X X X | 1, 2, 4 | Upstream slope is in good condition. |
| | X X X X X | 5 | Downstream slope is in good condition. A418 haul road buttresses the downstream side of Pond 13 dam. |
| | X N/A X X X X | 5 | A small static pond that typically exists over tundra in the low area downstream of Sta. 0+120 was observed dry during the 2022 inspection is again wet. No flow observed in toe area. |
| x | X X X X X X X X X | 7 | Openings in safety berms for Pond 13 spillway. Paste pipelines raised previously on cribbing across Pond 13 have now been removed. Pump shack partially blocks opening, as in previous years. |
| | | XX | X X X X XX X X 1, 3, 6, 7X X X XX |

7. NOTES

Pond 13 is generally in good condition; no signs of instability were observed. The A418 haul road is located downstream of the Pond 13 dam.

Openings in haul road safety berms to create the emergency spillway, however, a pump shack partially blocks opening.

A series of small sink holes that were identified in the 2023 annual inspection at approximately at stn. 0+60 and between 1+80 and 2+00 appear to be in similar condition in 2024. Sinkholes appear to be upstream of the liner.

Liner is exposed at two locations at the anchor trench on the crest, similar to previous years.

Two thermistors installed in the Pond 13 dam and key trench report frozen conditions between -1 °C and -6 °C.

| Inspector's Signature: | Ally 185 | Date: | November 15, 2024 |
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Photograph Pond 13 – 1: View to the west along the upstream face of Pond 13. Dam is in good condition. Water level is kept low in the pond by pumping.



Photograph Pond 13 – 2: View across Pond 13 to the southeast. Upstream slope of dam is in good condition and pond volume appears similar to 2023.



Photograph Pond 13 – 3: Small sink holes have developed at the crest and do not appear to be developing.



Photograph Pond 13 – 4: View to the north along the eastern section of Pond 13 dam. Underground rockfill pad has been pushed into Pond 13 over the eastern section of the Pond 13 dam; similar conditions to those observed in previous years.



Photograph Pond 13 – 5: View to the east along the downstream toe of the haul road fill south of Pond 13. A small static pond that typically exists over tundra in the low area downstream of Sta. 0+120 was observed wet during the 2024 inspection. No signs of seepage were observed.



Photograph Pond 13 – 6: View to the east along the crest of Pond 13 dam. Crest is in good condition. Two areas of exposed liner observed downstream of anchor trench, similar condition to previous years.



Photograph Pond 13 – 7: View looking downstream. Pipelines raised on cribbing. Pump shack and gravel pile partially blocks opening.

APPENDIX B

Thermistor Data

1

| Table B-1: Processed Kimberlite Containment Facility Instrumentation – Depressurization, Observation | on, and Seepage Collection Wells, and Piezometers |
|--|---|
|--|---|

| | Locat | Location | | | | |
|----------------|----------------------|--------------------|-----------|--|--|--|
| Reference | Structure | Phase 7 Station | Date | Status as of 2024 | Comments | |
| PKCE-C1823-US | | 71+883 | Aug 2017 | Operational | Vibrating wire piezometer installed in December 2020. | |
| PKCE-SCW-1937 | | 71+994 | Aug 2016 | Pump not operational. Functioning as monitoring well. | Pump removed in March 2020. Pumping currently not required. Currently only reading water level by manual readings. | |
| PKCE-SCW-1972 | | 72+030 | Aug 2016 | Not operational- decommissioned | Decommissioned in June 2024. | |
| PKCE-SCW-2320 | | 72+396 | Apr 2010 | No readings since December 2017 – Frozen | 152 mm observation well; pump can be installed in well if required. | |
| PKCE-SCW-2340 | East Dam | 72+416 | Apr 2010 | No readings since June 2019 – Frozen | 152 mm observation well; pump can be installed in well if required. | |
| PKCE-V2385-US | | 72+462 | Feb 2020 | Operational | Vibrating wire piezometer. | |
| PKCE-SCW-2520 | | 72+595 | Dec 2010 | Operational | 152 mm observation well. No pumping since January 2022. Pump can be installed if required. | |
| PKCE-SCW-2530 | | 72+606 | Aug 2016 | Operational | 406 mm collection well, currently pumping. | |
| PKCE-V2678-US | | 72+757 | Jan 2021 | Operational | Piezometer installed in PKCE-UDW-2678. | |
| PKCE-SCW-2795 | | 72+870 | May 2013 | Not operational | 152 mm collection well, pump not operational due to transformer damage in May 2021. Can be repaired if pumping required. | |
| PKCE-V2824-US | | 72+900 | Feb 2013 | Operational | Vibrating wire piezometer. | |
| NSR-V3491-US | | 72+780 | Jan 2018 | Operational | Vibrating wire piezometer, installed in NSR-SCW-3491. | |
| PKCN-V4000-DS | North Dam | 74+142 | May 2008 | Operational | Vibrating wire piezometer. | |
| PKCW-SCW-4957 | | 75+082 | May 2010 | Operational | 152 mm collection well; no pumping since September 2021. Power available, no discharge pipe. Can be restarted if required. | |
| PKCW-SCW-4982 | | 75+106 | Aug 2016 | Operational | 305 mm collection well, pumping since October 2019. Currently pumping. | |
| WSR-UDW-5343 | West Dam | 75+343 | 2014/2015 | Operational | Observation well, installed in 2014/2015. Equipped with Vibrating wire piezometer in spring 2021. | |
| NW Decant Sump | | _ | 2020 | Operational | Well for PKC pond management installed in July 2020. | |
| PKCW-V4900-US | | 75+025 | Feb 2020 | Operational | Vibrating wire piezometer. | |
| PKCW-V4992-US | | 75+116 | Mar 2013 | Operational | Vibrating wire piezometer. | |
| PKCW-V5094-US | | 75+218 | Mar 2013 | Operational | Vibrating wire piezometer. | |
| PKCW-V5320-US | | 75+567 | Mar 2013 | Operational | Vibrating wire piezometer. | |
| PKC-Z2-V2 | | - | Jun 2023 | Operational | Vibrating wire piezometer. | |
| PKC-580-2-V1A | | - | Jul 2023 | Operational | Vibrating wire piezometer. | |
| PKC-580-2-V1B | PKC Closure Cover | - | Jul 2023 | Operational | Vibrating wire piezometer. | |
| PKC-530-2-V3A | | - | Jul 2023 | Operational | Vibrating wire piezometer. | |
| PKC-530-2-V3B | | - | Jul 2023 | Operational | Vibrating wire piezometer. | |
| 0+335 Upper | | - | Apr 2022 | Operational | Vibrating wire piezometer. | |
| 0+335 Lower | South Barge | - | Apr 2022 | Operational | Vibrating wire piezometer. | |
| 0+380 Upper | Road | - | Apr 2022 | Operational | Vibrating wire piezometer. | |
| 0+380 Lower | | - | Apr 2022 | Operational | Vibrating wire piezometer. | |

PKC = Processed Kimberlite Containment. Note: Wells or piezometers decommissioned, destroyed or otherwise not functioning prior to the 2024 DSI reporting period are not shown in the table and are covered in prior DSI reports.

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Location Reference Orientation 2024 Status/Comments Phase 7 (Installation Year) Structure Location Station PKCS-T1340-US (2020) 71+340 South Buttress Foundation Vertical Operational. PKCS-T1540-DS (2008) 71+631 In liner bedding 3H:1V Operational. PKCS-T1550-DS (2008) 71+643 In liner bedding 3H:1V Operational. Operational. PKCS-T1560-DS (2008) 71+654 In liner bedding 3H:1V Bead 1 reporting erroneous data since June 2023. PKCS-T1555A-DS Vertical 71+650 Downstream rockfill Operational. South Dam PKCS-T1555B-DS (2017) PKCS-T1760A-KT reporting erroneous or no data since March 2022; instrument string dead in 2022. PKCS-T1760A-KT (2017) Upstream, 71+841 Vertical PKCS-T1760B-KT (2018) PKCS-T1760B-KT beads 7, 8, and 14 reporting South Spigot Road fill erroneous data since July 2022. Operational. PKCE-T1823A-KT Damaged but operational. Inconsistent readings in Upstream, 71+883 Vertical PKCE-T1823B-KT (2017) South Barge Road fill PKCE-T1823A-KT. Downstream rockfill PKCE-T1889-DS (2019) 71+947 55 degrees Operational. PKCE-T1931AA-DS Destroyed during East Dam closure re-sloping in 71+989 Downstream rockfill 55 degrees PKCE-T1931AB-DS (2018) September 2024. PKCE-T1931BA-DS Destroyed during East Dam closure re-sloping in 71+989 Downstream rockfill Vertical PKCE-T1931BB-DS (2018) September 2024. Destroyed during East Dam closure re-sloping in 71+967 PKCE-T1967A-DS (2019) Downstream rockfill 55 degrees September 2024. Destroyed during East Dam closure re-sloping in PKCE-T2005A-DS 72+061 Downstream rockfill Vertical PKCE-T2005B-DS (2017) September 2024 PKCE-T2009A-DS Destroyed during East Dam closure re-sloping in 72+064 Downstream rockfill 55 degrees PKCE-T2009B-DS (2019) September 2024. PKCE-T2023B-KT beads 3-16 not reporting data since February 2022. PKCE-T2023A-KT 72+082 Key trench Vertical PKCE-T2023B-KT (2017) PKCE-T2023A-KT beads 1-3 not reporting data since 2021. PKCE-T2119A-DS 72+083 Downstream rockfill Vertical Operational. PKCE-T2119B-DS (2017) PKCE-T2190A-DS Operational. 72+240 Downstream rockfill Vertical PKCE-T2190B-DS (2017) PKCE-T2385A-US 72+462 60 m downstream of CL 84 degrees Operational. PKCE-T2385B-US (2020) PKCE-T2399A-CL Downstream rockfill East Dam 72+474 Vertical Operational. PKCE-T2399B-CL (2012) and dam foundation PKCE-T2558-KT (2002) 72+390 Key trench (foundation) Vertical Non-operational since early 2023. PKCE-T2558-CL (2002) 72+405 Phase 1 - CL (foundation) Vertical Operational. Downstream rockfill 72+432 PKCE-T2601-DS (2006) Vertical Operational. and dam foundation PKCE-T2725-DS (2002) 72+557 Downstream dam foundation Vertical No readings since March 2023. 72+556 PKCE-T2725-CL (2002) Phase 1 - CL (foundation) Vertical No readings since November 2022. 72+562 Vertical PKCE-T2725-KT (2002) Key trench No readings since November 2022. Downstream rockfill Vertical PKCE-T2734-DS (2006) 72+566 Operational. and dam foundation 72+597 PKCE-T2765-DS (2002) Phase 1 – CL (foundation) Vertical Operational. Phase 1 – CL (foundation) PKCE-T2765-CL (2002) 72+596 Vertical Operational. PKCE-T2700A-CL Downstream rockfill 72+777 Vertical Operational. PKCE-T2700B-CL (2013) and dam foundation PKCE-T2780A-CL Downstream rockfill 72+856 Vertical Operational. PKCE-T2780B-CL (2013) and dam foundation PKCE-T2800A-DS Downstream rockfill and dam 72+877 Vertical Operational. PKCE-T2800B-DS (2013) foundation

Table B-2: Processed Kimberlite Containment Facility Instrumentation – Functioning Thermistors

| PKCE-T2824A-US PKCE-T2824B-US (2013) | | 72+900 | Upstream CPK and FPK | Vertical | PKCE-12824A-US erroneous readings since June 2023. PKCE-T2824B-US Operational. |
|---|--|--------|--|----------|---|
| PKCE-T2900A-DS PKCE-T2900B-DS (2013) | KCE-T2900A-DS KCE-T2900B-DS (2013) 72+976 | | Downstream rockfill and dam foundation | Vertical | Operational. |
| PKCE-T3080B-KT (2006) | | 72+894 | Cut-off (fill and foundation) | Vertical | Operational. No readings in bead 2 since February 2023. |

Table B-2: Processed Kimberlite Containment Facility Instrumentation – Functioning Thermistors

| Deference | | Loc | ation | | | |
|---|--|--------|--|----------------------|---|--|
| Reference (Installation Year) | ion Year) Structure Phase 7 Location Orienta | | Orientation | 2024 Status/Comments | | |
| PKCN-T3126-DS (2008) | | 73+270 | Under liner | 3H:1V | Operational. | |
| PKCN-T3180-DS (2008) | | 73+274 | Under liner | 3H:1V | Operational. | |
| PKCN-T3320A-KT PKCN-T3320B-KT PKCN-T3320C-KT PKCN-T3320D-KT (2009) | | 73+448 | Key trench (fill) | Horizontal | Operational. No readings in PKCN-T3320C-KT bead 4 since January 2023 and bead 11 since July 2023. No readings in PKCN-T3320D-KT beads 1 and 5 since July 2023. No readings in PKCN-T3320A-KT since August 2023. | |
| PKCN-T3450-DS (2008) | | 73+571 | Under liner | 3H:1V | Operational. | |
| PCKN-T4038E-KT PCKN-T4038W-KT (2010) | | 74+176 | Over key liner | Horizontal | Damaged but operational. | |
| PKCN-T4060-DS (2008) | | 74+202 | Under liner | 3H:1V | Operational. | |
| PKCN-T4288-US (2013) | North Dam | 74+433 | Intersection of Old North Spigot Road and Old North Barge Road | Vertical | Operational. Brief period of missing data between December 2022 and April 2023. | |
| PKCN-T4400-US (2020) | | 74+514 | Upstream through CPK berm, FPK beach, and Key Trench Fill and into bedrock | Vertical | Operational. No readings in bead 11 since May 2023. | |
| PKCN-T4350-US (2013) | | 74+464 | Upstream through FPK beach and key trench fill and into bedrock | Vertical | Operational. Many beads missing consistent data since November 2022. | |
| PKCN-T4500A-US PKCN-T4500B-US (2020) | | 74+620 | Upstream though CPK berm, FPK beach, and key trench and into bedrock | Vertical | Operational. | |
| PKCN-T4589-DS (2008) | | 74+722 | Downstream of liner in till plug | Vertical | Operational. Erroneous data in beads 2-8 since June 2022. | |
| PKCW-T4700A-US PKCW-T4700B-US (2020) | | 74+843 | Upstream through CPK berm, FPK beach, and key trench and into bedrock | Vertical | Operational. Erroneous data in PKCW-T4700B-US bead 8 since May 2023. | |
| PKCW-T4800A-US PKCW-T4800B-US (2020) | | 74+929 | Upstream through CPK berm, FPK beach, and key trench and into bedrock | 62 degrees | Operational. | |
| PKCW-T4844-US (2013) | 74+962 | | Upstream through FPK beach and rockfill pipe berm | Vertical | Operational. | |
| PKCW-T4855A-KT (2017) PKCW-T4855B-KT (2017) | | 74+979 | Downstream rockfill and key trench | Vertical | Operational. | |
| PKCW-T4896A-CL (2019) PKCW-T4896B-CL (2019) | | 75+021 | Downstream rockfill | 77 degrees | Operational. | |
| PKCW-T4900A-US (2019) PKCW-T4900B-US (2019) | | 74+026 | Upstream through CPK berm, FPK beach and pipe berm | 53.5 degrees | Operational. | |
| PKCW-T4901A-DS (2019) | | 75+027 | Downstream rockfill and dam foundation | 55 degrees | Operational. | |
| PKCW-T4906A-KT (2019) PKCW-T4906B-KT (2019) | | 75+031 | Downstream rockfill, liner cut-off fill, and foundation | 79 degrees | Operational. | |
| PKCW-T4994A-CL (2019) PKCW-T4994B-CL (2019) | West Dam | 75+120 | Downstream rockfill | 72 degrees | Operational. | |
| PKCW-T4999A-DS (2018) | | 75+125 | Downstream rockfill and dam foundation | 55 degrees | Operational. | |
| PKCW-T5000A-US (2019) PKCW-T5000B-US (2019) | | 75+124 | Upstream through CPK berm, FPK beach, upstream thermal cover, native till, and bedrock | 53.5 degrees | Operational. | |
| PKCW-T5004A-KT (2019) | | 75+130 | Downstream rockfill, liner cut-off fill, and foundation | 88 degrees | Operational. | |
| PKCW-T5006A-KT PKCW-T5006B-KT (2006) | | 75+011 | Downstream rockfill, liner cut-off fill, and foundation | Vertical | Operational. | |
| | | | | | Inconsistent data since October 2022. | |
| PKCW-T5041A-KT (2017) PKCW-T5041B-KT (2017) | | 75+167 | Downstream rockfill and key trench | Vertical | Operational. | |
| PKCW-T5140-KT (2006) | | 75+144 | Downstream rockfill and key trench | Vertical | Operational. | |
| PKCW-T5200-US (2013) | | 75+320 | Upstream through FPK beach and upstream rockfill | Vertical | Operational. | |
| PKCW-T5375-DS (2007) | | 75+494 | Downstream in liner bedding | 1.5H:1V | Operational. | |
| PKCVV-15385-DS (2007) | | 75+502 | | 1.5H:1V | | |
| FRGVV-10390-DS (2007) | | 10+514 | | I.SHIIV | | |
| PKBSW-T1829 (2007) | FPK Beach | 70+484 | Beach and old West Spigot Road, between West CPK Cell and Main Cell | Horizontal | No readings in beads 4-9 since January 2023. | |
| TH22-BH01-01 (2022) | South D- | - | CPK Raise Foundation | Vertical | Operational. | |
| TH22-BH02-02 (2022) | South Barge Road | - | CPK Raise Foundation | Vertical | Operational. | |
| TH22-BH02-01 (2022) | | - | CPK Raise Foundation | Vertical | Operational. | |
| PKC-Z2-T2 (2023) | PKC Closure | - | PKC FPK Beach | Vertical | Operational. | |
| PKC-530-2-11 (2023) | Cover | - | Closure Cover Region 580-2 | Vertical | Operational | |
| 1 10-000-2-11 (2020) | 1 | - | SIDSULE COVEL REVIOL 330-2 | veitical | | |

DS = downstream; US = upstream; KT = cut-off trench; CL = centreline; PKC = Processed Kimberlite Containment; FPK = fine processed kimberlite; CPK = coarse processed kimberlite. Note: Thermistors decommissioned, destroyed or otherwise not functioning prior to the 2024 DSI reporting period are not shown in the table and are covered in prior DSI reports.

Table B-3: Processed Kimberlite Containment Facility Instrumentation – Inclinometers and SAAs

| | | l | ocation | | | |
|-----------------|-----------|----------------|-----------------|------------------|-------------------|---------------------------------------|
| Reference | Structure | Easting (m) | Northing (m) | Elevation (m) | Installation Date | Comments |
| PKCE-SAA2335 | East Dam | 533,669 | 7,151,683 | 465.00 (collar) | 2011 | Retrofitted with SAA in April 2022. |
| PKCE-IN2500 | East Dam | 533,715 | 7,151,827 | 465.44 (collar) | May 2010 | Cleaned out and monitoring resumed. |
| PKCE-SAA2800-DS | East Dam | 533,715 | 7,151,827 | 465.44 (collar) | July 2013 | Retrofitted with SAA in October 2021. |
| PKCE-SAA2900-DS | East Dam | 533,715 | 7,151,827 | 465.44 (collar) | July 2013 | Retrofitted with SAA in October 2021. |

SAA = shape acceleration array.

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APPENDIX C

Instrument Plots















PKC East - T1931AA - DS and T1931AB - DS COMBINED Bead Temperature Vs Time

PKC East - T1931BA - DS and T1931BB - DS COMBINED Bead Temperature Vs Time



\\SD Note: Data and plots provided by DDMI on September 27, 2024.



























PKC East - T2725 - KT - Bead Temperature Vs. Time










PKC East - T2900A - DS and T2900B - DS COMBINED Bead Temperature Vs Time











PKCN - T3320D - KT - Bead Temperature Vs. Time







PKC North - T4038E - KT Bead Temperature vs Time





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PKC West - T4500A - KT and T4500B - KT COMBINED - Bead Temperature Vs. Time





PKC North - T4589 - DS - Bead Temperature Vs. Time

Date









PKC West - T4896A - CL and T4896B - CL COMBINED - Bead Temperature Vs. Time







PKC West - T4999A - DS - Bead Temperature Vs. Time























PKC West - T5385 - DS - Bead Temperature Vs. Time



PKC West - T5395 - DS - Bead Temperature Vs. Time

Date







wsp



