



# AER Update on Imperial Kearn: April 11 – 18, 2024

Hello everyone,

We hope that the week has been a great one.

Please find the latest information regarding the Alberta Energy Regulator's continued regulatory oversight of Imperial under the terms of the environmental protection order.

If you have any questions, please reach out.

## AER Highlights

- NODA, WETA, DP4, and WB3 areas were inspected on April 15 and April 18
- The AER's next planned site inspection is planned for April 22
- Third-party sampling on behalf of AER is planned for April 30 and May 1
- AER SMEs are currently reviewing the following documents and Imperial's responses to supplemental information requests (SIRs):
  - Update to the Source Control and Containment Plan
  - Conceptual Site Model Interim Report: Additional SIRs were sent to Imperial by the AER

## North Overburden Disposal Area (NODA)

- De-winterization in progress

## West External Tailings Area (WETA)

- De-winterization in progress

## Drainage Pond 4 (DP4)

- A temporary repair has been completed on fencing disturbed during the winter drilling program
- A permanent repair will be completed by Imperial at a later date

## Water Body 3 (WB3)

- No unplanned downtime on any of the wellpoint vacuum systems
- All three wellpoint systems have been operating consistently
- De-winterization in progress
- A temporary sump pump was installed and will be moved when ground conditions have finished thawing and have dried

## 2023 Winter Drilling Programs

- The approved winter drilling program was completed on April 3
- There were 235 locations drilled as part of the EPO winter drilling scope (211 EPO monitoring wells and 24 ETA-SIS pumping wells)

#### Monitoring & Sampling

- Visual inspections at seep locations are ongoing by Imperial
- Inspections and sampling of seeps where water is present continue by Imperial
- The sampling frequency in surface water and groundwater locations (where applicable in the Sampling and Monitoring Plan) was increased by Imperial during the last week of March with the start of spring freshet.
- Two compliance wells in southeast East External Tailings Area (KHY23\_790 and KHY 23\_793) have exceeded control objectives (CO) for sulphate, electric conductivity (EC), and Total Dissolved Solids (TDS). Based on Imperial's groundwater velocity calculations, Imperial does not expect these exceedances extend off-lease. Two additional pumping wells (KHY24\_297 and KHY24\_483) have been activated in the area and additional pumping wells will be activated as required to intercept any flow from moving off lease.
- At DP4, sampling results for DP4-SEEP-07 were above guidelines for sulphate and TDS, Imperial believes these exceedances are due to residual soil impacts. Details in our [April 5 update](#) provide additional background on the soil removal program.

#### Fish and Wildlife

- Weekly inspections of fenced wildlife areas are ongoing by Imperial
- During an IOL inspection, several dead fish in various stages of decomposition were found near the fish fence at WB3 over the last week. Imperial has attributed the deaths of these fish to natural winter kill due to low dissolved oxygen (DO) in WB3. In mid-to-late March at most locations, the DO dropped below 1 mg/L which is the lower limit for the forage fish (Brook Stickleback, Finescale Dace, Pearl Dace and Fathead Minnow) found in WB3.
- Given the shallow nature of WB3 and the dense aquatic vegetation, decomposition of vegetation under ice can use up available DO and lead to near anoxic conditions. Localized winter kills associated with anoxic conditions are common in shallow well-vegetated waterbodies in late winter. As per Imperial, normally, these fish will settle to the bottom to decompose and are not readily visible however the fine mesh on the fish fence permits water movement straining out the dead fish and allowing for identification at the surface.