



Kearl EPO Update #16 – May 31, 2023

Imperial is committed to complying with an environmental protection order that was issued by the Alberta Energy Regulator (AER) related to industrial wastewater at our Kearl oil sands operating site. We regret these incidents and are making every effort to learn from it and apply preventative measures.

Imperial will provide regular updates to communities and potentially affected stakeholders. Updates will be posted to Imperial's website weekly and notifications will be sent via e-mail.

There are two separate incidents included in the order issued on Feb. 6. We are working with the regulator on next steps for both.

Imperial nearing completion on seep mitigation work

Imperial today provided an update on work underway at its Kearl oil sands facility. Work continues to complete remediation efforts which includes expanding our seepage interception system with additional drainage structures, pumping wells and equipment, and increasing water and wildlife monitoring in the area. We continue to provide information to communities, regulatory officials from the Alberta Energy Regulator and government departments.

Weekly updates:

- Pumping and collection systems operating as work progresses on addressing areas of shallow seepage. Installation work complete at three of four locations, final location nearing completion.
- Regular inspections and sampling at seep areas ongoing. Water sampling results provided weekly to AER and communities.
- Enhanced wildlife monitoring is ongoing, barrier installed to prevent fish from entering waterbody.
- Continued to provide information to communities on ongoing cleanup, mitigation and remediation actions. Holding site tours for community members and community leadership.
- Water testing has indicated drinking water is safe, which has been confirmed by the local regional municipality.

Environment and Climate Change Canada (ECCC) update

On May 4, Environment and Climate Change Canada (ECCC) announced it has started an investigation into the situation at Kearl. Imperial is cooperating with the department. We have been providing information on the situation at Kearl and have hosted regulatory officials for tours and testing at our site.

Seepage mitigation and prevention

Imperial continued to advance work to address shallow seepage and collect water on site. Pumping systems are operating at all four seep locations and work is continuing to complete final seep mitigations. Collection systems are being activated and continuous monitoring is also in place to ensure mitigations are working as intended. As work is completed in some areas, work crews are being demobilized from the site. About 150 people continue to work on related activities at the site.

Total off-lease surface area impacted by seepage locations covers about one hectare. Additional fencing continues to be installed as work is completed to prevent potential access by wildlife. Wildlife monitoring

is ongoing, with regularly scheduled sweeps in the area. We are working in collaboration with communities to incorporate their feedback on our monitoring plans.

The company has determined the seepage was caused by shallow subsurface pathways from on-lease industrial wastewater sources bypassing the existing Seepage Interception System (SIS). This shallow groundwater pathway was created by placement of construction fill material, generated through the development of on-lease infrastructure. We are taking actions to prevent the reoccurrence of industrial wastewater seepage leaving the Kearsley lease boundary:

- Monitoring of the surface and groundwater seep locations has been enhanced
- Design upgrades and infrastructure improvements to the SIS have been completed
- Surface and shallow ground water interception trenches, complete with water return pumps, have been constructed
- A shallow well point vacuum system has been installed in the vicinity of Waterbody 3

Cleanup of drainage pond overflow

Sampling has been conducted to confirm cleanup of impacted materials resulting from wastewater released from a drainage pond on January 31, 2023. Imperial continues to work with the Alberta Energy Regulator on cleanup certification.

Based on our monitoring, released fluids did not enter any waterways and water sampling shows there has been no impact to local drinking water sources. There is no indication of impact to wildlife.

The company has determined the overflow was caused by a combination of equipment problems and process failure. We are taking actions to prevent reoccurrence at all drainage ponds:

- Inspected and re-programmed all level measurement equipment around the ponds
- Enhancing processes for sediment management
- Increased inspection requirements during regular operator surveillance
- Conducted additional training for all operators working in this area

Water quality

Imperial continues to take actions to prevent potential impacts to downstream waterbodies. We continue to actively monitor Waterbody 3, which is primarily located on the Kearsley lease. Surface water continues to be sampled on a weekly basis, with results provided to the regulator and communities. At Waterbody 3, Imperial latest water quality results showed no detection of F2 hydrocarbons and naphthenic acids. Recovery equipment near the waterbody, which includes a vacuum system to collect the shallow groundwater, has been installed and fully activated-

Alberta Environment and Protected Areas has indicated there is no evidence that municipal drinking water sources located more than 200 kilometres downstream in Lake Athabasca have been affected. Imperial also continues to respond to community requests to provide drinking water in the Fort Chipewyan region.

Fish and wildlife

Imperial, with participation and observation from community representatives, has collected a sample of fish from Waterbody 3. These samples were submitted to a third-party for analysis and results will be shared with communities.

As a further precaution, we have installed a barrier to prevent fish from entering the waterbody.

On May 28, regular monitoring identified approximately 15 deceased minnows at the outflow location of a submersible pump within the muskeg area to the west of Waterbody 3 (not from within the body itself).

Imperial shut all pumps off within the muskeg to the west of the waterbody until further investigation is complete. This incident is currently under investigation. The fish screen around the pump is being reviewed. There is no indication of changes in water chemistry. All pumps were shut off immediately after the fish were discovered.

The fish mortalities were reported to the EDGE hotline and to Department of Fisheries and Oceans.

Community engagement

Imperial continues to engage directly with Indigenous community leaders and other community members to answer questions, provide information and begin to rebuild trust. We recognize that we still have work to do in this area and are committed to improving our communications in the future.

Community representatives were onsite with our environment and regulatory teams on May 10 to observe fish tissue sampling from Waterbody 3. We will continue to provide opportunities for community participation in environmental monitoring activities that take place over the summer.

Imperial continues to host site tours for community members and community leadership.

We have shared our mitigation and monitoring plans with communities and their independent technical reviews are underway. We are also seeking input from communities on our plans to improve our communications going forward.

Additional information

We have shared a factsheet about Imperial's response at Kearl on our website: [Getting the facts - Imperial response at Kearl \(imperialoil.ca\)](#)

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