Comparison of Quesnel Lake Water to Water Quality Guidelines

Key substances in water samples collected in Quesnel Lake from August 8 to 25, 2014 are compared to water quality guidelines protective of aesthetics/operational considerations, human health and aquatic life.

Aesthetics/Operational



- The guidelines for the substances below are based on aesthetic, but not health effects. Aesthetic effects include taste, staining and odour.
- Aluminum was the only substance where average concentrations in the lake were above an operation guideline used by the Province of BC.
- Water samples collected at drinking water intakes have so far met the guidelines for aluminum.
- Average concentrations for all other parameters were below the applicable guideline.

Canadian Drinking Water Quality Guideline



Average Total as Measured from Samples Sampled Range August 8 to 25, 2014

Canadian Drinking Water Quality Guidelines (CDWQGs)

CDWQGs

- Are values below which effects on people are not anticipated • Are typically based on human health effects
- Can be based on aesthetics (e.g., taste, odour, colour) if this will impact on whether people will consider the water drinkable
- Operational considerations are also considered (e.g., factors that may affect processes at treatment plant or water distribution centers)

Health • The guidelines for the substances below represent safe levels for the purpose of health protection. Average concentrations of arsenic and mercury are lower than the safe level for health protection near Likely and adjacent to Hazeltine Creek, near the area where the tailings entered the lake. • The maximum measured concentrations of arsenic and mercury in water are below the safe level for health protection.

QUESNEL LAKE AT HAZELTINE CREEK Log Scale Drinking Water Quality Guidelines 10,000 10,000 1,000 1,000 Manganese Arsenic Mercury Iron Average Total as Measured from Samples Sampled Range August 8 to 25, 2014 Canadian Drinking Water Quality Guidelines



"...water sourced from Quesnel Lake is safe to drink... individuals are reminded they should not be drinking cloudy water. Point of use filters that are NSF certified (ie. commonly used systems in households drawing water from lakes or wells) will safely remove the suspended sediment."



Full text of Interior Health Bulletin:

- Go to www.interiorhealth.ca
- Click on "About Us" then "Media Centre" then "News Releases"
- Navigate to the News Releases from August 2014
- Open the Public Service Announcement from August 25, 2014 entitled "Mount Polley Mine Tailings Pond Breach - Quesnel Lake Water Quality"

Quicklink to full text









BC Water Quality Guidelines (WQGs) **Protective of** AquaticLife

BC WQGs - Aquatic Life

- Are typically expressed in terms of the total fraction
- to address short-term and long-term effects separately

Aquatic Life • Quesnel Lake at Hazeltine Creek, where the tailings entered the lake shows water quality to be suitable for aquatic life, except for turbidity. • The dissolved metals, which better reflect metal forms that could lead to aquatic effects are below the water quality guidelines on average. Total metals are believed to reflect the presence of particulate matter and not to represent harmful forms of metals; however, these are on average below the

sample).

water quality guidelines with

the exception of copper (one

QUESNEL LAKE AT HAZELTINE CREEK

• Are values below which effects on aquatic life are not anticipated • Are expressed in terms of a maximum and a 30-day average concentration