ARBUTUS RESERVOIR AND SUPPLY PIPING

TOWN OF LADYSMITH

View of the new Arbutus Reservoir with Town of Ladysmith and harbour in background

Associated Engineering was retained as a sub-consultant to provide structural and electrical design services.

The new reservoir is constructed in reinforced concrete. A circular, two-cell configuration was selected as the most cost-effective for this site, which is entirely in rock.

Due to budget constraints and limited power supply, the chlorination equipment was replaced, but housed in the existing small chlorination building.

The supply piping system was designed to allow future addition of a water treatment plant at the site and to connect to an interconnecting main from the south Ladysmith water system to facilitate future centralized treatment, without having to shut down the supply system.

The Town of Ladysmith retained Koers & Associates Engineering Ltd. to design a replacement of the old 4.5 ML open Arbutus Reservoir, which was vulnerable to contamination, and recently was the subject of a suspected vandalism attack.

The new reservoir was designed with a 5.7 ML capacity and a top water level 23 m higher than the old reservoir to improve distribution pressures at the higher elevations in the Town.

This necessitated the Town to create additional pressure zones to reduce already high pressures at the lower elevations in Town. Koers modeled these changes and designed the necessary pressure reducing valve chambers and piping modifications.

Inlet supply and outlet piping leading up to the reservoir site

Contractors: D. Robinson Contracting Ltd. – Reservoir
Hazelwood Construction Inc. - Rock Excavation
Knappett Industries Ltd. – Supply Piping
Construction Cost: $3,200,000
Project Completion: 2008

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Consulting Engineers