

Lake Geraldine Dam Repairs City of Iqaluit

General

The need for the repairs to the concrete and earthen dam was identified during a dive investigation in 2001. The repairs required the sealing of a leak in the concrete structure. The location of the leak was noted in the dive investigation. In 2003, Dillon Consulting Limited completed the design and tender for the proposed dam repairs. The contractor awarded the works was Bellai Bros Ltd.

Construction Activities

The scope of work for the Construction Contract is outlined as follows;

1. Contractor supplied all labour, plant, tools, equipment and materials necessary to carry out pressurized grout injection operation. The work was completed from the dry (down stream) face of the dam.
2. The concrete dam had a series of core holes drilled into the face of the dam. The coring was completed to intersect the location for the cracks identified in the diving report.
3. Grout installation was completed in accordance with manufacturer instructions.
4. The grout used was a poly-urethane hydrophilic grout that expands in the presence of water.
5. The work was performed over 3 days (not including mobilization).

The work of the contract was specified to meet or exceed the following standards.

1. National building code of Canada 1995 and all local, municipal and territorial by-laws and ordinances including all amendments up to the project date.
2. Occupational health and safety act and regulations for construction projects.
3. Canadian Construction Safety Code (latest edition).
4. Canadian environment assessment act (CEAA), 1995.

Dillon Consulting Limited provided inspection services during the installation. Mr. Elliot White, MIT, of Dillon was present on a periodic basis to witness the works. The work witnessed by Mr. White were completed in general conformance with the project specifications.