

SNARE HYDRO DEVELOPMENT | DAM SAFETY REVIEW | SNARE RIVER

Northwest Territories Power Corporation



Description of Services Provided:

The Northwest Territories Power Corporation (NTPC) retained Meco to prepare a Dam Safety Review for structures located at their Snare Hydro System. There are four (4) Hydroelectric Developments in cascade at Snare: Snare Rapids, Snare Falls, Snare Cascades and Snare Forks. The Snare system is located 145 kilometers Northwest of Yellowknife, NT.

The hydroelectric facility comprises main dams, freeboard embankments and dykes, weirs, spillways and monitoring structures for seepage. The site inspection assessed present condition of structures for deficiencies and deterioration. The design and construction review process included hydrologic and hydraulic analysis based on the updated flow data, review of freeboard requirements and structural stability assessments under the present design loading conditions.

A Dam Safety Review as described by the CDA Guidelines, 2007 generally includes:

- A review of classification of all dams
- Comprehensive site inspection of all dam structures
- Review of Design and Construction using design criteria generated from the consequence classification.
- Review inflow hydrology and hydraulics, including development of Inflow Design Flood and Freeboard requirements.
- Review of management practices as they relate to emergency preparedness, operations, maintenance, surveillance and public safety around dams.