

PORT UNION | RATTLING BROOK | SANDY BROOK | DAM SAFETY REVIEW

Newfoundland Power



Description of Services Provided:

In response to the Request from Newfoundland Power (NP), Mitchelmore Engineering Company (Meco) Ltd. Submitted a Dam Safety Review (DSR) for the Port Union, Rattling Brook, and Sandy Brook dams. The engineering review determined the safety of each dam structure and identified physical and procedural deficiencies that require additional investigation or remediation and recommended mitigation to improve safety.

NP has an eclectic array of structures and several unconventional structure types. Most of NP's structures are under 10m height and vary in classification from LOW to VERY HIGH consequences. Meco have reviewed nearly thirty dams at eight developments for NP during the past three years.

Meco's services included:

- Classification of dams in accordance with the CDA Guidelines
- A site inspection for physical deficiencies
- A review of OM&S and EPP Manuals and practices
- A review of compliance with previous reports
- Documentation and preparation of a formal report with findings and recommendations
- **A review and limited analysis of Design and Construction. NP's structures included :**
- Homogeneous Type Earth fill Dams
- Rock fill shell with Steel Sheet Pile (SSP) core
- Timber dams
- Concrete gravity dams and spillways

The scope of services for each project will vary slightly depending on the amount of previous work performed and the needs of NP. Projects do not generally include inundation mapping or development of EPP's. Design and construction review is usually limited by available Information



Responsibility on Project: Meco was responsible for classification of the structures, site inspections, review and analysis of all design and construction procedures, slope stability assessment, and preparation of a DSR report and presentation.

Relevance of Project: This project involved a DSR of an embankment dam built with glacial fill, similar to dams owned by NP.