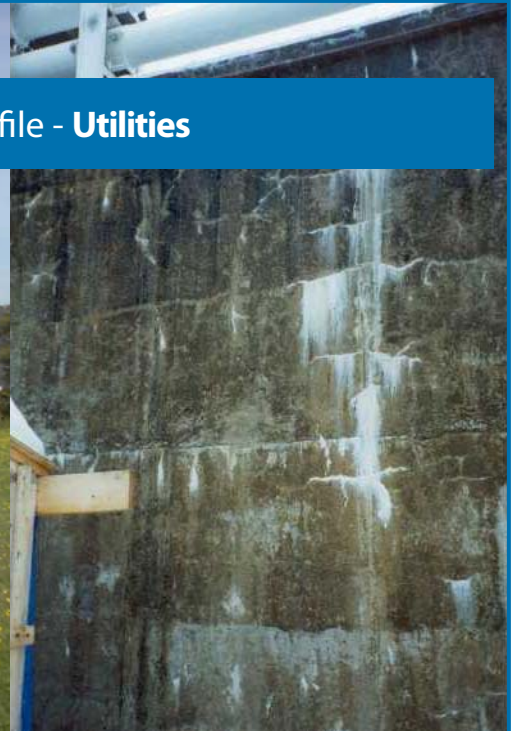


Project Profile - Utilities



PROJECT

**Mactaquac Generating Station 451,
New Brunswick, Canada**

SUMMARY

Waterproofing and protection of water intake passages suffering from alkali silica reaction.

PRODUCTS

Cemprotec Elastic
Monolevel FC
Fastfill
Polymer Admixture 850
Fastfill WP

CLIENT

NB Power Corporation

CONTRACTOR

RCJ Concrete Restoration &
Coatings Inc

BACKGROUND ►

Mactaquac Dam is part of a hydroelectric plant on the Saint John River in the Canadian province of New Brunswick operated by NB Power Corporation.

It has a capacity of 672 megawatts with 6 turbines generating 20% of New Brunswick's power. Building started in 1964 and by the 1970's distress was visible with leakage soon becoming evident through joints in many parts of the structure. Tests revealed expansion of the concrete caused by alkali silica reaction due to reactive silica present in the greywacke used in construction. In 2003 coatings trials were initiated with Flexcrete products chosen as the only ones suitable to fully waterproof the concrete.

THE SOLUTION ►

Following preparation, any small voids and rough areas were filled prior to coating. **Monolevel FC** was used in areas exhibiting little or no water infiltration and **Fastfill** for areas of moderate infiltration. In areas of severe water ingress, **Fastfill WP** was used as a water plug. All horizontal surfaces were then sealed with **Polymer Admixture 850** diluted 1:1 with water to prevent outgassing. The first coat of **Cemprotec Elastic** was applied at 1.25mm thickness and **Cemprotec Scrim** embedded into the wet material, before applying a second coat at the same thickness to provide complete protection.



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EMS 597350
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Health & Safety

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