



Saint-Joseph Potable Water Reservoir



ABOUT THIS PROJECT:

Market Segment:
Water Treatment Plant

Engineer:
Stantec

Products Used:
Xypex Admix C-500 NF

Location:
Sainte-Marie,
Quebec, Canada

Owner:
Ville de Sainte-Marie

General Contractor:
Excavations Lafontaine

The City of Sainte-Marie undertook the upgrade of the Saint-Joseph potable water reservoir to maintain reliability of the municipal drinking water distribution system and support growing community demand. The project involved the construction of new concrete reservoir structures that would be exposed to continuous moisture and strict watertightness and durability requirements typical of potable water storage facilities.

The project was constructed under winter conditions and within defined budget constraints, creating challenges for traditional surface applied waterproofing systems that require multiple installation steps and increased on site labour.

To address these conditions, Xypex Admix C-500 NF crystalline waterproofing admixture was specified for the reservoir concrete structures to provide integral waterproofing and long-term durability.

Approximately 1,280 m³ of concrete incorporating Xypex Admix C-500 NF was placed during construction. Added during batching, the crystalline admixture reacts with moisture and unhydrated cement particles in the concrete to form insoluble crystals that block capillary pores and microcracks, reducing permeability and protecting the concrete against water egress throughout the full depth of the structure.

Using Xypex Admix C-500 NF eliminated the need for multi-step surface waterproofing systems, reduced on site labour requirements, and simplified construction during winter conditions. The integral waterproofing approach provides long term durability and low maintenance performance for the potable water reservoir serving the City of Sainte-Marie.

