

CAMECO CORPORATION McARTHUR RIVER PUMPING STATION & FORCE MAIN

PROJECT BACKGROUND

Sewage treatment at the McArthur River mine was provided by a mechanical rotating biological contactor and ultra-violet disinfection prior to release into an exfiltration system. Years of operational issues and effluent quality not meeting Saskatchewan Environment guidelines resulted in the need for upgrades to the existing system. Servicing the permanent camp, Sewage Pumping Station No. 5 was subject to frequent back-ups and flooding due to capacity shortfalls. BCL was retained to evaluate proposed upgrades as well as provide additional alternatives for mechanical and conventional sewage treatment.

BCL proposed a new high density polyethylene lined facultative lagoon to reduce operational concerns while meeting required guidelines. BCL designed the new lagoon system including replacement of Sewage Pumping Station No. 5 and a new force main to service the mine's permanent camp. Force main construction was non-conventional and required insulation and heat tracing for above grade installation to meet policies put in place by regulatory agencies and Cameco.

PROJECT HIGHLIGHTS

Submersible style pumps in a 5.6 m deep concrete wet pit style station.
1,800 m of 100 mm diameter high density polyethylene forcemain complete with insulation and heat tracing.
Gravity sewer main replacement to new station.

BUDGET

Pumping Station - \$1,000,000
Force Main - \$1,500,000

YEAR OF COMPLETION

2007

