



Decommissioned Mine

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The solids from this primary settling basin were pumped to the Geotube® containers for dewatering and disposal.

The Challenge

A company in charge of the treating the wastewater generated from a decommissioned gold mine in British Columbia had to come up with a solution to comply with new solids disposal regulations. Dewatering the wastewater using Geotube® containers was evaluated and proved effective on small bench-scale tests. The objective of a full scale trial was to realistically evaluate the Geotube® container technology as well as to determine the logistical aspects of a full scale project.

WaterSolve's Chemical Conditioning

Representative samples of the mine wastewater were tested by a WaterSolve technician in the facilities laboratory. Dewatering polymers were evaluated based on water release rate, water clarity, and flocculent appearance. In addition, dosing rate(s) were determined during bench-top dewatering experiments and recommendations were provided to the mine during this phase of the program. Solve 9325 was the recommended polymer for dewatering the mine wastewater.



A sample of mine waste water conditioned with Solve 9325.



The two Geotube® containers were placed in an area where the filtrate could easily flow back into the settling basin.

Geotube® Container Sizing

Geotube® containers are manufactured from high strength polypropylene fabric and designed to allow effluent water to escape through the pores of the fabric while retaining the chemically-conditioned solids. Two 65' circumference x 72' length Geotube® containers were used for this trial.

The Solution

Watersolve representatives traveled to the mine and helped start-up the full scale pilot study. The two 65' circumference x 72' length Geotube® containers were deployed on a lined and graded lay-down area. A submersible pump on a barge transferred the material through four inch hoses and into the Geotube® containers. During the week long pilot study, small adjustments were made to the chemical treatment to improve the efficiency of the polymer. The mine employees were trained on the proper ways to fill the Geotube® containers and how to adjust the polymer dose based off of visual observations of the chemically treated samples. Daily notes and relevant data were recorded and included in an installation report along with recommendations and sent to the client after the pilot study was completed. Overall, The Geotube® containers proved to be an effective means of dewatering the mine waste water and helped the mine to comply with new solids disposal regulations.



Treatment Products, Solutions & Services
Through Science, Engineering & Management