

Obed Mine Coal Mine

Obed mountain spill was a mining disaster that occurred on October 31, 2013, when a waste pit at the Obed Mountain Mine failed.

Objective:

Provide an environmentally safe, effective, and efficient treatment for TSS reduction to ensure regulatory limits are met. Treatment must be mobile, have a small footprint, require little to no energy input and be operated by unskilled staff.

Situation:

In the first month after the Obed Mountain coal mine spill, water quality tests revealed the presence of metals and chemicals such as cadmium, arsenic, manganese, lead, mercury, and PAHs in excess of limits for consumption or life along the first 40 km (25 mi) of the Athabasca River. Mercury, for instance, was found to be nine times higher than normal, while PAHs were at levels four times higher than the Canadian standard for potable water. As a result, residents were discouraged from both drinking any of the Athabasca as well as watering any livestock or pets.

By December 2013, as the plume reached Fort McMurray, government officials reported that water from the Athabasca was once again below safety thresholds for both wildlife and drinking water. Monitoring continued for at least two years. Clearflow Group was called in to be apart of the Mine Disaster Relief team. While on the job, Clearflow worked along side Indigenous youth and workers from the Alexis Nakota Sioux Nation, Clean Harbours, Matrix Solutions, Sherritt Coal International.

Solution:

Clearflow's Gel Flocculant blocks and Treated Fabric were installed in - situ rivers and stream as well as engineered catchment basins. The run-off from the mine contacted the Gel Flocculant thus causing rapid settling of TSS in the primary settling cells upstream of the Athabasca river. Clarified water was moved to the secondary (polishing) cells where ultra-fine materials were filtered through the treated natural fabric.

Project Gallery

