

APT[®]sorb

When clean water matters

MINE WATER TREATMENT

THE CHALLENGE

Lead, zinc and cadmium in mine water. An active base metal mine in North America had elevated levels of lead, zinc and cadmium in its water. A successful treatment technology needed to meet the following criteria:

- Treat the direct discharge from the underground mine, including periodic elevated suspended solids
- Meet permit limits for all metals
- Pass chronic toxicity (WET) tests
- Cost less than \$1 per 1,000 gallons

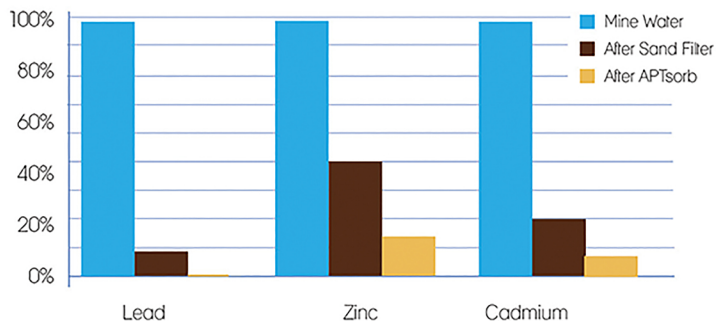
APT[®]sorb SOLUTION

American Peat Technology operated two parallel pilot treatment systems at the mine site in order to test both active and passive treatment technologies using its **APT[®]sorb** water remediation media. Both systems were preceded by a sand filter to remove the bulk of the mine solids that were present.



The active pilot system consisted of a pressurized tank containing APT[®]sorb media. Loading rates were varied from 1 to 5 gpm/ft². The passive pilot was a gravity-flow system; the APT[®]sorb media was contained in a drum and the mine water was delivered at 1 gpm/ft².

Percentage of Metal in Water



THE RESULTS

The sand filter effectively removed the suspended solids from the water. After the sand filter, both of the **APT[®]sorb** pilot systems removed dissolved lead, zinc and cadmium to well below permit levels. The treated water passed the WET test and the projected cost of treatment, using a lead/lag arrangement, was less than half of the target cost.

