



ONE OF THE LARGEST ROLLINGSTOCK MAINTENANCE DEPOTS IN THE SOUTHERN HEMISPHERE HAD A BIG ENVIRONMENTAL PROBLEM.

The locomotives are acid washed to remove copper oxide build up on the roof and windows deposited through overhead power supply cables, and this acid washing causes the effluent to be acidic, with a high concentration of metals, predominantly copper.

Over many years of operation, the depot had not been able to meet its EPA discharge requirements for copper, phosphorous, BOD, and suspended solids. Further reductions in the effluent limits were to come into effect.

There were ongoing problems with sludge management and disposal (it was being transported long distances to suitable landfill) and high levels of odour due to organic compounds.

The company wanted a total solution for their wastewater compliance issues. Virotec was therefore called in.

VIROTEC KNOWS EXACTLY WHAT TO DO

In the past 14 plus years, Virotec had come across many problems similar to those that the depot was experiencing. We knew exactly what to do.

The key is our proprietary non toxic, non hazardous, environmentally safe reagents. With this depot

the conventional alkaline (lime) treatment didn't work. By adding one of our special reagents, a dense, stable sediment that is easily recovered and dewatered, was produced.

The reagent has a high acid neutralizing capacity, fast settling rate characteristics, and a high metal binding efficiency. Minimal capital works and no plant modifications were required.

The sediment formed when the reagent settles and dries can now be classified as nonhazardous because it holds the bound metals sufficiently tightly so that they not released in the leachate.

Once the company knew what Virotec could do, they said go. System design, engineering, trial management, ongoing monitoring and full scale commercial application then followed.

THE LOCOS KEEP RUNNING

When everything was in place, there was a major reduction in heavy metal concentrations and all EPA discharge limits were met. There was also a significant improvement in effluent clarity and colour ("it was the cleanest they had ever seen").

The sludge was reclassified as being benign and so it could be accepted into a general clay lined local landfill with considerable cost savings in disposal and transportation fees.

Major capital upgrades to the waste water treatment plant were eliminated.

The Operations Manager was delighted. "Virotec helped us with a problem we couldn't solve. The trials went as they said they would and they now help us manage our wastewater requirements. We comply with the EPA's waste water requirements and the treated water doesn't smell anymore and looks good enough to drink".



FOR YOUR FREE SITE AUDIT, PLEASE CALL VIROTEC TODAY ON 1300 660 460