



FilterBoxx™

An Ovivo Company

WASTEWATER SOLUTIONS

PROJECT PROFILE

COAL FIRE POWER PLANT

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THE CLIENT

The client is a coal fire power plant and is an operating unit of a Canadian electric energy utility company with over \$34B in assets and serving 2.5 million customers. The company is committed to sustainability by investing in their companies and focusing on cleaner, renewable energy sources, while modernizing their facilities and operations and implementing good corporate governance.

THE SITUATION

The coal fire power plant receives runoff from the coal ash piles and precipitation events in an onsite pond. The pond ultimately discharges to a surface water course. The pond exceeds discharge levels of Hexavalent Chromium (Cr6+) and Molybdenum. The pond is remote to the power plant and lacks infrastructure. The maritime climate meant that the plant could operate throughout winter but also needed to operate in sub-zero conditions. The client needed a simple, effective, containerized system to remove these contaminants throughout the year and with minimal labour.

THE SOLUTION

FilterBoxx provided a completely containerized wastewater treatment system with a rated capacity of 300 gpm. The solution consists of a combination of 5 micron filtration and 1 micron filtration optimize TSS removal and cartridge filter life. The solution includes activated carbon beds to manage organics and algae within the pond. The solution also includes two types of single use ion exchange resin to optimally target the removal of the Hexavalent Chromium (Cr6+) and Molybdenum ions.

FilterBoxx designed the system with single use resin specifically to eliminate the handling of regeneration chemicals and disposal of spent regeneration solution from site.





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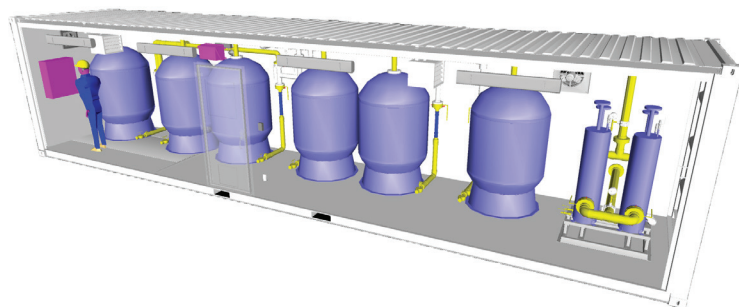
HOW WE MADE A DIFFERENCE

Because site conditions may change over time, and contaminants may change as well, it was important the system had built in flexibility.

FilterBoxx designed the system so the media vessel could operate in several lead-lag and grouped configurations that allows different resins and combinations of media to be used at any time in the future.

FilterBoxx completed the entire execution of the project, from start to delivery in 10 weeks. The FilterBoxx certified field service technician arrived on site, and completed the installation checklist, start-up, and training of site operations personnel within 3 days.

The plant achieved the effluent standards on start-up allowing the plant to discharge in compliance immediately.



INFLUENT / EFFLUENT TREATMENT SUMMARY

PARAMETERS	UNITS	INFLUENT	EFFLUENT
Hexavalent Chromium (Cr6+)	µg/L	55	<16
Molybdenum	mg/L	2.5	< 2
TSS	mg/L	3	< 25
pH	SU	7.5	6-9

MARKETS

- Mining
- PFAS/PFOS removal from drinking water
- Industrial wastewaters
- Chemical processing industry
- Hydrocarbon processing industry
- Industrial remediation
- Groundwater treatment
- Environmental clean-up

PROCESS FLOW DIAGRAM

