

CETCO

ENERGY SERVICES

A MINERALS TECHNOLOGIES COMPANY



SUCCESS STORY

Water Treatment & Filtration
Pipeline Fluid Management



CLEAR SOLUTIONS
for complex fluids

PIPELINE HYDROTEST FLUID FILTRATION AND DYE REMOVAL IN SARAWAK, MALAYSIA



CHALLENGE

- Depressurize and treat hydrotest water at flowrates up to 26,500 BPD while meeting environmental discharge requirements.



SOLUTION

- Fluid handling and multi-stage filtration system with fluorescent dye removal capability.



RESULTS

- Over 18,000 m³ of clear, colorless water discharged in compliance with project requirements.

PIPELINE HYDROTEST FLUID FILTRATION AND DYE REMOVAL IN SARAWAK, MALAYSIA

CHALLENGE

During commissioning of the 63.8 km 24-inch Samalaju gas pipeline, used hydrotest water containing fluorescent tracing dye required treatment prior to discharge to meet local environmental regulations. High flowrates of 26,500 BPD would require a robust filtration system to meet pumping capacities.

The customer required a temporary, high-capacity treatment solution capable of accommodating variable flow rates and pressure conditions associated with pipeline dewatering activities. In addition to ensuring consistent discharge quality throughout the commissioning program, the system needed to support ongoing operations through flexible flow management and uninterrupted treatment capability during media maintenance.

CETCO SOLUTION

CETCO designed, supplied, and operated a modular water treatment package at the TOS-2 facility consisting of:

- Two 230-bbl pressurized storage tanks
- Two SF-800 solids filtration units
- Three RV-72 Granular Activated Carbon (GAC) vessels

Hydrotest water was initially received in the storage tanks to provide surge capacity and depressurization. The SF-800 solids filtration units were utilized downstream for removal of suspended solids prior to adsorption treatment.

Next, the water was directed through the RV-72 GAC vessels, where the activated carbon effectively adsorbed the fluorescent dye and polished the water to a clear, colorless condition suitable for discharge.

Continuous water-quality monitoring was conducted at the treatment system inlet and at individual vessel outlets to verify treatment performance. The modular treatment configuration enabled operators to adjust flow rates, perform carbon vessel backwashing, and complete GAC media change-outs as required while maintaining overall treatment operations.

RESULTS

CETCO successfully treated and discharged 18,010 m³ of hydrotest water at up to 26,500 BPD during the commissioning campaign. The treatment package consistently removed the visible fluorescent dye from the water, producing clear, colorless effluent that met the project discharge requirements.

Our extensive design and operational experience helped engineer our system with operational flexibility necessary to accommodate changing commissioning conditions. By combining robust solids removal with proven activated carbon adsorption technology, CETCO enabled uninterrupted commissioning activity while ensuring regulatory compliance and effective management of a large volume of dye-bearing hydrotest water.

