Petrojam Wastewater Treatment Plant, Jamaica

ETA is curently involved in the detailed design of the process wastewater treatment facility for the single oil refinery in Jamaica. Currently, refinery process wastewater is passed through an API separator which removes oil by gravity separation, and effluent wastewater is discharged to the Kingston Harbour. The API separator effluent does not meet the Trade Effluent Standards set by the National Environment and Planning Agency (NEPA). In keeping with its mandate to preserve the environment and to comply with local regulations, Petrojam intends to install a new WWTP onsite and downstream of the API separator.

A basic design for the new WWTP had been prepared and it included the following major equipment units:

- Equalization Tank
- Spent Caustic Neutralization
- Dissolved Air Flotation (DAF) Units for further oil and grease removal
- Chemical Treatment Packages
- Colling Tower to lower the temperature of process wastewater before biological treatment
- Biological treatment for nitrate removal and Secondary Clarifier
- Tertiary Filtration for Total Suspended Solids Removal
- Waste Activated Sludge Thickener
- Dewatering

The implementation of the project will be in three phases as follows:

- Capacity of 2,000 m^3/day and comply with temperature and oil and grease effluent requirements
- Capacity of 2,000 m^3/day and compliance with BOD_5, TSS, TN and TP effluent requirements
- Capacity of 4,000 m^3/day and compliance with temperatue, oil and grease, BOD_5, TSS, TN and TP effluent requirements