

WATER TREATMENT SOLUTIONS

About Us:

NELCO GULF is a group of experienced Engineers who are dedicated to providing the highest quality water treatment solutions to clients in the UAE for more than a decade. We provide full range services to optimize water use and meet the required water or wastewater quality for various industrial applications. We take extreme care in ensuring quality and offering full customer satisfaction.

Area of services:

- ✚ ETP
- ✚ STP
- ✚ Portable water Treatment
- ✚ Cooling Tower water Treatment
- ✚ Boiler water Treatment

Why Us?

- ✚ Optimize the performance of your plant.
- ✚ Maximize the life of the components of your plant.
- ✚ Minimize the risk of breakdown of your plant.
- ✚ Assure the required effluent quality at the lowest long-term cost.
- ✚ Avoid 'out of consent' issues and environmental impact.
- ✚ Analyze the source and cause of failure and rectify the system.



To make the life easier for you we can provide complete water management, waste management and environmental management plans. This plan will help you achieve the standards of pollution board and build your brand reputation.

Quality

Quality is of utmost importance in our work culture and all business operations. To achieve this objective, we have adopted strict quality. Control measures and we source our materials only from very reliable and established vendors. Our quality control managers check quality at each stage of supply.

Team

A team of highly qualified chemical engineers, mechanical engineers and professionals acts as the prime strength of the company. These professionals use their expertise in the industry and help us to identify the best manufacturers for our range of Industrial Chemicals.

Our services:

1. Maintenance and managing of plant (Parts, Pumps, Tanks, etc.)
2. Cleaning and shut down of plant.
3. Operation, treatment and monitoring
4. Maintenance of Electrical & mechanical equipment.
5. Supply of Parts and Equipment.
6. Supply of chemicals for Treatment.
7. Adding Latest Technologies for treatment process
8. Calibration & Testing
9. Handling and Removal of High Residue Generated Waste (Wastewater & sludge).



ETP Operation & Maintenance

Importance:

All industrial operations produce some wastewaters otherwise known as effluent. Effluent from the industries are a major source of environmental pollution, especially water pollution. When disposed into water bodies or onto land these effluents will result in the deterioration of ecology, eutrophication and damage to aquatic life. Therefore, the treatment of the effluent is a must before it leaves the factory premises. By law factories must monitor the quality of their wastewater and stay within the limits.

Treatment stages

1. **Preliminary** (Physical): physical separation of particles based on size,
 - Screening
 - Sedimentation
 - Clarification
2. **Primary** (Chemical and Physical): removal of suspended and settleable materials
 - PH control
 - Coagulation and flocculation.
3. **Secondary** (Biological, physical and Chemical): Remove or reduce the Concentration of organic and inorganic compound
 - Aerobic treatment
 - Anaerobic treatment
 - Clarifier or settler
4. **Tertiary** (advanced treatment): removal of residual Suspended solids and dissolved solids.
 - Activated carbon and sand filter, Membrane Process etc.
 - Disinfection
 - De-chlorination
5. **Sludge Treatment:**
 - Thickening
 - Drying (Filter press, Dewatering centrifuge etc.)
 - Disposal

Maintenance program

Time period to test the factors:

- **Daily:** pH (if not continuous); DO in biological reactor (if not continuous); half hour settled solids (ASP only); colour.
- **Weekly:** MLSS and SVI (for ASP only); TSS; TDS; and COD.
- **Monthly:** BOD.
- **Quarterly or less frequently:** Heavy metals, other analytes specified by law.

Parameters and sampling point

Unit	Parameters to test	Sampling point
Equalization tank	pH, TDS, TSS, COD, Temp.	Outflow
Neutralization Tank	pH	Outlet to ensure that acid/alkali has been properly mixed
Coagulation/Flocculation	pH	Outflow
Primary Clarifier	pH, TSS, TDS, COD, BOD	Outflow
Biological Reactor	DO, pH, Temp, AS sample for Microscopic examine	In Aeration basin
Secondary Clarifier	BOD, COD, TSS	Outflow
Treated water	pH, TSS, TDS, BOD, COD,	Outlet

