

# NATCO DOX

## Dispersed oil extractor system

### APPLICATIONS

- Ethylene quench water treatment

### ADVANTAGES

- Reduces potential for exposure to hydrocarbons and benzene, toluene, and xylene (BTX)
- Decreases hazards associated with handling and disposal through design with no disposal components (consumables)
- Removes free and emulsified hydrocarbons and suspended solids to 20 ppm or less
- Reliably operates in the presence of tars, coke, or heavy and light hydrocarbon concentration changes
- Lowers operating costs through limited net water usage and recovery of light hydrocarbons for fuel or resale
- Lowers fouling of steam generators and strippers, reducing downtime of downstream equipment
- Reduces installation times for quicker commissioning and startup
- Comes in standard and custom-engineered packages
- Enhances cleanup of groundwater, ethylene quench water to feed dilution steam generators, and water feed to stream strippers
- Eliminates settling basins, API separators, sludge pits, and deep well injection
- Enables closing oily water sewers
- Reduces waste reduction through product or hazardous material recovery, recycle, or both



*The Schlumberger NATCO DOX system.*

The efficient, reliable NATCO\* DOX\* dispersed oil extractor system produces a clean water source for dilution steam from recycled ethylene quench water. The DOX system is uniquely suited to solve tough emulsion, hydrocarbon, solids, and water separation problems. It is available in both standard and custom designs and can be tailored to fit an existing or planned plant process, biological treatment, or environmental compliance projects. The DOX system provides customers with versatility in design and operation combined with flexibility in process.

### Innovative operating principle

Traditional water cleanup systems use technologies that require heavy operator intervention for changeout, cleaning, and backwash, increasing operating costs and increasing the potential for exposure to process contaminants.

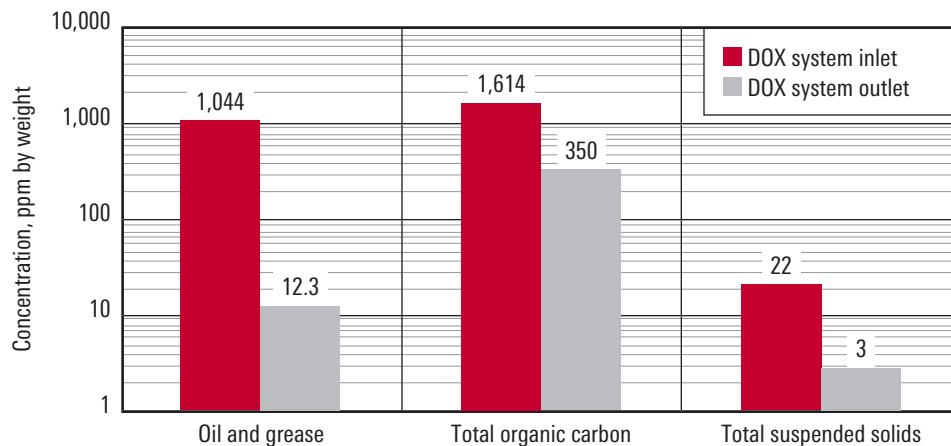
The DOX system consists of two specially designed coalescers (one primary and one secondary) and one NATCO PERFORMAX\* horizontal high-efficiency phase separator. A primary coalescer initiates coalescence and removes solids and tars. Contaminant removal is enhanced in a second coalescer that enables clean separation of the hydrocarbons, solids, and water. This continuous process operates unattended with minimal maintenance required.

The fully automated DOX technology is self contained to provide online backwash cycles for

- source control
- waste reduction
- limited operator exposure to aromatics
- highest onstream times in the industry.

### Performance while meeting regulations

The ability to provide efficient performance while meeting environmental regulations is an advantage of the DOX system. Featuring an engineered design that provides reduced maintenance, ease of operation, and low operating costs, the DOX system is able to help customer improve cost effectiveness.



Typical NATCO DOX system performance.

## Training

As part of our commitment to providing full-service solutions to customers, we also provide a diverse educational services program for the oil and gas processing markets. Our training capabilities include both open enrollment and custom courses that can be designed to meet our customers' specific needs, in addition to the ability to provide hands-on training.

## In-house process solutions group

Schlumberger provides in-house consulting services by an integrated team of R&D specialists that routinely develop solutions for challenging customer process problems. This unique group of specialists is available to work with customers to design efficient solutions that meet project requirements.

## Operating solutions

The DOX system is available in an extended-term operating contract in which Schlumberger installs and operates the system to maximize the operating benefit and enable customers to focus on production.

## Aftermarket support

Schlumberger provides site support using a dedicated team of experienced service and project representatives. With strategically located hubs across the globe, this network provides turnkey expertise and support for customers for the duration of a project—from commissioning to operation. From replacement parts and spares, from field service to equipment repair, our mission is to provide the highest-quality support to ensure our customers' satisfaction.