

**4090 QUINPLEX® WHITE GEAR LUBRICANT**  
**SOUTHEASTERN WATER TREATMENT PLANT, South Carolina**  
 Water Treatment Plant • SIC 4941 Water Supply

**CUSTOMER PROFILE**

A Southeastern Water Company provides the main source of water to area Coastal communities. They service over 1,000 square miles in the two county area.

The rapid growth of the coastal area demands that they continue to invest and maintain their equipment at peak performance. Today the water plant processes over 20 million gallons per day.

**APPLICATION**

The Water Company has twelve mixer gear units on a flocculator basin.

**AREA OF INTEREST**

An area of concern were the twelve mixer gear units on the flocculator basin. The units were converted from H2 oil to H1 Food Grade, since the mixers operate above the water. Lubrication Engineers 4090 QUINPLEX® White Gear Lubricant was selected. LE 4090 is NSF and USDA H1 for food processing equipment. It has excellent load-carrying, wear-reducing and non-foaming properties. LE 4090 contains LE's proprietary additive QUINPLEX® and an anti-microbial agent.

A routine oil sample showed above normal water levels. The maintenance Supervisor, decided a proactive preventive program was needed. With the help of LE Lubrication Consultant Helmut von Schweinitz,

the following procedures were implemented.

**LE SOLUTION**

- Esco Oil Site Glasses were installed on drains to detect and drain off accumulated water.



- Des-Case Desiccant Bladder Breathers were installed on the gearboxes to seal the gearbox from outside humidity and contamination.



- Depth Filtration was used to remove moisture and clean particulate contamination from the oil. (Note: sample of oil before and after filtration)



### **CUSTOMER COST SAVINGS**

The results in this application has encouraged the technical maintenance department to look at other equipment applications that can benefit from the Oil Site Glasses and Desiccant Breathers. In this application, they have saved untold costs in downtime and oil changes by using these preventive maintenance steps. They are moving from traditional change the oil every six months to condition based monitoring . The maintenance department notes *"It is easier to use these tools that detect and prevent contamination in equipment than the costs to clean up a contaminated gear box."*



*Lubrication Engineers Inc. would like to thank LE Lubrication Consultant Helmut von Schweinitz (pictured) for the information provided to prepare this report.*