# **CASE HISTORY**

Refining



## **RECORDED BENEFITS**

- 80% reduction in hypochlorite use
- 75% reduction in overall product consumption and handling
- Mild steel corrosion rates reduced by more than 50%
- Eliminated maintenance efforts due to biofouling
- Maintained recycled water use during wastewater plant operational problems

# Biofilm Control Program Enables Refinery to Maintain Recycled Water Use and Reduce Treatment Costs

**ClearPoint<sup>SM</sup> Biofilm Detection & Control** 

#### **Customer Challenge**

A refinery reusing wastewater as make-up for their cooling towers was using hypochlorite as a tertiary treatment to control bacteria. High concentrations of free chlorine were required to control the bacteria, resulting in high hypochlorite consumption and increased mild steel corrosion. Despite the high dosage of hypochlorite, the treatment was not able to prevent biofouling and frequent maintenance was required. Additionally, any operational problems in primary and secondary wastewater treatment reduced or prevented the use of recycled water as make-up due to quality limitations.

### **Recommended Solution**

After performing a thorough audit of the refinery's system, Solenis recommended its ClearPoint biofilm detection and control program. The program utilizes a novel biofilm analyzer, advanced chemistry (Biosperse<sup>™</sup> CX3195) and unparalleled technical know-how to effectively address microbiological activity and biofilm in industrial water systems.

#### **Results Achieved**

The ClearPoint program provided equal or better microbiological control while enabling the refinery to reduce its annual hypochlorite consumption by 80% and overall product consumption by 75%. Corrosion rates on mild steel were reduced by 50%. Additionally, biofouling obstructions were eliminated and recycled water use was maintained when operational problems in primary and secondary wastewater treatment occurred.



Hypochlorite Consumption

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