

WASTE MINIMIZATION

- PROCESS:** Fluid Milk Dairy.
- SITUATION:** The local POWT required the plant to comply with oil and grease limit caused by milk fat. Meeting this limit would traditionally require the plant to have a wastewater pretreatment system using flotation technology as well as incurring estimated capital costs of \$500,000 - \$750,000. In addition, ongoing operating costs would ensue.
- OBJECTIVE:** Meet the oil and grease limit without a wastewater pretreatment system.
- SOLUTION:** Evaluation of the facility found a milk loss of 1.5%. In order to meet the oil and grease limit, this loss would need to be cut in half.
- To provide the facility with a real-time wastewater milk fat measuring device in order to allow them to identify and correct excessive milk loss operations and incident, one optical sensor was installed at the wastewater effluent station and connected to the plants' alarm system. This system was installed at a cost significantly less than that of the cost for wastewater pretreatment.
- RESULTS:** Over the next several months, the plant was able to reduce milk losses by more than 50%, resulting in meeting the compliance standards and gaining a cost savings from product and sewer surcharges. The Wastewater censor project had a payback of less than 6 months.