

Vigilistics Helps to Improve Sustainability in a Fluid Milk Dairy Plant



Operation overview:

The plant receives milk seven days a week. The volume received is approximately 750,000 pounds per day or 5.5 million pounds per week. The plant sells the excess cream.

The processing and bottling areas of the plant operate six days, three shifts per day. The finished product is packaged in half gallon and gallon HDPE bottles supplied by its own blow mold department. Less than 25 different SKU's of milk products are produced.

The finished products are store picked and shipped either to a distribution center for merging with other products or shipped directly to retail locations.

Daily cleaning of tankers, tanks, lines and other processing equipment occurs by using four different systems.

The Opportunity:

The plant was having overall material loss or shrink of 2.5%. This is a total loss in raw materials and finished products. The annualized value of this loss exceeds \$1 million. Lost material is a sustainability issue, as the lost material goes down the drain and creates a wastewater load. In this case about 7 million pounds per year of milk was lost and became a counter-sustainability issue.

The plant discharges waste water to the city and controls the pH of the released product. The permit issued stipulates levels for volume, COD, pH, and Fats, oils and greases. The plant regularly exceeded the level allowed for fats, oils and greases. The root cause is butterfat. The city attaches monthly surcharges for violations to the normal monthly sewerage billing. Those surcharges cost the plant \$80,000 on an annual basis.

The Solution:

In an effort to track product flows, product losses and plant discharges, this plant reviewed the systems that were currently in place in the operation, including the training afforded the employees.

Plant leadership accepted that the losses were real and were happening on a regular ongoing basis. As a team they made the decision to focus on loss reduction, but needed reliable, actionable information to track the performance of each piece of the operation. Vigilistics software was chosen as the data collection tool with real-time reporting capabilities.

The goal was to eliminate waste water surcharges and reduce shrink to under 1%.

Plant Use of Vigilistics:

The leadership group put together a team, tasked to deliver on the goals. The plant was divided into areas of operation. Those areas were receiving, batching, pasteurizing, filling, distribution, and waste water.

Plans were put together to review information by shift, by day, by week and by month. The shrink team met weekly as a group. They established a list of actions to be performed by each team member.

The Vigilistics reports were used to look at loss by area and then within each area. Based on losses identified, standard operating procedures were reviewed, employee practices observed, and functionality of physical plant systems and infrastructure considered.

Milk receiving and cream load out procedures were adjusted and operators trained. Those operators who were not following procedures were counseled and retrained. Air blows to ensure that lines were emptied before washing were inspected and tuned to achieve better evacuation.

Adjustments were made in planning production to avoid unnecessary product changeovers, recycle time on the pasteurizer and the time to change from product to water and water to product was reduced to an acceptable level.

Filler loss and overfills were reduced and creation of unsaleable product reduced. When notified of a high fat level in the waste water stream, events happening at the same time were observed for their affect on the problem.

Key Results:

With the use of the real-time information delivered by Vigilistics, in concert with the historical Vigilistics information, measureable and sustainable results were achieved. Shrink dropped to less than 1%. Annualized avoided milk loss savings of \$600,000 were realized.

Sewerage surcharges were eliminated, which saved the company an additional \$80,000 and resulted in a much more sustainable operation.

Employees were trained in the Standard Operating Procedures needed to operate this fluid plant. The training was supported by on the job evaluation and reinforcement.

The weekly loss prevention team stills meets and every team member has a better knowledge of plant operations and knows how to access the information needed to sustain the improvements in loss control.



For further information about reducing milk loss and improving sustainability, please contact Vigilistics.

Contact Vigilistics:

Vigilistics, Inc.
23361 Madero
Mission Viejo, CA 92691

Telephone: 949-900-8380
Email: Info@Vigilistics.com
FAX: 949-380-3778
www.vigilistics.com