

CAF[®] CASE STUDY



Beef Slaughterhouse

Problem

A beef slaughterhouse in Idaho wanted to compare performance and efficiency between their existing DAF unit and the HydroCal CAF flotation unit.

Solution

The Hydrocal CAF ran continuously for 8-10 hours per day. Test runs were made with and without polymer and samples were collected over a wide range of feed conditions. Within one hour of start up, a thick float was obtained without the use of polymers. The effluent from the CAF unit was visually clearer than the DAF.

In some cases, the addition of acids and polymers help to increase the reduction rates of contaminants in the wastewater. Therefore, acid was added first to help "split" the oil emulsion, and bring almost twice as much oil to the surface, leaving clearer liquid below. Polymer was then added, which created a fluffy floc and quadrupled the amount of floating solids.

Their feed stream fluctuates continuously in both oil and solids content as well as less frequent changes in temperature and pH. These variations affect the samples taken; feed samples taken just seconds apart can be very different in solids and oil content. Therefore, it would not be accurate to consider feed and effluent samples from the same runs to be representative of the CAF's performance. Instead, calculating daily averages from individual tests identified performance levels.

In conclusion, the HydroCal CAF unit successfully treated the slaughterhouse waste stream. The results achieved during the demonstration, in addition to the ease of operation of Hydrocal's CAF flotation unit, convinced this company to invest in a system.



HydroCal CAF with bottom auger.

CAF Performance

TSS = up to 97 %
FOG = up to 98 %
COD = up to 74 %

The Solution is Clear.

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