

ENVIROQUIP MBR IS THE RIGHT SYSTEM FOR OHIO CHEESE PRODUCER



In response to increasingly strict NPDES discharge requirements, Guggisberg Cheese, one of the largest US producers of Swiss cheese, recently upgraded its wastewater treatment facility with Enviroquip MBR technology. Membrane bioreactor technology allowed Guggisberg Cheese to comply with the strict discharge requirements and to construct the new wastewater treatment facility in such a fashion as to minimize visibility at the site. Located within the heart of Ohio Amish country, reducing the impact of the cheese production plant and its wastewater treatment operations on the surrounding environment was a key concern.

The new MBR facility consists of an equalization basin, pre-aeration basin, and 3 membrane bioreactors. Raw wastewater from the cheese plant is first delivered to the aerated equalization basin, which serves to equalize high flows and shock loads to the plant. Prior to entering the EQ

basin, the waste is coarse screened through a basket screen. Wastewater is then pumped up to the pre-aeration basin, and is passed through two fine screens with 2mm openings. The pre-aeration basin provides the bulk of the treatment at the plant, as incoming wastewater is combined with active microorganisms and organic material is broken down biologically. Partially treated wastewater then flows by gravity to the MBR basins, where additional biological treatment occurs. Finally the wastewater is filtered through Kubota submerged membrane units (SMUs), is disinfected with chlorine and the final effluent is discharged to a nearby stream.

Full build-out capacity of the plant is 80,000gpd, with 50,000gpd membrane capacity installed initially. Additional membranes will be added as production expands at the cheese plant. The equalization basin, pre-aeration stage and influent screening have been sized for full build-out.

The existing aerated lagoon at the site will be utilized for sludge holding and storage. The other two lagoons will be cleaned out and filled with clean effluent from the MBR plant. They will serve as wildlife habitat and Guggisberg Cheese hopes that local bird life will be attracted to the new habitat. The new MBR system has allowed Guggisberg Cheese to expand production, improve the quality of the effluent they are producing and protect the quality of the stream and local environment.