

Proactive Environmental Stewardship Saves Company Money

Problem

During a scheduled outage, a beverage can manufacturer discovered a pump had malfunctioned in one of three underground storage basins, which are used to hold and process plant wastewater. After removing the wastewater from the storage basin, maintenance personnel could see that the liner had become detached from the wall and was now caught in the pump impeller, causing it to fail. As part of their Total Productive Maintenance (TPM) program, plant officials determined that the wastewater storage basins should be relined along with other related infrastructure improvements. This proactive approach would allow the customer to maintain their long-standing compliance status with the Federal and State EPA. However, due to very strong demand for aluminum cans, the plant was running at 110% production capacity and could not afford to shut down the waste treatment process. Plant personnel needed to find a way to divert the wastewater while maintaining peak production, so that necessary inspections and repairs could be completed swiftly.

MPW Solution

MPW Industrial and Chemical Cleaning operations personnel met with plant officials and performed a thorough walk-thru of the entire production process and wastewater treatment system. Following the walk-thru, the skilled MPW team developed an engineering strategy that included bypassing the on-site wastewater treatment system, and processing the wastewater through an interim treatment system that would be constructed and operated by MPW just outside the plant.



MPW frac tanks were used as part of a parallel wastewater treatment system, while plant personnel made necessary inspections and repairs to underground treatment systems.

“MPW crews conducted themselves as professionals. We are very pleased with the work .”

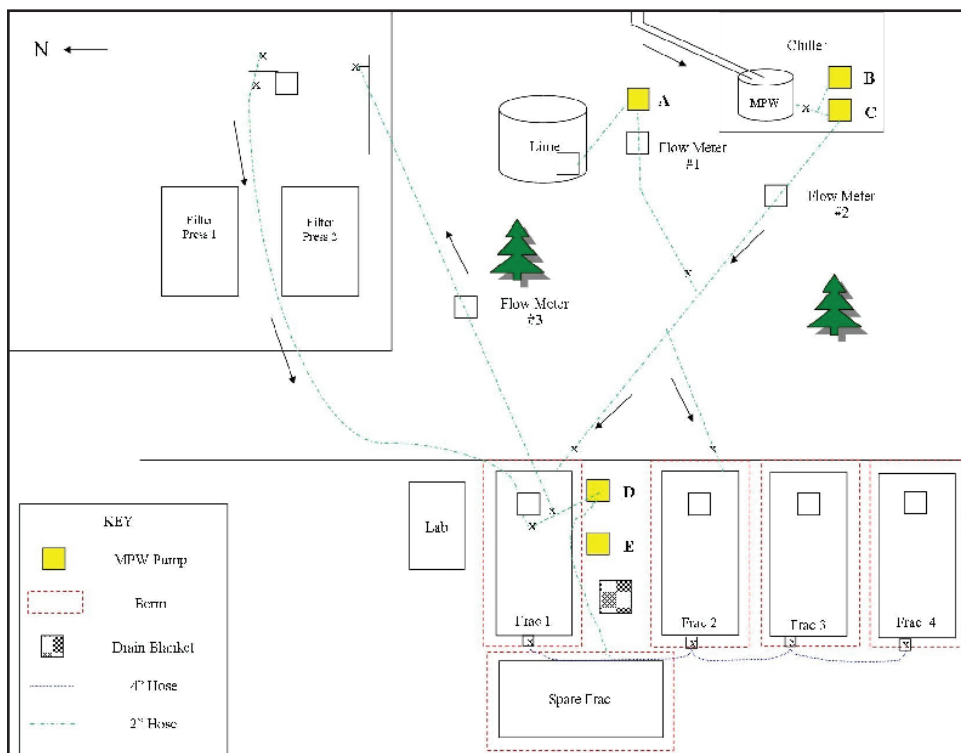
- Quality Control Manager.

Results

After receiving approval from plant officials, MPW dispatched all equipment and personnel to assemble and operate the parallel wastewater system. Bypassing the existing system required MPW to provide 24-hr monitoring of the wastewater to maintain consistent NPDES effluent permit specifications. To ensure adherence to all safety and operational requirements, MPW maintained constant communication and coordination with plant personnel.

A mobile laboratory supplied by MPW allowed MPW chemists to monitor critical wastewater parameters such as pH, alkalinity, and total suspended solids throughout the fifteen day project. Specialized feed systems were then utilized to safely feed lime and sulfuric acid to maintain proper pH control throughout the system. The incoming wastewater was treated then pumped from the frac tanks back to the filter press station to remove remaining impurities. The properly treated wastewater was then discharged to the local municipality in accordance with

MPW process schematic indicates the critical flow path of wastewater through the interim treatment system, bypassing the underground storage basins so improvements could be made and be returned safely to service.



city regulations. The solid waste, generated from the manufacturing process and comprised of aluminum filings, grease and other harmful contaminants, was held in containment pits prior to being processed through a sludge press. The solid waste was collected in a roll-off container and then transported to a landfill.

MPW technicians successfully maintained the peak production levels at the plant while all necessary improvements were made to the concrete storage basins, pits, and moats. By taking this proactive approach towards suspected environmental issues, plant officials were able to avoid city citations. Plant personnel commented that they found the entire MPW team to be very professional, and consequently were quite pleased with the outcome. According to city officials, the plant exceeded all bypass water treatment inspections. This proactive solutions approach is now being considered at other similar facilities within the corporation to avoid any other potential environmental exposures.