



## Customer:

An engineered wood products manufacturing plant whose manufacturing processes introduce high TSS and organics (tannins and lignins) into their wastewater

## Project:

Provide a method to remove tars, solids, tannins, and lignins from the wastewater to eliminate deposits in the WESPs, RTOs, and centrifuges

## Highlights:

- Facility incurring high costs associated with downtime and parts replacement, due to the poor quality of their existing recycled influent
- ProChem provided improved physical/chemical treatment and a more effective reuse technology, producing higher influent quality
- Facility saving \$500K per year on parts replacement and 120+ labor-hours per month on maintenance allowing production to run two more shifts per month

## High Quality Recycled Influent Extends Equipment Life

### THE CLIENT'S CHALLENGE

15K gallons of wastewater per day was being treated and recycled back into the manufacturing process. The customer was facing costly downtime and parts replacement due to the poor quality of the recycled water:

- The media in their Regenerative Thermal Oxidizing (RTO) units required replacing every two years, which is approximately a \$1 million investment per replacement
- Twice per month, production in the plant had to be shut down to clean their process equipment, consuming approximately 60-80 labor-hours to complete

Additionally, the customer was experiencing environmental compliance violations for onsite wastewater storage.

### THE PROCHEM SOLUTION

After completing the water analysis and assessing the facility's reuse potential and production goals, ProChem, Inc. offered an improved water reuse system. The water reuse system included a new physical/chemical treatment program, **CleanWESP™**, and filtration media. This system operates 40 hours per week. ProChem provides daily O&M services. This water reuse system is equipped with local monitoring, automation controls, and ProChem's web-based remote monitoring service.

A ProChem employee operates this system on-site daily. These responsibilities include testing equipment, calibrating instruments, and testing water quality to ensure the system is meeting project goals.

With this **CleanWESP™** water reuse system and operational services in place, the customer is experiencing a 100% wastewater reuse rate and a significant reduction to costly downtime and parts replacement, due to the higher quality of influent:

- The media in the RTO units was installed in 2009 and has not required replacement since (and shows no signs of wear). This represents a cost savings of approximately \$500,000 per year
- The monthly process equipment cleaning now requires less than 8 labor-hours to complete (compared to the previous 60-80 hours)

### THE WIN

- Eliminated media fouling in RTO units (saving approximately \$500K per year)
- Operational issues alleviated
- Significantly reduced production downtime for routine process equipment cleaning (by over 70 hours/month)
- More efficient operation of emission control equipment leading to further reduced costs
- 100% environmental compliance related to wastewater

