



50 GPM Parallel Plate Clarifier for Raw Water Treatment at a Chemical Manufacturing Plant

CHALLENGE

A chemical manufacturing company needed to clarify surface water that was being drawn from a local creek for use as a cooling agent in their manufacturing process. The existing system was 30 years old, corroded, and not very adept at handling solids after separation from the water. Space requirements were a limiting factor in the installation.

SOLUTION

Monroe sent an engineer to the site to inspect the old equipment and analyze the system requirements. Monroe proposed a 50 GPM vertical parallel plate clarifier with rapid mix and flocculation tanks to precipitate the solids and enhance settling. The unit was custom designed and built to perfectly fit within the existing space occupied by the previous unit.

The parallel plates were constructed of high-density polyethylene, and the clarifier provided the same amount of settling capacity as a 12 ft. diameter circular clarifier. The unit also included an access ladder and cage for top of tank inspection and plate cleaning.

RESULT

The plates improved the efficiency of the solids settling given the space requirements. Plant operators were able to continuously run the raw water through the clarifier without the clogging and other sludge handling issues that existed with the previous equipment. According to one engineer at the plant, the clarifier has been performing "like a champ" since the installation in September 2009.



Vertical Plate Clarifier for municipal water treatment