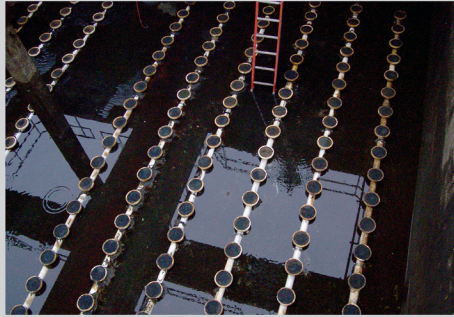


CASE STUDY:

CITY OF MENOMINEE, MI

START-UP DATE MARCH, 2010



PROBLEM FACED

In 2009, the city of Menominee, Michigan decided its wastewater treatment plant was consuming excessive electrical power and faced a much needed upgrade. The plant was using a 1044-unit ceramic disc system with an acid gas cleaning system. This system, installed in 1988, was deteriorating and needed to be replaced. The city worked with Honeywell Energy Services Group to reduce the city's electrical power consumption under a guaranteed contract. The city's wastewater treatment plant had a significant potential to reduce power consumed, specifically in the activated sludge process. However, with the existing ceramic disc system, it was consuming 1,800 kw-hrs per day.

EDI'S SOLUTION

Honeywell contracted with Energenex and Environmental Dynamics International (EDI) to provide a cost effective solution. The City wanted a new system offering operating flexibility and low power consumption. Honeywell evaluated several options, and selected the option providing the highest system efficiency. EDI installed a MiniPanel Fine Bubble Aeration System with a membrane density exceeding 30 percent, greater than the old ceramic disc system. Energenex provided new Kaeser positive displacement blowers and an advanced dissolved oxygen monitoring system. This new control system allows the plant to monitor the levels of dissolved oxygen in the basin, so that it can more accurately gage the amount of air the pumps are required to provide throughout a 24-hour period. This further reduces the electric power consumption during periods of low oxygen demand.

TESTIMONIAL

"Working with EDI was great," Mike Thorsen, Infrastructure Alternatives employee and Menominee Plant Superintendent, said. "The guys we worked with were efficient and easy to work with. The plant has been running smoothly since putting in the system."



Environmental Dynamics International
wastewater.com

CASE STUDY: MENOMINEE, MI

OUTCOME

Initially, the new EDI aeration system paired with the existing blowers and controls reduced the electrical power consumption from 97 Bhp to 43 Bhp. Once the new blowers and control system were in operation, the electrical power consumption was reduced by an additional 12 percent, bringing the total reduction to 56 percent. This translated into an **average annual savings of \$29,000**. The new system is expected to pay for itself by 2016.

