

REFERENCE PROJECT | Optimized Wastewater Systems: Cost Savings for Aerospace Manufacturing

Taking bigger steps...
to leave a smaller footprint

A Southern California aerospace manufacturer was struggling with an inefficient evaporator-based wastewater treatment system that sent all wastewater directly to the evaporator without pretreatment or automation.



THE CHALLENGE

A Southern California aerospace manufacturer was struggling with an inefficient evaporator-based wastewater treatment system that sent all wastewater directly to the evaporator without pretreatment or automation. This caused several issues:

- Increased energy consumption for evaporating untreated wastewater
- Frequent evaporator downtime (one week per month) for cleaning due to TSS buildup
- High labor costs for cleaning and sludge removal
- Excessive sludge generation, raising overall treatment costs
- Inefficient cadmium cyanide destruction, leading to compliance challenges

The outdated system was costly, labor-intensive, and unable to meet performance demands.

THE MACDERMID ENVIO SOLUTION

MacDermid Envio proposed a multi-step, automated process to optimize wastewater treatment.

Key improvements included:

- Ion Exchange: Recycling water to reduce the load on the evaporator
- Batch Treatment: Removing solids before evaporation to improve efficiency
- System Optimization: Using the evaporator as part of an integrated process rather than a standalone solution

These changes improved feed water quality, reduced sludge production, and minimized maintenance needs.

THE RESULT

The aerospace manufacturer achieved:

- 25–30% reduction in O&M costs by relying less on the evaporator
- Improved efficiency through automated pretreatment and ion exchange
- Lower sludge disposal costs and reduced downtime for cleaning
- Effective cadmium cyanide destruction, ensuring regulatory compliance

With a streamlined, cost-effective wastewater treatment system, the manufacturer can now focus resources on core operations instead of excessive treatment costs.



See our web site for more details
www.macdermidenvio.com

Email: info@macdermidenvio.com

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