



## Case History

### **Zero Discharge Wastewater Treatment system at Printed Circuitboard Manufacturer**

A printed circuitboard manufacturer contracted with Aries Chemical to design, build and install a zero discharge wastewater treatment system at their new state of the art plant located in New York State. The printed circuitboard manufacturer decided that as part of the building of a new manufacturing plant they wanted to minimize their environmental footprint. Aries Chemical was selected to design, build and install a 25 gpm treatment plant that allowed the facility to reuse its process wastewater without discharging any wastewater to the municipal wastewater treatment authority.

The printed circuitboard manufacturing process requires ultrapure water for its process baths and rinse waters while it produces a high strength chelated wastewater that contains heavy metals. This high strength chelated wastewater presents a significant wastewater treatment challenge to meet discharge permits. In order to provide maximum benefit from discharge requirements, the goal of the wastewater treatment process was to produce recycled wastewater that could be re-used in the printed circuit board production process. With the recycle system in place, no wastewater would need to be discharged to the municipal wastewater treatment authority. Manpower goals were to develop a process that did not require a full time operator. Evaporation losses in the water system would be made up with potable water that was treated to produce ultra-pure water. The treatment system was designed around proprietary microfiltration, reverse osmosis filtration and evaporation technology. Since the printed circuit board manufacturing process requires ultrapure water for bath and rinse water make-up, the Aries wastewater treatment system was required to produce ultrapure water for re-use.

Aries developed a system designed for the customer's needs that produced ultrapure water for reuse, required no discharge to the municipal treatment authority all without a full time operator.

**For further product and technical assistance, contact your Aries Chemical Representative or the Beaver Falls office @ 315 346 – 1489.**

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