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## Case Study: Ilco Unican Corporation

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Location:	Rocky Mount, NC (Nash County)
Industry:	Metals Manufacturing/Plating (SIC 3471)
Pollution Prevention Application:	Process Modification/Substitution
Annual Savings:	\$110,000
Payback Period:	1.08 years
PPP Challenge Grant Awarded:	\$20,000
Contact:	Brian Wells, Project Engineer, (919) 725-1331

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### Background

The Ilco Unican facility in Rocky Mount produces over 1.5 million blank keys each day. During fabrication, a residue of medium grade cutting oil is left on the keys which must be removed before the keys can undergo further processing. Ilco Unican had been using 1,1,1 trichloroethane in a vapor degreaser to clean the keys.

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### Waste Reduction Activities

To eliminate the use of the organic solvent degreaser, Ilco Unican designed a new aqueous cleaning system which uses a high-pressure spray of hot water to wash the keys and high-pressure air to dry them. No chemical cleaners are added. The spray nozzles are placed such that the keys spin on rods to allow thorough cleaning between rows. The water in the system is recirculated and cleaned by an oil skimmer. Since the water is recycled, no more than 25 gallons a day have to be added to the system. Screens are used on the nozzles to keep them free from fine metal chips that may have been present on the keys.

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### Waste Reduction

Ilco Unican's yearly consumption of almost 200,000 pounds of 1,1,1 trichloroethane has been completely eliminated. The efficiency of the new system has cut the plant's water use in half and reduced the energy used in the cleaning phase by almost 95 percent.

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### Annual Savings

The new washer cost \$119,327 and had a payback period of 1.08 years. The project is saving Ilco Unican over \$110,000 a year. Approximately \$60,000 per year of that savings is coming from the elimination of 1,1,1 trichloroethane and its disposal. Energy savings total another \$25,000 a year, while the rest of the savings are in water and labor reductions. Liability for the chemicals to be treated were not considered in the cost analysis but were another benefit of the process change.