CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 1998

DateRun: 11/01/1998

Experimenters: Jason Marshall

ClientType: Name Plate Mfg-Etching

ProjectNumber: Project #1

Substrates: Aluminum

PartType: Coupon

Contaminants: Abrasive, Paints, Dirt, Soaps

Cleaning Methods: Low Pressure Spray

Analytical Methods: Gravimetric

Purpose: To test spay washing for removal of the contaminant. Pre-pilot scale testing.

Experimental Procedure: Preweighed coupons were covered with the contaminant solution on one side of the coupon. Coupons were dried using a Infrared heat lamp for 10 minutes. After returning the samples to room temperature, the contaminated weights were recorded. All of the samples were clipped to a tray and inserted into a Miele Automatic G7735 Spay Wash Unit. The cleaning chemistry was heated to 130 F on hot plates. The solution was then poured into the unit. Cleaning lasted for 2 minutes. At the end of the cleaning, the coupons were rinsed with room temperature tap water for 15 seconds. Samples were dried using the IR heat lamp. Final weights were recorded and the cleaning efficiency was calculated.

SUBSTRATE MATERIAL: Aluminum 3003
CONTAMINANTS: Dirty cleaning solution- D-Greeze 500 w/ residual paint chips and pumice sludge

Results: The spray unit was effective in the removal of the contaminant from the samples. Table 1 lists the overall cleaning efficiency calculated from the 12 coupons tested.
Table 1. Average Efficiency
Cleaning Efficiencies for Each Coupon

Cleaning Efficiencies for Each Coupon			
88.81	81.89	66.47	78.47
79.91	88.89	89.17	90.63
70.21	58.54	88.77	94.58
Ave	81.36		
Std Dev	11.14		

There was a slight residue remaining on the coupons after the rinsing and drying. The coupons were visually clear of the contaminant solution. The low cleaning efficiencies were probably due to the residual film.

Summary:

Substrates:	Aluminum				
Contaminants:	Abrasive, Paints, Dirt, Soaps				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
AG Environmental Products	Soy Gold 2000	100	81.36	☑	

Conclusion: Soy Gold 2000 showed excellent removal of the D-Greeze 500 contaminant solution. The one remaining issue to deal with would be the removal of the film left on the coupons. Increased rinse water spray pressure could help to reduce or eliminate the residue. Pilot scale testing will be conducted on samples provided by the client.