CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 1999

DateRun: 06/18/1999

Experimenters: Jason Marshall

ClientType: Vessel Cleaning Company

ProjectNumber: Project #2

Substrates: Stainless Steel

PartType: Coupon

Contaminants: Resins/Rosins

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric, Wipe

Purpose: To further evaluate cleaners from previous trial using increased concentration and various cleaning times.

Experimental Procedure: Four cleaners from the previous trial were used at full strength.
Twelve preweighed coupons were contaminated and weighed again. Three coupons were placed in each cleaner for ten minutes with no agitation. Coupons were rinsed in a tap water bath for 30 seconds at 120 F. One coupon was wiped with a paper towel to determine if the contaminant had been affected. Observations were made and any cleaner that was effective was used to clean more coupons for a two-hour time period. At the end of the cleaning, all coupons were wiped with a paper towel after rinsing. Coupons were allowed to air dry for two hours. Final weights were recorded, and cleaning efficiencies calculated.
SUBSTRATE MATERIAL: Stainless Steel coupons (316 B-80)
CONTAMINANTS: Solutia Gelva Multipolymer Resin Solution 2895 (CAS#s: 50862-46-9; 141-78-6; 142-82-5; 67-63-0; 64-17-5; 108-05-4)
CONTAMINATING PROCESS USED: Coupons were coated with contaminant with a handheld swab. Coupons were then allowed to dry for one hour.

Results: The ten-minute cleaning and single coupon wipe demonstrated that two cleaners were capable of removing the contaminant. Envirosolutions was the more efficient product tested followed by T-Square. Table 2 shows the cleaning efficiencies for all four cleaners.

Table 2. Ten Minute Cleaning				
10min	AW Chesterton	Envirosolutions	T-Square	Savogran
100%	2.89	6.17	-39.09	9.43
	11.15	14.38	-21.30	9.56
	14.37	69.20	46.16	4.28
wipe observation	not easily wiped	easily wiped	easily wiped	not easily wiped
Average	**9.47**	**29.92**	**-4.74**	**7.75**
Std Dev	**5.92**	**34.27**	**44.97**	**3.01**

Summary:

Substrates:	Stainless Steel				
Contaminants:	Resins/Rosins				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
AW Chesterton	803 Industrial & Marine Solvent II	100	9.47	☐	
Bio Chem Systems	Bio T 300 B	100	69.20	☐	
Tarksol Inc	Tarksol HTF 85 B	100	46.16	☐	
Savogran Company	HD-34 Cleaner Degreaser	100	4.28	☐	
Bio Chem Systems	Bio T 300 B	100	99.45	☑	
Tarksol Inc	Tarksol HTF 85 B	100	70.59	☐	

Conclusion: Envirosolutions Bio-T 300 B was very effective in removing the resin after an extended soakand a gentle wipe with a paper towel. Spray washing would decrease the soak time of the cleaning solution, but would add more mechanical energy than the wiping.