CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2000

DateRun: 06/14/2000

Experimenters: Jason Marshall

ClientType: Light Manufacturer

ProjectNumber: Project #2

Substrates: Aluminum, Copper, Plastic, Iron, Fiberglass

PartType: Part

Contaminants: Tar, Asphalt

Cleaning Methods: Immersion/Soak

Analytical Methods: Visual, Wipe

Purpose: To identify a safer cleaning process. Currently using WD-40 and D-limonene.

Experimental Procedure: Eight cleaning chemistries were selected based on vendor supplied information and from searching the lab's Effective Test Conditions Database.
Dilutions were made using DI water in 600 ml beakers. Cleaning was performed at room temperature for 5 and 10 minutes. After each the first time interval, the ballasts were removed from the solution and wiped with a paper towel to determine if any cleaning had taken place. Parts were then submersed again into the solution. After the 10 minutes, the ballasts were rinsed in room temperature tap water for one minute and wiped dry. Observations were recorded for both cleaning times.

SUBSTRATE MATERIAL: Light Ballast (Fiberglass 50%, Al 10%, Cu 10%, Fe, 5%, Polypropar 25%
CONTAMINANTS: Tar/Asphalt
CONTAMINATING PROCESS USED: Samples were received contaminated

Results: Three products showed signs of being able to dissolve the tar from the ballasts. The Harvest Gold solution was the best cleaner tested. Initially, this cleaner was an translucent amber color, but after the 10 minutes, the color turned opaque black. The V-50 cleaner was only moderately successful at the 20% concentration. At the full concentration, the V-50 was much more effective. Only one aqueous product, Super Neutral, was able to dissolve the tar. Table 2 lists the observations made during the two cleaning times.

Table 2. Cleaning Results

Cleaner #	5 minutes	10 minutes
1a	Started to dissolve	Okay
1b	Good	Good-excellent
2	Possible some removal	Little cleaning
3	No signs	Very little
4	No signs	Very little
5	No signs	Possible some removal
6	Possible some removal	Some-Okay
7	Good	Excellent
8	Possible some removal	Some-Okay

Summary:

Substrates:	Aluminum, Copper, Plastic, Iron, Fiberglass				
Contaminants:	Tar, Asphalt				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Bio Chem Systems	Bio T V 50	20	0.00	☐	
Bio Chem Systems	Bio T V 50	100	0.00	☑	
Bio Chem Systems	Green Stuff 6325	5	0.00	☐	
Westford Chemical Corporation	Biosolve	5	0.00	☐	
Warren Chemical Company	Sea Wash 8 No Force	5	0.00	☐	
Ensolve Biosystems Inc	Grease Feast Plus	5	0.00	☐	
Safe CleanUp Solutions	Super Neutral	10	0.00		

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United Laboratories International	United 2002 Harvest Gold	100	0.00	☑	
Tarksol Inc	Asphalt Release	100	0.00	☐	

Conclusion: Having identified three cleaners that were potentially capable of removing the tar from the supplied ballasts. These three products, Harvest Gold, V-50 and Super Neutral, will be tested under similar conditions with only the cleaning time being changed. The time will be increased to 30 minutes.