CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2005
DateRun:	07/24/2005
Experimenters:	Jason Marshall
ClientType:	Cleaner Manufacturer
ProjectNumber:	Project #1
Substrates:	Steel
PartType:	Coupon
Contaminants:	Rust/Scale
Cleaning Methods:	Manual Wipe
Analytical Methods:	Photography, Visual
Purpose:	To evaluate supplied products for rust removal from steel coupons
Experimental Procedure:	Sixteen pre-rusted steel coupons were photographed to establish the baseline level of rust. A coupon was paired with another coupon that had similar amount of rust. One of the paired coupons was wiped for one minute using a paper towel that contained one of the supplied cleaning solution at full strength. Wiping was performed at room temperature. The second coupon was wiped with the other supplied product. Observations were made and a second photograph was taken to compare to the baseline photograph. Coupons were also observed after 24 hours to determine the level of rust that returned.
Results:	The DFC 23 wiped coupons were slightly better than the DFC 30 coupons. Both cleaners were effective in removing rust from the steel coupons. When wiping with DFC 30, there was a lot of foaming that developed. No such foaming was noticed for the DFC 23. The table below lists the observations made for each coupon cleaned. All sixteen coupons started to develop rust after sitting overnight. No difference was noticeable between the two cleaning products.

DFC 23 Cleaned Coupons		DFC 30 Cleaned Coupons	
Coupon #	Observation	Coupon #	Observation
22	good	15	good
6	okay	17	okay
27	good	19	okay
35	good	1	good
23	good	28	good
20	good	36	good
24	good	33	good
10	good	18	good

Photographs of coupons before and after cleaning.

Summary:

Substrates:	Steel				
Contaminants:	Rust/Scale				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Cogent Environmental Solutions	DFC 23	100	0.00	☑	
Cogent Environmental Solutions	DFC 30	100	0.00	☑	foaming

Conclusion: Both products, DFC 23 & 30, removed the rust from the steel coupons after one minute of wiping. DFC 30 had some foam develop.