CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2008
DateRun:	06/25/2008
Experimenters:	Heidi Wilcox
ClientType:	Electro-Optical Devices
ProjectNumber:	Project #1
Substrates:	Aluminum, Glass/Quartz
PartType:	Part
Contaminants:	Adhesive, Fluxes
Cleaning Methods:	Manual Wipe
Analytical Methods:	Visual
Purpose:	To conduct on-site assistance to eliminate IPA from cleaning process for worker health and safety;
Experimental Procedure:	Previously three products were brought to the facility to be tested. Dysol 144 was retained to continue testing onsite. A new product was brought based on VOC concerns of the DS 144. Clorox Green Works Glass and Surface Cleaner was tested in the TURI lab prior to being brought to the lab and was found to remove the gasket and adhesive efficiently off glass coupons. The product was brought with the MSDS in the spray bottle it came in. Once on site the solutions were used at 100% strength and first put in a squirt bottle so workers could squirt the solutions on the rag used to clean the panels. Once the cleaning began it was determined a lesser amount may need to be used due to foaming of the cleaner. Using the spray delivery method instead of squirting may help the facility use less product per panel, keep foaming down and give workers less exposure. Observations were made by the workers, EH&S and manufacturing staff as to the usage, smell and drying rate of the products.
Results:	Product 1: Clorox Green Works Glass and Surface Cleaner Worker stated that this product was a little grippy. Meaning it didn't slide across the panel like the IPA did. It was ok but wasn't sliding as well as they were used to. When the back of the panel was wiped with the product, the solution did not take the ink off the labels and bar code even with rubbing. The worker said the product was pretty good on the gasket removal. The gasket was a little sticky but nothing they are not used to with the IPA. The product felt slippery to the touch but it dried quick enough to not be a problem. Workers said the product did not smell at all and they felt they would have no problem using this product. The product foamed some when too much was put on the panel, or a cloth was used repeatedly, and product built up on the cloth. This will be a training issue that will need to be worked out on site. Spray delivery may be better than soaking the cloth as was previously done. Workers said the product worked and dried fine and that they could get used to the grippy nature of the product.
Summary:	
Conclusion:	Reasons for project are to reduce air emissions of VOC's and also to reduce flammability and worker exposure to toxics. This product has 40 g/l of VOC which would reduce the VOC level in this area of the plant by approximately 98%. The Clorox product was kept to be used more on-site. A follow up call and or visit with the company to check up on progress and implementation will be scheduled sometime in July.