CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 1998

DateRun: 10/25/1998

Experimenters: Jason Marshall

ClientType: Recycling

ProjectNumber: Project #2

Substrates: Glass/Quartz

PartType: Part

Contaminants: Adhesive

Cleaning Methods: Immersion/Soak

Analytical Methods: Photography, Visual

Purpose: One screen was soaked in only hot water with no cutting, the other three were used in the hot acidic Citrinox

Experimental Procedure: The back tip of four monitors were broken off to release the vacuum. One screen was soaked in only hot water with no cutting, the other three were used in the hot acidic Citrinox (2%) at 150 F. Of these two, one was cut along the desired location for separation while the other was cut along a different section and the final one was not cut at all. The monitor was left in the heated bath for four minutes. At the end of this cycle, the monitor was placed into a tap water bath at room temperature for two minutes. The cycle was repeated as necessary until separation took place.
SUBSTRATE MATERIAL: Monitor screens with leaded and unleaded glass
CONTAMINANTS: Frit and adhesive

Results: Table 1 lists the results of previous testing as well as the samples run during this trial. Screens are listed by number and each operating condition was recorded. A clean break means that the break occurred mostly at the desired pre-cut location.
The screen soaked in hot water did not break after 5 cycles (Screen 5). Screen 6 did not have any separation occur during 5 cycles as well. The seventh screen was pre-cut along a non-ideal location which resulted in a partial separation of the screen in the wrong direction (toward the back of the monitor). Screen 8 had the same operating conditions as Screen 4 from a previous trial. The separation occurred within 2 cycles.

Table 1. Operating Conditions for Separation

Screen #	Pre-Cut	Acid Soak	Hot Water	# of Cycles	Clean Break
1	Y	Y	N	4	Y
2	N	Y	N	4	N
3	N	Y	N	5+	N
4	Y	Y	N	1	Y
5	N	N	Y	5+	NO BREAK
6	N	Y	N	5+	NO BREAK
7	Y*	Y	N	8	N
8	Y	Y	N	2	Y

The pre-cutting the samples was noted to have a big impact on where the screen broke. If the initial cut was slightly off of the desired location, the break followed the cut line.

Summary:

Substrates:	Glass/Quartz				
Contaminants:	Adhesive				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Alconox Inc	Citranox	2	0.00	☑	
Water	Water	100	0.00	☐	

Conclusion: From all of the testing performed, pre-cutting the monitors and soaking them in a hot acidic solution and cold-water bath can lead to separation of the two types of glass.