CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2008
DateRun:	06/12/2008
Experimenters:	Heidi Wilcox
ClientType:	Chemical Company
ProjectNumber:	Project #1
Substrates:	Aluminum, Steel
PartType:	Part
Contaminants:	Resins/Rosins
Cleaning Methods:	Ultrasonics
Analytical Methods:	Visual
Purpose:	Conduct on-site assistance to replace nPB/TCE for cleaning process.
Experimental Procedure:	This was a RI company that came to the March 14, 2008 workshop the TURI Lab and the EPA put on to try to help companies who are still using TCE. The company was using nPB for their cleaning processes and was previously using TCE. They make resins and use large aluminum and stainless-steel buckets to mix the resin and the hardeners in. These are done separately and use mixing blades to mix the solutions. At the end of the process, they have buckets to clean the blades and the attached shafts. The resin is not allowed to harden on the containers or blades. The resin is cleaned off when wet. The company liked how well nPB worked and that it readily evaporated after cleaning was completed. They seemed interested in finding out if there was anything else that would work for them. The company signed up for free technical assistance from the laboratory. The site visit to the facility was coordinated by EPA Region 1.
Results:	During the visit, it was apparent that large mixers and other machinery were being used. The cleaning was performed in an area or alcove off to the side. There were parts washers, drums of chemicals and 5 gallon buckets on the floor. The company was using Solvon, an nPB product for their cleaning. Currently they are taking the buckets or mixing bowls, either aluminum or stainless steel, and the blades with approximately 2 foot shafts on them and soaking them with nPB. They had two 5-gallon buckets on the floor in front of 55-gallon drums of waste nPB. They were putting the saw blades in the buckets and putting nPB in the bottom to just cover the blades and letting the blades soak. Time was not a factor as the company would let the blades soak “for a while”. When most of the resin was dissolved off the workers may take a brush in the bucket or the parts washer next to the drums and buckets and scrub off the excess resin or just wait until it was all dissolved. The 5-gallon buckets had no covers on them so the nPB was freely evaporating into the air. There was a 2 x 3 foot area about 3 to 4 feet up on the wall that was a vent of some sort pulling air out of this area. The company had monitored the air in this area and all exposure levels were found to be fine. Next to the vent were 2 parts washers. One was to be for cleaning parts for the resin mixing and one for the parts for the hardener mixing. The second parts washer was broken so everything was being washed in the one parts washer. In the parts washer they used the nPB cleaner. There were plastic handled brushes used for scrubbing in the top of the parts washer. These brushes were obviously used by the workers. It was not clear if workers used any PPE such as organic filtered masks, gloves or aprons. The company was informed by EPA about a meeting on RI regulations for nPB which was surprising to the company. They were given a letter about the meeting.
Summary:	
Conclusion:	An information package on the company was collected at the site visit in addition to the resin. The materials were brought back to the lab for testing. Successful products were identified. The lab will be arranging for a date to go back and give them samples of the cleaning products or to do testing on site with them. It may be possible to get a mixing pot and a blade and do parts testing in the lab. Follow up will be continued into the new fiscal year.