CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2012

DateRun: 08/27/2012

Experimenters: Jason Marshall, Heidi Wilcox

ClientType: Cleaner Manufacturer

ProjectNumber: Project #2

Substrates:

PartType: Coupon

Contaminants:

Cleaning Methods:

Analytical Methods: Performance Test

Purpose: Conduct an EHS review of solvent using P2OASys

Experimental Procedure: P2OASys allows companies to assess the potential environmental, worker, and public health impacts of alternative technologies aimed at reducing toxics use. The goal is more comprehensive and systematic thinking about the potential hazards posed by current and alternative processes identified during the TUR planning process.

Collect data from external sources, and inputs both quantitative and qualitative data on the chemical toxicity, ecological effects, physical properties, and changes in work organization likely as a result of a proposed option (chemical or product of interest). The tool also allows the user to set data certainty and weighting factors for each endpoint.

Results:

EHS Category	TCE	NpB	Acetone	Methylene Chloride	BUTYLAL
Acute Human Health	7	7	6	6	4
Chronic Human Health	7	6	6	7	2
Physical Hazards	4	4	3	4	3
Aquatic Hazards	10	4	2	8	
Persistence/ bioaccumulation	7	6	2	5	4
Atmospheric hazard	6	2	2	6	2
Disposal hazard	10	8	6	7	6
Chemical hazard	9	10	10	10	6
Energy & resource use	8	7	6	7	7
Product hazard	10	10	10	10	8
Exposure potential	10	10	10	10	6
Total	88	74	63	80	48
Adjusted Score	8.0	6.7	5.7	7.3	4.8

Summary:

Conclusion: Of the five solvents compared, Butylal had the safer profile followed by acetone.