Agency Research Priorities

- Dermal Exposure
- Analyzing for Total NCO
- Reoccupancy Guidance and Potential Exposure
- Curing Rates
- Long-Term Stability of SPF
- Deconstruction of Buildings
CPI SPF Research Projects

• Analyzing for Total NCO
  – DAN Method

• Evaluate Potential Worker Exposure during SPF spraying
  – Trimming/Dust study
  – SPF Spray Booth Air Monitoring

• Evaluate Potential Occupant Exposure to SPF Product Emissions
  – SPF Product Emissions Testing Protocol
DAN - Total Isocyanates Analytical Method

RESEARCH FRAMEWORK:

• Develop and validate the DAN total isocyanates method for determining the concentration of total isocyanates
• Compare the DAN TRIG method with existing validated TRIG methods

PROJECT STATUS: *In Progress*

• Striecher (NIOSH) and Bello (U Mass-Lowell) working with International Isocyanate Institute
SPF Trimming Dust Study

RESEARCH FRAMEWORK:
• Phase I: Initial evaluation of particulates generated under extreme-case situation and sampling method applicability test
• Phase II: Dust sampling during trimming operations in the field

PROJECT STATUS: Phase I Complete
• Initial evaluation and method applicability testing complete. Paper presented during the CPI Conference EHS Technical Session

RESULTS:
• MDI: Monomer, pMDI not detected in all cases
• Inhalable particulate:
  – above OSHA PEL & ACGIH TLV® in all but one case
• Respirable particulate:
  – below OSHA PEL & ACGIH TLV® in all but one case

NEXT STEPS:
• Phase II: Conduct dust sampling during field trimming operations
Reoccupancy Guidance and Consumer Exposure

SPF Spray Booth Air Monitoring

RESEARCH FRAMEWORK:

• Phase I
  – Monitor potential exposure to SPF chemical components (MDI, Amine catalysts, Blowing agents)
  – Use varying air exchange rates to evaluate ventilation techniques

• Phase II
  – Conduct air monitoring in the field to evaluate potential exposure to SPF chemical components (MDI, amine catalysts, blowing agents)
  – Assess ventilation techniques

PROJECT STATUS: Planning Stage

• Draft proposal under development
Product Emission Testing

RESEARCH FRAMEWORK:

• Develop a testing protocol for use by SPF manufacturers to evaluate potential emissions released from samples of SPF foam samples

PROJECT STATUS: In Progress

• CPI is in discussion with ASTM Committee regarding the scope of research
Conclusion

The industry is actively conducting research to further evaluate:

• Potential worker exposure to SPF chemical components during SPF spraying

• Potential occupant exposure to emissions released from SPF foam