



OSAC RESEARCH NEEDS ASSESSMENT FORM

Title of research need:

Keyword(s):

Submitting subcommittee(s): **Date Approved:**

(If SAC review identifies additional subcommittees, add them to the box above.)

Background Information:

1. Description of research need:

Almost all of the guidance on wall and ceiling patterns in NFPA 921 is based on those surfaces being unpainted gypsum wallboard. It is important that fire investigators understand that their analysis and interpretation of patterns may change as the material on which those patterns manifest themselves change. The effects that are created on surfaces other than this material are largely unknown. Research is particularly needed on how residential construction methods and practices have changed and the attendant impact on using fire patterns to determine fire origin.

2. Key bibliographic references relating to this research need:

Kim, M.E., Dembsey, N. (2012). *Engineering Guide for Estimating Material Pyrolysis Properties for Fire Modeling*, WPI Final Report 28 September 2012.

Geiman, J, McCarthy, L (2015). *Assessment of Damage by Fire Investigators*, Fire and Materials Conference, San Francisco, CA.

3a. In what ways would the research results improve current laboratory capabilities?

This research will help laboratories to better determine which instrumentation is appropriate for large scale fire testing as well as what data should be documented and published.

3b. In what ways would the research results improve understanding of the scientific basis for the subcommittee(s)?

3c. In what ways would the research results improve services to the criminal justice system?

This research will help the fire investigation community to apply a more systematic approach to the results of fire pattern analysis.

4. Status assessment (I, II, III, or IV):

	Major gap in current knowledge	Minor gap in current knowledge
No or limited current research is being conducted	I	III
Existing current research is being conducted	II	IV

This research need has been identified by one or more subcommittees of OSAC and is being provided as an informational resource to the community.

Approvals:

Subcommittee	Approval date: <input style="width: 100px;" type="text"/>
<i>(Approval is by majority vote of subcommittee. Once approved, forward to SAC.)</i>	

SAC		
1. Does the SAC agree with the research need?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
2. Does the SAC agree with the status assessment?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
If no, what is the status assessment of the SAC:	<input style="width: 100px;" type="text"/>	
Approval date:	<input style="width: 100px;" type="text"/>	
<i>(Approval is by majority vote of SAC. Once approved, forward to NIST for posting.)</i>		