

# Abstract

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**Title:** Underwriters Laboratories (UL) Development of Flaming, and Smoldering Polyurethane Test Fires and an Up-Date on Other UL Standards Technical Panel Activities That Can Impact the Response of Smoke Alarms and Detectors to Non-Specific Fires.

This presentation will report the activities surrounding the development of new flaming and smoldering polyurethane test fires, and task group activities addressing smoke alarm/detector production windows, nuisance alarm, and multi-criteria detector issues.

The following is a summary of task group activities to be discussed:

1) STP 217 Task Group on Nuisance Alarms. This group was formed with the charge of looking at all aspects of the current requirements for smoke detectors and alarms to seek opportunities to further reducing nuisance alarms. As a result of the group's ongoing work, the new task group on Kitchen Area Detectors has been formed, and is now operating as an independent task group. At the 2009 meeting of the STP, the nuisance alarm task group was asked to perform a review of the effectiveness and value of the current Dust Test, and to return proposals as the TG determines to be appropriate based on that review.

2) STP 217 Task Group on Multicriteria Detectors. This group was formed with the charge of developing proposed revisions to UL's smoke detector/alarm standards to include the appropriate construction, performance, marking and installation instruction requirements for multicriteria fire detectors, i.e., detectors that utilize multiple sensing technologies with associated computational algorithms to determine when a fire exists and an alarm condition is warranted. It is anticipated that multicriteria detectors have the potential for reducing the time required to detect actual fire events, thus increasing evacuation times. It is further anticipated that multicriteria detectors have the potential to reduce the frequency of nuisance alarms, thus increasing the frequency at which installed smoke detectors will be maintained in an operational state.

3) STP 217 Task Group on Battery Deactivation and Replacement. This group was formed with the charge to improve the language and requirements in the standards regarding battery issues. It is anticipated that the work of this group may result in improvements to battery performance, battery replacement by users, the identification and detection of removed or non-functional batteries, and/or other battery related safety issues.

4) STP 217 Task Group on Kitchen Area Detectors. This group was formed with the charge to consider the development of a proposed rating for kitchen area detectors (with associated performance requirements), and/or improved marking and/or installation instructions regarding detectors installed in kitchens or in proximity to cooking equipment. It is anticipated that the work of this task group might result in the development of a class of smoke detectors that are suitable for installation in kitchens or in proximity to cooking equipment, and/or user information which will reduce the frequency at which inappropriate smoke detectors are installed in these locations.