

CPSA 6 (b)(1) Cleared  
No Mts/Prvil. Br.  
Products  
Accepted by  
June 21 1994  
CPSA

**LOG OF MEETING  
DIRECTORATE FOR ENGINEERING SCIENCES**

**SUBJECT:** Development of Safety Devices for Detecting/Monitoring Home Electrical Wiring Systems.

**PLACE:** CPSC Headquarters, Bethesda, MD

**DATE OF MEETING:** June 8, 1994

**LOG OF ENTRY SOURCE:** Alberta Mills *AM*

**DATE OF ENTRY:** June 8, 1994

**COMMISSION ATTENDEES:**

- Bill King, ESEE
- Ed Krawiec, ESEE
- Kim Long, EPHA
- Linda Edwards, ESEE
- Larry Moskowitz, ESEL
- Elizabeth Haught, FO
- Alberta Mills, ESEE
- Dennis McCoskrie, ESEE

**NON-COMMISSION ATTENDEES:**

- Saul Rosenbaum, Leviton Manufacturing Company
- Terry Macalady, Bussmann, Cooper Industries
- Darrell Robinson, Ekstrom
- Jim Pauley, Square D Company
- John Young, Siemens Energy and Automation
- Ray Legatti, Technology Research Corporation
- Nick Wakeman, Product Safety Letter
- Paul Duks, Underwriters Laboratories

**SUMMARY**

The purpose of the meeting was to discuss the development of innovative technology for monitoring or detecting conditions that could cause electrical wiring system fires. CPSC expects to award the contract for this subject by the end of June. The contractor is expected to have some interaction with manufacturers in evaluating concepts.

Mr. Pauley asked whether existing data was available to be used as a starting point for the project. He stressed that without knowing the exact cause, a focus point would be hard to reach. The task group generally concurred with Mr. Pauley's assessment. Mr. McCoskrie reviewed the technical studies that CPSC conducted to support the need to address electrical wiring system fires.

Mr. Krawiec also pointed out that since most electrical fires deal with circumstantial evidence, the ability to obtain realistic data would be difficult; therefore all areas of wiring fire safety should be considered.

Mr. Pauley suggested that guidelines would be appropriate in determining the type of device needed. He said that the device could not be identified unless the group knew exactly what it was working on. He recommended a device that took some action as opposed to a device that simply monitored electrical events. He also stressed the point that an educational campaign would have to be undertaken to inform the general public of any development.

Mr. King noted several electrical characteristics that could be viewed as potential clues that could possibly lead to electrical fires. These included: overcurrent, ground currents, arcing, leakage current, surges/voltage spikes, and overheating. Mr. Krawiec asked whether the group should avoid certain areas in performing this task such as devices that were too costly or too easily defeated by the consumer. Mr. McCoskrie mentioned that the device should not be one that will provoke consumers to bypass it.

Mr. King indicated that physical location of new safety devices that could be added to existing residences was an issue. Possible locations for whole-house protection include the meter socket and the service equipment.

Mr. Robinson indicated some of the possibilities with the use of meter socket adaptors. He said that one approach would be to have current limiting fuses or circuit breakers at every service entrance, which may be the best approach for older homes. This would provide a safe way to disconnect the service. He felt that simple lamp indicators on the meter socket or meter socket adaptor to warn of possible electrical trouble may not be effective because utility companies are in the process of eliminating meter readers in favor of newer methods of measuring power usage, and that lights on meters may attract vandals.

There was some general discussion that improved branch circuit protection should be the focus instead of service protection. Other comments included the need for sensing rates-of-changes of key electrical signatures; the need to minimize nuisance tripping; and the need that any new technology developments be adaptable to existing installations.

The meeting was adjourned with a reconvening date of October 11, 1994.