


Meeting Log

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Subject : General Meeting of the Home Electrical System Fires Project
Time : January 26, 1994, 1:00 to 4:00 pm
Place : Consumer Product Safety Commission
4330 East-West Highway
Bethesda, Maryland 20814

Entry Prepared By: Ted Gordon, ESEE 

Commission Representatives

William H. King, Jr.	Project Manager, ES
Edward Krawiec	ESEE
Richard Schenk	ESEL
Carl Fenstermaker	ESEL
Charles Smith	ECPA
Kimberly Long	EPHA
Elizabeth Haught	FO
Ted Gordon	ESEE

Non-Commission Representatives

Joan Arcand	National Ass'n Electrical Distributors
Mel Borleis	Edison Electric Institute
Kenneth Byrne	Virginia Power
Bob Dunigan	National Ass'n Electrical Distributors
Vic Ferrante	HUD-Standards and Codes
Charles Forsberg	Lamson & Sessions Company
Frederick Franklin	P.A.C.E., Inc.
Thomas Fromm	Murray Electrical Products
Doug Geralde	Canadian Standards Association
Owen Jackson	Technology Research Corporation
Richard Kuchnicki	CABO
Michal Lennon	HomePro Systems
Terry Macalady	Bussman, Cooper Industries

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Matt Mingoia	Edison Electric Institute
Thomas Mock	Electronic Industries Association
Keith Mowry	Underwriters Laboratories
Saul Rosenbaum	Leviton Manufacturing Company
Ken Schoonover	BOCA International, Inc.
Steve Scully	NAHB Research Center
Rick Shaffer	Product Safety Letter
David Soffrin	Edison Electric Institute
Thomas Ware	Building Technology, Inc.
Jack Wells	Pass & Seymour/Legrand
John Widener	Intern'l Brotherh'd Electrical Workers
John Young	Siemens Energy & Automation

Summary of Meeting

At CPSC's headquarters, on January 26, 1994, a group convened to discuss CPSC's project *Home Electrical System Fires*. The 35 in attendance included representatives from the media, inspectors, manufacturers, electricians, consultants, trade associations, utility companies, code-making bodies, testing laboratories, the housing industry, electrical distributors, the Federal Government, and the Canadian Standards Association.

William King, Project Manager, began the meeting with a welcome and a presentation of the project's overview.

Overview

Home Electrical System Fires embraces three goals:

1. **Inspection** - to forward the inspection of electrical systems in older homes
2. **Wiring Repairs** - to identify *cost-effective* ways to remedy wiring fire hazards
3. **Detection Technology** - to survey new technology that can—
 - monitor the distribution system and, upon detecting a hazardous condition,
 - send out an alert.

As for the first goal—inspection of older homes—there has already been progress made.

Inspection of Older Homes

Inspection code NFPA-73, *Residential Electrical Maintenance Code for One- and Two-Family Dwellings*—which the CPSC staff helped in framing—was recently adopted by the National Fire Protection Association as a new model code for 1994. It is intended as a model for governmental bodies with enforcement powers over the home electrical installations in their jurisdictions. To advance the code, the Commission has planned several approaches:

- The Commission will send to each state a copy of the code, each to be accompanied by a letter explaining the code's intent and purpose.
- The Commission will ask each recipient of the code to forward it to the authority in their jurisdiction with the most interest—and to let us know *who* that authority is. In this way, we might identify state contacts who can influence the code's adoption.
- When practice with the code might suggest need of improvement, the Commission plans to participate in the normal NFPA revision cycle.

To develop other approaches, there will be a convening of a small group composed of a number of attendees who expressed interest in participating. They will operate under the auspices of the project, convene once the CPSC staff has developed an agenda, and share whatever material they generate with everyone on the project mailing list. The group's express purpose: to deliberate ways to encourage state and local governments to put NFPA-73 into effect.

That NFPA-73 be adopted is a Commission objective, but the Commission has no plans to recommend under which occasion the reinspection of the home should happen—at the sale of the home, for instance, or after the passing of so many years. That is a decision for each jurisdiction.

Inspections In Allegheny County

In some jurisdictions, there are home inspection programs already. For example, Allegheny County, Pennsylvania administers a program that offers inspections of the home's structure as well as its electrical and plumbing systems. Should the inspection turn up defects, eligible home owners can apply for grants or low interest loans to make repairs. Such a program is of interest to us. Therefore part of our project

team, in mid-February, went to Pittsburgh to get better informed and to exchange information on inspections.

Evaluating Innovative Home-Wiring Repairs

In any inspection, after identifying defects, it is the remedies that are most vital. But traditional ones, often involved, might be cost-prohibitive. Consequently, the remedies this project will affirm, according to its second goal, are *cost-effective* and, likely, innovative wiring repairs—but those that retain essential levels of safety.

Such repairs and their costs will be surveyed for us by a contractor. The announcement has already been published. From the November 24, 1993 edition of Commerce Business Daily:

"The purpose of this contract is for a qualified contractor to develop and subsequently publish information about currently available methods, materials and devices for reliable upgrading of residential electrical systems at a relatively low cost. Specific hazardous defects have been selected from the National Fire Protection Association NFPA-73 Code and other sources to be the subjects of corrective-action narrative reports. Particular emphasis shall be placed upon applications of new technologies that achieve lower costs than traditional remedies. This information is intended for distribution to electrical inspectors, electrical contractors, 'authorities having jurisdiction' (over local electrical codes) and others who are interested in reducing the incidence of residential fires by reducing existing hazards."

Evaluating Remedies at the CPSC Engineering Lab

Some of the methods and materials the survey recommends, and others we identify, will be evaluated at CPSC's Engineering Laboratory in Gaithersburg, Maryland. There, the lab is building a full-scale mock-up to represent residential construction, which, once it's operational, will be available for viewing. In the mock-up, the lab will install various wiring schemes, raceway systems for instance, and note how they are installed and what limitations they present. The lab will also look at alternative ways to replace service equipment.

Monitors, Detectors, and Technology

Third on our list of goals is monitors and promising technology. To address wiring problems hidden and still evolving, we plan to evaluate types of permanent monitors or detectors. The detector, as we envision it, would monitor the entire distribution system for select circuit parameters (such as surges, arcing, leakage current, ground faults, overcurrent, or overtemperature), alert someone upon sensing a

condition (the consumer perhaps or the utility meter reader), but not necessarily interrupt power.

To survey detectors and the range of possible technologies, we plan to enlist a second contractor. From the December 6, 1993 edition of Commerce Business Daily:

"The purpose of this [the second] contract is for a qualified contractor to perform an in-depth study (with report) of the practical technologies to detect and monitor precursory electrical conditions that could lead to fires in residential electrical wiring systems. The study shall cover an assessment that can be applied to existing residences to decrease the likelihood that deficiencies could lead to fires. The technologies sought are conceived as supplementary devices to the existing wiring materials and electrical distribution apparatus."

Next Year—

Plans for next year include identifying one or more homes as candidates for electrical-system rehabilitation, diagnosing the system and renovating it, and committing the entire activity to video tape. Demonstration rehabs we plan to have performed area to area to illustrate what is involved in renovating houses in various parts of the country. But such activities, for our resources, will likely be ambitious. Therefore we hope to enlist the help of partners.

After that look ahead, Mr. King concluded his presentation and opened the floor for questions and suggestions.

Questions and Suggestions

- *Getting states to adopt NFPA-73 is one goal of your project that seems most vaguely described. Is there a timetable for getting states to pass it?*

CPSC cannot mandate to any state the passage of NFPA-73. We will, via designated state representatives, inform states of its existence, educate them of its importance, and apply whatever influence we have. But timetables for the code's adoption is entirely left up to each jurisdiction.

- *There is a wide variance in data on electrical fires. Often where no cause is apparent the cause is assigned as electrical. Will this project address ways to refine the reporting and statistics of electrical fires?*

This project is based on statistics and confirmed reports gathered by the Commission's Directorate of Epidemiology, which show among other things that fires caused by the electrical-distribution system are disproportionately high in home more than 40 years old. It is that conclusion that is our launching point. If in our work the pos-

sibility emerges to refine our data, we will incorporate that in our project or more likely recommend it for future work.

- *There is a lot of enthusiasm in the industry for a reinspection code and it seems we could form some sort of coalition, which CPSC could oversee and marshal. An ad hoc group could be formed under the project's auspices, and the group could report its progress at the next plenary meeting in the summer.*

CPSC welcomes this suggestion and, and we will notify those who expressed interest in participating about when the group is forming.

- *To promote inspection, perhaps insurance companies might to offer premium discounts to people who had their homes reinspected and, if necessary, upgraded. Similarly, to protect the interests of both the borrower and the investor, mortgage companies might induce their borrowers to accept inspections.*

Discussion over this suggestion seemed to settle on the sale of the home as the best time to require an inspection, as opposed, for instance, on mandatory inspection every so many years. At the sale of the home, buyer, lender, and insurer all have an opportunity and an interest to act on behalf of the home's safety.

- *Refurbishing is expensive, and the mindset of the typical homeowner, who doesn't want to spend much money, is hard to overcome. Refurbishing might be made more palatable if, in the refurbishing, replacement parts are more energy efficient, more cost saving. Moreover, the financing of electrical safety improvements could conceivably be arranged through electrical utilities, as is done with other home improvements.*

The discussion subsided around 4:00 pm, at which time William King adjourned the meeting.