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MEETING LOG

Meeting Between: CPSC, National Electrical Manufacturers (NEMA), Underwriters Laboratories (UL) and American Institutes for Research (AIR)

Date: Thursday, September 28, 1995 ✓

Place: One Washington Circle Hotel, One Washington Circle,
Washington, DC

Topic: UL's Decision to Postpone the Proposal to Require Indicator Lights on Ground Fault Circuit Interrupters (GFCIs) to Detect Miswiring of the Line and Load Terminals

Log Entry: Carolyn Meiers, ESHF, Ext. 1281

Participants:

Commission Staff:

Jacquie Elder, EXHR
Andrew Stadnik, ES
Carolyn Meiers, ESHF

Non-Commission Participants:

Milton Bush, THE 'M COMPANIES
Maureen Cisk, Product Safety Letter
Ric Erdheim, NEMA
Timothy Feldman, NEMA
Bruce C. Navarro, Legislative & Regulatory Affairs
Donald J. Talka, UL
Michael Wiklund, AIR, via telephone
Stephen Vastagh, NEMA

BACKGROUND: This meeting was requested by CPSC to discuss UL's decision to postpone the proposal to require mis-wired indicators on GFCIs. UL's stance was generated by AIR's response to the proposal that no empirical evidence existed that indicator lights would provide a measure of safety over and above the label already required to cover the load terminals on the GFCI and new, improved installation instructions. AIR is currently under contract to NEMA to design a generic set of installation instructions for GFCIs that would become part of the UL standard. A NEMA task force on Installation Instructions for Receptacle-Type GFCIs is administering the contract.

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DISCUSSION: At the start of the meeting Don Talka of UL stated that it was not UL's intention to withdraw the proposal but to postpone it until the efficacy of the label and instructions were evaluated. CPSC staff questioned whether this type of evaluation was feasible.

Dr. Wiklund of AIR stated that the instructions could be evaluated through individual usability testing of 8 to 10 subjects. CPSC staff said that this type of testing would not elicit information on whether the addition of an indicator light would improve safety over and above labeling and instructions. CPSC staff said testing that would show a difference between the two conditions (warning and instructions compared to warning, instructions and indicator light) would be expensive because more subjects would have to be used. In addition, CPSC staff questioned whether a valid methodology for such testing could be constructed because of the variety of wiring conditions that consumers can encounter.

Dr. Wiklund stated that requiring an indicator light without also requiring specifications for the light would cause critical confusion for installers. His concerns included whether consumer interpretation of the light would be correct. CPSC staff acknowledged that critical confusion could result, but felt that on-product information about the function of the light could eliminate the confusion.

In response to AIR's contention that there was no empirical evidence to support the addition of an indicator light, CPSC staff countered that the Human Factors literature showed quite clearly that the use of safety equipment increased when it was provided with a product. The literature was quoted as saying that even raising the cost of effort a small amount could have a devastating effect on compliance. CPSC staff referenced research to support this contention. CPSC staff stated that supplying an indicator light with a GFCI would be a significant persuasion factor in getting consumers to correctly test the device.

AIR and UL remarked that the design of new installation instructions and the adhesive warning label over the load terminals of the GFCI should be sufficient to assure correct installation of a GFCI. CPSC stated that while the adhesive label should prevent inadvertent connections to the terminals, it was still possible for the line and load wires to be incorrectly identified and attached to these terminals. CPSC staff said that because the new design of the installation instructions would aim at streamlining the installation process and exclude instructions for complex installations, it was even more critical for consumers to test and to test correctly.

CPSC staff said that from previous meetings with manufacturers and UL regarding indicator lights, it was recognized that the instructions and label would be interim measures to solve the problem of miswired GFCIs. CPSC staff also noted that the Human Factors literature supported that design was more effective than instructions alone to achieve safety objectives. CPSC staff stated that a systems approach had to be applied to the problem of GFCI installation and that design, labeling and instructions comprised that system.

During the discussion, CPSC staff acknowledged the importance of the technological advancements made by GFCIs to prevent electrocutions and fires, but said it had a poor user interface.

UL asked AIR what could be expected as a result of AIR's focus groups and usability testing of the instructions and AIR replied a better designed set of installation instructions.

NEMA requested that CPSC provide data on GFCIs that NEMA had asked for at a May, 1994 meeting. CPSC staff replied that they would supply this documentation.

UL concluded the meeting by saying they would discuss the issues brought up at this meeting and inform CPSC what decisions UL would make based on this information in approximately one week.