

**LOG OF MEETING
DIRECTORATE OF ENGINEERING SCIENCES**

CPSA 6 1/2, prepared
No. 410/194
No. 410/194
Products Identified
Date: 10/3/94

SUBJECT: Portable Electric Air Heaters, Petition by Bernard Schwartz

DATE OF MEETING: October 3, 1994

PLACE OF MEETING: CPSC Headquarters, Room 518

LOG ENTRY SOURCE: Erlinda M. Edwards, ESEE

COMMISSION ATTENDEES:

Edward Krawiec, ESEE
Erlinda Edwards, ESEE
Allen F. Brauning, OGC
Carl Blechschmidt, OPE

NON-COMMISSION ATTENDEES:

Bernard Schwartz, Schwartz Fire Specialists
Sandy Ruitter, UL
Jack Weizeorick, AHAM
Mike Kleine, AHAM Counsel
Mary Spock, Product Safety Letter

SUMMARY OF MEETING:

Ed Krawiec briefly explained that the purpose of the meeting was to review some of the details in the petition submitted by Mr. Bernard Schwartz concerning the risk of fire associated with portable electric air heaters.

Mr. Krawiec stated that there had been a series of revisions in the UL standard which, for the most part, became effective April 1991. Those revisions were based upon CPSC recommendations which resulted from CPSC's priority project on portable electric air heaters. Adopted changes--including modifications in testing, quality control programs, construction and performance--in totality appear to CPSC to represent a significant change which should result in a reduction of fires. Since portable electric air heaters meeting the new UL requirements would have been first used in winter 1992, and since the number of such heaters in use during 1992 and 1993 would be a small fraction of the heaters now in use by consumers, it is not yet possible to use national fire incident statistics to determine if those requirements have been effective in reducing the risk of fire.

In that regard, Mr. Schwartz inquired whether there were any significant construction details or metal identification plates which would aid a fire investigator in determining the age of a heater involved in a fire. Such information would be valuable in helping to determine



whether the UL revisions were effective. There was a negative response, and Mr. Schwartz suggested that CPSC consider recommending to UL a requirement for a metal identification plate.

Mr. Krawiec asked Mr. Schwartz whether, in his petition, he had taken the revisions to the UL standard into account. Mr. Schwartz indicated that he was not aware of the adopted changes when he filed his petition.

Mr. Schwartz explained that his concern lies in the possibility that combustibles in close proximity (0" to 6" range) to the face of a heater may be ignited. In addition, if something comes in contact with and only partially blocks a heater vent, the thermal cutoff will not activate and may result in ignition.

Mr. Krawiec explained that extensive testing of a range of heater designs purchased for the 1986/1987 portable electric air heater project indicated that most such heaters could not ignite common household combustibles placed close to or even in contact with their output grills. For example, national fire incident data suggested that many portable electric air heater fires occurred in bedrooms and that bedding was often the first material ignited. A large number of the CPSC tests involved exposing combinations of mattresses and easily ignited bed-clothing to a range of heater designs placed at decreasing distances from those combustibles. Other CPSC tests involved both full and partial draping of the heaters with a range of combustible materials. In most cases, full or substantially full draping of the heaters resulted in rapid response of their temperature limiting controls. Only when the combustibles covered a portion of the heaters' output grills and only when they were carefully placed so as to minimize the opportunity for the temperature limit controls to function, did ignition occur. This data provided the basis for the CPSC recommended changes to the UL standard. Those recommendations included, for example, both full and multiple trial partial drape tests, placement at decreasing distances to a combustible "wall," repeating tests at all of the power settings provided on a heater, etc.

The CPSC report of the heater project concluded that fires ignited by portable electric air heaters are most likely caused by failures of the heaters themselves rather than by consumers placing combustibles too close to the heaters. The exception was radiant type heaters. Some radiant heaters may be able to ignite combustible materials located within 6 inches of their output grills. Most of the radiant heaters tested by the CPSC could not ignite such materials placed 4 inches or further from their grills.

While Mr. Schwartz agreed that his experience has shown that problems are currently limited to radiant heaters, however, the test protocol described in his petition attempted to provide a generic solution.

Ed Krawiec agreed that Mr. Schwartz's proposed test made sense as yet another way of testing heaters but he indicated that without doing extensive comparative test work it would not be possible to say that the proposed test was substantially more or less severe than the multiple trial partial drape testing suggested by the CPSC and adopted by UL. Mr. Krawiec also pointed out that the UL standard requires a battery of tests which address issues ranging

from contact and proximity ignition to tip-over and impact damage. Consequently, that he viewed the proposed test as a possible additional test and not necessarily a replacement for any of the tests now required by UL.

Mr. Al Brauningger described CPSC's policy in dealing with petitions. A relatively quick decision is required and the decision must be based upon currently available information. In this case, this would include the CPSC project study along with the revised UL standard. The CPSC procedures for evaluating petitions would not allow the agency to conduct the extensive testing required to determine the relative severity of Mr. Schwartz's proposed test compared to the tests in the revised UL standard. If the CPSC decided that a final determination could not be made on the petition without such data, a decision could be deferred until resources became available to conduct such a testing project.

Mr. Brauningger pointed out that for a petition to be granted, it must be established that there may be an unreasonable risk of injury that could be reduced by the rule requested by petition. It must also be shown that a voluntary standard does not adequately address the risk or that the standard does not enjoy substantial compliance.

Mr. Jack Weizeorick expressed his opinion that the revisions to UL1278 addressed the concerns of the petition. He indicated that the portable electric air heater industry is complying with those revisions. UL has worked with its Listees to eliminate problems caused by defective heaters through improved quality assurance programs.

Mr. Brauningger stated that the Notice soliciting comments was published in the Federal Register on Friday, September 23, 1994. The CPSC procedures for petitions provides a sixty day comment period. The CPSC staff has 180 days from the close of the comment period to analyze the comments received and to forward a briefing package to the Commission.

In closing, Mr. Schwartz indicated that he would attempt to conduct some tests using the revised UL requirements and his own proposed tests. He would also carefully consider any comments and/or data submitted to CPSC during the comment period. Mr. Schwartz indicated that if the intent of the petition has been met by the revisions to the UL standard, then he would be satisfied. CPSC staff described alternatives which Mr. Schwartz may want to consider:

- Withdraw the petition if Mr. Schwartz is satisfied that the intent of the petition has been met by the revisions to the UL standard.
- Re-petition the Commission if Mr. Schwartz obtains information which suggests that the UL standard is not as effective at reducing the risk of ignition as is currently believed it will be.