

Subject 1559

September 22, 2017

SUMMARY OF TOPICS

The following changes in requirements to the Standard for Safety For Insect-Control Equipment - Electrocutation Type, UL 1559, are being proposed:

1. Revision of Requirements to Testing, Marking, and Instruction Requirements

STP BALLOTS AND ALL COMMENTS DUE: October 23, 2017

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<http://ulstandards.ul.com/develop-standards/participation/interest-categories/>

If you are interested in applying for STP 1559 membership or are aware of potential candidates for this STP, please contact the STP Project Manager, wilbertfletcher.com.

For your convenience in review, proposed additions to existing requirements are shown underlined and proposed deletions are shown ~~lined-out~~.

1. Revision of Requirements to Testing, Marking, and Instruction Requirements

RATIONALE

Proposal submitted by: David Sliney

Generally it is common that the electrocution insect killers are installed away from area with continuous human activities due to spark and zapping sound. UV exposure is addressed via UV limits at safe installation distance. In addition, there is marking to disconnect power supply during servicing due to high voltage in Para. 70.2.7 of UL 1559.

Due to number of existing markings with more immediate hazards on electrocution insect killer, multiple UV warnings may foster user to disregard more critical safety warnings. Therefore markings and instructions are simplified in Para. 73.1 and 74.2 of UL 1559.

And in Para. 64A2 there is a requirement to measure UV emissions even under conditions of removal of engineering controls such as protective guards. The original intent is to consider readily removable parts without tool in actual use. Clarification is added in 64A2 to consider foreseeable use in testing.

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Since there is no technical requirements whatsoever for UV emitted from insect light traps (ILTs) in Title 21 of the Code of Federal Regulations (the Radiation Control for Health and Safety Act is 90-602 and is the enabling legislation for Title 21CFR). The only Title 21 regulations are for sunlamps (21CFR), and for UV germicidal devices (21CFR). This paragraph 1.5 should therefore be deleted.

UL 1559 is for the most part well crafted. However, some very limited rewording is needed to reduce confusion in interpretation.

It is the proposal submitters opinion that this proposal affects the Test requirement revision or clarification, Marking requirement, and the Instruction requirements of the Standard.

PROPOSAL

~~1.5 Insect-electrocution equipment generating ultraviolet (UV) radiation are intended for use in accordance with the Federal Radiation Control for Health and Safety Act, Title 21.~~

39.3.1 Insect-electrocution equipment shall not employ lamps designed to emit ultraviolet (UV) radiation in wavelengths less than 250 nm. Incidental UV radiation in wavelengths less than 250 nm is allowed provided that the radiation shall not exceed an effective irradiance level greater than 1% of that generated in the 300-400 nm bands. Care shall be taken in measuring spectral irradiance at wavelengths below 300 nm to exclude instrument noise, which may give an erroneous indication of UV-C radiation. See 64A.4 for proper measurements and good laboratory practice.

64A.2 Testing shall be performed in the condition(s) most likely to result in the highest emission levels, including ~~removal~~ reasonably foreseeable removals or adjustment of guards or operating settings. The test shall be performed using a new lamp, or integral radiation source, representative of the maximum emission capability, including user replacement parts. The measurement device shall be placed at the distance indicated in Table 64A.1 for the type specified or at a lesser distance if requested by the manufacturer. The effective irradiance value shall comply with the requirements of 30.2.1.

64A.4 Instrumentation used for the radiation measurements shall be suitable for the measuring of emissions of the radiation source and frequencies. These measurements should only be performed by people trained to make proper optical radiation measurements and follow good laboratory practices, which can be found in documents such as ANSI/IESNA RP-27.2 and IEC 62471:2006.

73.1 Equipment employing lamps which produce ultraviolet (UV) radiation exceeding the applicable limits in Table 64.A1, shall be marked with the word "WARNING" and the following or equivalent: "Skin or eye damage may result from directly viewing the light produced by the lamp in this apparatus. Always disconnect power before relamping or servicing." The marking shall be located where readily visible during approach to the lamp compartment. Products employing an interlock switch to disconnect power during servicing and relamping in accordance with Exception No. 2 of 30.2.1 are not required to provide the marking.

74.2 Insect-electrocution equipment intended for permanent installation or mounted in a dedicated area (fixed equipment) such as the wall of a building structure which emit ultraviolet (UV) radiation exceeding the applicable limits in Table 64.A1 shall be provided with the following important safety instructions in the manual; marking or its equivalent "CAUTION – Risk of UV exposure. ~~Ensure product is installed such that no continuous human activity is likely to be performed within X distance of the unit while illuminated.~~" "Install product at minimum X distance from spaces with continuous, 8-hour human activities so that people are not continuously exposed to UV." X is the general use distance of Table 64A.1. The instruction shall be included in the Important Safety Instructions.

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