



U.S. CONSUMER PRODUCT SAFETY COMMISSION
WASHINGTON, D.C. 20207

October 22, 2003

Ms. Heather Sakellariou
Secretary for STP 2201
Underwriters Laboratories, Inc.
333 Pfingsten Road
Northbrook, IL 60062

Re: Request for Comments on the Proposed First Edition of the Standard for Portable Engine-Generator Assemblies, UL 2201

Ref: Comment resolution matrix for UL 2201, which provides the comments and dispositions, agreed upon by those attending the July 15-16 UL2201 STP meeting.

Dear Ms. Sakellariou:

This letter presents the U.S. Consumer Product Safety Commission (CPSC) staff's comments regarding the subject standard. Please note that the views and comments contained in this letter are those of the CPSC staff and have not been reviewed or approved by the Commissioners.

CPSC staff is very concerned about the carbon monoxide (CO) poisoning hazard associated with portable engine-generator assemblies. From 2001 to 2002, the number of CO poisoning fatalities associated with this product that were reported to the CPSC nearly doubled (from 17 to 30)^{1,2}. In the eastern U.S. alone, there were a number of regional power outages in the span of six weeks, starting with the northeast blackout on August 14, 2003. Hurricane Isabel caused power outages lasting up to eleven days for some consumers in the Washington, DC metropolitan area. During these outages, local media reported that area stores were sold out of generators. The total number of generator-related CO poisoning fatalities from that storm will take some time to be counted, but the three news articles attached to this letter are examples of some of the deaths. CPSC staff is investigating these as well as others. CPSC worked with local media outlets to warn the public about this hazard following the northeast blackout and prior to Hurricane Isabel.

At the July meeting, the Standards Technical Panel (STP) for UL 2201 agreed to address the CO poisoning hazard in the Markings and Operating Instructions sections of the standard. This hazard is not addressed in any other section in the proposed standard. CPSC staff believes

¹ This count is the unweighted, actual number of deaths in the CPSC files (reported as of 3/13/03) associated with generators; it is not a statistical sample and national totals may not be derived from it.

² Vagts, Susan, *Carbon Monoxide Incidents and In-Depth Investigations Associated with Engine-Driven Tools, 1990-2002*, CPSC Memorandum to Janet L. Buyer, Project Manager, U.S. Consumer Product Safety Commission, Washington, D.C., April 1, 2003.

that the use of generators in enclosed and partially enclosed spaces is foreseeable³ and that requirements for markings and instructions alone are not adequate to address this hazard. CPSC staff recommends that this standard include performance requirements to address consumer exposure to unsafe CO emissions from the generator engine. The staff requests that an ad hoc working group be formed to address such performance requirements at the earliest possible time.

As part of the strategy to reduce CO exposure, CPSC staff also recommends that weatherization requirements be added to the standard to permit safe outdoor use of portable generators during inclement weather. Weatherization features include devices that provide built-in electrical shock protection for consumers on the generator power outlets; a raintight or rainproof enclosure; and receptacle covers that are weatherproof when the receptacle has a cord plugged into it. CPSC staff requests that an ad hoc working group be formed to address such requirements.

Sections 12.9.2.b (Receptacles) and 15.1.1 (Generator Output Circuit Protection) of the proposed standard already include requirements for Ground Fault Circuit Interrupters (GFCIs), devices that provide personal shock protection. CPSC staff is aware of portable generators currently available on the market that provide GFCI protection on all output circuits. However, UL 2201 STP Working Groups 4 and 5 have been tasked to research issues associated with GFCI integration on portable generators and to propose alternative requirements for receptacles and generator protection. In advance of knowing the findings and recommendations of the working groups, CPSC staff believes that UL 2201 should include requirements for devices that provide consumers with electric shock protection for all alternating current (AC) generator outlets providing voltages greater than 30 volts root mean square (Vrms). Any shock protection device to be considered for this application should be evaluated to ensure that nuisance tripping under normal operation of the generator does not occur.

For purposes of clarification, page B2 (see attachment) of the referenced comment resolution matrix contains a comment made by Mr. Czarnecki and a disposition on that comment which states that “UL 2201 does not cover portable generators used to provide emergency standby power to a structure or dwelling.” Contrary to this statement, the proposed scope of the standard does not exclude this application and CPSC staff recommends that it not be revised to exclude it. Use of portable generators to provide emergency standby power to structures or dwellings is a common consumer application of portable generators. In fact, owner’s manuals of commercially-available generators acknowledge this use by warning consumers that connections for standby power must isolate the generator power from utility power. Therefore, this mode of operation should not be excluded from the scope of the standard.

The blocked inlet test that was proposed in Section 25 of the first draft version of this standard was deleted from the current version based upon comments on page B33 (see attachment) of the comment resolution matrix. CPSC staff believes this requirement should remain in the standard. Commercially available generators exist that are assembled in thermoplastic enclosures, which restrict airflow through louvers that could be blocked during operation. CPSC staff is concerned that blocked louvers could create an overheating condition and potential fire hazard. The conditions for failure in this requirement should be those conditions that create a risk of fire or personal injury.

³ Correspondence from CPSC to UL dated 5/8/03 describes the epidemiological data obtained from CPSC databases on this hazard as it is associated with this product. This data was presented to the UL 2201 Standards Technical Panel (STP).

In view of the apparent increasing sales of portable generators and the risk they pose to the public, CPSC staff encourages UL to move UL 2201 forward as quickly as possible, addressing the issues presented in this letter.

Thank you for the opportunity to provide these comments to the STP. CPSC staff is pleased to continue to work with UL and other STP members on UL 2201.

Sincerely,

Janet L. Buyer
Project Manager

Attachments: news articles
Page B2 of Comment Resolution Matrix for UL 2201
Page B33 of Comment Resolution Matrix for UL 2201

Cc: Colin Church, CPSC Voluntary Standards Coordinator