U.S. CONSUMER PRODUCT SAFETY COMMISSION
WASHINGTON, DC 20207

Arthur Lee
Electrical Engineer
Division of Electrical Engineering
Directorate for Engineering Sciences

Tel: (301) 504-7539
Fax: (301) 504-0533
Email: alee@cpsc.gov

February 25, 2003

Mr. Paul Patty
Underwriters Laboratories Inc.
333 Pfingsten Road
Northbrook, IL 60062

Dear Mr. Patty:

The U.S. Consumer Product Safety Commission (CPSC) staff has completed the final analysis and report on lithium batteries used in residential smoke alarms. A copy of the report, *Final Report on Lithium Batteries (Ultralife, ANSI 1604), Used in Residential Smoke Alarms, December 2, 2002,* is enclosed.

CPSC staff previously issued a report, *Preliminary Test Results on Lithium Batteries Used in Residential Smoke Alarms, June 28, 2002,* which documented that premature low-battery signals emitted by smoke alarms collected from the field were caused by failures of the lithium batteries used in the alarms.

In a letter to Underwriters Laboratories (UL), dated September 6, 2002, the CPSC staff made recommendations regarding revisions to UL 217, *Single and Multiple Station Smoke Alarms,* to address reliability and performance testing for long-life (10-year) battery-powered smoke alarms. Current requirements in UL 217 only mandate that battery-powered smoke alarms function for a period of one year. New performance requirements are needed in UL 217 to ensure that consumers can rely on the claims of manufacturers that long-life smoke alarms will provide protection up to 10 years. The CPSC staff also recommended that 10-year or long-life smoke alarms not have removable, replaceable batteries. This will encourage smoke alarm manufacturers to ensure that the batteries they use will meet the 10-year specification. In addition, the ability of a consumer to install a long-life or 10-year battery in a smoke alarm might encourage the consumer to operate the smoke alarm past its recommended life of 10 years.

With the issuance of the enclosed final report, the CPSC staff would like to reiterate the above recommendations. Smoke alarms have saved thousand of lives since they were first introduced in the 1970s. We are concerned that any unpredictability in useful life could severely erode confidence in these life-saving devices.

Thank you for the opportunity to address this critical issue, and we look forward to participating in further discussions on this matter in the near future. The views expressed in this letter are those of the CPSC staff and have not been reviewed or considered by the Commission.

Sincerely,

Arthur Lee
Electrical Engineer
Directorate for Engineering Sciences

cc: James R. Beyreis, UL/Northbrook
Gordon Gillerman, UL/Washington
Colin Church, CPSC Voluntary Standards Coordinator
Andy Naukam, Ultralife Batteries, Inc.