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Region III Office of Public Affairs  
801 Warrenville Road, Lisle, IL 60532-4351

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CONTACT: Jan Strasma 630/829-9663  
          Angela Dauginas 630/829-9662  
          E-mail: opa3@nrc.gov

NRC STAFF PROPOSES \$2,500 FINE AGAINST S.C. JOHNSON & SONS,  
FOR A RADIATION SAFETY VIOLATION

The Nuclear Regulatory Commission staff has proposed a \$2,500 fine against S.C. Johnson & Sons, Inc., Racine, Wisconsin, for the unauthorized disposal of a nuclear gauge.

The company, a manufacturer of a wide variety of consumer and commercial products, uses industrial gauges with a sealed radiation source containing americium-241 or cesium-137 primarily for detecting the fullness of aerosol cans on an assembly line.

In August of last year, S.C. Johnson employees removed a nuclear gauge containing americium-241 from an assembly line in preparation for replacement without informing the company's Radiation Safety Officer. The gauge was placed in an equipment scrap area and a month later was disassembled by company staff for scrap metal. Parts of the gauge were placed in non-radioactive trash bins which were disposed of in a local landfill, and the other parts were placed in bins containing metal for recycling.

In November, when the Radiation Safety Officer realized that the gauge was missing from the assembly line, searches and surveys were performed of the company's facility, the metal recycling center, and the landfill. The missing source was not located during the searches and no abnormal radiation levels or contamination were detected. The company believes that the part of the gauge containing the americium-241 source was disposed of as non-radioactive trash and sent to the landfill where it is buried 15 to 30 feet below the surface.

(The americium-241 is sealed in ceramic enamel which is bonded to a stainless steel capsule and inside a metal protective box. As long as the source remained in the protective housing with the source shutter closed, it would not represent a significant environmental or safety hazard. The gauge's source shutter automatically closes when power is off.)

NRC inspectors in November and December performed radiation surveys at the facilities and selected areas of the landfill where the source may have been deposited. Inspectors determined that landfill operations were unlikely to cause damage to the

sealed source.

In a letter to the company, NRC's Regional Administrator A. Bill Beach said:

"The lack of basic radiation safety instruction for employees frequenting areas where nuclear gauges are installed contributed to this incident which resulted in the loss of a 300 millicurie americium-241 source...Although [S.C. Johnson & Sons] is reasonably certain that the source is buried in a local landfill, this violation is of significant regulatory concern because several S.C. Johnson & Sons' employees failed to follow established procedures regarding the handling of nuclear gauges."

The company was also cited for unauthorized removal of the gauge, storing the gauge in an unsecured area, and failing to immediately report the missing source to the NRC. No fine was assessed for these three violations.

The company has until October 3 to pay the fine or to protest it. If the fine is protested and subsequently imposed by the NRC staff, the company may request a hearing.

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