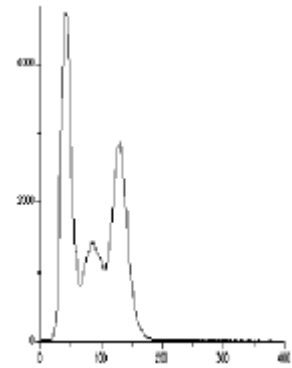




MIDWEST
CHAPTER

THE SPECTRUM

NEWSLETTER OF THE HEALTH PHYSICS
SOCIETY'S
MIDWEST CHAPTER
January 19, 2009
www.midwesthps.org



Winter Meeting, February 12, 2009

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Advances in the Non-intrusive Inspection Systems

Richard Whitman, Test Scientist for the Defense Threat
Reduction Agency, Mercury, NV

Rick Whitman, a member of the Hoosier Chapter of HPS, recently retired from a 28 year career as a federal health physicist, nearly all of which was as an RSO. He worked for the Army at Fort Detrick, the Naval Surface Warfare Center, the Army Tank Automotive Command, the VA Hospital at Kansas City, MO and with US Customs and Border Protection from May of 2000 until late in 2008. Mr. Whitman has held 35 NRC licenses, 2 DOE Permits for SNM, 2 Canadian licenses and has coordinated radiation security screening systems both inside and outside the US Government. In June 2008 he was recalled to Active Military service, and serves as an Army Colonel and Test Scientist at Mercury, NV for the Defense Threat Reduction Agency in support of counter WMD and other initiatives.

From the Desk of the President

Over the last few weeks, we have all read the many articles and watched the television news shows welcoming 2009 and uttering good riddance to 2008. From a professional health physics perspective, I can't say that I share in the general disdain for 2008.

During the past year, several significant health physics issues were discussed and debated, including the continued controversy concerning the LNT theory, the importance of health physics to homeland security, and the increased impact of medical exposure on estimated average annual exposures. Given the diversity and relative newness of these health physics issues, the coming year could be very interesting indeed.

(Continued next page)

From the Desk of the President (Continued from Page 1)

To that end, the chapter will continue to provide interesting and enriching opportunities to hear and discuss the health physics issues that will shape 2009, and beyond. You have undoubtedly read the article on page 1 by our President-elect, Cindy Boggs, introducing the speaker and topic for our winter dinner meeting on February 12th. I encourage all to attend, and I challenge each and every one of you to bring a professional associate, friend, or significant other.

Our premier event will be the second annual spring Technical Symposium on Saturday, April 25th at the Argonne National Laboratory Advanced Photon Source (APS). The first symposium in 2008 was highly successful with over 70 attendees and 12 different health physics-related presentations. The planning committee fully expects the 2009 symposium to build on the success of the inaugural event. In order to ensure this, we invite and would welcome participation from the chapter members, either as speakers or as committee members (i.e., to assist in the planning). If you are interested in participating, or know of any potential speakers, please send an email to me at john.schrage@exeloncorp.com, or call me at 630-657-2821. Otherwise, please mark the date and look for additional information in the March timeframe.

John L. Schrage

International Event -- Spain -- INES LEVEL 3 Event: Industrial Radiographer Dose Causes Significant Injury

Tarragona, Spain - Overexposure of a worker -- INES 3 – On September 25th the CSN (Regulatory Authority of Spain) was informed through the Radiopathology National Hospital that an industrial radiography operator suffered from radiological skin injuries, on the fingertips of three fingers on his right hand. The operator complained of tightness in his fingers in 24 hours and developed a blister and erythema 48 hours later (after) an incident involving an event with a remote portable industrial gammagraphy device with 0.8 TBq (21.4 Ci) of Iridium-192. The event took place on August 1st and (was) reported to the CSN on the 4th. On that day the operator was performing radiographic examinations of a pipe in the enclosure (for) industrial radiography. The enclosure did not have the appropriate safety measures (safety interlocks or warning alarms) to perform that type of work. After entering the room, the operator unlatched the source guide tube of the device to set up the next exam, and then realized the source was out the safety containment. He had not noticed it before because he did not hear the acoustic alarm of his direct reading dosimeter as he was wearing acoustic protection to avoid the noise outside the enclosure.

Based on the recorded dose of both, the personal and the direct reading dosimeters (1.7 mSv), the event was initially considered of low safety significance. The CSN was not informed of the actual impact on the worker until the report from the hospital was received.

The effective dose as recorded by the personal dosimeter was below the dose limits and the event resulted in a local exposure of the right hand. The skin injuries on the fingertips have developed well; currently there is no sign of local effect. However the worker will remain under medical surveillance.

The CSN is carrying out an investigation of all the aspects involving the event in order to take adequate actions. According to a previous CSN regulatory instruction, the specific device involved in this event could only be used under the fulfillment of (with) special precautions, including enclosure industrial facilities equipped with appropriate safety provisions. Until the new INES Manual is officially published, Spain is not using INES to communicate to the public the safety significance of radiological events (that have) occurred outside nuclear facilities.

NRC News

U.S. Nuclear Regulatory Commission

No. 09-011

January 16, 2009

NRC REQUESTS ORGANIZATIONS TO REPORT ON TRITIUM EXIT SIGNS IN THEIR POSSESSION

The Nuclear Regulatory Commission has requested 61 organizations to check tritium exit signs in their possession against their records and to report any lost or missing signs to the agency.

The NRC's action follows an inspection of Wal-Mart Stores, Inc., conducted in December and discussed in a meeting with Wal-Mart officials this week. A year-long audit by Wal-Mart identified approximately 15,000 tritium exit signs lost, missing, or otherwise unaccounted for at its stores and warehouses nationwide. Wal-Mart, which kept the NRC informed of its audit, expects to submit a formal report to the agency in late January.

Tritium exit signs pose little or no threat to public health and safety and do not constitute a security risk. However, the NRC requires proper recordkeeping and disposal of all radioactive materials. Proper handling and recordkeeping are important, because a damaged or broken sign could cause minor radioactive contamination of the immediate vicinity, requiring a potentially expensive clean up.

"Wal-Mart's inability to account for all the tritium exit signs the company purchased demonstrates that organizations may not be fully aware of the regulatory requirements for owning these signs," said George Pangburn, deputy director of the NRC's Office of Federal and State Materials and Environmental Management Programs. "The NRC wants to be certain that organizations are aware of their responsibility to properly account for tritium exit signs in their possession and to dispose of them properly at the end of their useful life."

In a "demand for information" issued today, the NRC asked organizations possessing 500 or more tritium exit signs to report in writing to the NRC within 60 days the following information:

An explanation of how the organization ensures compliance with regulatory requirements applying to the possession, transfer and disposal of tritium exit signs the organization has acquired;

- A confirmation of the total number of signs possessed, and whether this matches the number in the organization's records;
- The reasons for any discrepancies, and actions taken or planned to locate any missing signs;
- Actions taken or planned to prevent future losses.

The organizations receiving the demand for information were identified through the NRC's General License Tracking System, which contains information filed by device manufacturers regarding initial distribution of the signs. The organizations include large retail store chains, churches, federal and state agencies, school districts and universities, among others.

The signs are considered "generally licensed devices," because they are inherently safe enough to be handled or used by anyone with no radiation training or experience. Although purchasers – known as "general licensees" – do not need authorization from the NRC or a state regulatory agency to possess the signs, they are subject to certain regulatory requirements regarding handling, transfer or disposal of the signs. They are also subject to NRC or state inspection and enforcement action (including fines) for violating those requirements.

From 2001 through 2007, Wal-Mart purchased approximately 70,000 tritium exit signs to install in its stores and warehouses. Last year, after discovering some signs were missing, the company initiated an audit of all its facilities. The NRC and its Agreement States (the 35 states that regulate radioactive materials under agreements with the NRC) have been kept informed of Wal-Mart's progress in its audit. The company is now in the final stages of removing tritium exit signs from its facilities and returning them to the manufacturers in accordance with NRC regulations for proper disposal.

The NRC reminded manufacturers and general licensees of the regulatory requirements for tritium exit signs in a Regulatory Issue Summary ([RIS 2006-25](#)) issued in December 2006. The requirements are also spelled out in NUREG-1556, Consolidated Guidance for Materials Licensees, Volume 16, [Appendix L](#). More recently, the NRC posted a [Fact Sheet](#) on tritium exit signs on its Web site.

Winter Meeting

Advances in the Non-intrusive Inspection Systems
Richard Whitman, Test Scientist for the Defense Threat Reduction Agency,
Mercury, NV

Date: Thursday, February 12, 2009

Time: 6:00 PM Social Hour
7:00 PM Dinner
7:45 PM Featured Speaker

Location: Casey's Restaurant
415 East North Avenue
Lombard, IL
630/932-4777
<http://caseysrestaurant.com/>
for directions

Cost: \$22 per person for members &
spouse; \$25 per person for
non-members.

Menu Choices are:

London Broil with noodles,

Fettuccine Alfredo with chicken, or

Baked Boston Scrod with rice

Soup, salad, and dessert are included
with all meals

Reservations: Phone or e-mail your reservation to John Schrage, at (630) 657-2821 or
john.schrage@exeloncorp.com by 4 pm Tuesday February 10.

Midwest Chapter Health Physics Society
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