

# BNL Radiological News

1st Quarter FY12

## New DOE Order 458.1

In February 2011 DOE Order 458.1, Radiation Protection of the Public and the Environment, replaced the previous DOE O 5400.5. BNL must be in compliance with the new directive by August 2012.

The main objectives of the Order are: (1) To conduct DOE radiological activities so that exposure is maintained within established dose limits; (2) To control the release and clearance of DOE real, personal and residual property with proper controls; (3) To ensure that potential exposures to the public are ALARA; (4) To ensure that DOE sites have the capabilities to monitor radiological releases and to assess the dose to members of the public; and (5) To provide protection of the environment from the effects of radiation and radioactive material.

BNL is also required to develop and implement an Environmental Radiation Protection Plan. Radiological monitoring will be integrated with environmental effluent surveillance, and a graded approach applied with risk assessment.

Contact **Benny Hooda** at Ext. 8107 or [bhooda@bnl.gov](mailto:bhooda@bnl.gov)

## Facility Support

The Facility Support (FS) Representatives and Radiological Control Technicians (RCTs) are the primary contact for directorates in support of their research involving radiation or radioactive materials.

FS is involved in several large projects including the decommissioning of the BGRR which is estimated to be completed by Summer 2012. This significant engineering effort has been successful in proceeding without any radiological contamination issues. Thus far more than 90% of the concrete and steel from the reactor and biological shield have been removed and packaged for disposal.

FS is also assisting directorates in implementing the corrective action plan following a contamination incident caused by a leaking sealed-source. Radiological Work Permits (RWPs) have been adjusted to address vehicular transportation

requirements as a preventative measure. The site Transportation Safety Manual will also be revised in response to this incident.

FS is providing support to the departments in reviewing and determining the appropriate sources to be maintained in their sealed source inventory. Any sources that are no longer programmatically necessary will be properly disposed of in order to limit liabilities. A safety analysis methodology is being developed for reviewing and evaluating the sources.

FS expects to complete the clean scrap; suspect and moratorium metals program implementation requirements and receive final approval from the DOE Brookhaven Site Office on the release of metal from radiological areas. This approval will allow BNL to again release material from radiological areas and designate them as scrap for recycle.

Contact **Dennis Ryan** at Ext. 5528 or [dryan@bnl.gov](mailto:dryan@bnl.gov)

## Health Physics Technical Support

Health Physics Technical Services provides a range of services that include but are not limited to: Safety reviews, regulatory compliance, programmatic improvement, area radiation monitoring, and lessons learned implementation.

There have been a number of changes in the Health Physics Technical Support Group over the past few months, most recently with the retirement of Personnel Monitoring (PM) group leader, Rich Reciniello. Rich departed with warm well wishes from his colleagues of about 24 years.

Benny Hooda, CHP, assumed the role of interim leader of the PM group.

PM also welcomed Dave Stillwell to the role of internal dosimetrist. Stillwell's qualification process is currently underway as the internal dosimetry DOELAP performance evaluation approaches in the coming months.

HPTS welcomes Chuck Schaefer, CHP, to the Radiological Engineering Group in support of Waste

Management operations. Chuck was recently a key member of the BGRR Project.

Scott Walker, CHP, has joined the Radiological Engineering Group to support the NSLS II project. Scott has extensive experience in accelerator operations, and is one of the authors of the new ANSI Standard on Accelerators.

A new records management group was formed with Andrea Epple at the lead. The Energy Employee Occupational Illness Compensation Program/Records Management group was established to manage all personnel records dealing with requests for occupational radiation exposure.

The Instrument and Calibration Group supports the lab with procurement, calibration and repair of radiological instruments. In addition they support the Laboratory in support of Homeland Security efforts.

Contact **Henry Kahnhauser** at Ext. 7509 or [kahnhaus@bnl.gov](mailto:kahnhaus@bnl.gov)

## Nuclear Materials Management

The Isotopes and Special Materials (I&SM) group was formed as an adjunct to operations at the BGRR. The group's primary functions were Radioactive Material Packaging and Transportation (RAM P&T) and Nuclear Material Control and Accountability (NMC&A).

The RAM P&T function was transferred to the Environmental Protection Division (EPD) effective October 1, 2011. This provision allowed all transport functions to be consolidated solely under EPD. Consequently, the group was renamed Nuclear Materials Management (NMM) under the direction of Kris Dahms, and consists of the following programs:

1. I&SM/Nuclear Materials Control and Accountability
2. Sealed Radioactive Source Control and Radiation Generating Devices
3. Facilities Authorization Basis
4. Nuclear/Criticality Safety Support

IS&M is now associated with NMC&A as a subgroup of NMM, while RAM P&T remains essentially unchanged.

Contact **Kris Dahms** at Ext. 4051 or [kdahms@bnl.gov](mailto:kdahms@bnl.gov)

## Management Thoughts

In the last two fiscal years (2011 and start of 2012) the Laboratory has experienced an increase in “**traffic violations**” and “**injuries.**” This trend is unacceptable and has led management to believe staff is not displaying the type of attitude required for a high performance organization. This includes: texting while driving; parking in restricted areas, failure to adhere to traffic signs; and the failure to consider uncertainty and ambiguity in operations.

As we move forward and progress through FY12, the RCD Management team asks that you consider the following:

1. Have a questioning attitude and be actively involved in planning and improvement of your work practices;
2. Encourage co-workers to bring forth safety issues, concerns and improvement ideas;
3. Accept responsibility for safe work performance and assist each other in preventing unsafe acts, keeping the following in mind:
  - Are we or staff performing work by cutting corners or rushing to meet a deadline?
  - Are we or staff taking hazards / controls for granted because we've done this many times before?

Thank you for considering this message.

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## Radcon Brainteaser

A waste-processing line ruptures and the spill forms an annulus having an inner radius of 5.0 m and an outer radius of 10.0 m. What is the exposure rate on the centerline of the annulus, 2.0m above the floor, if the total activity released in the liquid is 10 curies of Co-60?

- a. 0.22 R/h
- b. 0.34 R/h
- c. 0.41 R/h
- d. 0.56 R/h
- e. 1.73 R/h

The winner will be chosen at random from all correct responses received within one week of the Newsletter being published. Send your responses to Steven Coleman ([Coleman@bnl.gov](mailto:Coleman@bnl.gov)). The winner will receive a \$25 lunch certificate to JRs.