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Title
Environment, Health & Safety Division Quarterly Newsletter

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Publication Date
1998
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NEW RAD CON MANAGER

Gary H. Zeman, Sc.D., CHP has joined Berkeley Lab as the new Radiological Control Manager. He will lead and manage the Radiation Protection Group (RPG).

Gary’s professional experience includes leading radiation programs at the Armed Forces Radiobiology Research Institute in Bethesda, Maryland. This was followed by management in the radiation protection program at AT&T Bell Labs.

Academically, Dr. Zeman holds a bachelor and masters degree in Physics from St. Mary’s College and University of Minnesota, respectively, and a doctorate in Radiological Health from the Johns Hopkins University. He is also a Certified Health Physicist by the American Board of Health Physics. He has several articles published in peer reviewed journals and has also written extensively in other health physics related publications. Gary is also an avid golfer and bass fisherman.

Gary Zeman will report directly to the EH&S Division Director, David McGraw. His office will be located at Building 75B and he can be reached at extension 6626.

NEW ROUTING PROCESS FOR RWA

A change has been made to the RWA amendment routing process. Class I RWA amendments are unchanged. Class II amendments are reviewed by the chairperson of the Radiation Safety Committee (RSC). Class III amendments are reviewed by the entire RSC. This will lengthen the time required for RWA approval so allow at least 2 weeks for Class II and 3 weeks for Class III amendments.

FROM THE EH&S DIVISION DIRECTOR

Research is by definition dynamic and rapidly changing. Advances in scientific research are both the solution and the source of environmental health and safety concerns. New regulations continually arise. It is our challenge to keep pace with both the science and the regulations while assuring a compliant workplace that operates efficiently and is fully protective of workers, the public, and our environment.

Communications are key to keeping pace with the EH&S challenges that face the Berkeley Lab research community. The EH&S Newsletter has been created to help spread the word on EH&S issues, policies and programs. This first issue focuses on subjects of special interest to users of radioactive materials. Future issues will cover a broad spectrum of environmental health and safety matters.

I hope you find the EH&S Newsletter to be useful. Please send me your comments and suggestions.

David McGraw

CLARIFICATION FOR REPORTING OF RADIOACTIVE MATERIALS SPILLS

During the normal work hours, 8am-5pm Monday through Friday, phone extension 5251 may be used to request assistance from the Radiation Protection Group (RPG) on radioactive spills and contamination. This number will put you in contact with EH&S Division Office administrative staff who obtain required RPG assistance. After this number allows you to page the EH&S Division Duty Officer for assistance. Extension 5251 does not replace the 7911 emergency number used to notify the fire department of significant incidents categorized as emergencies. However, minor incidents involving radioactive material may be handled more appropriately by the staff. If you have any questions regarding this information, please call Don Bell @ 6626.
USING THE RADIOISOTOPE JOURNAL

The Radioisotope Journal (RIJ) is used as a centralized point to collect records and procedures related to a Radiological Work Authorization (RWA). This allows Radiation Protection Group (RPG) personnel and safety inspectors convenient access to information needed to evaluate a project's safety compliance. This information includes:

- Project RWA
- Usage Protocols
- Daily Use Logs
- Inventory Summary
- User Surveys
- Project Training Records
- Incidents

Point of contact phone numbers and a summary of standard work rules for Radioactive Materials Areas (RMAs) are found on the front and back covers of the RIJ.

Project RWA

The first tab in the RIJ is the "Authorization". A copy of a project's most current RWA and amendments for the year are placed here. RWAs must be kept a minimum of 3 years. Copies of the RWA may be posted at the entrance of actual work area(s). Posting of the RWA is not required. However, if the RWA is posted at the entrance of a work area it must be a copy of the most current RWA or amendment.

Usage Protocols

Protocols used for radioactive materials work go in the "Usage Protocols" section. Photocopies of standard protocols are acceptable. A separate binder labeled "RWA ___ Usage Protocols" may be kept next to the RIJ if additional space is required. Methods used to characterize radioactive waste streams also go in this section.

Daily Use Logs

Completed "Daily Use Logs" for each vial of radioactive material (RAM) received are filed in this section. Daily Use Logs for RAM still in use can be kept in the RIJ or at the storage area until the RAM is used up. The Daily Use Log is then filed in the RIJ. When transferring RAM a copy of the Daily Use Log accompanies the material being transferred. Daily Use Logs must be kept a minimum of 3 years. A separate binder labeled "RWA ___ Daily Use Logs" may be kept next to the RIJ if additional space is required.

Inventory Summary

Quarterly inventory updates and all associated correspondence will go in this section. The quarterly inventory updates will be generated by the RPG database and delivered to each project PI. A two-week period will be given to complete the update and return by mail to RPG. The quarterly update is not completed so this section should be empty for the time being. Projects will be provided ample notification before startup of the quarterly update. Quarterly updates must be kept a minimum of 3 years.

User Surveys

Each project authorized to use radioactive materials is required to perform and document regular radiation surveys. "User surveys" are filed in this section. Surveys should be performed before, during and after work with RAM. It is a good practice to document these surveys also, but it is not required by the RWA. The frequency for regular documented surveys is based on the hazard class of the project. The hazard class can be found toward the top of the RWA just below the shaded "Radiological Work Authorization" box. The user survey form can be obtained from the RCT assigned to your project. The survey can be documented using a different form but must contain at a minimum the same information. User surveys must be kept a minimum of 3 years. A separate binder labeled "RWA ___ Surveys" may be used if more space is needed. Each location within an RWA must have a documented survey within the required time frame. The required frequency for documented surveys are as follows:

- RSA/RMA Required Survey Frequency
  - Radiological Storage Areas (RSA) - Quarterly
  - Class I RMA - Quarterly
  - Class II RMA - Monthly
  - Class III RMA - Weekly (when in use, otherwise Monthly)

Class III RMAs where radiological work has not been performed during the week may place an entry in the RIJ stating "No Radiological Work Performed Week Of _______." The entry must have a signature from an authorized user.

Training Records

On The Job Training (OJT) forms are required for new employees hired after 12/95. Employees hired before 12/95 are not required to have a completed OJT form in the RIJ. It is a good practice to complete OJT forms for all employees regardless of time at LBNL. OJT records must be kept a minimum of 3 years.

Incidents

This section should contain pertinent information regarding all incidents associated with an RWA. Correspondence regarding radiological concerns, waste issues, dosimetry issues, etc. would also be placed in this section.
USE OF RADIOACTIVE MATERIAL IN BIOSAFETY CABINETS

Biosafety Cabinets (BSC's) are devices that use directed air flow to both protect workers from agents being handled and protect agents from the environment, through the use of High Efficiency Particulate Air (HEPA) Filters within the BSC's. As a result, BSC's have complex airflow patterns, requiring periodic balancing of the air movement inside. Additionally, HEPA filter(s) inside the BSC's build-up resistance over time, thereby reducing the airflow and upsetting this balance.

The use of radioactive material in a BSC requires authorization through the RWA program. In general, non-volatile radioactive material may be used in a properly labeled and prepared biosafety cabinet. For volatile radioactive material use in a biosafety cabinet, further review is required.

At the Berkeley Lab, BSC's must be certified by an outside vendor if biohazardous agents and/or radionuclides are used within the cabinet. BSC's used for this purpose must be certified:

1) Upon initial installation,
2) At least annually,
3) When re-located,
4) When HEPA filters are changed.

Exceptions to the certification requirements are:

1) When the BSC is being used to protect the product solely and not the worker; i.e., there is no infectious or rad components present.
2) When non-volatile radionuclides are used (the use of the specific isotope will be evaluated by the Radiation Protection Group (RPG) and requirements for certification will be listed in the RWA).

Note: solvents and other volatile materials may only be used in BSC's that are “hard ducted” to the outside (similar to a fume hood design).

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<td>Glenn Garabedian</td>
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<td>Roger Kloepping</td>
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<td>Ron Zavala</td>
<td>7752</td>
<td>425-5215</td>
<td>Gary Zeman</td>
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RADIATION SAFETY COMMITTEE

The Radiation Safety Committee (RSC) officially convened in January, 1997. The RSC provides a forum to ensure important radiation safety issues receive appropriate and balanced research community review before implementation by EH&S.

The RSC meets at least once each calendar quarter with additional meetings called for review/action on radiological incidents, review/approval of higher hazard projects, matters referred to the RSC by the RadCon Manager (RCM) or members of the RSC. Minutes of these meetings are kept on file by the RPG.

The RSC reviews and approves radiation safety policies on storage, transportation and disposal of radioactive materials, RWA and RWP review/approval, handling and processing of radioactive waste, environmental release of radioactive effluents, dosimetry, emergency response to accidents involving RAM or radiation producing machines, ALARA procedures and goals, facility design and review, and radiation training. Investigation of radiological accidents at LBNL are also performed by the RSC.

The RSC consists of six members representing the scientific disciplines using radiation at LBNL. Currently the chairman of the RSC is Henry VanBrooeklin. Henry can be reached at x4083 with questions or issues for the RSC.

RSC Members
Henry VanBrooeklin (chair) x4083
Priscilla Cooper x7346
Phil Williams x7336
Eric Norman x7846
Jeff Kortright x5960
Norman Edelstein x5624
Alan Jackson x6752
Gary Zeman (RCM) x6626

EH&S DIVISION ORGANIZATION

David McGraw
Division Director

Cynthia Coolahan
Division Administrator

Sherrill Whyte
Supervisor

Jack B
Division

Chuck A
Budget

Jim Fl
Info. Sy.

Ron Pauer
Robin Wendt
Jeff Chung
Henry Stauffer M.D.
Gary Zeman
Group Leader
Group Leader
Division Deputy &
Group Leader
Radcon Manager/
Environment Protection
Waste Management
Head Field Support
Health Services
Radiation Protection

Don Bell
Stacy Cox
Kathy Dinnel
Group Leader
General Sciences & Operations
Battalion Chief
Radcon Manager/ Group Leader
Bio/Energy Science

Questions or comments about the EH&S Quarterly Newsletter should be directed to hmpinto@lbl.gov
This work was supported by the U.S. Department of Energy under Contract No. DE-AC03-76SF00098

AAG296