

# Lawrence Berkeley National Laboratory

## Recent Work

### Title

Environment, Health & Safety Division Quarterly Newsletter

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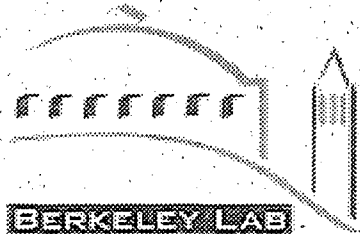
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# Environment, Health and Safety

## Quarterly Newsletter

PUB-803 FALL 1997

### NEW RAD CON MANAGER

**G**ary H. Zeman, Sc.D., CHP has joined Berkeley Lab as the new Radiological Control Manger. 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.

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### FROM THE EH&S DIVISION DIRECTOR

**R**esearch 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

**D**uring 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 sr radiation spills and contamination. This number will put you in contact with EH&S Division Office administrative staff who obtain required RPG assistance. After hours 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 on significant incidents categorized as emergencies. However, minor incidents involving radioactive materials may be handled more appropriately by staff. If you have any questions regarding this information, please call Don Bell @ 6626.

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PUB-803

## 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 deliv-

ered 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 air-flow 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 out-

side 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).

### NEW RCT/HP ASSIGNMENTS

Bldg	RCT	Back-up RCT	HP
1/3/934	Ron Zavala	Jim Hayes	Chris Donahue
26/76	Jim Hayes	Ron Zavala	Chris Donahue
70/70A(LSD/EE)	Jim Hayes	Ron Zavala	Chris Donahue
83	Jim Hayes	Ron Zavala	Chris Donahue
55/56	Paul Whybark	Cameron Huff	Chris Donahue
70/70A(NSD/CSD)	Paul Whybark	Bob Fairchild	Roger Kloeping
NRLF	Cameron Huff	Steve Sohner	Chris Donahue
51	Bette Muhammad	Paul Whybark	Glenn Garabedian
88/50	Bob Fairchild	Keith Heinzelman	Roger Kloeping
ALS	Keith Heinzelman	Paul Whybark	Rick Donahue
71	Paul Whybark	Steve Sohner	Roger Kloeping
72	James Hayes	Steve Sohner	Roger Kloeping
74	Ron Zavala	Steve Sohner	Roger Kloeping
Transportation	Steve Sohner	Doug Ryan	Roger Kloeping
Sealed Sources	Doug Ryan	Bette Muhammad	Glenn Garabedian

RCT	Phone	Pager	HP	Phone
Bob Fairchild	2278	448-8952	Ken Barat	7658
Jim Hayes	6687	448-8573	Ted de Castro	5256
Keith Heinzelman	6212	448-3891	Chris Donahue	7736
Cameron Huff	7753	448-3892	Rick Donahue	5597
Bette Muhammad	7602	840-6195	Glenn Garabedian	7609
Doug Ryan	7141	425-7901	Roger Kloeping	7608
Steve Sohner	6228	442-7754	Mike Schoonover	6424
Paul Whybark	4020	442-1480	Todd Sundsmo	7673
Ron Zavala	7752	425-5215	Gary Zeman	6626

## 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 VanBrocklin. Henry can be reached at x4083 with questions or issues for the RSC.

### RSC Members

Henry VanBrocklin (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

