NOTICE

TO: Employees who are required to wear personnel monitoring badges.

FROM: David Wiik, Director
Radiation Safety Office

SUBJECT: State requirements regarding personnel exposure at two different institutions.

Regulations require institutions to monitor and record personnel radiation exposures of employees that might receive ten percent of the maximum allowable limit. An employee’s occupational exposure is the sum of all occupational sources. Therefore, if you have a secondary employer, the Radiation Safety Office will communicate with them to share exposure values. This will satisfy the requirement for both employers.

To implement this procedure, we must know if you are employed elsewhere and if so, by whom. Please notify us at 460-7063.

MEMORANDUM

TO: All new employees working with radiation.

FROM: David A. Wiik, Radiation Safety Officer

SUBJECT: Previous Occupational Radiation Exposures

Please complete and return the statement below.

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During the immediate past calendar quarter, I have / have not received an occupational dose in excess of 25% of the applicable standards.

Date Name Title Employer / Department

ALABAMA DEPARTMENT OF PUBLIC HEALTH
DIVISION OF PUBLIC HEALTH
### OCCUPATIONAL EXTERNAL RADIATION EXPOSURE HISTORY

#### IDENTIFICATION

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<tbody>
<tr>
<td>1. Name (print- Last, First, and Middle)</td>
<td>2. Social Security Number</td>
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<tr>
<td>3. Date of Birth (Month, Day, Year)</td>
<td>4. Age in Full Years (N)</td>
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#### OCCUPATIONAL EXPOSURE - PREVIOUS HISTORY

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<tr>
<td>5. Previous employments involving radiation exposure</td>
<td>6. Dates of employment (From-To)</td>
<td>7. Periods of employment</td>
<td>8. Whole Body (Rem)</td>
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10. Remarks

11. Accumulated Occupational Dose- Total

#### Calculations-Permissible Dose

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<td>Whole Body:</td>
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<tr>
<td>(A) Permissible accumulated Dose: (5(N-18))</td>
<td>Rem</td>
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<tr>
<td>(B) Total exposure to date (From item 11)</td>
<td>Rem</td>
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<tr>
<td>(C) Unused part of permissible accumulated Dose (A-B)</td>
<td>Rem</td>
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12. Certification: I certify that the Exposure History listed in columns 5, 6 and 7 is correct and complete to the best of my knowledge and belief.

Employee’s Signature | Date

13. Name of Licensee or Registrant
PROCEDURE FOR PERSONNEL MONITORING

The Alabama Health Department has adopted these radiation protection guide levels as their regulatory limit:

1. The total effective dose equivalent being equal to or less than 0.05 Sv (5 Rem*) for exposure to whole body, head, and trunk, active blood-forming organs, and the gonads.
2. An eye dose equivalent of 0.15 Sv (15 Rem*).
3. A shallow dose equivalent of 0.5 Sv (50 Rem*) to the skin or to any extremity.
4. The dose to an embryo/fetus during the entire pregnancy, due to occupational exposure of a “declared pregnant woman”** does not exceed 5 mSv (0.5 Rem).
   A second individual monitoring device, worn at the abdomen under the lead apron, is required for a declared pregnant woman.
5. The total effective dose equivalent to individual members of the public from the licensed or registered operation does not exceed 1 mSv (0.1 Rem) in a year.

The maximum whole body exposure of individuals under 18 years of age must be limited to 10% of the annual occupational dose limits specified for adult workers. Prior to starting work in a radiation area all new occupationally exposed personnel shall sign a form stating that they have not received an occupational dose in excess of 10% of the applicable limits. The badge shall be worn on the collar outside a lead apron that might be used. If lead aprons or shields are used, a second badge may be issued and shall be worn behind it.

If any other area is suspected of receiving a higher dose than the above listed limits, a second badge or ionization chamber (to be read daily) shall be issued. Wrist badges and finger rings shall be worn on the wrist or hand that receives the greater amount of exposure.

Personnel monitors shall be provided to each individual who enters a restricted area under such circumstances that they receive, or may receive, a dose in excess of 10 percent of the listed applicable limits.

All personnel who are issued a personnel dosimeter are charged with the responsibility of accounting for and wearing it at the appropriate times.

* Biological dose: Rem = Rad x Quality Factor = 1 for X – and Gamma rays as well as electrons and Beta particles.

** “Declared pregnant woman” means a woman who has voluntarily informed her employer, in writing, of her pregnancy and the estimated date of conception.
The Radiation Safety Office shall be responsible for the distribution and collection of dosimeters on a routine basis. The Radiation Safety Office shall maintain a supply of dosimeters to replace those lost and those needed for visitors, new users, and temporary users.

Normally, external radiation exposure shall be determined from a dosimeter worn by the individual. Exposure from internal emitters shall be determined from measurement of biological samples and/or external counting. The required method of monitoring of an individual may be reviewed and changed at any time by the Radiation Safety Officer.

The normal method of determining exposure to alpha or weak beta emitters shall be through measurements of biological samples from the exposed individual. Such samples (e.g., urine, feces, or blood) shall be submitted to the Radiation Safety Office for analysis.

If there is a suspected accidental inhalation, ingestion, or skin puncture involving radionuclides, the Radiation Safety Office must be notified immediately.

**ALARA INVESTIGATIONAL LEVEL**

Inform the Radiation Safety Committee (during Committee meetings) whenever a monthly exposure of more than thirty percent of the maximum quarterly allowed limit is exceeded and whenever radiation contamination exposure or levels are in excess of the amount prescribed in this manual or in the applicable regulations. All overexposure of personnel must be reported to the appropriate governmental agency and to the individuals involved, as required by the regulation.

The Radiation Safety Office shall maintain a permanent record of all personnel exposures.

Sign: ______________________________________

(first and last)

Date: ______________________________
PERSONNEL MONITORING RECORD

In order to maintain personnel monitoring records current and up-to-date, the following information is needed:

NAME:  LAST__________________________ FIRST ___________________________
        MIDDLE_______________________ MAIDEN_________________________

DATE OF BIRTH: ___________________ ___________________
                     Month                   Day                     Year

SOCIAL SECURITY NUMBER: ___________ - ___________ - ___________

The Alabama Health Department requires that when a lead apron is worn and only one film badge is available, the badge shall be worn on the collar outside the lead apron.

Have you had any formal Radiation Safety Training Courses, other than the University of South Alabama, that can be documented?     YES___________     NO ___________

Have you, prior to working here at USAMC, ever been monitored for radiation exposure (Film Badge, Ionization Chamber, TLD, etc.)?  YES ___________    NO ___________

If yes, complete the following:

1. Institution where monitored: __________________________________________
   Address Of Same: __________________________________________
   _____________________________________________
   Period Of Employment: ____________________ To ___________________

2. Institution Where Monitored: _________________________________________
   Address Of Same: __________________________________________
   ___________________________________________
   Period Of Employment: ___________________ To ___________________

3. Institution Where Monitored: __________________________________________
   Address Of Same: __________________________________________
   ___________________________________________
   Period Of Employment: ___________________ To ___________________

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Addressed To:

Gentlemen:

___________________________________________, Social Security # __________ - ______ - ______ was an employee of your organization from __________ to __________ and worked with, and/or around, sources of ionizing radiation such that personnel monitoring was required.

In order to keep our records up-to-date and to comply with state, federal and institutional regulations, we request a report of this person’s cumulative exposure to ionizing radiation.

Please forward this information to the above letterhead address, attention of the Radiation Safety Officer at the University of South Alabama. Your cooperation in this matter will be greatly appreciated.

Has this individual passed a radiation safety test? If so, please indicate on this form.

Yours truly,

David Wiik, MS
Radiation Safety Officer

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<tr>
<th>Employment From</th>
<th>Employment To</th>
<th>Cumulative Exposure (mrem)</th>
<th>Type of Monitor</th>
<th>Vendor</th>
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To Whom It May Concern:

You are hereby authorized to release my radiation exposure records and/or documentation of formal Radiation Safety training. Please include all types of exposure records that you maintained.

Signed: ____________________________

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