

# NOTICE

TO: Employees & students who are required to wear x-ray dosimeters.

FROM: Michelle Taylor, Director FAX: 460-6068  
Radiation Safety Office  
5795 USA Drive N; CSAB 330  
Mobile, AL 36688

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

Regulations require institutions to monitor and record personnel radiation exposures of employees and students who might receive ten percent of the maximum allowable limit or in a room with a 100-mrem-per-hour field of radiation (such as when a fluoroscopy beam is energized). An employee or student'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 facilities.

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 & students working with radiation.

FROM: Michelle Taylor, Radiation Safety Officer

SUBJECT: Previous Occupational Radiation Exposures

**Please complete and return the statement below to CSAB 330.**

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During the immediate past calendar quarter, have you received an occupational dose in excess of 25% of the applicable standards? Yes No .  
(If you haven't been around any radiation or have never worn a dosimeter, answer "No".)

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| Date | Name | Title | Facility / Department |
|------|------|-------|-----------------------|
|------|------|-------|-----------------------|

ALABAMA DEPARTMENT OF PUBLIC HEALTH  
 OCCUPATIONAL EXTERNAL RADIATION EXPOSURE HISTORY  
 (Follow instruction at bottom of page)

IDENTIFICATION

|                                          |                           |
|------------------------------------------|---------------------------|
| 1. Name (print- Last, First, and Middle) | 2. Social Security Number |
| 3. Date of Birth (Month, Day, Year)      | 4. Age in Full Years (N)  |

OCCUPATIONAL EXPOSURE - PREVIOUS HISTORY

| 5. Previous employments involving radiation exposure | 6. Dates of employment (From-To)         | 7. Periods of employment | Previous Dose History |                                      |
|------------------------------------------------------|------------------------------------------|--------------------------|-----------------------|--------------------------------------|
|                                                      |                                          |                          | 8. Whole Body (Rem)   | 9. Record or Calculated (Insert one) |
|                                                      |                                          |                          |                       |                                      |
|                                                      |                                          |                          |                       |                                      |
|                                                      |                                          |                          |                       |                                      |
|                                                      |                                          |                          |                       |                                      |
| 10. Remarks                                          | 11. Accumulated Occupational Dose- Total |                          |                       |                                      |

|                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>12. Calculations-Permissible Dose</p> <p>Whole Body:</p> <p>(A) Permissible accumulated Dose: 5(N-18) = _____ Rem</p> <p>(B) Total exposure to date (From item 11) = _____ Rem</p> <p>(C) Unused part of permissible accumulated Dose (A-B) = _____ Rem</p> | <p>13. 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.</p> <p style="text-align: center;">_____</p> <p style="text-align: center;">Employee's Signature <span style="float: right;">Date</span></p> <p style="text-align: center;">_____</p> <p>14. Name of Licensee or Registrant</p> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**Complete blocks 1-4 and if applicable, columns 5, 6, & 7.** Unless you are certain of the answers, leave the others blank and we will research the exposures and complete 8, 9, 10, 11 and 12. **Sign block 13.**

## PROCEDURE FOR PERSONNEL MONITORING

The Alabama Department of Public Health's Department of Radiation Control is the regulatory Agency for radiation exposure in Alabama. Their annual regulatory dose limits are:

|                                                                                                                                                                                                                                                                      | Effective Dose Equivalent |                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|--------------------------|
|                                                                                                                                                                                                                                                                      | Traditional Unit (Rem)    | SI Unit of Sieverts (Sv) |
| 1. Whole body, Head, and Trunk<br>Active blood-forming organs, and Gonads                                                                                                                                                                                            | 5 Rem (5,000 millirem)    | 0.05 Sv (50 milliSv)     |
| 2. Eyes                                                                                                                                                                                                                                                              | 15 Rem                    | 0.15 Sv                  |
| 3. The dose to an embryo/fetus during the entire pregnancy, due to occupational exposure of a "declared pregnant woman" <sup>**</sup><br>A second individual monitoring device, worn at the abdomen under the lead apron, is required for a declared pregnant woman. | 0.5 Rem                   | 0.005 Sv (5 mSv)         |
| 4. Members of the public                                                                                                                                                                                                                                             | 0.1 Rem                   | 0.001 Sv (1 mSv)         |
|                                                                                                                                                                                                                                                                      | Shallow Dose Equivalent   |                          |
| 5. The dose to skin or to any extremity including the head but not the eyes.                                                                                                                                                                                         | 50 Rem                    | 0.5 Sv                   |

\*\* "Declared pregnant woman" means a woman who has voluntarily informed the radiation safety officer, in writing, of her pregnancy and the estimated date of conception. Such declarations may be made in confidence. According to the US Supreme court, pregnancy declarations are not mandatory.

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 indicating if they have or have not received an occupational dose in excess of 10 % of the applicable limits. The badge shall be worn on the collar outside of any lead garments, if applicable. If lead aprons or shields are used, a declared pregnant woman must wear a second dosimeter under those protective garments.

If we suspect that any body part might receive a higher dose than the above listed limits, a second dosimeter or ionization chamber (to be interpreted daily) shall be issued. Extremity dosimeters 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 OR if they are in a room with a radiation field of 100 milliroentgens per hour.

All personnel who are issued a personnel dosimeter are responsible and accountable for wearing it at the appropriate times and returning it as instructed in a timely manner.

PROCEDURE FOR PERSONNEL MONITORING (continued)

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 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.

While pregnant employees are not required to declare a pregnancy to the Radiation Safety Office, doing so will get you a fetal monitor. Fetal monitors should be worn UNDER the protective apron at the uterine level. A collar dosimeter must still be worn outside the apron. To declare a pregnancy, simply write a note to the RSO including estimated conception and delivery dates. You may use a SPARE dosimeter as a fetal monitor until you receive a named one the following month.

ALARA INVESTIGATIONAL LEVEL

The RSO investigates exposures of 90% or more of the applicable limit. The Radiation Safety Committee reviews these exposures. All overexposures 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.

**ALL PERSONS INSIDE A ROOM WHERE X-RAYS OR FLUOROSCOPY ARE UTILIZED MUST WEAR A PROTECTIVE APRON & DOSIMETER EVEN IF OTHERS TELL ME IT ISN'T NECESSARY. MEDICAL STAFF, EMPLOYEES & STUDENTS MUST WEAR A DOSIMETER ISSUED BY THE UNIVERSITY OF SOUTH ALABAMA ON THE COLLAR OUTSIDE A PROTECTIVE LEADED APRON. IT IS THE RESPONSIBILITY OF EACH PERSON TO KEEP TRACK OF THEIR DOSIMETER AND EXCHANGE IT FOR A NEW ONE EACH MONTH. I UNDERSTAND THIS STATEMENT AND INDICATE MY AGREEMENT TO COMPLY WITH THIS REGULATION / HOSPITAL POLICY BY MY SIGNATURE BELOW.**

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

PERSONNEL MONITORING RECORD

Dosimeter # \_\_\_\_\_

Office use only

In order to maintain current and up-to-date personnel monitoring records, 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 dosimeter is available, the dosimeter 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 USA, 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 \_\_\_\_\_

4. Institution where monitored: \_\_\_\_\_

Address of same: \_\_\_\_\_

Period of Employment: \_\_\_\_\_ To \_\_\_\_\_

# UNIVERSITY OF SOUTH ALABAMA

COLLEGE OF MEDICINE  
RADIATION SAFETY



TELEPHONE: (251) 460-7063  
5795 USA Drive North; 257 CSAB  
MOBILE, ALABAMA 36688-0002  
FAX: (251) 460-6068

Addressed To:

Dear Sir / Madam:

\_\_\_\_\_, 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.

Cordially,

Michelle Taylor  
Radiation Safety Officer

| Employment<br>From | To | Cumulative Exposure (mrem) | Type of Monitor | Vendor |
|--------------------|----|----------------------------|-----------------|--------|
| <hr/>              |    |                            |                 |        |
| <hr/>              |    |                            |                 |        |
| <hr/>              |    |                            |                 |        |

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: \_\_\_\_\_

**Complete the top line and sign the bottom.**