

**Information Notice Number 5  
(revised July 2003)**

**For Florida Radiation Machine Registrants**

**Department of Health, Bureau of Radiation Control**

**RADIATION PROTECTION PROGRAM FOR RADIATION MACHINE REGISTRANTS**

Florida Administrative Code requires radiation machine registrants to develop, document and implement a radiation protection program (RPP). A properly developed and implemented RPP can minimize unnecessary radiation exposure to employees and the general public, help prevent either group from exceeding their legal limits on exposure to radiation, and document such an effort has been made by the registrant.

In order to comply with this requirement, please choose **one (1)** of the following three options:

1. Complete and post the following page entitled Radiation Safety Program for Radiation Machine Registrants. If a facility can comply with all of the provisions of the Radiation Safety Program, then that compliance, along with posting this notice where it is readily accessible to all staff members involved in making radiographic exposures, will satisfy the RPP requirement. Most registrants (other than fluoroscopy, therapy, industrial and educational) will be in this category.
2. Draft and submit a RPP that includes, but is not limited to, the following eight (8) issues:
  - a) identification of restricted and unrestricted areas,
  - b) identification of occupational workers,
  - c) determination of adequate shielding and protection for occupational workers,
  - d) study to determine that members of the public will be within the required dose limits,
  - e) policy on declared pregnant workers,
  - f) policy on use of personnel monitoring,
  - g) procedure for record keeping and record maintenance, and
  - h) procedure for program evaluation.
3. Call the X-Ray Machine Program for specific guidance concerning your facility.

Department of Health  
Bureau of Radiation Control, Radiation Machine Program  
705 Wells Rd Ste 300, Orange Park, Florida 32073  
Phone: (904)278-5730 Fax: (904)278-5737  
[www.myFloridaEH.com/radiation](http://www.myFloridaEH.com/radiation)

(July 2003)

## RADIATION SAFETY PROGRAM FOR RADIATION MACHINE REGISTRANTS

*Note: This program has been developed by the Bureau of Radiation Control to assist registrants in meeting Florida Administrative Code requirements. If this program is used, it does not need to be submitted for review.*

**This notice will be posted where all staff members involved in making radiographic exposures can access; those staff members will be made aware of these provisions and held accountable for them.**

1. X-ray machine operators will remain completely behind a fixed barrier during all radiographic exposures.
2. All rooms with radiation machines must be properly shielded.
  - a) The operator position and primary barrier for occupied areas must be shielded to 1/16 inch of lead equivalent.
  - b) Secondary/scatter radiation must be shielded to 1/32 inch of lead equivalent (e.g., 3 sheets of standard 5/8<sup>th</sup> inch dry wall) to occupied areas.
3. Only patients are allowed in the x-ray room and patients are not routinely held during radiographic exposures. If under unusual circumstances a patient must be held:
  - a) A log will be kept documenting the date, the name of the individual holding the patient, type of procedure and number of films taken.
  - b) The holder will be positioned so no portion of their body is in the primary x-ray beam. The only exception may be hands when necessary. In those cases, lead gloves will be required.
  - c) The holder will be protected from scattered radiation with a lead apron.
  - d) If patients are to be held more than three times in any calendar quarter, an alternate plan must be developed by the registrant and approved by the Bureau of Radiation Control, Radiation Machine Program.
4. Fluoroscopic exposures are never made.
5. Minors are not employed to take radiographic exposures. Approved training programs for minors aged 16 or 17 must develop an RPP.
6. Declared Pregnant Workers never take radiographic exposures or when a woman declares pregnancy in writing (including estimated conception date) they are provided with a monitoring device specifically for documenting fetal dose. The device will be worn at waist level and underneath any protective clothing. All personnel monitoring records must be kept in accordance with the Florida Administrative Code.
7. \_\_\_\_\_ is responsible for radiation protection.

JR

\_\_\_\_\_  
X-ray Machine Registration Number

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Bureau of Radiation Control, Radiation Machine Program  
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## ALTERNATE RADIATION PROTECTION PROGRAM

*Note: Radiation Protection Programs (RPPs) are used to minimize unnecessary exposure to radiation workers and the general public and help prevent either group from exceeding their legal limits on exposure to radiation. This program has been developed by the Bureau of Radiation Control to assist registrants in developing an RPP which meets the Florida Administrative Code requirements. This program and all required attachments must be submitted to the Bureau of Radiation Control, Radiation Machine Program for review.*

**The signature below attests this registrant has evaluated the following provisions. One option for each numbered section has been selected and accurately describes the conditions present at this facility. All staff members involved in making radiographic exposures will be made aware of these provisions and held accountable for following them.**

### RADIOGRAPHIC EXPOSURES

1.  X-ray machine operators will remain completely behind a fixed barrier during all radiographic exposures.  
 Written procedures are followed describing how aprons and movable barriers are used when operators are not positioned behind a fixed barrier during radiographic exposures. These procedures are attached and are part of this Alternate Plan. In addition, surveys, calculations or monitoring records are attached to document members of the public and occupationally exposed persons do not exceed dose limits when the operator is not completely behind a fixed barrier during radiographic exposures.
2.  Patients are not held during radiographic exposures.  
 Written procedures are followed describing how aprons and movable barriers are used when patients are held during radiographic exposures. These procedures are attached and are part of this Alternate Plan. In addition, holding logs or monitoring records are kept to document members of the public and occupationally exposed persons do not exceed dose limits when any person other than the patient is allowed in the x-ray room during radiographic exposures.
3.  Only patients are allowed in the x-ray room during radiographic exposures.  
 Written procedures are followed to assure that any person in the x-ray room during radiographic exposures is medically necessary. Written procedures are followed that describe how aprons and movable barriers are used when any person other than the patient is allowed in the x-ray room during radiographic exposures. These procedures are attached and are part of this Alternate Plan. In addition, surveys, calculations or monitoring records are attached to document members of the public and occupationally exposed persons do not exceed dose limits when patients are held during radiographic exposures.
4.  Less than 100 radiographic exposures are made per week when averaged over a year or the portion of the year the facility is open for business.  
 Surveys, calculations or monitoring records are attached to document members of the public do not exceed dose limits outside any radiographic x-ray room where 100 or more radiographic exposures are made per machine each week.

## **RADIOGRAPHIC EXPOSURES (continued)**

5. \_\_\_\_\_ Any wall bucky or cassette stand is located on an outside wall or a wall with at least one sixteenth (1/16) inch of lead equivalent shielding.  
\_\_\_\_\_ Surveys, calculations or monitoring records are attached to document members of the public do not exceed dose limits outside any radiographic x-ray room where the wall bucky or cassette stand is not located on an outside wall nor a wall with at least one sixteenth (1/16) inch lead equivalent shielding.
6. \_\_\_\_\_ The center of any radiation machine table is at least two (2) feet from any wall.  
\_\_\_\_\_ Any wall less than two (2) feet from the center of the radiation machine table is either an outside wall or a wall with at least one thirty-second (1/32) inch lead equivalent shielding.  
\_\_\_\_\_ Surveys, calculations or monitoring records are attached to document members of the public do not exceed dose limits outside any radiographic x-ray room where the center of the radiation machine table is not at least two (2) feet from any inside wall and the wall does not have at least one thirty-second (1/32) inch lead equivalent shielding.

## **FLUOROSCOPIC EXPOSURES (if applicable)**

7. \_\_\_\_\_ Fluoroscopic machine operators remain completely behind a fixed barrier during all fluoroscopic exposures.  
\_\_\_\_\_ Written procedures are followed describing how aprons and movable barriers are used when operators are not positioned behind a fixed barrier during fluoroscopic exposures. These procedures are attached and are part of the Alternate Plan. In addition, surveys, calculations or monitoring records are attached to document members of the public and occupationally exposed persons do not exceed dose limits when the operator is not positioned behind a fixed barrier during fluoroscopic exposures.
8. \_\_\_\_\_ Patients are not held during fluoroscopic exposures.  
\_\_\_\_\_ Written procedures are followed that describe how aprons and movable barriers are used when patients are held during fluoroscopic exposures. These procedures are attached and are part of this Alternate Plan. In addition, holding logs or monitoring records are kept to document members of the public and occupationally exposed persons do not exceed dose limits when patients are held during fluoroscopic exposures.
9. \_\_\_\_\_ Only patients are allowed in the x-ray room during fluoroscopic exposures.  
\_\_\_\_\_ Written procedures are followed to assure that any person in the x-ray room during fluoroscopic exposures is medically necessary. Written procedures are followed that describe how aprons and movable barriers are used when any person other than the patient is allowed in the x-ray room during fluoroscopic exposures. These procedures are attached and are part of this Alternate Plan. In addition, surveys, calculations or monitoring records are attached to document members of the public and occupationally exposed persons do not exceed dose limits when any person other than the patient is allowed in the x-ray room during radiographic exposures.

## FLUOROSCOPIC EXPOSURES (continued)

10. \_\_\_\_\_ Fluoroscopic x-ray machines are operated less than fifteen (15) minutes per machine each week.  
\_\_\_\_\_ Surveys, calculations or monitoring records are attached to document members of the public dose limits are not exceeded outside each fluoroscopic x-ray room where fluoroscopic x-ray machines are operated fifteen (15) or more minutes per machine each week.
11. \_\_\_\_\_ High level (>10 R/min) fluoroscopy is not used at this facility.  
\_\_\_\_\_ Surveys, calculations or monitoring records are attached to document members of the public dose limits are not exceeded outside each room where high level fluoroscopy is used.

## GENERAL REQUIREMENTS

12. \_\_\_\_\_ Minors never make radiographic and fluoroscopic exposures.  
\_\_\_\_\_ Written procedures are followed when minors make radiographic or fluoroscopic exposures. These procedures are attached and are part of this Alternate Plan.
13. \_\_\_\_\_ Declared Pregnant Women never make radiographic and fluoroscopic exposures.  
\_\_\_\_\_ When a woman declares her pregnancy or intent to become pregnant in writing (this statement should include estimated conception date) they are provided with a monitoring device specifically for documenting fetal dose. The device will be worn at waist level and underneath any protective clothing.
14. The provisions of this radiation protection program will be evaluated annually during the month of January to ensure they accurately describe the conditions expected in the coming year. An attached sheet will be used to document this review. Each review will include a date of review, the signature of the reviewer, and the statement the provisions are true for the coming January through December. If the program needs to be changed, the revisions will be sent to the Bureau of Radiation Control, Radiation Machine Program for review.
15. This radiation protection program will be re-evaluated when changes occur that could affect dose to radiation workers or the general public.
16. All radiation protection program(s) will be kept on file until the registration is terminated.
17. \_\_\_\_\_ is responsible for radiation protection.
18. The above provisions are true from \_\_\_\_\_ through December of \_\_\_\_\_.  
(Month/Year) (Year)

_____	<b>JR</b>
Facility Name (print or type)	X-ray Machine Registration Number
_____	_____
Signature of Person Responsible for Above Program	Date Signed