

**RADIATION PROTECTION PROGRAM FOR  
USE OF RADIATION GENERATING MACHINES  
IN THE HEALING ARTS, RESEARCH AND EDUCATION**



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# 1. INTRODUCTION

## 1.1. Use of Radiation Machines

Creighton University is a facility having radiation generating equipment for use in the healing arts, research and education. As such, the University maintains registrations with the Nebraska Department of Health and Human Services, Public Health Services, Office of Radiological Health (the "State"). Copies of the University's registrations are available for review at the Radiation Safety Office.

## 1.2. Radiation Protection Program and ALARA

**1.2.1.** In accordance with applicable law, the University shall implement and maintain this Radiation Protection Program (the "Program") based on ALARA principles. ALARA is an acronym that stands for "As Low As Reasonably Achievable". ALARA principles reflect that some risk may be associated with any dose of radiation, no matter how small, that the risk of the exposure must be compared to the benefit of the activity and that an entity should strive to prevent unnecessary exposures and overexposures. It is everyone's responsibility to reduce potential and expected radiation exposures to levels As Low As Reasonably Achievable. The Radiation Safety Committee and Radiation Safety Officer shall review the Program no less than annually. The Program is part of the University's Radiation Safety Program, which also includes provisions for radioactive materials.

**1.2.2.** The following methods can be used as part of the ALARA philosophy. Access to controlled areas should be restricted and secured. External exposure may be reduced by limitation of time, use of distance and use of shielding.

- **Minimize Time of Exposure.** The less time a person remains in a radiation field, the smaller the dose of radiation the person receives. Operators should perform procedures as quickly and efficiently as possible without increasing the probability of accident. Exposure time should be minimized to reduce chance of movement causing an image to be repeated. Repeat exposures should be avoided.
- **Maximize the Distance from the Source.** The dose rate for most gamma and x-ray varies with the inverse square of the distance from a "point" source. Therefore, the farther a person positions him/herself from the source of radiation, the smaller the dose of radiation received.
- **Shield the Radiation Source.** Operators should use appropriate shielding, especially over the reproductive organs, via lead aprons, collars, gloves and/or goggles. Primary beam collimation should be

used on every image; the only part of the body exposed should be the area of interest.

### **1.3. Scope**

The Program applies to all University faculty and staff who may operate or be exposed to the operation of x-ray generating equipment while used in the healing arts, research and/or education (“Faculty and Staff”). This includes, but is not limited to, Faculty and Staff of the School of Medicine, School of Dentistry, and Student Health.

The University also maintains a registration for the Department of Physics, and this Program shall apply as relevant to the use of radiation generating equipment in the Department of Physics. Specifically, the Department of Physics shall be subject to Sections 1-3 and 7-14 of the Program. The initial training of any faculty, staff or students in the Department who may operate or be exposed to the operation of x-ray generating equipment in the Department of Physics shall be the responsibility of the faculty member who supervises the use of x-ray generating equipment. The Radiation Safety Office will coordinate and maintain records of annual training for any such faculty, staff or students.

## **2. MANAGEMENT OF THE PROGRAM**

### **2.1. Radiation Safety Committee**

The Radiation Safety Committee (RSC) is delegated the authority to oversee the safe use of ionizing radiation at the University. The RSC reports to the President of the University. Additional details regarding the structure and function of the RSC can be found in the Radiation Safety Manual for Authorized Users of Radioactive Material at Creighton University (the “Manual”). The Manual is available on the Office of Research and Compliance website at:

<http://www2.creighton.edu/researchcompliance/radiationsafety/manuals/index.php>

### **2.2. Radiation Safety Officer**

The Radiation Safety Officer (RSO) is specifically appointed by the University and has the authority to implement the Program. Additional information on the RSO’s duties may be found in the Manual.

**THE RADIATION SAFETY COMMITTEE AND THE RADIATION SAFETY OFFICER ARE AUTHORIZED BY THE UNIVERSITY PRESIDENT TO LIMIT OR REVOKE AN INDIVIDUAL'S AUTHORITY TO USE SOURCES OF IONIZING RADIATION IF SUCH USE PRESENTS A HAZARD TO INDIVIDUALS, VIOLATES THE RADIATION SAFETY PROGRAM, OR VIOLATES HEALTH AND SAFETY CODES.**

## **2.3. Designated Contacts**

The RSO will work with the following designated contacts (each, a “Designated Contact”) in each operating entity of the University that uses x-ray equipment in the healing arts or research (each, a “Regulated Entity”) to implement the Program:

School of Medicine: The Principal Investigator of any research project using x-ray

School of Dentistry: Director of Dental Radiography

Student Health: Radiology Technologist

## **3. PERSONNEL MONITORING**

### **3.1. Limits of Exposure**

#### **3.1.1. General Rule**

No individual is to exceed the following annual limits of exposure from occupational use of radiation:

- A. The more limiting of the following:
  - 1. The total effective dose equivalent (TEDE) being 5 rem; or
  - 2. Limits to the lens of the eye, to the skin of the whole body, and to skin of the extremities which are:
    - a. A lens dose equivalent of 15 rem, and
    - b. A shallow dose equivalent of 50 rem to the skin or to any extremity.

### **3.2. Declared Pregnant Worker**

During pregnancy, the occupational dose to the declared pregnant worker shall not exceed 0.5 rem. The University shall make efforts to avoid substantial variation above a uniform monthly exposure to a declared pregnant worker so as to satisfy the dose limit. To declare the pregnancy, the woman must notify the Radiation Safety Office in writing of the fact that she is pregnant and the month of conception. (A sample form for use in declaring may be found on the Radiation Safety Office website at: <http://www2.creighton.edu/researchcompliance/radiationsafety/forms/index.php>.) If the embryo/fetus has already exceeded 0.45 rem at the time of declaration, the dose for the remainder of the pregnancy shall not exceed .05 rem. If an employee chooses not to declare pregnancy, the employee and the embryo/fetus will continue to be

subject to the same radiation dose limits that apply to other occupational workers. Declarations remain in effect until the declared employee withdraws the declaration in writing or is no longer pregnant. The Radiation Safety Office will provide a personal monitoring device to be used for fetal monitoring. The Radiation Safety Office will maintain records of the dose to the embryo/fetus with the records of the dose to the declared pregnant employee. The declaration of pregnancy, including the estimated month and year of conception, will be kept on file in the Radiation Safety Office but may be maintained separately from the dose records.

### **3.3. Minors**

The University does not employ minors in positions that will result in occupational exposure to radiation.

### **3.4. Responsibilities**

#### **3.4.1. Faculty and Staff**

Each Faculty and Staff member is expected to make every reasonable effort to maintain radiation exposures to himself/herself, the patient and the public As Low As Reasonably Achievable (ALARA). Faculty and Staff who are also authorized users of radioactive materials subject to the Manual must be aware of the two different types of exposures to which they may be subject.

#### **3.4.2. Radiation Safety Officer**

In accordance with the University's ALARA policy, the RSO shall investigate levels of exposure which exceed the ALARA policy thresholds. Causes of potential excessive exposure will be identified and corrected when possible.

### **3.5. ISSUANCE OF PERSONAL MONITORING DEVICES**

#### **3.5.1. General**

The Radiation Safety Office, upon notification by the Regulated Entity, shall issue personal monitoring devices to individuals likely to receive ten percent (10%) of the annual regulatory limits of occupational radiation exposure.

#### **3.5.2. Procedures**

##### **3.5.2.1. Issuance**

The following procedures shall be followed in issuing personal monitoring devices:

A. New personnel who will be working in areas where it is possible that they will receive 10% of the annual regulatory limits of occupational radiation exposure shall submit Form RSO-1 to the Radiation Safety Office, detailing their previous exposure history.

B. The Radiation Safety Office will review the completed Form RSO-1 and investigate the previous exposure history or otherwise document that there was no previous history of exposure to assure present compliance with regulations.

C. Based upon its investigation, the Radiation Safety Office will issue one or more of the following types of personal monitoring devices, based upon the expected working conditions:

- Deep and Shallow optically stimulated luminescence (OSL badges) or Film badges sensitive to X, Gamma, and Beta radiation. These badges will be evaluated monthly or bi-monthly,
- Extremity TLD rings sensitive to X, Gamma, and Beta radiation, evaluated monthly or bi-monthly,
- Extremity wrist badges (OSL, TLD, or film) sensitive to X, Gamma, and Beta radiation, evaluated monthly,
- Pocket or digital dosimeters sensitive to X, Gamma, and Beta radiation, evaluated as needed.

At the time of issuance, the Designated Contacts or Badge Coordinators (as defined below) will instruct the personnel on proper use of the personal monitoring device, including consequences of deceptive exposure monitoring. Such instruction shall include, but not be limited to, the following information:

- Film badges shall be worn on the trunk of the body outside of any lead shielding. When a protective apron is worn, the location of the monitoring device is typically at the neck.
- Fetal monitors shall be worn at waist level under a lead apron, if worn.
- Extremity rings shall be worn on any finger of the dominant hand.

Monitoring will continue as long as the personnel will be working in areas where it is possible that they will receive 10% of the annual regulatory limits of occupational radiation exposure. Monitoring can be discontinued at the Radiation Safety Office's discretion if exposures do not exceed 100 mrem per year for at least two years.

### 3.5.2.2. Distribution and Inventory of Personal Monitoring Devices

The Radiation Safety Office shall obtain personal radiation monitoring devices from a NVLAP certified distributor and distribute the new devices to the designated faculty or staff member (the "Badge Coordinator") for each area where x-ray generating equipment is used. The Radiation Safety Office will determine how often monitoring devices are to be collected and instruct the Designated Contacts and Badge Coordinators on the interval of monitoring.

The Badge Coordinators are responsible for distributing the devices to the appropriate personnel and retrieving the previous period's devices. The Badge Coordinators are responsible for collecting and returning in a timely manner all collected devices to the Radiation Safety Office. The Radiation Safety Office will forward the devices to the analysis company for processing.

The Badge Coordinators shall arrange through the Radiation Safety Office for replacement of any lost or damaged personal monitoring device.

When an individual leaves employment or otherwise discontinues use of a personal monitoring device, his/her personal monitoring device must be returned to the Radiation Safety Office. The Radiation Safety Office will provide a report (Form RSO-6 or equivalent) of that individual's total exposure, year-to-date, when the information from the last time period of dose measurement becomes available from the analysis company. The report must be provided to the employee within 30 days of the request of the employee or within 30 days after the dose of the individual has been determined, whichever is later.

### 3.5.2.3. Receipt, Review and Distribution of Exposure Reports

Reports of dosimeter exposures are received by the Radiation Safety Office and reviewed by the RSO or assigned individual for any excessive or out of the ordinary exposures. Any exposures exceeding the ALARA policy threshold will be investigated by the RSO or his/her designee to assure compliance with acceptable dose regulations, to mitigate the circumstances leading to the excessive or out of the ordinary exposure and to formulate methods to prevent their reoccurrence.

The Radiation Safety Office will send written notification to any Faculty or Staff, and their superior, whose exposure exceeds the University's ALARA thresholds. Faculty and Staff are required to respond to such notification within 10 business days providing an explanation of potential causes of the exposure. The Radiation Safety Office will further investigate and report to the Radiation Safety Committee any Faculty or Staff with repeated notifications of exposures exceeding threshold or an unusually high exposure or who fail to reply to a notice of exposure.

The original copy of all exposure reports shall be kept on file in the Radiation Safety Office. The Radiation Safety Office shall make the exposure reports available to the affected individual upon request.

Any individual at Creighton University who is employed by another entity and monitored for radiation exposure by that entity is required to report any such exposures obtained from that entity to the Radiation Safety Office.

The Radiation Safety Office will inform each person provided with a personal monitoring device of his/her exposure to radiation on an annual basis.

Any individual may request and receive his/her current radiation exposure history by contacting the Radiation Safety Office.

#### 3.5.2.4. Deceptive Exposure

Faculty and Staff who engage in deceptive exposure of a personal monitoring device will be subject to review and discipline in accordance with University policies and procedures. Deceptive exposure includes, but is not limited to, failure to wear a required badge or other monitor. The RSO will work with the Designated Contacts to review any potential deceptive exposures.



### 3.5.2.5 High Exposure

Any Faculty or Staff who demonstrates radiation exposure at a level equal to or greater than 90% of the annual exposure limit in the course of a year may, at the discretion of the University as advised by the Radiation Safety Office, be subject to corrective action. This action is designed to prevent such Faculty or Staff from receiving additional radiation exposure in that year. Such corrective action may include, but not limited to, the reassignment of such Faculty or Staff member to duties that do not include radiation exposure.

## **4. QUALITY ASSURANCE PROGRAM**

Each Regulated Entity performing diagnostic or therapeutic x-rays in the clinical setting (a "Clinical Entity") shall develop, implement and maintain a quality assurance program for its radiation generating machines and processing systems. At a minimum, the quality assurance program shall specify what quality assurance checks are to be completed, the interval of such checks, what actions are taken if discrepancies are noted and who is responsible for conducting quality assurance checks. At a minimum, all radiation generating equipment will undergo routine and preventive maintenance as advised by the manufacturer of the equipment, which maintenance may be performed by a representative of the manufacturer, the equipment vendor or University-employed or contracted biomedical services personnel. Copies of maintenance reports shall be forwarded to the Radiation Safety Office and maintained for five years.

Each Clinical Entity may implement a clinical quality assurance program for radiography as it determines necessary and appropriate.

## **5. TRAINING**

### **5.1. Licensure and Continuing Education Required for Licensure**

Each Regulated Entity is responsible for ensuring its Faculty and Staff are and remain licensed or certified as may be required by the State for such Faculty or Staff member's position and activities at the University (e.g., physicians, physician assistants, medical radiographers, limited medical radiographers, dentists, dental hygienists) with training, licensure, continuing education and renewal in accordance with State law and regulation including 180 NAC 16 and 172 NAC 056, as applicable.

## **5.2. New Employees and Newly Licensed Personnel**

All new Faculty and Staff and all existing employees who become licensed to work with x-rays who are likely to receive radiation exposure in excess of 100 mRem per year shall be required to complete radiation safety training prior to being issued a personal monitoring device and within 30 days of start date. The Radiation Safety Office will make training available on the University's Internet site. The Radiation Safety Officer may accept specific training provided by a Regulated Entity in lieu of online training at his/her discretion. Each Regulated Entity shall maintain and implement procedures that require new employees to complete the training and impose corrective action in the event a new employee fails to complete the training.

## **5.3. Annual Training**

All Faculty and Staff who are likely to receive radiation exposure in excess of 100 mRem per year shall be required to complete radiation safety training on an annual basis. The Radiation Safety Office will make training available on the University's Internet educational site. The Radiation Safety Officer may accept specific training provided by a Regulated Entity in lieu of online training at his/her discretion. Each Regulated Entity shall maintain and implement procedures that require Faculty and Staff to complete the training and impose corrective action in the event any Faculty or Staff fails to complete the training.

# **6. POSTING/LABELING**

## **6.1. Machines**

Each Regulated Entity shall ensure that x-ray machines used in their respective clinical operations are and remain labeled as required by 180 NAC 4-036.03, 6-004.01 and 21-007.06B (caution that radiation is produced when the equipment is energized; "WARNING: This x-ray unit may be dangerous to patient and operator unless safe exposure factors and operating instructions are observed."). The Radiations Safety Office will review such labeling on annual audit.

## **6.2. Doors**

Doors that are an integral part of room shielding shall be posted with a sign reading "Close door during x-ray procedures."

## **6.3. Caution Signs**

Each Regulated Entity shall post in each radiation area a conspicuous sign or signs bearing the radiation symbol with the words "CAUTION RADIATION AREA". Clinical Entities can obtain caution signs from the Radiation Safety Office or may order them directly from a vendor as identified by the Radiation Safety Office.

## **7. COMPLIANCE WITH DOSE LIMITS TO THE PUBLIC**

### **7.1. Dose Limits for the General Public**

The University shall conduct its operations so that the TEDE to individual members of the public from the use of x-ray equipment in the Clinical Entities does not exceed 0.1 rem per year and the dose in any unrestricted area from external sources does not exceed .002 rem in any one hour.

### **7.2. New Equipment or Modified Installation**

Each Regulated Entity shall be responsible for notifying the Radiation Safety Office prior to the delivery of any new radiation generating equipment or if the installation of existing equipment will be modified. The Radiation Safety Office shall arrange for a post-installation or post-modification survey to determine: 1) the magnitude and extent of radiation levels produced by the equipment; 2) concentrations or quantities of radioactive material, as applicable; and 3) the potential radiological hazards that could be present. Documentation of the survey shall include the assumptions used in calculating doses, such as sources of radiation present, occupancy and workload factors. A scale drawing of the x-ray rooms will be available at the facility and a copy provided to the Radiation Safety Office. The drawing should include: x-ray room dimensions, adjacent areas and extent of their occupancy, location of the tube head, wall contents and show the operators protected area.

### **7.3. Survey**

The Radiation Safety Office shall perform or arrange for a survey of each existing piece of radiation generating equipment including, but not limited to, machine calibration and scatter area at intervals required by federal or state law and regulation. In order to ensure each piece of equipment is surveyed or otherwise accounted for, each Regulated Entity is required to notify the Radiation Safety Office prior to the disposal of any radiation generating equipment. Each Regulated Entity is responsible for completing and maintaining inventories of its radiation generating equipment as may be required by regulation and the Program.

## **8. INSPECTIONS/AUDITS**

### **8.1. General**

Throughout, the term "inspection" and "audit" shall be synonymous. The facilities of each Regulated Entity using x-ray equipment in the healing arts shall be inspected at least annually and subject to follow-up inspections. Inspections shall be conducted by the Radiation Safety Office or contracted personnel. During the inspection, the Regulated Entity and its staff shall allow free access to the equipment and all areas where the equipment is stored and used and shall fully cooperate during the inspection or any follow-up inspections.

### **8.2. Purpose**

The purposes of annual inspections are to:

- Assure the safety of all personnel and the environment;
- Assure compliance with applicable State and University regulations;
- Assure compliance with the Program; and
- Answer any questions anyone in the area may have concerning radiation and safety.

### **8.3. Scope**

In the course of an inspection, the Radiation Safety Office or contractor may review the following and any other information or documents as the Radiation Safety Office or contractor may request:

- Licensure and training status of Faculty and Staff
- Labeling of equipment
- Posting of Notices to Workers
- Required records including, but not limited to, x-ray logs and equipment maintenance logs
- Regulated Entity specific policies and procedures developed under the Program

## **8.4. Reports**

The Radiation Safety Office or contractor shall prepare a written report of each inspection and provide a copy to the Regulated Entity and to the Designated Contact. The Radiation Safety Office shall maintain a copy of each report. The final inspection findings shall be reported to the Radiation Safety Committee.

## **8.5. Corrective Actions**

The Radiation Safety Office in consultation with the Radiation Safety Committee may impose such corrective actions as it determines necessary with respect to any deficiencies found on inspection. Each Regulated Entity will be required to implement the corrective actions as required and notify the Radiation Safety Office upon completion of the corrective actions.

## **8.6. State Inspections**

All x-ray facilities are subject to inspections by the Nebraska Health and Human Services Regulation and Licensure's X-ray Program. Each Regulated Entity will cooperate with all such inspections and shall notify the Radiation Safety Office immediately that such an inspection is scheduled to occur. In the event of an unannounced inspection by the State, the Regulated Entity will notify the Radiation Safety Office that the inspection occurred as soon as reasonably possible.

## **9. OTHER ENGINEERING CONTROLS**

### **9.1. Types of Controls**

Personnel must take precautions so that no part of their bodies is directly exposed to radiation. If there is a danger of exposing a body part, appropriate protection must be used. Lead aprons, gloves, and goggles should be worn by workers located in the direct field or in areas where radiation levels from scattering are high. Protective devices must be used in the following situations: (i) when it is necessary for an individual other than the patient to remain in the room or hold a patient; (ii) when it is necessary to protect other patients who cannot be moved out of the room; or (iii) when the gonads are in or within 5 centimeters of the x-ray beam, shields must be used unless the use of the shield interferes with the diagnostic procedures.

### **9.2. Inspection and Maintenance of Controls**

All protective equipment should be checked annually for cracks in the lead and other signs of deterioration. Clinical Entities may either arrange for annual inspection through their own staff or work with the Radiation Safety Office to ensure inspections are completed. All inspections must be documented. If a defect is found at the time of annual inspection or at any other time, the Regulated Entity must notify the Radiation Safety Office and remove the device from service until it can be repaired or replaced.

## **10. INSTRUMENTATION**

### **10.1. Types of Radiation Detection Instrumentation and Electronic Equipment Used in Servicing and Calibration**

The Radiation Safety Office contracts with a third party to service and calibrate radiation generating equipment used in the healing arts at the University. The third party contractor maintains radiation detection instrumentation and electronic equipment used in servicing and calibration of the equipment.

## **11. NOTICES, INSTRUCTIONS, REPORTS TO WORKERS**

### **11.1. Required Notices**

The Radiation Safety Office shall maintain current copies of the following documents:

1. The regulations in 180 NAC 10, 180 NAC 4 and 180 NAC 21;

2. The license, certificate of registration, conditions or documents incorporated into the license by reference and amendments thereto;
3. The operating procedures applicable to activities under the license or registration; and
4. Any notice of violation involving radiological working conditions, proposed imposition of civil penalty, or order issued pursuant to 180 NAC 17 or 180 NAC 21-010 and any response from the University. This document must be posted within two working days after receipt of the documents from the State; the University's response, if any, shall be posted within two working days after dispatch from the University. The documents shall remain posted for a minimum of five working days or until action correcting the violation has been completed, whichever is later.

Each Regulated Entity is responsible for ensuring information regarding how these documents may be examined by employees is posted prominently in all facilities in which radiation generating equipment is used in the healing arts.

Each Regulated Entity is also responsible for posting the State Form NRH-3, "Notice to Employees". This document must be posted wherever individuals work in or frequent any portion of a radiation area.

All notices must be posted in a sufficient number of places to permit individuals engaged in radiation work to observe them on the way to or from any particular work location to which the document applies, must be conspicuous, and must be replaced if defaced or altered.

## **11.2. Inspection**

The Radiation Safety Office shall ensure such notices are properly posted during annual inspections.

## **12. REPORTS TO RSO**

Each Regulated Entity must report immediately to the RSO any of the following events:

- Purchase of new radiation generating equipment
- Loss or theft of radiation generating equipment
- Moving radiation generating equipment to a new location
- Decommissioning or disposal of radiation generating equipment
- Any exposure to radiation over that permitted by occupational limits

- Any event involving a source of radiation that may have caused or threatens to cause an individual to receive a TEDE of 25 rem or more; a lens dose equivalent of 75 rem or more; or a shallow dose equivalent to the skin or extremities of 350 rad or more
- Any event involving loss of control of a radiation generating machine that may have caused or threatens to cause any of the following: 1) an individual to receive in a period of 24 hours a TEDE exceeding 5 rem; a lens dose equivalent exceeding 15 rem; or a shallow dose equivalent to the skin or extremities exceeding 50 rem.
- Any planned special exposure in which an adult worker is to receive doses of radiation in addition to and accounted for separately from the doses received under normal occupational limits
- Any radiopharmaceutical spill.

### **13. REQUIRED POLICIES AND PROCEDURES**

Each Clinical Entity shall develop, implement and maintain such policies and procedures as necessary to comply with the Program and requirements of State and federal laws and regulations governing radiation generating machines used in the healing arts. Such policies and procedures must include:

- Written safety procedures to be provided to each individual operating x-ray equipment, including any restrictions of the operating technique required for the safe operation of the particular x-ray system. The operator shall be able to demonstrate familiarity with these procedures.
- As applicable to the Clinical Entity, a requirement for an x-ray log containing such information as required by the State at 180 NAC 6-003.02.
- A requirement for a technique chart to be posted in the vicinity of the x-ray system.
- As applicable to the Clinical Entity, film processing requirements.

### **14. RECORDKEEPING**

The Radiation Safety Officer is responsible for ensuring records relating to radiation generating machines used in the healing arts and required by the State are maintained. Each Regulated Entity will maintain copies of records at each facility in which radiation generating equipment is used in the healing arts pursuant to their own policies and procedures, ensuring the records are available for State inspection. Copies of the records specified below will be maintained in the Radiation Safety Office in hard copy format; provided, however, that records may be converted and stored in electronic media



provided that the media is capable of producing legible, accurate, and complete records during the required retention period. Each Regulated Entity and the Radiation Safety Office shall maintain adequate safeguards against tampering with and loss of records..

Each Regulated Entity will, at a minimum, maintain the following records/documents:

	Name of Records/Document	Regulation Cross-Reference
I	Model and serial number of all certifiable components	180 NAC 6-003.01, item 2.a.
II	User's manuals for x-ray components	180 NAC 6-003.01, item 2.a
III	Tube rating charts and cooling curves	180 NAC 6-003.01, item 2.b.
IV	Surveys, calibrations, maintenance, and modifications performed on x-ray systems	180 NAC 6-003.01, item 2.c.
V	Scale drawing of room with x-ray system and areas adjacent to room and estimation of occupancy	180 NAC 6-003.01, item 2.d.
VI	Copy of all correspondence with Department regarding the x-ray system	180 NAC 6-003.01, item 2.e.
VII	Receipt, Transfer, and Disposal of Each Radiation Machine Possessed	180 NAC 1-004
VIII	Current Operating and Safety Procedures	180 NAC 6-003.01, item 1.d.& 180 NAC 10-002.01, item 3
IX	Current 180 NAC 10 and 180 NAC 4	180 NAC 10-002.01, item 1
X	Current Certificate of Registration (NRH-4)	180 NAC 10-002.01, item 2
XI	Notice of Violation From Last Inspection	180 NAC 10-002.01, item 4
XII	Documentation of Corrections of any Violations	180 NAC 10-002.01, item 4
XIII	X-ray Utilization Log or chart	180 NAC 6-003.02

Copies of Items I, IV, V, VI, VII, VIII, X, XI, and XII shall be forwarded to the Radiation Safety Office by each Regulated Entity.