VETERINARY FACILITY COMPLIANCE CHECKLIST

The Nebraska Department of Health and Human Services, Division of Public Health, Office of Radiological Health, conducts routine inspections of facilities possessing x-ray generating equipment. The equipment and facility are reviewed to assure their compliance with Title 180 the Nebraska regulations for the "Control of Radiation."

Chapters of the regulations to pay particular attention to are 180 NAC 4, "Standards for Protection Against Radiation", 180 NAC 6, "X-Rays in the Healing Arts", and 180 NAC 10, "Notices, Instructions and Reports to Workers: Inspections". Though not exclusive, these chapters contain a large portion of the regulations that a veterinary medical office should be concerned with as an owner of x-ray generating equipment.

Below are highlights of some of the items that will be checked during an inspection.

FACILITY ITEMS

Documentation Needed

- Current copy of Title 180, "Control of Radiation (180 NAC 10-002.01).

Note: A web browser having the website of www.dhhs.ne.gov/rad bookmarked or added to favorites is acceptable.

- Current "Certification of Registration for Radiation Generating Equipment" must be available.

Note: The Registrant shall notify the Agency in writing within thirty (30) days of any change which would render the information contained in the "Certification of Registration" no longer accurate (180 NAC 2-008)

Radiation Protection Program

- Facilities must develop, document, and implement a radiation protection program based on ALARA principles. The radiation protection program content and implementation must be reviewed at least annually. (180 NAC 4-004)

- Written safety procedures need to be provided to each x-ray operator outlining techniques for the safe operation of each x-ray system (180 NAC 6-003.01, item 1.d.). **Documentation necessary**.

Note: Regulatory guide 6.3 has been developed to aid in the development of a facility's radiation protection program and safety procedures.

Personnel Monitoring

- Facilities must be able to demonstrate that they comply with the dose limits for occupational workers. This can be accomplished by the use of personnel monitoring such as film badges for a period of time that is long enough to incorporate normal variations in workload (not less than 6 months). Monitoring can be discontinued if exposures do not exceed 500 mrem per year. Records of any personnel monitoring must be retained and will be reviewed during an inspection. (180 NAC 4-022).

- On an annual basis, film badged personnel must be informed of their exposure to radiation, if personnel monitoring is required by 180 NAC 4-022 (180 NAC 10-004.02). **Documentation necessary.**

- Reports of an employee's exposure to radiation must be provided within 30 days from the request of an employee formerly engaged in activities controlled by the registrant, or within 30 days after the dose of the individual has been determined by the registrant, whichever is later. (180 NAC 10-004.03). **Documentation necessary.**

- Annually, the instructions of 180 NAC 10-003 must be provided to all individuals likely to receive an occupational dose in excess of 100 mrem (1 mSv). **Documentation necessary**.

Training

- Veterinary assistants shall have a minimum of 8 hours of instruction in the fundamentals of radiation safety, radiographic equipment, state regulations, operating and emergency procedures OR have graduated from an accredited veterinarian technicians program (180 NAC 6-007.04).

Posting/Labeling

- NRH-3 form, "Notice to Employees", posted in restricted areas that individuals work in or frequent any portion of a restricted area (180 NAC 10-002.03).

- Posted notice of location of documents (180 NAC 10-002.02).

- Technique charts need to be provided in the vicinity of the x-ray system's control panel, including the information outlined in 180 NAC 6-003.01, item 1.c.

- Doors that are an integral part of room shielding must be posted “Close door during x-ray procedures” (180 NAC 6-003.01, item 1.d. (2)).

Compliance With Dose Limits

- A scale drawing of the x-ray room(s) needs to be available at the facility. The drawing must indicate room dimensions and the adjacent areas and extent of their occupancy. It must also include the results of a survey for radiation levels present at the operator's position and at pertinent points outside the room at specified test conditions OR the type and thickness of materials of each protective barrier (180 NAC 6-003.01, item 2.c.).

- The floor plan and equipment arrangement must be reviewed by a qualified expert (new or modified installations) (180 NAC 6-003.03, item 1). [180 NAC 6-003.03, item 1 went into effect on June 27, 1983. Therefore facilities that have equipment installed prior to that date and have not made modifications, do not need to have a qualified expert review the floor plan.]

Operating Procedures

- The operator shall be protected from the direct scatter radiation by a whole body protective barrier of 0.25 mm lead equivalent or shall be so positioned that the nearest portion of the body is at least 2 meters from the tube head and the nearest edge of the image receptor (180 NAC 6-007.03, item 1).

- No individual other than the operator may be in the x-ray room while exposures are being made unless such individual's assistance is required (180 NAC 6-007.03, item 2).

- When an animal must be held in position during radiography, mechanical supporting or restraining devices should be used. If the animal must be held by an individual, that individual shall be protected with appropriate shielding devices, and shall be positioned so that no part of the body will be struck by the useful beam (180 NAC 6-007.03, item 3).

MACHINE ITEMS

- The total filtration in the useful beam shall not be less than the values specified in 180 NAC 6-007.01, item 3.
- Diaphragms and cones shall be provided for collimating the useful beam to the area of clinical interest (180 NAC 6-007.01, item 2).
- A device shall be provided to terminate the exposure after the preset time or exposure (180 NAC 6-007.01, item 4).
- A dead-man type exposure switch shall be provided, together with an electrical cord of sufficient length, so that the operator can stand out of the useful beam and at least 6 feet from the animal during all x-ray exposures (180 NAC 6-007.01, item 5).
- The control panel containing the main power switch shall bear a warning label as specified in 180 NAC 6-004.01.

Film Processing

- Each installation using a radiographic x-ray system and using analog image receptors (e.g. radiographic film) must have available suitable equipment for handling and processing radiographic film (180 NAC 6-003.04).
- The specified developer temperature and development time must be posted (180 NAC 6-003.04, item 1.b. (2)).
- The darkroom must be light tight and have proper safe lighting (180 NAC 6-003.04, item 2.a.).

This check list is by no means inclusive. However, it should provide useful information necessary to assure compliance with Title 180.

It is essential to the inspector to have a person from upper management, ultimately the Radiation Safety Officer or their designate, present during the exit interview. At this time results of the inspection can be outlined, questions can be clarified, and a course of action necessary to resolve any item(s) of noncompliance can be reviewed.

If there are any questions regarding x-ray inspections or this document, please direct them to:

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