X-ray Unit Information Notice

SECURITY SCREENING X-RAY EQUIPMENT

Date: April 22, 2019

To: Correctional or Detention facility in Minnesota

From: Teresa Purrington, BS, RT (R) (CT), Supervisor, X-ray Program

Subject: Security Screening X-ray Equipment

The Minnesota Department of Health (MDH) is issuing this Information Notice (IN) to inform correctional or detention facilities who may request a variance pending law changes to Minnesota Statute, 144.121 involving the use of security screening x-ray equipment for human use.

In addition to these pending statutory requirement changes, a correctional or detention facility must also comply with applicable Minnesota Rules, Chapter 4732 should laws be enacted.

Minnesota Rules, Chapter 4732

Applicable rules required for security screening x-ray equipment registrants.

- Registration requirements listed under Minnesota Statues, 144.121 and part 4732.0200. A correctional or detention facility must register the facility and security screening x-ray equipment with the Minnesota Department of Health.
- Registration fees under part 4732.0210.
- General requirements under part 4732.0220.
- Exemptions listed in part 4732.0300.
- Applicable prohibited uses listed in 4732.0305. A correctional or detention facility must not allow an operator to expose an individual for training, instruction, or demonstration purposes.
- Applicable unauthorized requirements listed in 4732.0306.
- General administration requirements under parts 4732.0308, 4732.0310, 4732.0315, and 4732.0320.
- Record requirements under part 4732.0330.
- Inspection and enforcement requirements in parts 4732.0335 and 4732.0340.
- Shielding requirements in 4732.0355 and 4732.0360. A shielding plan must be completed and submitted prior to installation of each security screening x-ray equipment.
- Radiation dose levels and individuals monitoring requirements of parts 4732.0400 through parts 4732.0440. Dosimetry is required for individuals who are likely to receive greater than 500 mRem occupational dose in a year.

- Safety and radiation safety officer responsibilities in parts 4732.0500 and 4732.0505. A registrant must identify a radiation safety officer and the individual is responsible for the operation of the security screening x-ray equipment under the registrant's administrative control. A correctional or detention facility's RSO must be qualified by training and knowledge concerning radiation hazards and precautions involved in the operation of the security screening x-ray equipment.
- Procedures and safety instructions under part 4732.0510.
- Quality assurance and ALARA program requirements under parts 4732.0520 and 4732.0530.
- Annually review a registrant program with a program audit listed in part 4732.0540.
- Requirements under parts 4732.0550 for radiographic practice standards.
- Requirements for bypassing a safety device under parts 4732.0630.
- Calibration requirements under parts 4732.0700, Subparts 1, 3, & 4.
- General equipment requirements listed in part 4732.0800.
- Requirements for CR/digital/PSP equipment according to 4732.0835, if applicable.
- Security screening x-ray equipment must be installed, calibrated, and maintained by a registered service provider according to parts 4732.1100, Subparts 1, 2 and 5.

Variance Request

A correctional or detention facility must submit a variance request according to 4717.7000, 4717.7010, 4717.7020, 4717.7030, 4717.7040 and 4717.7050 and comply with the conditions of a granted variance. The variance request process can be found on the x-ray website. In addition, the following information must be submitted with the variance request:

- An area survey must be performed initially by an authorized manufacturer service provider.
- A radiation survey must verify reference effective dose, radiation leakage, inspection zone, radiation area, and other parameters specified by the manufacturer of the security screening x-ray equipment.
- Provide information on how the registrant will maintain the reference effective dose limitations to a scanned subject.
- Provide information on how the registrant will inform each subject being scanned that the security screening system emits ionizing radiation. A registrant may use signs or fact sheets to provide this information to subjects being screened.
- Provide an example with how the registrant will maintain a utilization record that includes; name of security screening equipment operator, subject name, date of birth, identification of the subject scanned, MN Department of Corrections offender identification number, if applicable, the time and date that each individual is scanned, the reason each scan is conducted, and documentation of the number of scans to each subject.
- A security screening x-ray system operator must complete radiation training including the types of radiation, sources and magnitude of typical exposures, radiation units of measurements, concept of time, distance, and shielding, concept of ALARA, biological effects of radiation, radiation risks, basic communication concepts, and ensuring that dose to subjects is limited, and the importance of the dose to the subject.

- Establish site-specific operating and emergency policies of the security screening x-ray equipment.
- A security screening x-ray equipment operator must complete training on the operation and use of the security screening x-ray equipment including operational checks, subject positioning, interpretation of images, procedures to be followed if the system is damaged or malfunctions, and practical operational experience.
- A security screening x-ray equipment operator must be trained and demonstrate proficiency on site-specific operating and emergency procedure, physical security procedures to prevent unauthorized access and use, security screening x-ray equipment operator awareness and control of inspection zones, rights of declared pregnant workers, regulatory requirements, supervised practical operations, other safety hazards, and familiarity with the information being provided to the subject being scanned.

For specific questions related to security screening x-ray equipment use, please contact Craig Verke at (651) 201-4533, Paul Germann at (651) 201-4529 or Teresa Purrington at (651) 201-4519.

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To obtain this information in a different format, call: 651-201-4545.