Clear Form

PERSONNEL SECURITY SCREENING CHECKLIST

(A FACILITY checklist is not required when completing this form)
(Numbers in parentheses are SRPAR or ANSI N43.17 references)

Note: This form is for a whole-body system, using either a backscatter or transmission detection. Definitions are at the end of this form.

Facility _____ Date Surveyed_____

Registration number _____-_____ Location _____ Control number_____ Inspector _____

Facility Email Address _____ Person Interviewed_____

Control panel manufacturer and serial no_____

Tubehead manufacturer and serial no._____

Choose for yes (compliant), N *for no (noncompliant)* N/A *for not applicable, or and DNT for did not test.*
If question not tested or reviewed, note in comments at the end of each section. (All reg references preceded by 0400-20-)

	Y	N	N/A	
1.	◯	◯	◯	Copy of registration form available for this unit? (04-.11(1)(d))
2.	◯	◯	◯	Is the information on the registration form for this unit accurate as to address, ownership, possessor and location? (10-.24(5))
3.	◯	◯	◯	Are all of the units registered under this registration possessed by the registrant? (10-.24(5))
4.	◯	◯	◯	Are all of the units possessed at this facility registered? (10-.24(1))
5.	◯	◯	◯	Regulations Present. (04-.11(1)(a))
6.	◯	◯	◯	"Notice to Employees" (RHS 8-3) posted. (04-.11(1)(g))
7.	◯	◯	◯	Switch at control panel and any remote switch labeled "CAUTION – RADIATION, THIS EQUIPMENT PRODUCES RADIATION WHEN ENERGIZED". (05-.111(11), (7.2.2.d.))
8.	◯	◯	◯	Has management designated an RSO? (8.2.1) Name_____

Radiation Surveys

	Y	N	N/A	
9.	◯	◯	◯	Has a survey been performed by a Qualified Service Provider (QSP) at installation and within the previous 12 months? (8.2.2 and 8.2.7)
10.	◯	◯	◯	Has a Reference Effective Dose been established? (6.1.3) _____ microrem (8.2.9)
11.	◯	◯	◯	Has the determination of the half-value layer been established? (7.1) _____ mm Al equivalent (8.2.9) *(Minimum of 1 mm Al equivalent required)*
12.	◯	◯	◯	Radiation leakage surveys performed? (6.3 and 8.2.7) (8.2.9) *(Leakage dose limits of 250 microrem/hour at 30 cm from any external surface of the unit.)*

Y N N/A

13. ◯ ◯ ◯ Has an inspection zone been established around the security screening system? (6.2)

14. ◯ ◯ ◯ Operator's position outside the inspection zone (meets the unrestricted area criteria?) (6.2)

15. ◯ ◯ ◯ Proper survey instrument used? (C.3.1 and C.3.2)

16. ◯ ◯ ◯ Survey performed by QSP after any maintenance or incident that may have affected x-ray production components? (8.2.7)

Administrative Controls (6.1.2.2)

Dose Limits for Limited-use Systems

25 microrem per screening and 25 millirem per 12-month period to any one individual.

The 25 microrem per scan can be demonstrated by determining the Reference Effective Dose.

The 25 millirem per 12-month period limit can be demonstrated by:

1) *The number of screenings received by any individual does not exceed 1,000 per 12-month period or,*

2) *The reference effective dose multiplied by the number of screenings does not exceed 25 millirem over a 12-month period for any individual.*

Y N N/A

17. ◯ ◯ ◯ Are administrative controls in place, in the form of documented procedures, which ensure that the effective dose to individuals:

☐ Does not exceed 25 microrem per screening, or

☐ Does not exceed 25 millirem over a 12-month period?

System and Manufacturing Requirements (7.2.1)

Y N N/A

18. ◯ ◯ ◯ Indicator that indicates when a scan is in progress, visible from the inspection zone and from anywhere a scan can be initiated? (7.2.1.a.)

19. ◯ ◯ ◯ Power to the system is controlled by a key switch? (7.2.1.c.)

20. ◯ ◯ ◯ Operator can clearly view entire scanning area (inspection zone)? (7.2.1.f.)

	Y	N	N/A	
21.	◯	◯	◯	Technique factors are preset by manufacturer for each mode of operation? (7.2.2.b.)
22.	◯	◯	◯	Technique factors cannot be changed by operator? (7.2.2.b.)
23.	◯	◯	◯	If more than one mode of operation, technique factors clearly indicated for each mode of operation? (7.2.2.b.)
24.	◯	◯	◯	X-ray emission terminated at a preset time? (7.2.2.e.)
25.	◯	◯	◯	Operating procedures available? (8.2.3, 8.2.9, and 0400-20-04-.11(1)(e)).
26.	◯	◯	◯	Is information provided to individuals being screened that the system emits radiation (e.g., posting)? (8.2.4)
27.	◯	◯	◯	Does this information contain the following: (8.2.4)

- ☐ The estimated effective dose from one screening,
- ☐ An example to compare the dose to a commonly known source of radiation,
- ☐ That the screening complies with ANSI N43.17,
- ☐ Information on how to acquire ANSI N43.17?

Preventive Maintenance (8.2.6)

	Y	N	N/A	
28.	◯	◯	◯	Preventive maintenance performed by qualified personnel and records maintained? (8.2.6) (8.1.9)

Training (8.1.5)

	Y	N	N/A	
29.	◯	◯	◯	All operators trained sufficient to operate the system?
30.	◯	◯	◯	All operators have received radiation safety training prior to operating the system?
31.	◯	◯	◯	Proficiency demonstrated for each operator (testing)?
32.	◯	◯	◯	Refresher training provided at least annually?

Notes

Definitions (2.0)

Backscatter system: A security screening system that makes use of radiation scattered or deflected from an object or person to form an image of the scatter object or person.

Transmission system: A security screening system using the conventional means of radiographic imaging with which x-rays or gamma rays pass through a target (e.g., person or container) and create showdown-grams of enclosed objects (e.g., contraband) based on their radiation attenuating properties.

Portal system: A system designed to image persons who move through the inspection zone under their own control, by a moving walkway, or within a vehicle. It does not include systems that move the individual through the inspection zone in a controlled manner, such as a moving platform on which the subject is nominally required to remain still.

Stationary-subject system: A system designed to image a person who remains stationary while a scan is occurring. This includes systems that move the individual through the inspection zone in a controlled manner, such as a moving platform on which the subject is nominally required to remain still.

Limited-Use System: A personnel screening system that is capable of delivering a reference effective dose greater than 25 microrem per screening but shall not exceed a reference effective dose of 1 mrem per screening.

General-Use system: A personnel screening system that delivers a reference effective dose equal to or less than 25 microrem per screening.

Scan: The operation necessary to produce one image (i.e., front view) from one radiation source.

Screening: The sum of radiation exposures or scans necessary to image objects concealed on all side of the body as intended by the system design under normal circumstances.

Administrative control: A documented, compulsory, routine procedure aimed at controlling the radiation exposure received by individuals and ensuring that the appropriate dose limits are not exceeded.

Inspection zone: The general area established by the operating institution for the purpose of limiting or controlling access to the area where the screening will be performed. The ambient dose equivalent outside of this inspection zone shall not exceed 2 mrem in any one hour.

Mode of operation: A selectable set of technique factors or machine settings that is per-determined by the manufacturer for a specific purpose.

Qualified service provider: As it pertains to radiation surveys, a person having the knowledge—as demonstrated by documented training and experience—to properly measure ionizing radiation and analyze the results relative to the requirements of this standard.

Reference effective dose: A quantity based on measurable parameters used by this standard for setting dose limits. It is derived from the effective dose to the average adult. It is obtained from air kerma (or exposure) and HVL measurements as described in the ANSI N43.17 document Section 6.1.3 “Determination of the Reference Effective Dose.