**U.S. Department of Justice**
Federal Bureau of Prisons

P R O G R A M  S T A T E M E N T
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# Whole Body Imaging

/s/
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## 1. PURPOSE AND SCOPE

To implement requirements and guidelines governing the use of Whole Body Imaging on inmates to mitigate the introduction, possession, and use of weapons and other dangerous contraband within BOP institutions to protect institution security, and staff and inmate safety.

The Whole Body Imaging program is an ionizing radiation system that complements existing physical search procedures for contraband detection and introduction, including metal detectors, x-ray machines, alcohol and drug detection devices, etc.

These standards provide guidance for radiation safety in using Whole Body Imaging devices. Operating the whole body imaging device requires strict compliance with these standards/reports to ensure that the risk of radiation exposure is minimized. Personal dosimeter (radiation measurement) devices are not required to be worn, but area badges are required.

### a. Program Objectives.

- Staff will deploy Whole Body Imaging (WBI) devices at each secure Bureau facility to detect and deter dangerous contraband (i.e., weapons, drugs, contraband cell phones).
- The WBI program will increase staff and inmate safety by detection and deterrence of dangerous contraband within secure Bureau correctional facilities.
- The WBI program will ensure staff competency in operating WBIs for contraband detection by required initial and annual device training.

b. **Institution Supplement.** None required. Should local facilities make any changes outside the required changes in the national policy or establish any additional local procedures to implement the national policy, the local Union may invoke to negotiate procedures or appropriate arrangements.

## 2. PROGRAM MANAGEMENT

A comprehensive WBI program requires coordination and training. The Warden will designate management officials as Institution Program Coordinator (IPC) and alternate IPC to manage use of WBI devices within the local facility. IPCs have the following responsibilities:

a. **Assigning Operator Privilege Levels.** IPCs assign operator privileges as required and defined by the device manufacturer's specifications. These privilege levels may include:

- **Administrator.** The IPC and at least one alternate are assigned "Administrator" level privileges. Administrators can perform all functions of both the operator and supervisor levels.
- **Supervisor.** Staff supervising daily operation of the WBI program are assigned "Supervisor" level privileges. Supervisors can perform all functions of the operator level. Supervisors are authorized to accomplish password-protected functions in the "Options Menu - System Menu" command, or as specified by the manufacturer's manuals and procedures.
- **Operator.** Staff performing daily operation of the WBI program, who have been properly trained, are assigned "Operator" level privileges that may or may not be password-protected. Operators can perform basic functions such as running scans of inmates and analyzing results.

b. **Operator Training.** IPCs ensure staff operating the device are trained in accordance with the device manufacturer's specifications, any related Institution Supplements or Post Orders, and the standards contained in ANSI/HPS N43.17-2009 (as amended).

c. **Storage and Security.** IPCs ensure that when the device is not in use, it is secured and inaccessible to inmates and unauthorized persons.

d. **Purchasing.** The IPC coordinates with the Office of Security Technology (OST) prior to purchasing a body scan device to ensure the device will meet the needs of the agency.

e. **Scheduled Maintenance.** IPCs supervise necessary device maintenance and repairs according to manufacturer specifications. Maintenance and radiation surveys will be performed only by qualified individuals, preferably the manufacturer's representatives. IPCs will document

all maintenance and repairs performed on the device by using the Whole Body Imaging System Maintenance and Radiation Survey Log (BP-A1108) or other appropriate documentation.

f. **Radiation Exposure Badges**. A radiation exposure badge must be in the immediate search area of each WBI device, in accordance with the Program Statement **National Occupational Safety and Health Policy.** Refer to this Program Statement for information on badge evaluations, testing procedures, and exposure data.

g. **Radiation Surveys.** IPCs supervise radiation surveys required by manufacturer specifications or ANSI /HPS N43.17-2009 (as amended). IPCs document all radiation survey results on the Whole Body Imaging System Maintenance and Radiation Survey Log (BP-A1108). Radiation survey results should include subject dose, radiation leakage, inspection zone, and any other parameter required by the manufacturer. Radiation surveys must be performed at all of the following:

- Upon installation.
- At least once every 12 months.
- After any maintenance that affects the radiation shielding or X-ray production components.
- After any incident that may have damaged the system in such a way that X-ray leakage may occur.

IPCs ensure daily operation of the WBI program is performed in accordance with manufacturer specifications, applicable BOP policy, and ANSI/HPS N43.17-2009 (as amended), if applicable.

h. **Compliance with Federal, State, and Local Regulations.** IPCs ensure the device is registered and complies with applicable Federal, state, and local regulations.

## 3. WHOLE BODY IMAGING SYSTEMS – DOSE LIMITATIONS

Operation of the WBI program must be suspended when dose limitations are exceeded, as determined by the annual radiation survey or by the specified output of the device as set by the manufacturer. It is critical to ensure that the annual limit on the number of scans allowed per inmate is not exceeded. Note: WBI systems used by the BOP have embedded software to track and limit the number of scans per inmate to prevent exceeding allowable annual exposure limits. WBI systems do not constitute a medical x-ray device as referenced in the Program Statement **Searches of Housing Units, Inmates, and Inmate Work Areas**.

a. **Subject Dose Limitation.** The radiation dose delivered to a human subject should be As Low As Reasonably Achievable ("ALARA"), while meeting the desired detection performance.

See Attachment A, Chart of Typical Subject Dose Limitations For Scanning Systems Using Ionizing Radiation.

b. **Operator Dose Limitation.** The radiation dose delivered to the operator of a WBI system should not exceed an annual effective dose of 1 micro-sievert (100 micro-rem).

c. **Bystander Dose Limitation.** An inspection zone should be established around the WBI system where bystanders are prohibited while the system is in use. Radiation doses outside this inspection zone should not exceed 2 micro-rem in any one hour.

## 4. WHEN TO USE WHOLE BODY IMAGING

WBI systems that use ionizing radiation to detect contraband in body cavities may be used to scan inmates coming into or departing an institution. Staff may use WBI to conduct an electronic device search of an inmate on a routine or random basis to control contraband (see the Program Statement **Searches of Housing Units, Inmates, and Inmate Work Areas**).

**Screening Inmates for Work Areas**. If inmates refuse to submit to screening, proper disciplinary action should be taken in accordance with the Program Statement **Inmate Discipline Program**.

## 5. SCREENING PROCEDURES FOR INMATES

a. **Controlled Area.** Screening will be conducted in a controlled area so that, following each scan, contact between screened and unscreened inmates is prohibited. This minimizes the opportunity for inmates to transfer contraband after screening.

b. **Cross-Gender Viewing**. Cross-gender viewing of screened images is only permitted if the WBI system is equipped with BOP-tested and -approved privacy filters. All BOP-approved WBI systems have the tested and approved privacy filters.

c. **Investigative No Filter Same-Sex Viewing.** Investigative staff authorized by the Warden and of the same sex as the scanned inmate may retrieve scanned images without the digitized privacy filter for evidentiary purposes for an internal or criminal investigation.

d. **Prohibition on Inmates Viewing Images.** Inmates must never be allowed to see the monitor that displays the scanned images either of themselves or another inmate. However, if an inmate is subject to disciplinary action, they may view the image being used as evidence.

e. **Explanation to Inmates.** IPCs will ensure informational poster is mounted with Attachments B and C.

f. **Initial Scan Results.** Inmates screening negative (image contains no apparent contraband) should be permitted to proceed to their destination within the institution. Inmates screening positive (suspect contraband is displayed in the image) must be further examined by staff per the Program Statement **Searches of Housing Units, Inmates, and Inmate Work Areas**.

## 6. TRAINING

The IPC, in collaboration with the Safety Department, ensures staff operating the WBI system are trained to use the device in accordance with the manufacturer's specifications. Staff will be expected to comply with the training requirements outlined in ANSI/HPS N43.17-2009 (as amended). At a minimum, training includes:

- Familiarity with the information being provided to the inmate.
- Radiation safety training, including:
  - Types of radiation.
  - Sources of magnitude of common exposures.
  - Units of measurement.
  - Time, distance, and shielding.
- Concept of "As Low As Reasonably Achievable" (ALARA).
- Biological effects of radiation and radiation risks.
- Operating and emergency procedures.
- Threat Recognition
- Other safety hazards (e.g., unauthorized disassembly of the system).
- Physical security procedures to prevent unauthorized use or access.
- Operator awareness and control of inspection zones.
- Supervised practical operations.
- Maintenance.

Refresher training must be provided at least every 12 months.

## 8. RECORDKEEPING

The Warden will determine who will retrieve and maintain all records referenced in this Program Statement. The IPC ensures that all required forms and notices are completed and forwarded to appropriate staff designated for recordkeeping. BOP staff will be expected to comply with recordkeeping requirements outlined in ANSI/HPS N43.17-2009 (as amended), and the Bureau's Records and Information Disposition Schedule (RIDS).

The IPC or designated alternate must collect and maintain the following records:

- Each operator's training records, including sufficient information to show compliance with the training requirements outlined above.
- Upgrades, modifications, maintenance, and repair records maintained for the life of the system.
- Records of radiation surveys as outlined above.
- Evidence to show the dose limits outlined above are being met and the number of scans routinely conducted on inmates does not exceed the ANSI Standard.

## REFERENCES

*Program Statements*

P1600.11 National Occupational Safety and Health Policy (6/1/17)
P5270.09 Inmate Discipline Program (7/28/11)
P5500.14 Correctional Services Manual (8/1/16)
P5521.06 Searches of Housing Units, Inmates, and Inmate Work Areas (06/04/15)

*BOP Forms*

BP-A1108 Whole Body Imaging System Maintenance and Radiation Survey Log

*Other References*

- NIJ Standard-0601.03, NIJ Report 100-07, and NIJ CR-0601.03.
- NIJ Guide-0601.03. *Criminal Justice and Public Safety Selection and Application Guide to Walk-through Metal Detector.* Washington, DC: U.S. Department of Justice, National Institute of Justice.
- ANSI/HPS N43.17-2009, Radiation Safety for Personnel Security Screening Systems Using X-Ray or Gamma Radiation.
- 28 CFR 552.13
- NCRP Commentary No.16, and ISCORS Technical Report 2008-1.

*ACA Standards*

- American Correctional Association Standards for Adult Correctional Institutions, 4th Edition: 4-4192; 4-4193; 4-4194; 4-4285.
- American Correctional Association Performance Based Standards for Adult Local Detention Facilities, 4th Edition: 4-ALDF-2C-01; 4-ALDF-2C-03; 4-ALDF-2C-05.
- American Correctional Association Standards for Administration of Correctional Agencies, 2nd Edition: None.
- American Correctional Association Standards for Correctional Training Academies: None.

*Records Retention*

Requirements and retention guidance for records and information applicable to this program are available in the Records and Information Disposition Schedule (RIDS) on Sallyport.

**Attachment A. Chart of Typical Subject Dose Limitations For Scanning Systems Using Ionizing Radiation**

**Annual Limit established by ANSI/HPS N43.17-2009 (as amended) = 250 µSv/year**

**Key: µSv = micro-sievert µrem= micro-rem Reference**

| **Reference effective dose per scan** | | **Standard is met if number of scans per year does not exceed:** | **Standard is met if number of scans per day does not exceed (based on 250 work days for UNICOR/Facilities Work Cadre Applications):** |
|---|---|---|---|
| **(µSv)** | **(µrem)** | | |
| 0.05 | 5 | 5,000 | 20 |
| 0.10 (e.g., AS&E Smartcheck & Rapiscan Secure 1000) | 10 | 2,500 | 10 |
| 0.15 | 15 | 1,667 | 6 |
| 0.20 | 20 | 1,250 | 5 |
| **0.25 (e.g., Virtual Imaging SecurPASS & Smiths Detection B-Scan)** | **25** | **1,000** | **4** |

## Attachment B. Typical Radiation Exposures

| ADDITIONAL SAMPLES OF TYPICAL RADIATION EXPOSURES | | | |
|---|---|---|---|
|  | X-ray tomography of the skull | | 50,000 (max)<br>10,000 (typically) |
|  | Teeth radiography | | 5,000 (max)<br>1,000 (typically) |
|  | Thorax radiography | | 400 (max)<br>100 (typically) |
|  | Flight by aircraft | Time | |
| | Paris – Washington | 8.00 hr. | 41 |
| | London – New York | 7.30 hr. | 37 |
| | New York – Los Angeles | 6.15 hr. | 24 |
| | London – Rome | 2.30 hr. | 12.3 |
| | London – Frankfurt | 1.35 hr. | 7.2 |
|  | Natural radiation background (for 24 hours) | | 2.7-13 |
|  | Person exposure dose at the Scanner per scanning session | | 0.25 |

**Attachment C: INMATE INFORMATION SHEET ON WHOLE BODY IMAGING SYSTEM PROGRAM**

*Background:*
The possession and use of weapons and other contraband by inmates seriously jeopardizes the overall safety and security of our institutions for both staff and inmates. The Whole body Imaging System Program is being introduced to complement already existing procedures for contraband detection that include metal detectors, X-ray machines, alcohol and drug detection devices, etc. In some cases, inmates must submit to the Whole body Imaging System as a requirement for working in certain areas, such as in Unicor, Facilities, etc.

*Safety and Privacy:*
FDA has approved the use of these devices including those screening systems that use low-dose backscatter and transmission ionizing radiation technology. All these technologies have been proven to be safe and effective for screening members of the general public as well as safe for both operators and those in the vicinity of the operating device. People are exposed to ionizing radiation every day, much of it naturally occurring in the environment.

The same type of radiation is found in our food supplies and in many consumer products such as smoke detectors. Everyone who flies in an airplane receives ionizing radiation. For comparison, 50 scans from a typical whole body imaging system that uses ionizing radiation is the equivalent to about 2 hours of air travel at 39,000 ft.

For most of the whole body imaging systems which do reveal/differentiate between the male/female anatomies, there will be no cross-gender viewing by BOP staff of inmates, except under emergency situations as allowed by policy. With those low-dose transmission type systems, the tracking and archiving of images is built-in for additional safety measures to ensure inmates never exceed the allowable doses/scans as outlined in regulatory standards and guidance.

*How It Works:*
Inmates will stand in front of the device with their legs spread slightly and arms extended away from their sides while the scan is taken, this takes approximately 8 seconds to process. The number of scans required at one screening is based on the technology deployed. Should the subject move during the scan, the scan will be repeated. For whole body imaging systems utilizing ionizing radiation, several federal guidelines/standards such as ANSI Standard ANSI/HPS N43.17-2009 (as amended), NCRP Commentary No.16, and ISCORS Technical Report 2008-1dated July 2008 all provide additional guidance.