



**U.S. Customs and
Border Protection**

JUN 13 2012

TO: Gary T. McMahan
Director, Office of Safety and Health
Office of Human Resources Management

FROM: Dr. Clifton Wilcox *For [Signature]*
Acting Director, Labor-Management Relations
Office of Human Resources Management

SUBJECT: Agency Head Review
Memorandum of Understanding – Ionizing Radiation Safety Program Directive

The attached Memorandum of Understanding (MOU) signed June 4, 2012, memorializes an agreement between the U.S. Customs and Border Protection (CBP) and the National Treasury Employees Union (NTEU) concerning the Ionizing Radiation Safety Program Directive. The negotiated terms have been reviewed in accordance with 5 U.S.C. §7114(c) and under Department of Homeland Security, Customs and Border Protection Delegation Order 10-001 dated February 23, 2010.

The MOU does not violate existing law, rule or regulation, and is hereby approved. This approval does not constitute a waiver of, or exception to, any existing law, rule, regulation, or policy.

If you have any questions or need additional assistance, you may contact Don Stakes, Chief Labor Negotiator, by telephone at (202) 863-6335, or by electronic mail at Donald.Stakes@dhs.gov.

CC: Colleen M. Kelley, National President, NTEU
Jonathan Levine, Assistant Counsel for Negotiations, NTEU
Deborah Eres, Deputy Director, Labor-Employee Relations Field Services
Michael Pfeiffer, Supervisory CBP Officer, Office of Field Operations

Attachment

**MEMORANDUM OF UNDERSTANDING
BETWEEN
U.S. CUSTOMS AND BORDER PROTECTION (CBP)
AND
NATIONAL TREASURY EMPLOYEES UNION (NTEU)**

I. Introduction

This Memorandum of Understanding (MOU) is entered into by, and between the United States Customs and Border Protection, (hereinafter referred to as "Agency") and the National Treasury Employees Union (hereinafter referred to as "Union").

II. Background

On November 15, 2011, the Agency formally notified the Union of its intent to establish the Ionizing Radiation Safety Program Directive. The parties held a briefing by teleconference on December 21, 2011. On January 13, 2012, the Union provided initial proposals, which the Agency responded to on January 26, 2012. Based on the ensuing proposals and counterproposals, the parties were able to come to an agreement and it is memorialized herein.

III. Purpose

This MOU constitutes the parties' agreement on all matters related to the Agency's Ionizing Radiation Safety Program Directive.

IV. Terms or Provisions of Agreement:

1. CBP will provide the applicable NTEU Chapter with reasonable notice of annual inspections, usually at least five (5) business days, in the event it implements the procedures set forth in 6.8-Inspections- at a particular post of duty. For an employee complaint that prompts an inspection, the notice will probably be less than three days to try to remedy the problem as quickly as possible. The Chapter President, or designee, will be permitted to accompany CBP on the inspection.
2. CBP will provide the applicable NTEU Chapter President, or designee, and the local Safety and Health Committee with the CBP Form 500, as described in 6.8. If there is disagreement concerning what's found on the CBP Form 500, local management will work to resolve the issue.
3. The local NTEU Chapter will receive the same information and access to the OSH Division Health Physicist as enjoyed by the Port's management officials, unless the information is need to know or classified and thus cannot be provided. The NTEU Chapter shall contact the management representative and/or LER specialist, whichever is already established, and he/she can reach out to the Health


Physicist so that all parties can meet and/or speak by phone unless the Health Physicist is on site in which case the meeting will be in person.

4. CBP will develop a webpage of frequently asked questions that encompasses questions and/or concerns regarding the matters covered by this Directive and will post it online. It will be updated on a frequent basis, as questions come up. Future questions to be posted will be brought to the Radiation Safety Committee's attention by the NTEU Committee Representative and/or come to Safety and Health's attention by having National NTEU contact Labor Relations.
5. At least once a year the matters covered by this Directive will be discussed at a port health and safety committee meeting. CBP and NTEU will work jointly to encourage such discussion.


V. Effective Date and Termination

This MOU will be submitted for Agency head review immediately after the final signature of the chief negotiators. This MOU will become effective thirty-one (31) days after the date it is signed by the last chief negotiator or after Agency head review, whichever occurs first. Either party may request to reopen this MOU for revision or modification in accordance with Article 26 (Bargaining) of the CBP & NTEU National Collective Bargaining Agreement.


VII. Signatures




For the Agency Date



For the Agency Date



For the Agency Date



For the Union Date

5/4/12

FOR OFFICIAL USE ONLY

U.S. CUSTOMS AND BORDER PROTECTION DIRECTIVE

ORIGINATING OFFICE: HRM/OSH **DISTRIBUTION:**
CBP DIRECTIVE NO.
DATE:
REVIEW DATE:

**U.S. Customs and Border Protection
Ionizing Radiation Safety Program**

1 PURPOSE

The purpose of this directive is to establish U.S. Customs and Border Protection (CBP) policy and program requirements for the implementation of an Ionizing Radiation Safety Program. This program is designed to ensure the safe use of ionizing radiation from radioactive materials and radiation emitting devices by CBP employees.

2 POLICY

2.1 It is the policy of CBP to ensure that radiation exposures to CBP employees and members of the general public are kept "As Low as is Reasonably Achievable." CBP will comply with all requirements of the U.S. Nuclear Regulatory Commission (NRC) and Canadian Nuclear Safety Commission (CNSC) radioactive materials licenses and abide by all governing regulations using the same standard for x-ray generating systems that do not require a license.

2.2 The maximum allowable exposure to any individual (CBP employee or member of the general public) shall not exceed 50 μ rem (microrem) in any hour from CBP Non-Intrusive Inspection (NII) systems. The maximum allowable exposure to any CBP employee in a calendar year from any CBP sources combined shall not exceed 100 millirem (mrem).

3 AUTHORITIES/REFERENCES

Title 10, Code of Federal Regulations (C.F.R.), parts 19, 20, 30, 31, 32, 33, and 70; 29 C.F.R. § 1910.1096; "Radiation Detection Program Directive," CBP Directive 5290-015A; "Authorities and Responsibilities of the Office of Human Resources Management," CBP Directive 2130-013; "Non-Intrusive Inspection (NII) Technology," CBP Directive 3340-036; U.S. Nuclear Regulatory Commission License No. 08-17447-01; Canadian Nuclear Safety Commission License Nos. 13489-1-11.2 and 13489-2-11.0.

4 RESPONSIBILITIES

4.1 The Assistant Commissioner, Human Resource Management (HRM) is the CBP Designated Safety and Health Official pursuant to CBP Directive 2130-013 and has the overall responsibility for establishing radiation safety policy and overseeing all aspects of the Ionizing

Radiation Safety Program on behalf of the Commissioner. The Assistant Commissioner, HRM shall appoint a qualified health physicist in writing to serve as the CBP Radiation Safety Officer (RSO) to act as CBP's responsible authority for all radiation safety issues.

4.2 The Assistant Commissioners, Office of Information Technology (OIT), Office of Field Operations (OFO) and Chief, Office of Border Patrol (OBP) shall ensure that the acquisition, operation and maintenance of NII equipment are performed in accordance with this directive, and CBP's licenses with the U.S. NRC and the CNSC using the same standard for x-ray generating systems that do not require a license.

4.3 The Assistant Commissioner, Office of Training and Development (OTD) shall ensure that appropriate employee training curricula for the Ionizing Radiation Safety Program are in place and that the training complies with the terms and conditions of CBP's NRC and CNSC licenses, using the same standard for x-ray generating systems that do not require a license.

4.4 The Chief, Office of Border Patrol (OBP), the Assistant Commissioner, Office of Field Operations (OFO), Assistant Commissioner, Office of Information and Technology, Assistant Commissioner, Office of Training and Development and Assistant Commissioner, Office of Air and Marine shall ensure that the requirements of this directive are effectively implemented throughout their area of responsibility.

4.5 The HRM, Director, Occupational Safety and Health (OSH) Division is responsible for establishing CBP occupational safety and health program policy and program requirements including radiation safety, overseeing the CBP radiation safety program, conducting a physical inventory every six months of all devices possessed under the CBP NRC and CNSC licenses, and serving as the Chair of the CBP Radiation Safety Committee (RSC).

4.6 Radiation Safety Committee. The RSC is composed of the CBP RSO, employee representatives, subject matter experts representing CBP management, and persons trained in the safe use of radioactive material and radiation emitting devices. The RSC shall oversee the CBP Radiation Safety Program. The RSC is chaired by the CBP Director, OSH.

4.6.1 The RSC shall review and approve the use of radioactive materials, x-ray generating equipment, and any other technology that produces ionizing radiation, and has the authority to direct the contracting officer to revoke or suspend the procurement or use of such equipment.

4.6.2 The RSC shall establish a charter to define the purpose, composition, responsibilities, and proceedings of the RSC, and the frequency of RSC meetings.

4.7 CBP Radiation Safety Officer. The CBP RSO is the holder of specific radioactive materials licenses who is qualified through training and experience to oversee the use of radioactive material for the purposes requested and to minimize the danger to life and property. The RSO is appointed by the Assistant Commissioner, HRM. The RSO ensures that the possession, use, storage, and maintenance of all radioactive sources, nuclear gauges and radiation emitting devices are consistent with the limitations identified in the NRC License, CNSC

Licenses, the Sealed Source and Device Registrations, Occupational Safety and Health Administration (OSHA) regulations, and manufacturers' recommendations and instructions. The RSO serves as CBP's liaison to the NRC, OSHA, and Department of Homeland Security (DHS) on all radiation safety issues. The RSO has the authority to require the cessation of any unsafe act or condition involving radioactive materials or radiation emitting devices.

4.8 Health Physicist. Health Physicists (HP) assigned to the HRM, OSH Division are stationed in the field to provide radiation safety guidance and support to Field Offices, Sectors, and Laboratories under the direction of the RSO. OSH Division Health Physicists conduct initial (baseline) and periodic comprehensive regulatory inspections to ensure compliance of specific license and regulatory requirements. They investigate hazard reports and reported radiation exposures. They also conduct initial and periodic comprehensive radiation surveys of all radiation emitting devices, investigations of exposures, and reporting of hazards.

4.9 Port Directors and Chief Patrol Agents shall ensure an environment that allows all requirements of this directive are effectively implemented throughout their area of responsibility.

4.10 Primary Operators of NII systems are responsible for the safe use of radiation emitting devices or systems, posting warning signs and boundaries that limit access to, controlled areas, controlled zones and exclusion zones, and performing and documenting all required radiation surveys.

4.11 Secondary Operators of gamma and high-energy x-ray NII systems are responsible for guiding and controlling flow of vehicles and conveyances through active NII systems and communicating with the Primary Operator.

4.12 Source Custodians oversee the safe use and security of radioactive training sources authorized for use by a radioactive materials permit issued by the RSO.

5 DEFINITIONS

5.1 As Low As is Reasonably Achievable (ALARA). Means making every reasonable effort to maintain exposures to radiation as far below the dose limits as is practical consistent with the purpose for which the licensed activity is undertaken, taking into account the state of technology, the economics of improvements in relation to state of technology, the economics of improvements in relation to benefits to the public health and safety, and other societal and socioeconomic considerations, and in relation to licensed materials in the public interest.

5.2 Buster. A buster is a portable contraband detector which measures density changes to discover hidden contraband.

5.3 Canadian Nuclear Safety Commission. CNSC is the regulatory body in Canada that authorizes the use of licensed material.

5.4 Check Source. A check source is radioactive source material that allows the user to determine if an NII device is working correctly.

5.5 Controlled Area. The two dimensional space that outlines the operational area of a large-scale NII system, and is to be clearly posted with “Caution-Radiation Area” or “Caution – High Radiation Area” signs to designate the operational area where individuals are generally not permitted (unless operating from inside the NII system itself or driving through an approved system such as the Z-Portal™) when scanning is occurring. The perimeter of the Controlled Area designates the location beyond which any individual would expect to receive a cumulative dose of less than 50 µrem in any hour.

5.6 Controlled Zone. The three dimensional space that effectively extends the Controlled Area vertically to consider individuals who may be working above CBP NII systems.

5.7 Dose or Radiation Dose. A generic term that means absorbed dose, dose equivalent, effective dose equivalent, committed dose equivalent, committed effective dose equivalent, or total effective dose equivalent. Absorbed dose describes the amount of radiation absorbed by an object or person. The units for absorbed dose are the radiation absorbed dose (rad) and gray (Gy).

5.8 Exposure. A measurement that describes the amount of radiation traveling through the air. Many radiation monitors measure exposure. The units for exposure are the roentgen (R) and coulomb/kilogram (C/kg).

5.9 Gamma Ray Detection System (GaRDS™). A device that employs a gamma ray source to produce images of tankers, commercial trucks, sea and air containers, and other vehicles.

5.10 Ionizing Radiation. Energy in the form of alpha particles, beta particles, neutrons, gamma rays and x-rays capable of producing ionization.

5.11 Licensed Material. A source material, special nuclear material, or byproduct material received, possessed, used, transferred or disposed of under CBP’s specific license issued by the NRC or the CNSC.

5.12 Non-Intrusive Inspection (NII). Technology designed to detect and prevent, among other things, weapons of mass destruction, illicit radioactive materials, firearms, and illicit drugs from entering or exiting the United States. NII equipment includes all large and small scale radiation emitting systems as defined in CBP Directive 3340-036 (NII Technology).

5.13 Nuclear Regulatory Commission. NRC is the regulatory body in the United States that authorizes the use of licensed material.

5.14 Permit. A document issued by the CBP RSO authorizing specific individuals to utilize licensed material for training of CBP personnel.

5.15 Personal Radiation Detector (PRD). A small, self-contained safety device used for detecting illicit radiation.

- 5.16 Radiation Dosimeters. Measures the amount of occupational radiation exposure an individual or environmental area is exposed to in a set period of time.
- 5.17 Radiation Isotope Identifier Device (RIID). A handheld device utilized for locating a radiation source and determining the specific isotope encountered.
- 5.18 Radiation Portal Monitor (RPM). A large fixed system used to detect gamma and neutron radiation.
- 5.19 Radiation Safety Officer (RSO). A Health Physicist assigned to the HRM OSH Division who has the overall responsibility for the management and oversight of the CBP radiation safety program and who is responsible for ensuring CBP compliance with the requirements of the U.S. NRC and the CNSC.
- 5.20 Sealed Source Device Registry (SSDR). A registration certificate issued by the NRC and Agreement States that contain detailed information on use and safety of sealed sources and devices.
- 5.21 Survey Meter. An auto-ranging pressurized ion chamber used to measure radiation rate and dose from x-ray and gamma sources. The survey meter approved for CBP radiation measurements is the Fluke (Victoreen) model 450 or 451P.
- 5.22 Training Source. A licensed radioactive source used by permitted field locations for the purpose of teaching or training of CBP personnel.
- 5.23 Vehicle and Cargo Inspection System (VACIS[®]). A device that employs a gamma ray source to produce images of tankers, commercial trucks, sea and air containers, train cars and other vehicles used to smuggle contraband and other merchandise.
- 5.24 Z-Backscatter Van (ZBV[™]). A mobile device that employs low energy x-rays to produce images of tankers, commercial trucks, sea and air containers, and other vehicles.
- 5.25 Z-Portal[™]. A stationary device that employs low energy x-rays to produce images of automobiles and buses.

6 PROCEDURES

6.1 Radioactive Material and Radiation Emitting Devices.

6.1.1 **Acquisition and Purchase.** The RSO and RSC must provide written approval prior to any acquisition or purchase of any radioactive material or radiation emitting devices. This is necessary to ensure that all material or devices meet regulatory licensing and CBP specific requirements.

6.1.2 Any solicitation or procurement action for licensed materials must include arrangement for disposal of radioactive material at end of life-cycle or usefulness to CBP

and must include provisions to demonstrate compliance with financial assurance criteria as specified in 10 C.F.R. § 30.35 (Financial Assurance and Recordkeeping for Decommissioning).

6.1.3 The RSO must be contacted prior to the disposal of any radioactive material or waste.

6.1.4 The Office of Information and Technology, Laboratories and Scientific Services (LSS) Teleforensic Center shall immediately notify the RSO in all cases where specific material(s) may need to be “detained” by CBP pending disposition.

6.1.5 CBP personnel shall not disrupt a package or attempt to gain access to the inner contents of a package suspected to be radioactive. The purpose is to minimize potential for radiation contamination which CBP field personnel are not trained to handle. Any necessary measurements with a Radiation Isotope Identifier Device (RIID) can be done outside of the packaging. Radioactive packages that require forensic analysis will only be opened by properly trained and equipped LSS laboratory personnel, and under the direction of the RSO or an OSH Division Health Physicist.

6.1.6 There are no prohibitions regarding the use of radiation emitting devices to scan containers or conveyances carrying any cargo or commodities, including livestock, pets and photographic film.

6.1.7 Intentional use of radiation emitting devices on containers or conveyances known to carry human passengers is prohibited unless the specific system, like the Z-Portal™, has been approved for such use by the RSO and RSC.

6.2 Licensing

6.2.1 CBP shall maintain a license with the NRC that permits use of specific sources of radioactive material for the detection of contraband, smuggled merchandise and hazardous materials, measurement of physical properties, teaching, calibration and testing throughout the United States.

6.2.2 CBP maintains two licenses with the CNSC that permits use of specific sources for detection of contraband, smuggled merchandise and hazardous materials, and permits use of specific sources for calibration and testing in Canada.

6.2.3 CBP is not required to register x-ray emitting devices with State government offices. If a State government representative contacts a CBP office regarding registering x-ray emitting devices that office should immediately refer the representative to the RSO.

6.2.4 Any changes or deviations from the above licenses must be authorized in writing by the RSO in advance.

6.2.5 Licenses for operations outside of the United States and Canada require approval from the RSC and RSO. When possible, approval for temporary export and import of radioactive materials will be obtained through diplomatic channels.

6.2.6 Individuals requiring a copy of the CBP NRC or CNSC licenses shall contact the RSO. These licenses contain security related information and are only distributed to officials with an official need to know.

6.3 Operations

6.3.1 Radiation emitting devices may only be used under conditions set forth in the appropriate CBP policies, such as CBP Directive 3340-036 (NII Technology), existing Sealed Source Device Registry documents, manufacturer's instructions, specific regulations and commitments in CBP's NRC or Canadian licenses and applicable laws and regulations, such as the OSHA regulations.

6.3.2 CBP employees, under guidance and safety precautions established by OIT's Enforcement Technology Program (ETP), may maintain, repair, or replace device components that are not related to the radiological safety of a device and that do not result in the potential for any portion of an individual's body to come into contact with the primary beam or increased radiation levels in accessible areas.

6.3.3 CBP and ETP personnel are not authorized to maintain, repair, or replace any of the following device components of large scale NII systems: the sealed source, the source holder, source drive mechanism, on-off mechanism (shutter), shutter control, shielding, or any other component related to the radiological safety of the device.

6.3.4. Safety interlocks on any radiation emitting device will not be altered or otherwise disabled without the written authorization of the RSO.

6.3.5. Licensed material shall only be used for detection of contraband and hazardous materials, training of CBP personnel, and calibration and testing of CBP systems. No other use is permitted.

6.3.6 Check Sources are to be used only for the purpose of verifying operability of specified equipment (i.e., PRD, RIID).

6.3.7 Permits/Source Handlers. The use of licensed training sources for testing and training exercises requires the issuance of a written permit by the RSO. The RSO will not initiate the issuance of a permit until the CBP NII Office has granted permission and the originating office (OAM, OBP and OFO) has concurred. Permitted uses are covered in each individual permit and there may not be any deviations from such permitted uses without the written approval of the RSO. The RSO shall appoint a Source Custodian to oversee the safe use and security of these training sources under the issued permit and the RSO may designate other source handlers to use sources after they have been listed on the permit. Only after approval from the RSO may a new user begin using training

sources without supervision of the official Source Custodian. Depending on the nature of use of the source, personnel monitoring may be required. When a Source Custodian plans to leave his or her current assignment, he or she must notify the RSO so that a replacement Source Custodian can be designated. Only individuals who have been trained by the RSO or designated representative may become the Source Custodian of record. If no Source Custodian is appointed, the permit shall be terminated, sources will be forwarded to the RSO and the permit will not be reinstated without the concurrence of the RSC.

6.3.8 Licensed radioactive material or equipment containing licensed material may only be used at CBP Ports of Entry, temporary and permanent CBP inspection sites within the United States (e.g., Border Patrol checkpoints, events designated as national special security events), select locations in Canada and other locations as specified in CBP's NRC and CNSC licenses.

6.3.9 Contractors authorized by contract with CBP may transport and use material or equipment after demonstrating completion of all training requirements and receiving written approval from the RSO.

6.4 Radiation Exposures

6.4.1 The maximum allowable exposure to any individual (CBP or member of the general public) at the Controlled Area/Controlled Zone boundary is 50 μ rem (microrem) in any hour. The maximum allowable exposure to any employee in a calendar year from all CBP sources combined is 100 mrem (millirem).

6.4.2 If individual(s) are discovered hiding in a vehicle or container during a scan procedure, the scan is to be halted immediately and the RSO shall be notified as outlined in section 6.7 of this directive.

6.4.3 Upon notification of an inadvertent or unintended exposure to a member of the public or CBP employee, an OSH Division Health Physicist or the RSO shall conduct a dose reconstruction to determine potential exposure to ionization radiation. The RSO will provide notice and report the incident to the NRC, DHS RSO, and CBP RSC as appropriate.

6.5 Material Security

6.5.1 All check or calibration sources must be locked and secured when not in use, or under direct observation of a trained authorized user, and require a minimum of two layers of security. The source must be physically secured with a locking mechanism or other device that prevents removal, and the storage area must be locked or be located in an access controlled environment.

6.5.2 When in storage, sources and devices shall be accessible only to authorized CBP

Personnel (i.e. trained operators or Source Custodians). The dose rate at any occupied location outside of a radioactive material storage area, room or enclosure must be less than 2 mR/hr at 30 centimeters. All (gamma) VACIS[®] and GaRDS[™] systems must be locked when in transport or storage, or when not under the direct observation of a trained operator.

6.5.3 If it is necessary to have service or maintenance performed on a Mobile VACIS[®] system outside of a CBP controlled facility, the user shall contact ETP to have the nuclear gauge (container holding the source of radioactive material) removed by the manufacturer to ensure that it remains in the secure custody of CBP as outlined in section 6.5.1 of this directive. It is not necessary to remove the source if the length of time needed to complete repair or maintenance offsite permits a trained operator to accompany the device for the entire period of time.

6.5.4 The nuclear gauge (shutter mechanism) must be locked and the outer lockable container secured/stowed to prevent unauthorized or accidental removal of the sealed source from its shielded position when the system is not in use.

6.5.5 Contractors shall adhere to CBP security requirements at all times. All CBP contracts that require contract employees to move or relocate equipment that contains licensed material must include language that requires compliance with CBP security requirements at all times.

6.6 Training

6.6.1 The RSO in coordination with OTD oversees and approves all training required by the radiation safety program. Radiation training requirements are described on the Sharepoint OTD/HRM/mandatory training page.

6.6.2 No CBP employee will use radioactive material or radiation emitting devices without first receiving all prerequisite training from CBP and in some cases the equipment manufacturer. For NII systems, no individual may operate a radiation emitting system before completing training specific for that system.

6.6.3 Only instructors trained by CBP Radiation Safety staff are authorized to provide Radiation Safety training to CBP personnel.

6.7 Reporting Requirements

6.7.1 Immediate Notification of RSO and the NII Office is required when there is an accidental and/or inadvertent/unintentional scanning of individuals hidden within a conveyance or vehicle or other individuals (including CBP personnel) by CBP radiation emitting equipment other than those devices approved for scanning of vehicles carrying human occupants (Z-Portal[™]); any loss of licensed radioactive material; any accident involving licensed material or devices where the integrity of a radioactive source or radiation generating device (accelerator) has been jeopardized; shutter/nuclear gauge

malfunction on a VACIS[®] or GaRDS[™] system; or damage to a large scale NII system that results in potential loss of use for greater than 30 days.

6.7.2 The RSO shall be notified at least 30 days prior to removal/replacement of sources or fielding of new sources.

6.7.3 Port Directors and Station Patrol Agents in Charge are required to provide a detailed summary of any incident and related recovery efforts involving lost or damaged sources to the RSO within one week of occurrence. A Board of Survey must also be initiated in accordance with the requirements described in the CBP Personal Property Management Handbook, HB 5200-13B (Nov. 2005).

6.8 Inspections

6.8.1 A comprehensive regulatory compliance inspection shall be conducted for all large-scale NII systems and radioactive material permit holders at least annually by a Health Physicist from the OSH Division. Results are documented on CBP Form 500, Safety and Health Inspection Report, including findings, applicable standards, and recommended corrective actions to correct any deficiencies. The inspection report is issued to the management official in charge of the operation. The management official in charge is responsible for correcting all deficiencies and notifying the OSH Division in writing within 30 days of receipt of the report, of the corrective actions that have been taken to eliminate the deficiencies.

6.8.2 An operability inspection shall be conducted at least annually or more frequently if specified by the Sealed Source Device Registry or by the manufacturer's field service engineer to ensure the proper operation of each radiation emitting device. A copy of the annual operability inspection report shall be maintained at the Port of Entry or Station.

6.8.3 A comprehensive regulatory compliance inspection shall be conducted for all small-scale NII systems (i.e. cabinet type x-ray systems) at least bi-annually by a Health Physicist from the OSH Division. A copy of the comprehensive regulatory compliance inspection report shall be maintained at the Port of Entry or Station.

6.9 Surveys

6.9.1 Each day that a gamma (VACIS[®] or GaRDS[™]) system is used, three (3) separate exposure rate measurements are required to verify the integrity of the source. If the system is only used once a day or over one eight-hour shift, it is recommended that these three measurements take place at the beginning, middle and end of the operation. If the system is used over a 24-hour period, the Primary Operator shall ensure that these measurements are taken at the beginning of every shift.

6.9.2 Only a Fluke (Victoreen) 450 or 451P survey meter is approved for conducting required daily surveys. Any deviation from this requirement must be authorized in writing by the RSO.

6.9.3 The RSO or OSH Division Health Physicist will conduct a comprehensive survey of newly acquired, refurbished or relocated large scale NII equipment during acceptance testing whenever practical. Situational surveys may also be performed during testing of new modalities and other occasions as deemed necessary. In most cases baseline surveys will verify the safety of systems, and will determine or verify the appropriate Controlled Area and Controlled Zone for a specific system based on local environmental conditions. This survey is in addition to the initial radiation surveys conducted by the manufacturer.

6.10 Calibrations

6.10.1 All survey meters used for radiation exposure/dose rate measurements must be calibrated at least annually. ETP coordinates calibrations for OFO, OBP and other offices as necessary.

6.10.2 A survey meter is required to be present for operation of VACIS[®] and GaRDS[™] systems. A replacement survey meter shall be provided to the user prior to the primary meter being removed for calibration or repair.

6.10.3 Pacific Northwest National Laboratories (PNNL) shall coordinate and perform all transportation of sources related to RPM calibrations. CBP Field Offices and Sectors are not authorized to transport any sources related to RPM calibrations.

6.11 Inventory of Radioactive Material

6.11.1 The RSO shall require a monthly inventory of all training sources and maintain these records.

6.11.2 Office of Administration, Personal Property Management Division and HRM, OSH Division, shall conduct a physical inventory every six months of all devices that are covered by the CBP NRC and CNSC licenses.

6.11.3 Inventory records shall include the name of the radionuclide, quantity, manufacturer name and model number, storage location, and the date of each inventory.

6.11.4 Inventory records will be reviewed by the RSC.

6.12 Leak Testing

6.12.1 Sealed sources shall be tested for leakage and/or contamination at intervals not to exceed six months or at intervals specified in the Sealed Source Device Registry. Sealed sources installed in NII systems are leak tested by the manufacturer's factory service personnel and results are reported to the RSO through ETP. For sources controlled under Permits or utilized by LSS, leak tests are analyzed by OSH Division Health Physicists.

6.12.2 VACIS[®] sources shall be tested every 12 months by the manufacturer's factory service personnel. All other sources (including GaRDS systems) shall be tested every six months with the exception of alpha-sources which will be performed every three months as described in section 6.12.1 above under the direction of the RSO and OSH Division Health Physicists.

6.12.3 Leak tests must be capable of detecting the presence of 0.005 μCi (microcuries, 185 becquerels) of radioactive material. Copies of all leak test results shall be forwarded to the RSO at the end of each month when performed and will be maintained by the RSO. Sources in storage that are not being used are not required to be leak tested, however they must be leak tested upon removal from storage.

6.13 Transporting radioactive material

6.13.1 Transporting radioactive material shall be done in accordance with 10 C.F.R. pt. 71 (Packaging and Transportation of Radioactive Material) and in 49 C.F.R. pts. 107, 171 through 180, and 390 through 397, appropriate to the mode of transport.

6.13.2 Only individuals who have completed Radiation Awareness and Radiation Safety Training or Source Handler Training and are current on required annual Radiation Safety Refresher or Hazardous Material Refresher Training are authorized to package, ship or transport any radioactive material.

6.13.3 Transporting a Mobile VACIS[®] on public roadways requires that a signed and dated Shippers Declaration of Dangerous Goods be kept in the truck cab within reach of a properly trained driver while operating the vehicle.

6.13.4 Operators of Mobile NII systems with a Gross Vehicle Weight Rating exceeding 26,000 pounds will be required to possess a valid commercial driver's license (CDL) when driving vehicles on public roadways.

6.13.5 CBP Field Office and Sector personnel are not authorized to transport any sources related to RPM calibrations as described in section 6.10.3.

6.14 Dosimetry

6.14.1 Dosimeters shall be used when CBP fields new large-scale equipment modalities not previously operated by CBP to confirm that existing radiation fields are below CBP imposed standards.

6.14.2 Environmental or personnel dosimeters will be utilized for at least the first six months a new modality large scale system is operational in the field. Actual environmental locations and possible need for personnel dosimeters will be determined by the RSO or OSH Division Health Physicist.

6.14.3 Situational use to demonstrate radiation exposures to areas or personnel during unusual circumstances will be at the discretion of the RSO or OSH Division Health Physicist.

6.14.4 Dosimetry records are maintained by the OSH Division for CBP personnel receiving dosimeters. An exposure summary will be provided annually to any individual exceeding 100 mrem in a calendar year or upon request.

6.15 Records Required to be Maintained by Field Users

All users of radioactive materials and radiation emitting devices are required to maintain the following radiation safety related records in an accessible location as long as the material or devices are in the user's custody:

Record type	Frequency of report	Retention	Type
Radiation Safety Inspection	Annual	3 years	Paper report
Radiation Safety Equipment Survey	Initial	Equipment lifespan	Paper report
Radiation Safety Equipment Survey	Annual/source or tube maintenance	1 year	Paper report
Leak Test	Annual/source change	5 years	Paper report
Maintenance Records x-ray	Any records pertaining to x-ray tube or imaging system	Equipment lifespan	Paper report in chronological order
Maintenance Records of radioactive sources	Any records pertaining to source or imaging system	Equipment lifespan	Paper report in chronological order
Maintenance or Movement Records of radioactive sources	Whenever mobile system is taken on public roadways; if source is removed, record source storage site	Equipment lifespan	Paper report in chronological order
Source Handler Source Inventory	Monthly	Source lifetime	Paper report in chronological order
Source Handler Check out log	Daily or as used	Source lifetime	Paper report in chronological order
Source Handler Permit	Initial and renewal every two years	Source lifetime	Electronic or paper copy
Dosimeter reports	Monthly/Quarterly	Indefinite	Paper report for file/inspection

7 MEASUREMENT

7.1 The RSC shall review and approve the use of radioactive materials, x-ray generating equipment, and any other technology that produces ionizing or non-ionizing radiation, and ensure compliance with licensed activities.

7.2 An independent audit of the CBP Radiation Safety Program will be conducted by an external subject matter expert annually. The results of this audit will be shared with the RSC and the final report will be maintained on file in the HRM, OSH Division office, and the DHS Office of Safety and Environmental Programs.

8 NO PRIVATE RIGHT CREATED

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