

X-RAY FLUORESCENCE DEVICE LICENSING SUPPLEMENT

This supplement is intended for use by applicants desiring to obtain licensure, amendments or renewal for authorization to possess x-ray fluorescence devices (XRFs) containing sealed sources of radioactive material. Include the information specified below on an "Application For Radioactive Material License" form (RH 2050) or on attachments thereto. General information can be found in the guide (Form RH-2051). Please submit all correspondence in duplicate.

- Item 1a. State the name of the company, business entity, or individual (if self-employed) as you would have it appear on the license.
- 1b. If the mailing address is a PO Box, also include the physical location of the company.
- 1c. Include phone and fax numbers, email address, and tax identification number (or SSN if individual).
- Item 2a. Check the appropriate box for type of business, or indicate if government agency.
- 2b. Provide the address where radioactive material will be used or stored. Check the appropriate box to indicate use at temporary jobsites. NOTE: Portable XRFs are most commonly used at temporary job sites. Permanent locations are any sites where the XRF is stored longer than six months.
- 2c. Check the appropriate box indicating the type of licensing action.
- Item 3a. Name the nuclide(s) (e.g., Cadmium-109, Cobalt-57, Iron-55, Americium-241).
- 3b. Indicate the chemical and physical form of the nuclide, and specify the *sealed source* manufacturer and model number (e.g., Sealed source (ABC Corp. Model DEF))
- 3c. Specify the number of sources to be possessed under the license and the maximum activity of each source (e.g., One source not to exceed 50 millicuries). NOTE: *Source* manufacturer and model number are generally different than *device* manufacturer and model number.
- Item 4. Specify the manufacturer and model number of the XRF, and clearly state its intended use (e.g., To be used as components of a GHI Corp. Model JKL x-ray fluorescence analyzer for analysis of lead in paint.).
- Item 5. Name the radiation safety officer (RSO) and alternate RSO (if applicable), and name all independent XRF users. Provide a completed Statement of Training and Experience (Form RH-2050A) and a manufacturer's training certificate for all named personnel. Commit to provide annual radiation safety refresher training internally (e.g., by the RSO), or externally (e.g., by the manufacturer) to all users. NOTE: All records must be maintained for inspection.
- Items 6. and 7. Not required for XRFs.
- Item 8. Specify the supplier, the type (i.e., whole body and/or extremity AND either film, optically stimulated luminescent dosimeter (OSLD), or thermoluminescent dosimeter (TLD)), and the frequency of exchange (i.e., monthly, bimonthly, or quarterly) of personnel dosimeters. NOTE: Only a monthly exchange frequency will be permitted for film. Dosimetry records of lifetime cumulative dose must be maintained for all users. Bioassays are not required for sealed source users.

Item 9. Describe the XRF permanent storage location(s):

- a. Submit an 8-1/2" x 11" diagram of the XRF storage room(s), and specify the location of the XRF within the room. Describe the areas or rooms adjacent to the XRF storage room, and indicate their use (e.g., office, storage, lab, parking lot, neighboring suite). Also indicate on the diagram the location of the nearest full-time workstation.
- b. Describe the dedicated XRF storage container (i.e., construction material and approximate dimensions).
- c. Describe (or indicate on the diagram) the security used to prevent unauthorized removal of the XRF. State who has access to any keys used. NOTE: A minimum of three levels of security is recommended (e.g., XRF case, storage cabinet, room, building).
- d. Provide the land use zoning of the storage location (e.g., industrial, commercial). NOTE: Residential storage is generally prohibited under most ordinances, laws and regulations.
- e. If using a public storage facility, the facility proprietor and the local fire department must be notified in writing. Supply copies of notifications.
- f. Describe procedures employed in the event of overnight storage at temporary job sites (if applicable). Include description of storage container, postings, and security.
- g. Commit to post the following:
 - 1) "Caution, Radioactive Material" and international radiation symbol.
 - 2) "Notice to Employees" (Form RH-2364, provided by the Department) in a conspicuous location.
 - 3) A current copy of the radioactive material license, state and federal regulations (Title 17, California Code of Regulations, AND Title 10, Code of Federal Regulations, Part 20), and your operating and emergency procedures in a conspicuous location. Or commit to post a notice which describes the documents and states where they are kept available for review.

Item 10. Submit your Radiation Safety Program (RSP). Consider contacting the XRF manufacturer for a copy of their sample program. Include the following information in your RSP:

- a. Include the information requested in Items 5, 8, 9, 12, and 13 of this application.
- b. Specify the RSO's duties.
- c. Submit your operating and emergency procedures, including an emergency call-down list. Include the names and phone numbers (day and 24 hour numbers) of the RSO, alternate RSO, local inspection agency, regulatory agency, and manufacturer.

- d. Submit your leak test procedures.
 - 1) Commit to follow the manufacturer's instructions for collecting leak test samples, and identify the individual or company who collects your samples.
 - 2) Commit to perform leak tests for the XRF at intervals not to exceed 6 months.
 - 3) Identify the vendor that provides your leak test kit *and* the vendor that performs your sample analysis.
- e. Commit to maintain a utilization log that includes the XRF serial number, operator, date out, destination, and actual date of return. Submit a copy of the log.
- f. Commit to conduct a semi-annual inventory. Note: RSO must perform a physical inspection of the XRF.
- g. Submit your XRF transportation procedures, including method of transport, use of DOT-approved packages, security during transit, and documents carried during transit. Commit to carry the Certificate of Compliance or shipping paper during transit. Commit to carry a copy of your license, manufacturer's instruction manual, and your operating and emergency procedures to temporary job sites.
- h. Commit to notify the Department as soon as practicable, but within 24 hours, of theft, loss, or damage to the XRF.

Item 11. Not Applicable.

Item 12. Commit to return the XRF to the manufacturer or to transfer it to another specific licensee of the USNRC or an Agreement State. NOTE: Receipt records must be provided at termination of this license.

Item 13. Commit to notify the Department at least 30 days prior to vacating or relocating a storage area. A storage location cannot be vacated or relocated until approval is obtained by the Department via a completed license amendment or termination. Note: Leak test records must be provided to release any facility.

Item 14. Provide an original signature, printed name, and official job title of a person who has legal and financial responsibility for the applicant.