REQUEST FOR INFORMATION (RFI)

RFI Title: Market Research for Self-Shielded X-ray Irradiators for Research Applications
RFI Number: 89233126NNA000149
Issue Date: Friday, July 10, 2026
Response Due Date & Time: Friday, August 7, 2026, at 12:00 PM EDT
Deadline for Questions: Friday, July 24, 2026, at 12:00 PM EDT
Response Due Date & Time: Friday, August 7, 2026, at 12:00 PM EDT

1. INTRODUCTION AND PURPOSE

This is a Request for Information (RFI) issued by the National Nuclear Security Administration (NNSA), Office of Radiological Security (ORS). This RFI is for market research and planning purposes only and does not constitute a solicitation for bids, proposals, or quotes. This RFI does not commit the Government to contract for any supply or service whatsoever. The Government will not award a contract based on this RFI, nor will it otherwise reimburse respondents for information solicited.

The purpose of this RFI is to conduct market research to identify manufacturers and vendors capable of supplying self-shielded X-ray irradiators suitable for various research applications. The insights gained from this RFI will assist the ORS in understanding current market capabilities, promoting X-ray technology alternatives to high-activity radioactive sources, and impartially including relevant vendors in future ORS engagements.

2. BACKGROUND

High-activity radiological materials, while valuable in certain applications, present inherent risks if lost, stolen, or misused. The ORS actively promotes the adoption of alternative technologies, particularly X-ray technology, which can achieve similar or superior performance compared to traditional source-based radiation devices in various fields. This initiative aims to enhance safety and security by reducing the reliance on high-activity radioactive sources.

3. SCOPE AND DESIRED OUTCOMES

The ORS is seeking information on self-shielded X-ray irradiators that can effectively serve research applications traditionally performed by gamma source-based devices. These applications include, but are not limited to, the irradiation of cell lines, small mammals, material samples, and other organic matter for scientific study. The goal is to identify existing, commercially available X-ray irradiator technologies that offer comparable or improved functionality, safety, and operational efficiency for research purposes.

Specifically, the desired outcomes of this RFI are:

- To compile a comprehensive list of manufacturers and vendors of self-shielded X-ray irradiators suitable for research applications.
- To ascertain which of these manufacturers and vendors are actively operating and distributing their products within the United States.
- To gather basic technical specifications and capabilities of their relevant product lines.

4. INFORMATION REQUESTED FROM INDUSTRY

The ORS requests that interested parties provide responses to the following questions. Please limit your total response to no more than 10 pages (excluding cover page and table of contents, if used).

4.1. Company Information:

a. Full legal company name, address, and primary point of contact (name, title, phone number, email address).

b. A brief, one-page-or-less description of your company, including its history, core competencies, and presence in the X-ray irradiator market.

c. Confirmation of your company's capability to operate and distribute self-shielded X-ray irradiators within the United States.

4.2. Product Information for Self-Shielded X-ray Irradiators (Research Applications): For each commercially available self-shielded X-ray irradiator model suitable for research applications your company offers, please provide the following basic specifications:

a. **Model Name/Number.**

b. **Overall Dimensions:** Provide approximate external dimensions (Length x Width x Height) in centimeters or inches.

c. **Weight:** Provide approximate weight in kilograms or pounds.

d. **Energy (kVp):** Specify the maximum kilovoltage peak (kVp) range of the X-ray tube.

e. **Cooling Method:** Describe the cooling method employed (e.g., air-cooled, water-cooled, oil-cooled).

f. **Available Modules or Add-ons:** List and briefly describe any significant modules, accessories, or add-ons that enhance the irradiator's functionality for research purposes (e.g., specialized sample holders, dose monitoring systems, software features).

g. **Target Research Applications:** Briefly describe the typical research applications for which each model is designed or commonly used (e.g., cell irradiation, small animal studies, material science, food sterilization).

4.3. General Capabilities and Market Insights:

a. Describe your company's approach to customer support, training, and maintenance for your X-ray irradiator products in the United States.

b. Identify any unique features or technological advancements that differentiate your self-shielded X-ray irradiators from traditional gamma source-based irradiators for research applications.

c. What are the typical lead times for delivery and installation of your X-ray irradiator systems?

5. RESPONSE INSTRUCTIONS

a. **Submission:** Responses to this RFI must be submitted electronically to Kwanita Brown at kwanita.brown@nnsa.doe.gov, with the subject line: "RFI Response: Market Research for Self-Shielded X-ray Irradiators –(Your Company Name)".

b. **Format:** Responses should be provided as a Microsoft Word (*.docx) or Adobe Acrobat (*.pdf) attachment.

c. **Content:** Please clearly address each section and question outlined in Section 4.

d. **Proprietary Information:** If your response contains proprietary information, please clearly mark it as such. The Government will protect such information from unauthorized disclosure to the maximum extent permitted by law.

e. **Questions:** Questions regarding this RFI must be submitted in writing to Kwanita Brown at kwanita.brown@nnsa.doe.gov by Friday, July 24, 2026, by 12:00 PM EDT. The Government may elect to post answers to questions publicly on SAM.gov without identifying the source of the question.

6. DISCLAIMER

This RFI is issued solely for information and planning purposes. It does not constitute a solicitation and is not to be construed as a commitment by the Government. The Government will not pay for any information received in response to this request, nor will it compensate a respondent for any costs incurred in developing the information provided. Responses to this RFI will not be returned. Any information provided by respondents will be used for market research and internal planning purposes only. Responses to this notice are not offers and cannot be accepted by the Government to form a binding contract. Participation in this RFI is optional and is not required to respond to any subsequent procurement action the Government may take.