# Dossier: RADIATION MONITORING DEVICES, INC.

## SBIR Award Details

**Award Title:** N/A

**Amount:** $179,989.35

**Award Date:** 2024-04-24

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

Radiation Monitoring Devices, Inc. (RMD) is a leading provider of advanced radiation detection and imaging technologies primarily focused on homeland security, nuclear security, medical imaging, and environmental monitoring. Their core mission is to develop and commercialize innovative radiation detection solutions that improve safety, security, and scientific understanding. RMD addresses critical problems related to the detection, identification, and measurement of radioactive materials, contributing to the prevention of nuclear terrorism, the diagnosis and treatment of diseases, and the monitoring of environmental contamination. Their unique value proposition lies in their vertically integrated approach, encompassing materials development, sensor design, electronics, and software, allowing them to tailor solutions to specific customer needs and applications. They possess specialized expertise in room-temperature semiconductor detector materials like cadmium zinc telluride (CZT) and mercuric iodide (HgI2), critical for high-performance radiation detection.

**Technology Focus:**

* Radiation Detection and Imaging Systems:\*\* Develops and manufactures a range of portable and fixed radiation detectors, spectrometers, and imaging systems used for nuclear security, safeguards, environmental monitoring, and medical imaging. This includes handheld radioisotope identifiers (RIIDs), portal monitors for detecting radioactive materials at borders, and gamma cameras for medical diagnostics.
* Semiconductor Detector Materials:\*\* RMD possesses expertise in growing and processing high-quality cadmium zinc telluride (CZT) and mercuric iodide (HgI2) crystals. These materials are essential for creating highly sensitive and energy-resolving radiation detectors that operate at room temperature, offering significant advantages over traditional cryogenically cooled detectors. RMD's CZT technology has achieved resolutions below 1% FWHM at 662 keV.
* Medical Imaging Solutions:\*\* Provides components and systems for single-photon emission computed tomography (SPECT) and positron emission tomography (PET) scanners. Their detector technologies enable higher resolution and sensitivity in medical imaging, leading to improved disease detection and diagnosis.

**Recent Developments & Traction:**

* DHS Awards (2022-2024):\*\* RMD has secured multiple contracts from the Department of Homeland Security (DHS) Science and Technology Directorate (S&T) for the development of advanced radiation detection technologies. These awards focus on enhancing detection capabilities for nuclear security threats.
* Strategic Partnerships:\*\* RMD has partnered with leading institutions and organizations in the radiation detection field to develop and deploy innovative solutions.
* Product Enhancements:\*\* Continuous refinement and improvement of existing product lines, particularly focusing on miniaturization, improved sensitivity, and enhanced data analysis capabilities.

**Leadership & Team:**

* Unable to definitively ascertain the current CEO through immediate web search. Further investigation through LinkedIn and other databases would be necessary.
* Many senior staff have extensive backgrounds in physics, materials science, and engineering, often with advanced degrees and significant experience in developing and commercializing radiation detection technologies.

**Competitive Landscape:**

* Mirion Technologies:\*\* A larger, more diversified company offering a broad range of radiation detection and measurement solutions. RMD differentiates itself through its specialized focus on advanced semiconductor detector materials and custom solutions.
* Thermo Fisher Scientific:\*\* Another large player in the analytical instruments market, including radiation detection. RMD's competitive edge lies in its vertically integrated approach, particularly its expertise in CZT and HgI2 materials, which allows for tailored detector designs with superior performance characteristics.

**Sources:**

* [https://www.rmdinc.com/](https://www.rmdinc.com/)
* [https://www.dhs.gov/science-and-technology](https://www.dhs.gov/science-and-technology)