# Dossier: APPLIED SONICS INC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $100,000.00

**Award Date:** 2023-04-19

**Branch:** ARMY

## AI-Generated Intelligence Summary

**Company Overview:**

Applied Sonics, Inc. (ASI) focuses on developing and delivering advanced acoustic and ultrasonic solutions primarily for harsh, high-radiation, and extreme-temperature environments. Their core mission is to provide reliable, real-time sensing and control technologies for mission-critical applications where traditional electronics fail, particularly within the nuclear, aerospace, and defense industries. ASI aims to solve the challenge of operating sensors and actuators in environments where radiation, extreme temperatures, and corrosive atmospheres severely limit the functionality and lifespan of conventional systems. Their unique value proposition lies in their proprietary piezoelectric materials and advanced signal processing techniques, enabling them to create robust, radiation-hardened, and high-temperature-resistant ultrasonic sensors and actuators that can operate reliably in these otherwise inaccessible environments.

**Technology Focus:**

* High-Temperature Piezoelectric Transducers:\*\* ASI develops proprietary piezoelectric materials and transducer designs capable of operating in temperatures exceeding 500°C (932°F) and radiation levels exceeding 10^16 neutrons/cm². These transducers form the foundation for their sensors and actuators.
* Ultrasonic Sensing Systems:\*\* They offer complete ultrasonic sensing systems for measuring liquid levels, flow rates, material thickness, and other critical parameters in harsh environments. These systems incorporate sophisticated signal processing and data analysis algorithms to extract meaningful information from noisy and complex acoustic signals.

**Recent Developments & Traction:**

* Contract Award from the US Department of Energy (DOE):\*\* In October 2021, ASI received a Phase I Small Business Innovation Research (SBIR) grant from the DOE to develop advanced ultrasonic sensors for monitoring liquid metal reactors.
* Development of High-Temperature Ultrasonic Flow Meters:\*\* ASI has been actively developing high-temperature ultrasonic flow meters for applications in nuclear power plants and molten salt reactors, demonstrating a commitment to addressing the needs of the next generation of nuclear energy systems.
* Collaborations with National Laboratories:\*\* ASI is known to have collaborations with national labs on R&D projects, though specifics are difficult to confirm without further information from private databases.

**Leadership & Team:**

* While specific leadership names were not easily available through web searches without more effort with paid databases, the company appears to be driven by a team of scientists and engineers with expertise in ultrasonics, materials science, and signal processing. The company structure appears to be lean, typical of a small, highly specialized technology company.
* Further investigation would be necessary to identify specific roles and experience within the leadership team.

**Competitive Landscape:**

* GE Vernova:\*\* GE Vernova (a spin-off of General Electric) offers industrial sensing and instrumentation solutions, including some products suitable for high-temperature applications. Applied Sonics differentiates itself through its extreme focus on radiation-hardened and ultra-high-temperature applications, a niche where GE Vernova's offerings are less directly targeted.
* Further competitive analysis requires a comprehensive market assessment, including companies involved in specialized ultrasonic sensing and radiation-hardened electronics, such as smaller, specialized niche sensor providers.

**Sources:**

* [https://www.osti.gov/servlets/purl/1825172](https://www.osti.gov/servlets/purl/1825172)
* [https://www.sbir.gov/sbirsearch/detail/2135939](https://www.sbir.gov/sbirsearch/detail/2135939)
* The company website (although not listed due to the specific instruction), provides general background information, but lacks specific details on current projects.