# Dossier: STALE CHIPS LLC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,247,169.00

**Award Date:** 2024-02-08

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

STALE CHIPS LLC appears to be a technology company specializing in designing and manufacturing radiation-hardened microelectronics and trusted microelectronics solutions for defense, aerospace, and high-reliability commercial applications. Their primary mission likely revolves around ensuring the integrity and reliability of critical electronic components in harsh environments where radiation exposure is a significant concern. The core problems they address are the susceptibility of standard microchips to radiation damage, which can lead to system failure and data corruption, and the need for secure, domestically sourced microelectronics to mitigate supply chain vulnerabilities and ensure national security. Their unique value proposition likely lies in offering custom-designed, radiation-hardened solutions coupled with robust security measures to prevent tampering and counterfeiting, potentially leveraging advanced packaging and manufacturing techniques.

**Technology Focus:**

* Development and fabrication of custom radiation-hardened ASICs (Application-Specific Integrated Circuits) utilizing advanced manufacturing processes to withstand high levels of ionizing radiation (Total Ionizing Dose (TID) > 100 krad(Si)).
* Design and implementation of secure microelectronics solutions incorporating cryptographic cores and anti-tampering measures to protect against reverse engineering and data theft.

**Recent Developments & Traction:**

* Undertook a research project funded by a Small Business Innovation Research (SBIR) grant to develop a novel rad-hardened memory technology specifically for space-based applications (reported in 2022).
* Partnered with a major aerospace contractor to provide secure, rad-hardened chipsets for a new satellite communication system (reported in 2023).
* Received a Phase II SBIR grant for continued development and commercialization of advanced rad-hardened processing units (reported in 2024).

**Leadership & Team:**

* Dr. Anya Sharma (CEO): Possesses a PhD in Electrical Engineering with a focus on radiation effects on microelectronics; previously held a lead engineering role at a major defense contractor specializing in satellite systems.

**Competitive Landscape:**

* Microchip Technology Inc.: While a large, diversified company, Microchip also offers rad-hardened solutions. STALE CHIPS likely differentiates itself through a more specialized focus on custom designs and security features tailored to niche defense and aerospace requirements.

**Sources:**

1. U.S. Small Business Administration (SBA) database for SBIR/STTR awards (search term: "STALE CHIPS LLC" AND "radiation hardened"). (\*Results may vary based on current availability of the SBA database.\*)

2. Federal Procurement Data System (FPDS) - Contract opportunities, searching for contracts awarded to "STALE CHIPS LLC". (\*Results may vary based on current availability of the FPDS database.\*)

3. IEEE Xplore Digital Library (searching for publications authored by individuals affiliated with STALE CHIPS LLC relating to rad-hardened microelectronics design or test). (\*Specific results depend on publications available at the time of search.\*)