

## DEFENSE LOGISTICS AGENCY

### ***ManTech (SBIR) Develops Solutions for Non-toxic Replacement Parts***

**The Challenge:** To develop a replacement for Aluminum-Beryllium and Beryllium materials in military aerospace applications. Developing low cost, lighter than Beryllium, high stiffness, environmentally safe, low risk/liability, designable structures are extremely important for the Department of Defense in the current climate of reduced spending.



#### **ManTech Response:**

- DLA's SBIR project developed the Nano-Powder manufacturing process to successfully demonstrate the application of lightweight, low cost materials for use in DoD systems. The product provides an excellent solution, aiding the DoD in the achievement its goal of providing the US warfighter with the highest quality, as well as the safest, nontoxic materials available. The product demonstrated materials capable of replacement of toxic Beryllium in DoD systems.
- DLA SBIR investment of \$700K

#### **Impact:**

- **The benefits** will directly influence new and existing DoD programs, as well as provide a positive impact on many commercial programs by providing;
  - Lower cost products,
  - Tailor-made properties,
  - safer systems, and parts,
  - an endless market
- **Multiple Commercial Applications;** (\$15M/yr sales 2014), MRL/TRL=8
  - Beryllium, Aluminum, Graphite/Epoxy replacement parts,
  - Lightweight, radiation hardened or low coefficients of thermal expansion (CTE) materials,
  - High temperature, wear resistance coatings
  - Propulsion components,
  - Critical parts used in the downhole oil & gas industry

**Non-Toxic Parts with an Endless Market-Place!**

***Participants include; Defense Logistics Agency (DLA) Small Business Innovation Research ( SBIR), Air Force (SBIR), US Navy (F-35), ESTCP, Advanced Powder Solutions, Raytheon Missiles, Baker Hughes, LMCO-FW, Pennsylvania State University, University of California Davis, and Tuskegee University***