



**Training Proposal for:
Space Micro Inc.**

Small Business ≤ \$50,000

ET15-0335

Approval Date: 11/13/14

ETP Regional Office: San Diego

Analyst: M. Ray

CONTRACTOR

- Type of Industry:
 - Engineering
 - Manufacturing
 - Priority Industry: Yes No
- Number of Full-Time Employees
 - California: 62
 - Worldwide: 62
 - Number to be trained: 60
 - Owner Yes No
- Out-of-State Competition: NAICS Code Eligible
- Special Employment Training (SET): Yes No
- High Unemployment Area (HUA): Yes No
- Turnover Rate: 10%
- Repeat Contractor: Yes No

FUNDING

- Requested Amount: \$49,920
- In-Kind Contribution: \$89,529

TRAINING PLAN TABLE

Job No.	Job Description	Type of Training	Estimated No. of Trainees	Range of Hours		Average Cost per Trainee	Post-Retention Wage
				Class / Lab	CBT		
1	Retrainee Priority Rate SB <100	Computer Skills, Continuous Improvement, Manufacturing Skills	60	8-60	0	\$832	\$15.60
				Weighted Avg: 32			

- Reimbursement Rate: Job #1: \$26 SB Priority
- County(ies): San Diego
- Occupations to be Trained: Administrative Support, Designer, Engineer, Production, Sales, Manager/Supervisor, Owner
- Union Representation: Yes
 No
- Health Benefits: Job #1: \$2.60 per hour

SUBCONTRACTORS

- Development Services: California Manufacturing Technology Consulting (CMTC) in Torrance assisted in the development of the project at no charge.
- Administrative Services: CMTC will also provide administration services for a fee not to exceed 13% of earned funds.
- Training Vendors: To Be Determined

OVERVIEW

Located in San Diego, Space Micro Inc. (SMI) (www.spacemicro.com) is a small business that focuses on engineering technology advancement and product implementation, specifically, in the areas of microelectronics, computing, and communications electronics technology. Founded in 2002, with two employees, SMI started performing Research and Development for the Department of Defense (DoD) and the National Aeronautics and Space Administration (NASA) projects. Today, with 62 employees, SMI has grown into developing and manufacturing broad product lines of space electronics components and subsystems for both domestic and international space and missile programs. The Company manufactures a myriad of digital and radio frequency (RF) products including digital systems, guidance and navigation, and space components. SMI also provides internal environmental testing and qualification, thermal vacuum testing, and radiation testing and analysis to customers such as Raytheon, Lockheed Martin, Space X, NASA, and various military units.

SMI's continued growth is due to the Company's expertise in the development, manufacturing, and delivery of avionics and image processing systems that are integrated into missile, satellite, and spacecraft missions. SMI's products are desired by the industry because of its scalability, reliability, and cost. With increased customer demands, SMI's need for training is focused on the increased expectations of its customers. The DoD, and its prime contractor, NASA, as well as various commercial space companies demand adherence to enterprise-specific suite of technical/process requirements. Likewise, the aerospace business sector demands adherence to national/global standards requirements. In addition, customers expect continuous improvement in all space micro processes affecting the delivery of the product including contracting; purchasing; designing/developing; manufacturing; validating; testing; as well as related business and administrative processing.

To respond to increased customer demands, SMI has committed to promoting a more experienced, well-trained workforce that can understand and follow specific quality protocols and manufacturing procedures, while working efficiently and adhering to stringent standards requirements of the Company's customers. To realize this goal, SMI must leverage its workers' capabilities with targeted training to create an agile, in-depth, talent pool that can respond effectively in a constantly changing technical environment.

To meet customer's needs, the Company also doubled the size of their current location by leasing the previously unoccupied other half of their building in early 2014. The expansion will allow SMI to house additional engineering and environmental testing laboratories designed to sustain increased customer demands in aerospace testing. The Company projects that this expansion will require additional engineering personnel once the laboratories are established.

ETP funding will allow SMI to deliver a comprehensive training program that incorporates computer, continuous improvement, and manufacturing skills. Training will enable the Company to successfully upgrade the skills sets of its workers, meet customer demands, and effectively manage its overall business growth.

Training Plan

SMI is committed to providing both in-discipline and cross-functional training to ensure the Company has the appropriate skill base available to address technical and process issues to reduce cost and remain competitive. Specifically, lower-level Designers and Engineers will receive a significant amount of training parallel to the Company's training objectives.

Computer Skills – Training will be provided to all occupations. Trainees will learn full capabilities of the Company's Manufacturing Resource Planning system to address operational and financial planning. Training in QuickBooks will allow trainees to learn all aspects of accounting functions to ensure accuracy and improve productivity. Training in Oregon Computer Aided Design will allow trainees to effectively integrate flows supporting SMI's engineering processes.

Continuous Improvement – Training will be offered to all occupations. Course topics in Team Building, Problem Solving, and Leadership training will provide trainees with the knowledge to identify improvement opportunities, to enhance communication, and improve efficiencies across departments. Training in radiation testing, engineering standards, and space parts engineering will allow trainees to build a strong foundation for managing the quality of products or services to increase customer satisfaction and customer retention, reductions in operating costs, and greater growth in profits.

Manufacturing Skills – Training will be offered to Production, Engineering, Designer, and select Administrative Support, and Managers/Supervisors. Course topics in International Traffic and Arms Regulations, Standard Operating Procedures, and Defense Support Services will provide trainees with skills necessary to support increased sales while complying with stringent customer requirements and company standards.

RECOMMENDATION

Staff recommends approval of this proposal.

Exhibit B: Menu Curriculum**Class/Lab Hours**

8 - 60 Trainees may receive any of the following:

COMPUTER SKILLS

- ✦ Manufacturing Resource Planning (MRP)
- ✦ Schematic Capture – OrCAD (Oregon Computer Aided Design)
- ✦ SolidWorks
- ✦ VxWorks
- ✦ Intermediate/Advanced Excel
- ✦ Intermediate/Advanced Word
- ✦ Intermediate/Advanced INDesign
- ✦ Intermediate/Advanced Photoshop

CONTINUOUS IMPROVEMENT

- ✦ Product Knowledge
- ✦ Process Improvement
- ✦ Lean Enterprise
- ✦ Team Building
- ✦ Problem Solving
- ✦ Leadership Skills
- ✦ Radiation Testing
- ✦ Space Environments
- ✦ Space-Based Infrared System
- ✦ Radiation Hardening by Design (RDHB)
- ✦ Space Parts Engineering
- ✦ Engineering Standards

MANUFACTURING SKILLS

- ✦ Electrostatic Discharge (ESD)
- ✦ International Traffic in Arms Regulations (ITAR)
- ✦ Defense Support Services (DDS)
- ✦ Standard Operating Procedures (SOP)
- ✦ Soldering Skills
- ✦ Inspection Skills
- ✦ Obsolete Parts Management
- ✦ Counterfeit Parts Management
- ✦ Foreign Objects Damage (FOD)

Note: Reimbursement for retraining is capped at 60 total hours per-trainee, regardless of method of delivery.
