



**Training Proposal for:
FormFactor, Inc.
Agreement Number: ET15-0131**

Panel Meeting of: June 27, 2014

ETP Regional Office: San Francisco Bay Area

Analyst: T. Teles

PROJECT PROFILE

Contract Attributes:	Priority Rate Retrainee	Industry Sector(s):	Manufacturing Priority Industry: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Counties Served:	Alameda, Santa Clara, San Diego	Repeat Contractor:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Union(s):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Number of Employees in:	CA: 560	U.S.:560	Worldwide: 743
<u>Turnover Rate:</u>	10%		
<u>Managers/Supervisors:</u> (% of total trainees)	12%		

FUNDING DETAIL

Program Costs	-	(Substantial Contribution)	(High Earner Reduction)	=	Total ETP Funding
\$148,500		\$0	\$0		\$148,500

In-Kind Contribution:	100% of Total ETP Funding Required	\$165,000
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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	Business Skills, Computer Skills, Continuous Impr, HazMat, Mfg Skills, OSHA 10/30, PL - Mfg Skills	250	8-200	0-30	\$594	\$15.60
				Weighted Avg: 33			

Minimum Wage by County: \$16.25 for Alameda and Santa Clara Counties and \$15.60 for San Diego County

Health Benefits: Yes No This is employer share of cost for healthcare premiums – medical, dental, vision.

Used to meet the Post-Retention Wage?: Yes No Maybe

Up to \$1.63 per hour may be used to meet the Post-Retention Wage.

Wage Range by Occupation

Occupation Titles	Wage Range	Estimated # of Trainees
Production Staff, Operator		145
Administration, Finance, Marketing, Sales Staff		15
Technician, Lead		45
Engineer, Technical Director		25
Supervisor		10
Manager		10

INTRODUCTION

Founded in 1993, FormFactor, Inc. (FFI) (www.formfactor.com) designs, develops, manufactures, sells and supports precision, high performance advanced semiconductor wafer probe card products and solutions. FFI products are based on proprietary technologies, including MicroSpring interconnect technology for applications that require reliability, speed, precision and signal integrity. FFI is headquartered in Livermore with locations in San Jose and Carlsbad. Training will be provided at the three locations.

In 2013, FFI merged with MicroProbe, Inc., a provider of advanced “System on Chip” wafer test solutions located in San Jose. The merger requires the Company to train on several processes to maintain quality and customer satisfaction. Furthermore, the market trend of increasing speed while reducing power consumption has imposed new performance demands for today’s high-end mobile products. Thus, training will focus on merging and streamlining processes, developing new technologies for quicker production release, testing and troubleshooting new products, implementing quality systems throughout the organization, and cross-training employees for a more flexible workforce.

PROJECT DETAILS

Training Plan

Company training is scheduled to begin in July 2014. Training will be delivered by internal subject-matter experts and vendors.

This will be FFI's fourth project within five years. No substantial contribution will be applied because FFI did not earn over \$250,000 (see Active and Prior Projects). The most recent Agreement was reduced from the requested \$500,000 to \$99,360 by ETP staff before implementation due to low performance in previous projects. Because the funding was reduced, FFI was only able to conduct a portion of the training and include a small number of trainees (only trainees at the Livermore facility). The prior agreement is in fiscal close-out and will terminate early; performance is projected at 100% (See Active Project Table).

In this proposal, the curriculum is similar to the previous Agreement; however, this project will be expanded to Carlsbad and the new San Jose (MicroProbe) location to merge processes, skills and products. No trainee will receive training previously received in the last ETP project.

Business Skills (5%) - Training will be offered to Admin, Marketing, Finance, and Sales Staff to become familiar with the Company's products, improve accounting expertise, provide superior customer service to help expand sales, develop marketing strategies, and manage projects efficiently.

Computer Skills (10%) - Training will be offered to Engineers, Leads, Managers, Supervisors, IT Staff, Production Staff, Sales Staff, Marketing Staff, and Support Staff to aide in designing new customized products as the Company expands market share. Trainees will learn various aspects of MRP (Material Resource Planning – Agile) and other manufacturing software systems to control and track production to improve delivery times. Information Technology Staff will also acquire the skills they need to support all software applications.

Continuous Improvement (15%) - Training will be offered to all trainees to learn best manufacturing practices and teambuilding; identify ways to improve product quality; identify and resolve production issues; and eliminate waste in order to reduce costs, improve efficiency, and increase productivity. Leadership and coaching skills will help Leads and Managers direct staff to support company goals and objectives.

Hazardous Materials (5%) - Training will teach Production Workers, Engineers, Leads, Managers, Supervisors, and Support Staff how to combine chemicals correctly and handle hazardous chemical spills to improve workplace safety.

Manufacturing Skills (35%) – Training will be offered to Production Staff, Technicians, Engineers, Leads, Supervisors and Managers on manufacturing procedures and workflow for new and existing customized products. Training will improve trainees' technical knowledge and the manufacturing process to produce products at a lower cost. Additionally, production workers will be cross-trained to work different products and handle multiple functions.

Productive Laboratory

PL trainees may produce goods for profit as part of the training, in the courses identified under the Curriculum and with no more than 10 trainees per instructor. The instructor must be dedicated to training delivery during all hours of training.

Up to 145 trainees, Production Staff, Technicians, Engineers, and Leads who are involved in the manufacturing process, will receive an average of 33 hours of PL. The trainer-to-trainee ratio that will not exceed 1:3. The Company has identified 12 trainees that may need up to 100 hours of PL; however, only 80 hours may be reimbursed. These are new employees or trainees that are cross-training in several manufacturing processes and must be certified in several processes. Each certification is, on average, 40-80 hours of PL.

- Trainee Competencies: Certification may require more than one course, depending on the complexity of the tool and/or process. Each course has a corresponding checklist that contains critical skills/knowledge (competencies) that must be obtained for trainees to be certified. For each skill there are tasks and sub-tasks that must be performed and learned during PL training.

At the completion of PL training, the trainees will be able to:

- Operate new equipment,
- Repair and inspect products effectively,
- Handle hazardous materials safely;
- Assemble products per customer specifications;
- Demonstrate all steps required for each specific task;
- Troubleshoot if problems are detected.

Trainees will also be training on Agile, a new software that links all equipment. Agile was implemented company-wide in 2013. This is the system the Company uses to obtain product specifications & work instructions. Trainees need to know how to navigate this system in order to optimize its manufacturing processes.

OSHA 10/30

OSHA 10/30 training is a series of courses “bundled” by industry sector and occupation. It consists of 10 hours of training for journey-level and 30 hours for frontline supervisors.

This training is not required as a condition of doing business in California. However, the coursework must be approved by, and the instructors must be certified by Cal-OSHA. When delivery is by CBT all training hours must be delivered in a classroom over a finite number of times, and the vendor must have a certified instructor present to confirm attendance.

Completion of the training results in a certificate that expands employment opportunities. To ensure that each trainee receives certification, ETP will only consider payment earned upon completion of the full 10-hour or 30-hour course. OSHA 10/30 is not included in the 10% limitation on safety training, nor in the 50% limitation on CBT.

Commitment to Training

FFI's yearly training budget is \$84,000 which covers new hire orientation (including mandatory safety regulations and sexual harassment prevention), temporary worker training, compliance training, health & safety, basic computer skills and special requests – budget permitting.

FFI represents that ETP funds will not displace its existing financial commitment to training. Safety training is, and will continue to be, provided in accordance with all pertinent requirements under state and federal law.

Temporary to Permanent Hiring

Some trainees fall under Panel guidelines for “temporary to permanent” employment. FFI has retained these employees through a temporary agency, with the intention of hiring them into full-time, permanent positions after training.

These trainees must be determined eligible to participate in ETP-funded training before the start of training, while on payroll with the temporary agency. (Unemployment Insurance Code Section 10201(c).) However, the retention and post-retention wage requirements cannot be satisfied until after they have been hired by FFI. Until then, FFI will not receive progress payments. FFI estimates that 15 trainees may be in this category.

RECOMMENDATION

Staff recommends approval of this proposal.

ACTIVE PROJECTS

The following table summarizes performance by FFI under an active ETP Agreement:

Agreement No.	Approved Amount	Term	No. Trainees (Estimated)	No. Completed Training	No. Retained
ET13-0348	\$99,360	04/29/2013-04/28/2015	230	102	0

ETP’s Tracking website shows that FFI has completed 6,024.75 hours which (when calculated) is more than the approved amount. The final payment invoice was submitted on May 15, 2014, when all trainees completed retention. The Company expects to earn 100%.

PRIOR PROJECTS

The following table summarizes performance by FFI under an ETP Agreement that was completed within the last five years:

Agreement No.	Location (City)	Term	Approved Amount	Payment Earned \$ %
ET11-0102	Livermore	12/01/2010-11/30/2012	\$49,950	\$0 (0%)
ET08-0325	Livermore	12/26/2007-12/25/2009	\$620,100	\$92,646 (15%)

ET11-0102: FFI’s representative states that it completed 80% of the training but did not invoice for any of the funding because an administrative assistant inadvertently threw the rosters away while the main internal training manager was on sick leave. The training manager was on medical leave several times during the term and no one else took over when he was gone. Enrollments were delayed until almost the end of the term.

ET08-0325: The low earnings were due to several factors:

- The drastic decline of the economy caused the Company to reduce its workforce four times and there were few employees remaining to train.

- As part of a global strategy, FFI moved half of an assembly and test operation to Singapore intending to lower manufacturing costs, provide a simplified manufacturing process and decreased cycle times for customers. The move to Singapore reduced the need for employee training in California.
- The assembly and test operations returned to California.
- The administrative consultant dropped the Company once the training slowed and the consultant decided that the business was not worth their time. The Company had to find an internal administrator which delayed training.

DEVELOPMENT SERVICES

FFI retained California Training Administration in Camp Connell to assist with development of this proposal at no cost.

ADMINISTRATIVE SERVICES

FFI also retained California Training Administration to perform administrative services in connection with this proposal for a fee not to exceed 13% of payment earned.

TRAINING VENDORS

To Be Determined

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

8-200

Trainees will receive any of the following:

MANUFACTURING SKILLS

ATRE Overview for Techs
Basic Metrology Theory
Building Automation
Clean Room Certification
Cycle Counting
Design Techniques (DOE, DFM, DOM, CAD, IDP)
Electronics 101, 102, 103
Equipment Operation / Installation
ESD (Elec. Static Discharge)
FormFactor Manufacturing Processes
Lean / Kaizen Manufacturing Processes
Machine Shop Safety (OSHA) – non regulatory
Manufacturing Equipment Maintenance
New Product Design / Development
Operating Production Equipment
Product Repair / Inspection
Production / Processes / Assembly
Recycling & Waste
Reliability & Testing
SEM Imaging & Operation
Shipping & Receiving Techniques
Theory of Tester Operations (PXI, TDR, COW)
Warehouse Inventory Procedures
Workflow Process
Work Instruction / Core Trainer

HAZARDOUS MATERIALS

Hazmat Process
Confined Space
HALT Operation
DOT (Dept. of Transportation Process)
RCRA (Transporting Haz Materials)
IATA (Handling Haz Waste Certification)
Incident Commander
Mock Response Scenario
Radiation / Cyanide
Respirator
FFI Product Overview
Core Trainer
Handling Hazardous Materials

COMPUTER SKILLS

Agile System & Tools
Allegro Tools
ASQ Reliability Tools
ATRE Assy. Test Reliability Engineering
Cryogenics
Crystal Reports
Design CAD
Equipment Installation, Operation
ESD Advanced Machinery
FMEA Failure Mode Effect Analysis
JMP7 Advanced Tools
LabView
LearnerWeb
MicroSoft Tools (Intermediate / Advanced)
Oracle System & Tools
Programming Languages (MySQL, MCL, ACS, APS)
Programming Tools
Promis, Sharepoint, SolidWorks
Theory of PKX, TDR, COW
Web Design Tools (XHTML, CSS, HTML)
Windows 7 Operating System
Xsite

CONTINUOUS IMPROVEMENT

5S: Sort, Set, Shine, Standardize, Sustain
SPC (Statistical Process Control)
FMEA Failure Mode Effect Analysis
Problem Solving / Root Cause Analysis
Program Management / Project Management
Continuous Improvement / Quality Management
Quality Audit Process
Team Building / QIT (Quality Improvement Teams)
Lean / Kaizen Quality Process
Product / Process Improvement
Workplace Communications
Leadership / Coaching
Mentoring / Coaching
Managing Change
Performance Management
Conflict Resolution
Feedback / Communication Skills
Develop your IDP
6 Keys (Leadership, Behavioral Styles)
Transitioning to Management
Organizing Workflow & Schedules

BUSINESS SKILLS

Finance for Non Financial
Effective Meetings
Global Marketing & Communications
FormFactor Product Knowledge
Managing Projects, Products, Customers
Management System – DBMS System
New Product Knowledge / Certification
Presentation Skills (Technical/Non-Technical)
Product Document Training
Sales and Negotiations
Sales Management Leadership
Strategic Planning
Technical Training Delivery Skills (Train the Trainer)
Customer Satisfaction
Writing Skills (Technical & Business)

Productive Lab Hours

0–80

MANUFACTURING SKILLS

FormFactor Manufacturing Processes
Agile System
CleanRoom Certification
Manufacturing Equipment Maintenance
Material Handling / Haz waste disposal
New Equipment Knowledge / Certification
Operating Production Equipment
Product Repair / Inspection
Production / Processes / Assembly
Troubleshooting / Testing / Reliability
Warehouse Inventory Procedures
Work Instruction Certification

CBT Hours

0-30

HAZARDOUS MATERIALS

Confined Space - 2 hrs
Cyanide Handling - 1 hr
ERT Technician Core - 2 hrs
HazCom – Global Harmonization system - 2 hrs
HazCom Annual - 2 hrs
Incident Commander - 8 hrs
Laser Safety - 8 hrs
LOTO (lockout/tagout) - 1 hr
Machine Shop Annual Safety - 1 hr
Radiation - 1 hr
Stormwater - 1 hr
Supervisory Safety - 1hr
Wastewater Operations - 2 hr

OSHA 10/30 (OSHA certified instructor)

OSHA 10 (requires completion of the 10-hour course)

OSHA 30 (requires completion of the 30-hour course)

BUSINESS SKILLS

Finance for Non Financial - 8 hrs

Internal Quality Audit - 2 hrs

Effective Communications - 8 hrs

Supervisor Annual refresher - 1 hr

Management System – DBMS System - 24 hrs

Note: Reimbursement for retraining is capped at 200 total training hours per trainee, regardless of the method of delivery. CBT is capped at 50% of total training hours, per trainee excluding OSHA 10 and OSHA 30.