

DELEGATION ORDER



RETRAINEE - JOB CREATION

Training Proposal for:

Therm-X of California, Inc.

Agreement Number: ET16-0206

Approval Date: October 20, 2015

ETP Regional Office: San Francisco Bay Area

Analyst: C. Hoover

PROJECT PROFILE

Contract Attributes:	Retrainee Priority Rate Job Creation Initiative	Industry Sector(s):	Manufacturing Green Technology Nanotechnology Priority Industry: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Counties Served:	Alameda	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: 222	U.S.: 222	Worldwide: 222
<u>Turnover Rate:</u>	5%		
<u>Managers/Supervisors:</u> (% of total trainees)	14%		

FUNDING DETAIL

Program Costs	-	(Substantial Contribution)	(High Earner Reduction)	=	Total ETP Funding
\$98,920		\$0	\$0		\$98,920

In-Kind Contribution:	100% of Total ETP Funding Required	\$125,000
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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, Cont. Imp., Management Skills, Manufacturing Skills, OSHA 10/30, HAZWOPER, HAZMAT	111	8-200	0-60	\$720	\$16.44
				Weighted Avg: 40			
2	Job Creation Retrainee Priority Rate	Business Skills, Computer Skills, Cont. Imp., Management Skills, Manufacturing Skills, OSHA 10/30, HAZWOPER, HAZMAT	19	8-200	0-60	\$1,000	\$13.70
				Weighted Avg: 50			

Minimum Wage by County: Job Number 1: \$16.44 per hour for Alameda County.

Job Number 2 (Job Creation): \$13.70 per hour for Alameda 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 \$2.44 per hour may be used to meet the Post-Retention Wage in Job Number 1.

Up to \$1.70 per hour may be used to meet the Post-Retention Wage in Job Number 2.

Wage Range by Occupation

Occupation Titles	Wage Range	Estimated # of Trainees
Job Number 1:		
Administration/Support Staff		20
Technical Staff		35
Supervisor/Manager		20
Production Staff		36
Job Number 2:		
Administration/Support Staff		1
Technical Staff		3
Supervisor/Manager		1
Production Staff		14

INTRODUCTION

Founded in 1983, and headquartered in Hayward, Therm-X of California, Inc. (Therm-X) (www.thermx.com) engineers and manufactures heaters, sensors, control systems and nanotechnology components. Their customer base crosses multiple industries such as semiconductor fabrication, aerospace and green/clean technology manufacturers. Therm-X is the primary supplier of these products to Applied Materials, Intel, Lam Research, ASM America and other original equipment manufacturers (OEM). Therm-X provides thermal solutions including: design and testing; Computer Numerical Control machining, metal joining, sheet metal manufacturing and integration of these with electro mechanical assembly.

This is Therm-X's fourth ETP proposal. In the first three ETP Agreements, the Company established a formal training program, responding to rapid growth and demand. Growth occurred when the Company developed its own OEM capabilities, and it expanded into the aerospace industry. In this ETP proposal, the Company is responding to increased manufacturing demand from Applied Materials and other semi-conductor supply chain customers to build new Radio Frequency (RF) Source Assemblies.

This proposal will help meet Therm-X's assessed "cross-functional" training needs as the Company addresses the repurposing of their facilities to meet this new demand. The proposed training will not repeat any training on any products or services that were part of prior ETP Agreements.

Substantial Contribution

Therm-X is a repeat contractor. Without payment earned in excess of \$250,000 by the Company within the last 5 years, there will be no Substantial Contribution.

Therm-X continues to grow its full-time workforce as it expands into new product development and industries. The Company Employed 52 staff during its first ETP Agreement, and grew to 77 by its second Agreement. At the start of its third Agreement, 112 full-time staff were employed at Them-X. The Company currently has 222 full-time employees.

Retrainee - Job Creation

In support of job creation, the Panel is offering incentives to companies that commit to hiring new employees. Training for newly-hired employees will be reimbursed at a higher rate and trainees will be subject to a lower post-retention wage.

In this proposal, Therm-X has committed to hiring 19 new employees (Job Number 2). The date-of-hire for all trainees will be within the three-month period before contract approval or within the term-of-contract. These trainees will be hired into "net new jobs" as a condition of contract.

Therm-X recently acquired a 25,000 square foot (\$22.6 million) assembly and packaging facility. The Company will relocate its warehousing operations from its original facility to the new facility. By repurposing the warehousing space in the original facility into expanded manufacturing space, Therm-X will increase its overall manufacturing capabilities by an estimated 25% to meet its new RF Source Assemblies product line demands.

In addition to the above expansions, Therm-X has spent \$649,000 in new equipment, Clean Room fabrication components, and upgraded software to manage growth.

PROJECT DETAILS

Based on demand, Therm-X has launched a new product series - RF Source Assemblies Product Line. Warehouse space at its headquarters facility will be repurposed for manufacturing of the new RF Source Assembly components. Therm-X has expanded its logistics to a new assembly and packaging facility located within the immediate vicinity of its existing headquarters. This new facility will accommodate the assembly and packaging of this new line of product. The purchasing and upgrading of new equipment and software platforms to manage the growth, quality, and production demands has occurred as well.

The ETP training will be delivered to both locations, which will broaden workers' technical qualifications and allow them to move between locations as needed for workflow. This cross-training will enable the management of immediate increased production demand while aligning logistics between the two locations.

Training will be delivered in Class/Lab, E-Learning and Computer-Based Training (CBT), as outlined below:

Training Plan

Business Skills (25%): Administration/Support Staff, Supervisors and Managers will receive training in sales, marketing and customer service with regard to its new product series. This training will cover the bidding process, delivery of product to customers and follow-up requests. To ensure that new procedures are created as new systems are implemented, Technical Staff will receive training in technical writing to create operational directives and standard operating procedures.

Computer Skills (20%): Due to new software implementation, Administration/Support Staff, Supervisors/Managers and Technical Staff responsible for reporting and financial management will receive training in JPM Data Analysis Software. Engineers responsible for new product design will receive training in Advanced Mastercam 3D Design Software. Production Staff responsible for materials movement and assembly will receive Doosan Auto Pallet Software training.

Continuous Improvement (15%): All occupations will receive training in Lean Manufacturing practices to align new procedures in the new product series with the maximization of existing resources and waste reduction.

Management Skills (10%): Supervisors and Managers will receive training in managing rapid growth to ensure productivity while expanding logistics and services.

Manufacturing Skills (25%): Production Staff and Supervisors/Managers who oversee production related areas will receive training in a variety of production skills related to its specific functions. Training will consist of new equipment (Doosan HP- horizontal mill, Ispen Bar-vacuum braze furnace and WeldLogic- welder), technologies and Clean Room (assembly and packaging) capabilities during implementation and expansion.

Hazardous Materials Handling (HAZMAT) (2%): Training will be provided to Technical staff, Production staff, and Supervisor/Managers. Training on Handling and Disposal, Hazardous Chemicals & Waste, and Material Safety Data Sheet will be delivered. Training will lead to heightened awareness and responses to on-the-job incidents related to hazardous events. Training will result in improved preparation of a HAZMAT event.

Certified Safety Training

OSHA 10/30 (2%): OSHA 10/30 training is a series of courses “bundled” by industry sector and occupation. It consists of 10 hours of training for entry-level workers and 30 hours for frontline supervisors. The coursework must be approved by Cal-OSHA, and the instructors must be certified by Cal-OSHA as well. The vendor must also 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 or in the 50% limitation on CBT.

OSHA 10/30 will be delivered to Technical staff, Production staff and Supervisor/Managers.

HAZWOPER (1%): This training is a series of courses specifically designed for workers who handle hazardous substances as first-responders, or clean-up as needed at a hazard disposal or emergency site. It consists of 40 hours of classroom training for workers stationed at the hazard site, and 24 hours for workers who visit the site (e.g. – engineers). Field training is also required, although not funded by ETP. Completion of the training results in a certificate that expands employment opportunities. Each certification requires an 8-hour annual refresher course. This coursework must be approved by Cal-OSHA, and the instructors must be certified by Cal-OSHA.

CBT and E-Learning

While the majority of the training being delivered will be in-house instructor lead classroom training, Therm-X does intend to deliver some training topics as E-Learning. Therm-X understands original instructor signatures are required and trainer-to-trainee ratios must be within the ETP required 1:20 ratio. Additionally, Computer-Based Training (CBT) will be provided for items that can be taken by employees at their own pace without instructors. CBT is restricted to no more than 50% of a trainee's total training hours. E-Learning and CBT methods of training offer additional methods of delivering training at the convenience of the Company's training population.

Commitment to Training

ETP funds will not displace the existing financial commitment to the Company's training resources. Therm-X spends \$30,000 on training annually between its two facilities in California. On-going training includes employee orientation, human resource related topics, sexual harassment prevention, employee benefits, baseline production and computer skills, performance management, sales and marketing for existing products and services, continuous improvement practices for existing processes and CPR.

Safety training is, and will continue to be, provided in accordance with all pertinent requirements under state and federal law.

➤ Training Infrastructure

As in the previous ETP Agreements, Therm-X will administer the Agreement. The HR Manager and Administration/Support staff's resources will perform the administrative requirements of tracking and earning of the funds, while the CEO will oversee ETP funding management and invoicing. Executive and management staffs have participated in the development of the training plan, and are prepared to oversee the training initiatives in each area of the Company.

Impact/Outcome

The ETP funding will enable Therm-X to offer structured training around its new portfolio of services in RF Source Assemblies and Supply Chain Management. Plus, ETP funds will expand the Company's in-house certifications with regard to its OSHA portfolio of skills.

RECOMMENDATION

Staff recommends approval of this proposal.

PRIOR PROJECTS

The following table summarizes performance by Therm-X under ETP Agreements that were completed within the last five years:

Agreement No.	Location (City)	Term	Approved Amount	Payment Earned	
				\$	%
ET13-0373	Hayward	5/10/13- 5/9/15	\$96,300	\$76,655	(80%)
ET11-0123	Hayward	11/8/2010– 11/7/2012	\$49,920	\$49,920	(100%)

DEVELOPMENT SERVICES

Therm-X retained Sallyanne Monti Consulting in San Francisco to assist with development of this proposal for a flat fee of \$4,000.

ADMINISTRATIVE SERVICES

N/A

TRAINING VENDORS

Fusion Technology of Mountain View has been retained to provide Manufacturing Skills training for a fee of \$120 per employee for certification plus \$2,500 per class/lab training. Other training vendors will be identified for ETP record-keeping purposes, as they are retained by Therm-X.

Exhibit B: Menu Curriculum

Class/Lab Hours

8-200 Trainees may receive any of the following:

BUSINESS SKILLS

- + Sales, Marketing & Customer Service for New Product Series
- + Technical Writing for Engineers & Technical Staff
 - o OMS – Operational Method Sheet Writing
 - o SOP – Standardization of Operational Procedures

COMPUTER SKILLS

- + Advanced Mastercam NC 3D Design Software
- + Doosan Automatic Pallet Changer Software
- + Interface to Existing Software Systems for Reporting
- + JPM Data Analysis & Statistics Software

CONTINUOUS IMPROVEMENT

- + Lean Manufacturing Principles

MANAGEMENT SKILLS (Supervisor/Manager Only)

- + Managing Rapid Productivity & Logistics Growth

MANUFACTURING SKILLS

- + Advanced Heater Element Manufacturing
 - o Band
 - o Cable
 - o Cartridge
 - o Circulation
 - o Flexible
 - o Tubular
- + Advanced Machining
 - o DCC CMM Programming & Operations
 - o GD&T- General Dimensions & Tolerance
 - o SPC – Statistical Process Control Inspections
 - o TQI & KPI - Total Quality Control & Key Performance Indicators
- + Advanced New Control Systems
 - o Process Controllers
 - o Power Controllers
 - o Temperature Controllers
- + Advanced New Processes
 - o Critical Component Finishing
 - o RF Source Assemblies
- + Clean Room Technologies
- + New Equipment Operations
 - o Horizontal Pallet Mill
 - o Interface Equipment Ops
- + Temperature Sensor Systems
 - o Mineral Insulated Thermocouples
 - o RTD – Resistance Temperature Detectors
 - o Software Thermocouples

- Tube and wire Thermocouples
- ✚ Welding Technologies
 - Fronius Cold Welding Robotic Welder
 - Laser Welder for Thermocouples & Light Welding
 - TIG Tungsten Gas Welding
- ✚ Vacuum Furnace Brazing
 - Assembly
 - Inspection
 - Materials Compatibility
 - Principles
 - Process/Environmental Controls

HAZARDOUS MATERIALS

- ✚ Handling and Disposal
- ✚ Hazardous Chemical & Waste
- ✚ Material Safety Data Sheet

OSHA 10/30 (OSHA Certified Instructor)

- ✚ OSHA 10 (must complete 10 hours)
- ✚ OSHA 30 (must complete 30 hours)

HAZWOPER (OSHA Certified Instructor)

- ✚ HAZWOPER

Safety Training cannot exceed 10% of total training hours per-trainee (This cap does not apply to HAZMAT, OSHA 10/30 or HAZWOPER)

E-Learning Hours

8-120

BUSINESS SKILLS

- ✚ Sales, Marketing & Customer Service for New Product Series
- ✚ Technical Writing for Engineers & Technical Staff
 - OMS – Operational Method Sheet Writing
 - SOP – Standardization of Operational Procedures

COMPUTER SKILLS

- ✚ Advanced Mastercam NC 3D Design Software
- ✚ Doosan Automatic Pallet Changer Software
- ✚ Interface to Existing Software Systems for Reporting
- ✚ JPM Data Analysis & Statistics Software

CONTINUOUS IMPROVEMENT

- ✚ Lean Manufacturing Principles

MANAGEMENT SKILLS (Supervisor/Manager Only)

- ✚ Managing Rapid Productivity & Logistics Growth

MANUFACTURING SKILLS

- ✚ Advanced Heater Element Manufacturing
 - Band
 - Cable
 - Cartridge
 - Circulation
 - Flexible
 - Tubular
- ✚ Advanced Machining
 - DCC CMM Programming & Operations
 - GD&T- General Dimensions & Tolerance
 - SPC – Statistical Process Control Inspections
 - TQI & KPI - Total Quality Control & Key Performance Indicators
- ✚ Advanced New Control Systems
 - Process Controllers
 - Power Controllers
 - Temperature Controllers
- ✚ Advanced New Processes
 - Critical Component Finishing
 - RF Source Assemblies
- ✚ Clean Room Technologies
- ✚ New Equipment Operations
 - Horizontal Pallet Mill
 - Interface Equipment Ops
- ✚ Temperature Sensor Systems
 - Mineral Insulated Thermocouples
 - RTD – Resistance Temperature Detectors
 - Softwire Thermocouples
 - Tube and wire Thermocouples
- ✚ Welding Technologies
 - Fronius Cold Welding Robotic Welder
 - Laser Welder for Thermocouples & Light Welding
 - TIG Tungsten Gas Welding
- ✚ Vacuum Furnace Brazing
 - Assembly
 - Inspection
 - Materials Compatibility
 - Principles
 - Process/Environmental Controls

CBT Hours

0-60

COMPUTER BASED TRAINING (CBT)

- ✚ Technical Disc 1 (1 hour)
 - Electricity
 - Electrical Circuits
 - Electrical Ground
 - Forms & Heat
- ✚ Technical Disc 3 (1 hour)
 - Cable Heaters
 - Radiant Heaters

- FIREROD
- Tubular Heaters
- Thick Film
- Ceramic Heaters
- Flexible Heaters
- ✚ Technical Disc 4 (1 hour)
 - Sensors
 - RTDs
 - 2-3 and 4-wire
- ✚ Technical Disc 5 (1 hour)
 - Thermocouple Junctions
 - Thermocouple Sensor Styles
 - Thermocouple Sensors
 - Insulated Wire Sensors
 - Thermowells
 - Field Errors
 - Resistance
 - Sensor Location
- ✚ Technical Disc 6 (1 hour)
 - Application Exercises
 - Material & Process
 - Smart Sensors
 - Wiring & Controls
- ✚ Technical Disc 7 (1 hour)
 - Controls Terminology
 - Thermal Systems
 - Proportional Control
 - Proportional Band
 - Auto-tune PID
 - On-off vs Proportional
 - Control Features
 - Outputs
- ✚ Technical Disc 8 (1 hour)
 - Alarms
 - Power Control
 - Semi Conductors
 - Firing Method
 - Electric Heaters
 - Power Distribution
- ✚ Technical Disc 9 (1 hour)
 - Heater Configurations
 - SCR Applications
 - SCR Failures
 - Fusing
 - Line Notching
 - GFI
 - SCR Detector
 - Communications
- ✚ OSHA 10/30
 - RMOL 5903 – Electrical Standards (1 hour)
 - Lockout/Tagout (1 hour)
 - Respiratory Protection Training (1 hour)
 - Faucet Repair and Replacement (0.5 hour)

- Pipe Repair and Replacement (0.5 hour)
- Basic HVAC Maintenance (0.5 hour)
- HVAC Fundamentals (0.5 hour)
- Drywall, Doors and Locks (0.5 hour)
- Basic Relaying I (0.5 hour)
- Basic Relaying II (0.5 hour)
- Advanced Curcuit Breakers (0.5 hour)
- Power Transformers I (0.5 hour)
- Power Transformers II (0.5 hour)
- Instrument Transformers (0.5 hour)
- General Welding Safety (0.5 hour)
- Chemical Storage (0.5 hour)
- Electrical Control Circuits (0.5 hour)
- Facility Management (0.5 hour)
- Risk Management (0.5 hour)
- ISO 9001-2008 (2 hour)
- Stormwater Discharges & Permits in Construction (2 hour)
- Identifying Your Hazardous Wastes (4 hour)
- Safety Orientation (1 hour)
- Fire Safety (1 hour)
- Recordkeeping & Reporting OSHA Requirements (1 hour)
- Welding and Cutting Safety Training (1 hour)
- Fire Protection in the Workplace (1 hour)
- ✚ HAZMAT
 - GHS Hazardous Communication Training (1 hour)

CBT hours are capped at 50% of trainee's total training hours (This cap does not apply to HAZMAT, OSHA 10/30 or HAZWOPER)

Note: Reimbursement for retraining is capped at 200 total training hours per trainee, regardless of the method of delivery.