Training Proposal for:

Lawrence Livermore National Laboratory

Agreement Number: ET15-0407

Approval Date: March 16, 2015

ETP Regional Office: San Francisco Bay Area

Analyst: A. Nastari

PROJECT PROFILE

<table>
<thead>
<tr>
<th>Contract Attributes:</th>
<th>Retraineep</th>
<th>Industry Sector(s):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retraineep Priority Rate</td>
<td></td>
<td>Services Technology/Other</td>
</tr>
<tr>
<td>Counties Served:</td>
<td>Alameda</td>
<td>Repeat Contractor:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Union(s):</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Number of Employees in:</td>
<td>CA: 6,570</td>
<td>U.S.: 6,575</td>
</tr>
<tr>
<td>Turnover Rate:</td>
<td>2%</td>
<td></td>
</tr>
<tr>
<td>Managers/Supervisors: (% of total trainees)</td>
<td>28%</td>
<td>See Projects Details Section</td>
</tr>
</tbody>
</table>

FUNDING DETAIL

<table>
<thead>
<tr>
<th>Program Costs</th>
<th>(Substantial Contribution)</th>
<th>(High Earner Reduction)</th>
<th>Total ETP Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>$24,192</td>
<td>$0</td>
<td>$0</td>
<td>$24,192</td>
</tr>
</tbody>
</table>

In-Kind Contribution: 100% of Total ETP Funding Required $51,000
TRAINING PLAN TABLE

<table>
<thead>
<tr>
<th>Job No.</th>
<th>Job Description</th>
<th>Type of Training</th>
<th>Estimated No. of Trainees</th>
<th>Range of Hours</th>
<th>Average Cost per Trainee</th>
<th>Post-Retention Wage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Retrainees Priority Rate</td>
<td>Commercial Skills</td>
<td>28</td>
<td>8-200</td>
<td>0</td>
<td>$864</td>
</tr>
</tbody>
</table>

Minimum Wage by County: $16.44 in 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
- Although employer provides health benefits, they are not being used to meet Post-Retention Wage.

<table>
<thead>
<tr>
<th>Occupation Titles</th>
<th>Wage Range</th>
<th>Estimated # of Trainees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility Coordinators</td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>Facility Managers</td>
<td></td>
<td>8</td>
</tr>
</tbody>
</table>

INTRODUCTION

Lawrence Livermore National Laboratory (LLNL) is operated by Lawrence Livermore National Security, LLC (LLNS) (www.llnl.gov). This Proposal includes funding to train workers at AKIMA Infrastructure Services, LLC., a close affiliate of LLNL. LLNL was created in 1952 to serve the Atomic Energy Commission. The laboratory is now under the National Nuclear Security Administration within the Department of Energy. The laboratory supports the needs of Homeland Security in the research, design and development of techniques and equipment necessary for national security. In addition, the laboratory conducts research in the medical and energy fields. Training will be conducted in Livermore.

LLNL meets out-of-state competition requirements, as defined by its NAICS code for Research & Development in the Physical, Engineering and Life Sciences industry sector. LLNL has also been identified as a priority industry.

This is LLNL’s third ETP Proposal, which builds upon training previously delivered in Facilities Management. The previous training included Air Handling, Water Treatment & Plumbing systems, Electrical and Illumination and Energy Management and Controls. LLNL continues to experience significant upgrades within its facilities, resulting from innovative implementations to its internal energy sources, controls, and monitoring systems. The training in this Proposal does not duplicate the content delivered in the previous two ETP funded training plans.
PROJECT DETAILS

Due to the high level of experiments and research conducted at the laboratory, its Facilities Managers and Facilities Coordinators must ensure that the environment meets stringent standards.

In addition, the Federal Buildings Personnel Training Act of 2010 (Act) makes training requirements applicable to non-federal personnel performing building operations and maintenance. The Act increased requirements on facilities to have the highest level of security with the least environmental impact. The Act mandates all facilities management personnel are trained in the most current technologies associated with all aspects of facilities operation and maintenance. The training in this proposal is designed to meet the Act’s requirements.

Commitment to Training

LLNL’s company-wide training budget is estimated at $12,500,000 which is dedicated to compliance training consisting of Environmental Safety and Health, Security, Job Assignment Competency, Personal Growth, Leadership, and Management Skills. Training is delivered to frontline workers, Managers, and Executive Staff. The request for ETP funds will cover instructional costs to raise the competency level of Facility Coordinators and Facilities Management Staff which will help ensure that the LLNL facilities and the service provided by Facilities Management remains competitive with National Laboratories in other states.

LLNL represents that ETP funds will not displace the 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.

- Training Infrastructure

  Training will be conducted by in-house trainers and a vendor. The training will be delivered through classroom/laboratory instruction.

Green/Clean Operations

LLNL has launched a pilot project to reduce potable water use by using treated groundwater to cool equipment and research facilities. Water from one of the laboratory’s treatment wells is being run through a reverse osmosis filtration unit and used as an alternative to using water from the Hetch-Hetchy Reservoir throughout some of its buildings. This process will reduce the need for utilizing water from the Reservoir and associated costs. LLNL’s Sustainability Manager has set forth a plan of an ongoing effort to conserve water, reduce costs and help the Laboratory meet its environmental goals. LLNL strives to identify innovative ways to improve its water efficiency.

Managers/Supervisors

LLNL proposes to train eight (28%) Facility Managers. Although they have direct reports, over 50% of their work time is performing frontline functions many times providing guidance, direction, and implementing processes along side their subordinates. The Facility Managers are directly responsible for working with other LLNL department managers in identifying areas
where facility upgrades are necessary, as well as maintenance safety, and equipment issues. They are required to make decisions that impact and improve the safety of the facility.

**Training Plan**

LLNL will train 28 Facility Coordinators and Facility Managers (both occupations are frontline workers) in a Facilities Management Training Program, geared to the Act. The training examines how each system or component operates. It covers the total facility from parking area to roof, including its waste water leaving the facility.

**Commercial Skills (100%)** – will be offered to both Facility Coordinators and Facility Managers. Training in Electrical Systems and Illumination will provide the skills required to measure electrical consumption and control usage. Trainees require these skills to recognize, set up, and maintain a reliable and effective maintenance and safety system.

Training in Building Design and Maintenance focuses on the repair and replacement of structural items such as floors, ceilings, interior walls, and windows. Trainees will have a better understanding of LLNL’s building designs, materials, codes, regulations, and structural systems and finishes. Staff needs to comprehend maintenance procedures, equipment operation, and grounds design in order to maintain and implement preventive maintenance measurements.

LLNL’s refrigeration equipment is a key component of its air-conditioning system which must be properly maintained and operated at maximum efficiency. The Refrigeration Systems and Accessories course reviews refrigeration cycle and system components, operation and maintenance of reciprocating and absorption within the systems.

The Facilities Planning and Project Management course is designed specifically for Facility Managers. They will acquire skills for developing strategic facilities plans, planning facilities projects and effectively implementing and evaluating projects. Trainees will learn how to read and use the symbols and tools required in reading architectural drawings, enhancing communication skills with architects, designers and general contractors.

Training in Design, Operation and Maintenance of Building Systems addresses electrical systems and lighting, elevator maintenance and modernization, and pest and solid waste management. Other aspects of the training include security issues, fire and safety systems, and energy management concerns. The training is required so that Facility Coordinators and Managers have the capability to make decisions that will increase occupant safety and comfort while facilitating building requirements and systems efficiency to meet LLNL’s business goals. This training is Part II, building upon what was previously funded by ETP.

**RECOMMENDATION**

Staff recommends approval of this proposal.

**PRIOR PROJECTS**

The following table summarizes performance by LLNL under an ETP Agreement that was completed within the last five years:
ET13-0256 – The ETP online Tracking system shows a total of 840 hours entered for 17 trainees for potential reimbursement amount of $15,120. The Contract Status Report shows LLNL has been paid $7,776 which has yet to be earned. The organization submitted its Final Invoice on December 30, 2014, totaling $15,120. It is expected that LLNL will earn 100% of its Agreement Amount - $14,616.

ET09-0399 - The Company representative reports that during its first Agreement it only achieved 21% of the Agreement amount because training was postponed due to the organization’s budget constraints and workload demands.

For its second project (ET13-0256). LLNL originally requested $53,600. However, the proposal was right sized to reflect the amount earned in its first Agreement to ensure that the funds would be fully utilized. Management’s commitment to workload coverage during training allowed the release of trainees, resulting in 100% performance.

The management team is committed to its same workload coverage strategy to again achieve a high outcome.

**DEVELOPMENT SERVICES**

N/A

**ADMINISTRATIVE SERVICES**

N/A

**TRAINING VENDORS**

JEMCOR of Santa Rosa has been retained to provide training for a fee of $7,000 per course. Other trainers will be identified for ETP record-keeping purposes, as they are retained by Lawrence Livermore National Laboratory.
Exhibit B: Menu Curriculum

Class/Lab Hours

8 – 200 Trainees may receive any of the following:

Safety Training cannot exceed 10% of total training hours per-trainee

COMMERCIAL SKILLS

- Electrical Systems and Illumination
- Building Design and Maintenance
- Refrigeration Systems and Accessories
- Facilities Planning and Project Management
- Design, Operation and Maintenance of Building Systems – Part II

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