RETRAINEE - JOB CREATION
Training Proposal for:
JSR Micro, Inc.
Agreement Number: ET19-0351

Panel Meeting of: December 7, 2018
ETP Regional Office: San Francisco Bay Area     Analyst: R. Jackson

PROJECT PROFILE

| Contract Attributes: | Priority Rate Retrainee Job Creation Initiative | Industry Sector(s): | Manufacturing (E)  
| | | | Manufacturing (33)  
| | | | Biotechnology and Life Sciences (54+)  
| | | | Priority Industry: ☑ Yes ☐ No  
| Counties Served: | Santa Clara | Repeat Contractor: ☑ Yes ☐ No  
| Union(s): | ☐ Yes ☑ No  
| Turnover Rate: | 7%  
| Managers/Supervisors: (% of total trainees) | 13%  

FUNDING DETAIL

| In-Kind Contribution: (100% of Total ETP Funding Required) | Total ETP Funding |
| | $243,065 | $124,358 |
## 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>Retrainee Priority Rate</td>
<td>Business Skills, Commercial Skills, Computer Skills, Cont. Improv. HazMat, Mfg. Skills, Literacy Skills, OSHA 10/30, Hazwoper</td>
<td>153</td>
<td>8-200 0-3</td>
<td>$598</td>
<td>$18.22</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Weighted Avg: 23</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Weighted Avg: 158</td>
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</tr>
</tbody>
</table>

**Minimum Wage by County:** Job 1 - $18.22 for Santa Clara County. Job 2 - $15.18 for Santa Clara 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.

### Wage Range by Occupation

<table>
<thead>
<tr>
<th>Occupation Titles</th>
<th>Wage Range</th>
<th>Estimated # of Trainees</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Job 1</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production Staff</td>
<td>77</td>
<td></td>
</tr>
<tr>
<td>Technical Staff</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>Supervisor</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Manager</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Administrative Staff</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td><strong>Job 2</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production Staff</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Technical Staff</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Supervisor</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Administrative Staff</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
INTRODUCTION

Established in 1990, JSR Micro, Inc. (JSR) (www.jsrmicro.com), a US-based subsidiary of JSR Corporation, is a manufacturer of materials sold to large Original Equipment Manufacturers (OEM). The customer base includes companies in the semiconductor and electronic-related industries; and energy and life sciences laboratories and research facilities. Products include advanced photo resists, Chemical Mechanical Polishing and stored-energy components, bioprocess components, research and diagnostic re-agents, and polymers prepared for customers across multiple industries.

JSR’s high-performance materials and components are used in OEM for advanced materials, specialty chemicals, and packaging materials. In addition, the Company provides research and development, custom design, and engineering to its customers.

Training will take place at the Company’s sole location in Santa Clara.

PROJECT DETAILS

This is the fifth ETP Agreement, the third in the last five years. This project has been rightsized in Job Number 1 based on prior earnings. Training in the last two ETP Agreements focused on supporting skill upgrades related to business operations and manufacturing skills, supporting the development and roll outs of earlier product lines and earlier new equipment.

Training in this proposal focuses on training JSR’s staff on new equipment and new products serving the Company’s continued expansion into Life Sciences markets. Specifically, products such as ion capacitors and battery binders are new emerging technologies that require new processes and upgraded skills training. JSR recently invested $570,000 in equipment (including software) that are integral in new manufacturing processes for its new product lines such as lithography materials and Amspherea3 proteins, a chromatography resin used in therapeutic antibodies manufacturing.

Additionally, ISO certified companies have periodic audits and review findings to help determine staff's training needs. In this proposal, JSR is including ISO 9001 training to meet efficiency goals.

Lastly, JSR has expanded the number of fulltime employees by 22 staff members since the last Agreement and anticipates hiring an additional 8-25 people over the next two years.

Retrainee - Job Creation

The Panel offers incentives to companies that commit to hiring new employees. Training for newly-hired employees will be subject to a lower post-retention wage.

The Company will hire 8 new employees (Job Number 2). The date-of-hire for 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.

New employees will report to the Santa Clara facility where ample space is available to accommodate the new employees. Seven of the eight new staff from administrative, technical, production, supervisory/managerial occupations will attend safety training and receive OSHA 10/30 certifications. Due to the nature of the technical expertise and safety requirements new JSR staff are anticipated to need a higher weighted average number of hours of training.
(estimated 158 hours). However, JSR training is not planned to exceed ETP’s range cap of 200 hours.

**Training Plan**

JSR will deliver Class/Lab, E-learning and Computer Based Training. JSR represents all training content is refreshed and none of the prior content is repeated to the same trainees, although some topics are similarly titled.

**Business Skills:** This training will be offered to all occupations. Cost of Quality training focuses on three elements; prevention, appraisal and quality failures. With the planned expansion into Life Sciences Business, JSR is pursuing reforms to increase efficiency. ISO9001 and ISO14001 management standards were recently updated to reflect the increased need for risk awareness and mitigation. To meet these updated requirements, JSR plans to launch a risk management system that will necessitate training for all occupations. This training is anticipated to result in a 4% reduction in project implementation time and lead to a decrease in errors.

**Commercial Skills:** This training will be offered to all occupations. The transition of the semiconductor industry to ever-smaller technology nodes has increased the quality requirements for the materials sourced by JSR. Better management of the raw material supply chain may result in a 2-3% improvement in raw materials supplies acquired by JSR and a 1-2% reduction in scrapped products and waste. The Environmental Health and Safety team will deliver training to all occupations on a variety of topics. This training will result in the integration of Environmental Health & Safety standards in all new product research and development processes. Production, Technical, Supervisors and Managers will receive training in Life Sciences Biomaterial Handling, Storage and Cleaning Practices. The training is anticipated to result in a 10-15% increase in efficiency in moving through the EPA approval processes for new product approval after applying the EPA’s own standards to JSR’s life sciences biomaterial handling, storage and cleaning processes.

**Computer Skills:** This training will be offered to all occupations. JSR Micro aims to manage its strategic growth into new markets in the Life Science sector in part by ensuring that it has the technological infrastructure in place to support and sustain growth. Many new software platforms are being introduced at JSR such as CONCUR, which centralizes and makes expense reporting efficient by automatically categorizing and mapping expenses based on receipt images; Data Visualization Software presents data to a targeted audience in order to enable them to gain insights most effectively; New System Administration software for managing configuration, and reliability of computer systems, such as user computers and servers; SAP HANA automates key business functions in financial, and operations such as sales/distribution, production planning, purchasing and warehousing; SAP New Module for Production will enhance and accelerate manufacturing operations including production planning and analysis.

**Continuous Improvement:** This training will be offered to all occupations. Topics such as Business writing, Presentation Skills, Decision Making will be offered to assist JSR to improve communication and build strong workplace teams. The goals include upgrading skills to assist employees in advancing on career ladders and remaining skilled in a fast paced technological environment where new products and tools are continuously being introduced or developed.

**Literacy Skills:** This training will be offered companywide. JSR is a subsidiary to JSR Corporation based in Japan. A number of Japanese staff with limited English proficiency work in Santa Clara. Thus, JSR has a need to offer Vocational English to improve workplace communications.
Manufacturing Skills: This training will be offered to all occupations. Topics such as Research and Development for New Product Technology are proposed. JSR is preparing new systems for managing orders and materials that staff across occupations will utilize. JSR is introducing New Equipment Training on production techniques for fabrication of the new products. As a result of the training the Company anticipates increasing sales over the next 24 months. Production, Technical occupations and Supervisor/Manager occupations will receive training in New Equipment Technology such as MPI Auto Labeler, Manual Filter, NFC Filter Leak Sensor System and upgrading skills to reprogram existing equipment. The Company anticipates a 2-3% decrease in operating costs and a 1-2% increase in productivity as a result of this training.

Certified Safety Training

1. OSHA 10/30. This training is a series of courses “bundled” by industry sector and occupation. It consists of 10 hours of classroom or CBT training for journey-level workers and 30 hours for frontline supervisors. The coursework is geared to construction work, and also manufacturing. Completion of the training results in a certificate that expands employment opportunities. The coursework must be approved by Cal-OSHA, and the instructors must be certified by Cal-OSHA.

2. Hazardous Waste Operations and Emergency Response Standard (HAZWOPER). 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 or CBT 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. Trainees will not receive 40 hours unless they work full time onsite at the clean-up location.

3. Hazardous Materials (HAZMAT). This training is a series of courses, specific to industry sectors involved in the transport of hazardous materials. The coursework varies in length depending on the industry and the occupational title, as organized in five levels ranging from “first responder” to “incident commander.” It is generally a minimum of 24 hours with an 8-hour annual refresher, and may be delivered by classroom or CBT. In this proposal, company-wide occupations will receive up to 24 hours of training. Field training may be required, although not funded by ETP. Completion of the training results in a certificate that expands employment opportunities. This coursework is not under Cal-OSHA, but is administered under the Department of Transportation and CalTRANS. There are various certification entities for the coursework and instructors. In this proposal, the certification entity has not yet been determined.

Computer Based Training

Computer Based Training will be provided for internally developed items that can be taken by employees at their own pace without instructors. Commercial Skills topics such as Inventory Cycle, Export Trade, Import trade, and Environmental Health and Safety are proposed.

Green/Clean Operations

JSR employs “green technology” methods including environmental protection, energy generation and efficiency, distributed renewable energy, and other green business practices, processes, and products. JSR performs environmental and safety related evaluations during new product development, from research to end. Additionally the Company employs many strategies,
including the use of nanotechnology, to make conservation and waste reduction measures routine.

JSR has joined the Environmental Protection Agencies Onium Consortium, which supports research into sustainable photo acid generators. Additionally, the Company enrolled in Silicon Valley's Clean energy program. As of 2017, JSR procures 50% of its electricity from renewable nonpolluting sources. In response to California's drought conditions, the Company has taken substantial measure to reduce water consumption. The Company reports a 1.6 million gallon reduction per year in contrast with water usage figures from five years ago.

**Nanotechnology**

JSR uses nanotechnology to develop solutions for various industries including mobile device and medical equipment. Enhancements to more traditional semi-conductor or medical device manufacturing are being driven by consumer demands, innovation, and a broad marketplace shift to reduce the costs, size, and weight of products, and to maximize the ability to offer new products or services in order to adapt to market pressures. JSR reports these skills are being used in the development of new products.

**Commitment to Training**

JSR uses training to express its on-going commitment to employee advancement and recognition in an effort to retain employees and equip them with skills to optimize service delivery and product development and improve customer satisfaction.

JSR’s past training efforts included new hire orientation, regulatory training, on-the-job training, seminars and conferences, and basic computer skills (budget permitting).

ETP funds will not displace the existing financial commitment to training. The Company’s training budget has increased from $95,000 to $200,000, an increase of over 100% from prior years. The Company will continue to provide safety training in accordance with all pertinent requirements under state and federal law.

**Training Infrastructure**

The ETP project will be managed by two H.R. staff (Partner and Director). JSR has a dedicated internal training staff of eight in addition to targeting some CA based training vendors. JSR also has obtained a subcontracted consultant to assist with program administration.

**Impact/Outcome**

Training will assist the company in meeting strategic goals including:

- Achieving an estimated 10-15% revenue increase meeting new business orders from life science customers.
- Improvement in quality controls and business improvement procedures which will contribute to saving time, error reductions and more revenue thru waste reduction and better management of raw materials.
- Alignment of business practices and improvement in innovation practices, especially in the integration of Environmental Health and Safety standards in all new products.
- An estimated 3% improvement in speed to delivery as a result of new processes and equipment.
- An estimated 10% efficiency increase in the EPA approval process for new product approvals by applying EPA’s standards to biomaterial handling, storage and cleaning processes.
- Seven new certified safety staff (OSHA 10/30/Hazmat/Hazwoper) to improve the Company’s readiness to respond to emergencies.

**RECOMMENDATION**

Staff recommends approval of this proposal.

**PRIOR PROJECTS**

The following table summarizes Company’s performance under an ETP Agreement that was completed within the last five years:

<table>
<thead>
<tr>
<th>Agreement No.</th>
<th>Location (City)</th>
<th>Term</th>
<th>Approved Amount</th>
<th>Payment Earned $</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>ET16-0364</td>
<td>Santa Clara</td>
<td>03/14/2016 - 03/13/2018</td>
<td>$118,404</td>
<td>$94,859</td>
<td>(*80%)</td>
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<tr>
<td>ET14-0256</td>
<td>Santa Clara</td>
<td>02/03/2014 - 02/02/2016</td>
<td>$134,758</td>
<td>$103,527</td>
<td>(*77%)</td>
</tr>
</tbody>
</table>

**DEVELOPMENT SERVICES**

The Company retained Prospect Consulting Group in San Francisco to assist with development of this proposal for a flat fee of $5,200.

**ADMINISTRATIVE SERVICES**

Prospect Consulting Group will also perform administrative services in connection with this proposal for a fee not to exceed 13% of payment earned.

**TRAINING VENDORS**

Learnit, in San Francisco, has been retained to provide Continuous Improvement training for a fee of $17,000.

Other trainers will be identified as they are retained.
Exhibit B: Menu Curriculum

Class/Lab/E-Learning Hours
8-200 Trainees may receive any of the following:

BUSINESS SKILLS
- Cost of Quality Training
- Quality Systems to Manage Growth
- Business Writing

COMMERCIAL SKILLS
- Environmental Health and Safety Training
- Life Sciences Biomaterial Handling, Storage and Cleaning Practices (Safety Training)
- Raw Material Supply Chain Management
- Industry Import/Export Trade Updates

COMPUTER SKILLS
- New Technology for Growth
  - Advanced Simulation Software Training
  - CONCUR
  - Data Visualization Software
  - Label Software 2.0
  - Maintenance Connection
  - New System Administration
  - Replicon (Gen 3)
  - SAP HANA
  - SAP New Module for Production
  - StarLIMS
  - Upgrades to Halogen

CONTINUOUS IMPROVEMENT
- Professional Development
  - Develop Strategic Agility: Embrace Change & Drive Results
  - Influencing without Authority
  - Decision Making-
  - Move from an Operational Manager to a Strategic Thinker
  - Presentations Skills
  - Thrive in Chaos
  - Time Management
  - ISO9001

MANUFACTURING SKILLS
- Research and Development for New Product Technology
  - 3D printing
  - 5G materials
  - Advanced Lithography
  - Advanced mask technology
  - Antenna packaging
  - APP4 Technology
- Cleans Technology
- Electroplating
- Electronic Materials
- Ellipsometry Training
- EUV Stochastics R&D Studies
- Formulated Cleans Solutions
- Formulation Processes
- New Electronic Materials
- R&D Tools Training: XSEM
- Post Etch Cleans
- Thermal and Thick Carbon UL
- Tilted Ion Implantation Lithography
  - New Equipment Technology
  - MPI Auto-Labeler
  - MT Systems Manual Filter
  - MT Systems NFC Filter
  - Therma Leak Sensor System

**LITERACY SKILLS** (Literacy Training cannot exceed 45% of total training hours per-trainee)
  - Vocational English Language Skills

**OSHA 10/30**
  - OSHA 10 (certified trainer)
  - OSHA 30 (certified trainer)

**HAZWOPER**
  - HAZWOPER Refresher 8 Hours
  - HAZWOPER 24 hours
  - HAZWOPER 40 hours

**HAZARDOUS MATERIALS**
  - HAZARDOUS MATERIALS

**COMMERCIAL SKILLS**
  - Inventory Count Process 0.5
  - Export trade Update 0.5
  - Import Update 0.5
  - EH&S Updates 0.75

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

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