



Training Proposal for:
ENGEO Incorporated
Agreement Number: ET15-0191

Panel Meeting of: June 27, 2014

ETP Regional Office: San Francisco Bay Area

Analyst: A. Nastari

PROJECT PROFILE

Contract Attributes:	Job Creation Initiative Priority Rate Retrainee	Industry Sector(s):	Engineering Technology/Other Priority Industry: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Counties Served:	Statewide	Repeat Contractor:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Union(s):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Operating Engineers Local Union No. 3, Sacramento		
Number of Employees in:	CA: 130	U.S.:130	Worldwide: 185
<u>Turnover Rate:</u>	11%		
<u>Managers/Supervisors:</u> (% of total trainees)	2%		

FUNDING DETAIL

Program Costs	-	(Substantial Contribution)	(High Earner Reduction)	=	Total ETP Funding
\$102,400		\$0	\$0		\$102,400

In-Kind Contribution:	100% of Total ETP Funding Required	\$131,865
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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	Advanced Technology, Business Skills, Commercial Skills, Computer Skills, PL - Commercial Skills	100	8 - 200	0	\$432	\$20.50
				Weighted Avg: 24			
2	Retrainees Job Creation Priority Rate	Advanced Technology, Business Skills, Computer Skills, Commercial Skills, PL - Commercial Skills	16	8 - 200	0	\$3,700	\$20.00
				Weighted Avg: 185			

Minimum Wage by County: \$16.25 for Alameda, Contra Costa, San Francisco, and Santa Clara counties; \$16.04 for Los Angeles County; \$15.98 for Orange County, and \$14.90 for San Joaquin and Placer counties

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		
Occupation Titles	Wage Range	Estimated # of Trainees
Engineers & Geologists Level 1		46
Engineers & Geologists Level 2		3
Field Representatives		42
Job Creation - Engineers & Geologists		6
Job Creation - Field Representatives		10

INTRODUCTION

ENGEO Incorporated (ENGEO) www.ENGEO.com provides specialized services in environmental, geotechnical, hydrologic and geologic engineering, inspection, and construction testing.

Founded in 1971, ENGEO Incorporated (ENGEO), provides specialized engineering services required for the design and construction of buildings, resevoirs, pipelines and commercial sites, such as sports arenas, medical facilities, and rail lines. ENGEO competes with international, national and local firms. ENGEO's clients include city, county, state and local agencies and utility districts throughout California, public and private land developers, builders, financial institutions and land owners.

ENGEO meets out-of-state competition standards as a company providing engineering services. (Title 22, California Code of Regulations (CCR), Section 4416(i)(2). As an engineering services provider, ENGEO is also eligible for priority industry reimbursement.

ENGEO has seven California locations - Irvine, Ripon, Rocklin, Santa Clarita, San Francisco, San Jose, and San Ramon. The Company's Engineers, Geologists and Field Representatives provide the following services: analysis of soil and rock for construction design, consultation and design to address environmental clean-up of contaminated groundwater and soil; grading of the land; soils testing; storm water management, including creation and implementation of Stormwater Pollution Prevention Plans and Stormwater Management Plans and permitting support.

This is ENGEO's second ETP Proposal. During its last Agreement, ENGEO was recovering from a 40% decrease in business due to the downturn in the economy. To become more competitive and gain market share. ENGEO sought funds to develop the skills of its Engineers, Geologists, and Field Representatives in Soil Testing, Foundation Stabilization, Environmental Site Assessments, Stormwater Management, Nuclear Gauge usage and project management. As a result of the training, ENGEO increased its contracted work and in 2013 added 39 new employees. ENGEO did not have sufficient time in its prior Agreement to provide the highly technical training required for its new Engineers, Geologist and Field Representatives. ENGEO achieved a successful project of 100% performance. Although the courses in this Proposal appear to be the same as in its last Agreement, ENGEO assures ETP that no one who participated in the last Agreement will be trained in the same skill sets.

Union Support

ENGEO's Field Representative are represented by Operating Engineers Local Union No. 3, from Sacramento. The union provided a letter supporting its training initiatives. It specifically supports site specific training or training conducted at a client's job site, because its deemed to be benficial.

Training Location

ENGEO estimates that 90% of the class/lab curriculum will be provided at ENGEO's facilities. The remaining 10% will be delivered at the training vendor's facility in Antioch. Training in Productive Lab format will be delivered to Field Representatives, both incumbent and newly hired, as well as new Engineers/Geologists at the client's job site.

PROJECT DETAILS

Training in this new Proposal will address regulatory changes in various realms, such as water quality, air quality, and permitting for geotechnical and environmental exploration. ENGEO's clients have been significantly affected by California's regulatory changes in seismic building codes, stormwater management, and environmental assessment standards. These policies and regulatory changes affect almost every aspect of ENGEO's processes ranging from the proposal process to field design implementation.

Clients face new challenges with such things as alleviating risk for seismic events, flooding, and geologic hazards.. ENGEO needs to train Engineers and Geologists performing work on new sampling and analysis techniques, the selection of new equipment and the use of new equipment. ENGEO designed and developed a specialized training program for existing and future hires that meets the demands of its clients, marketplace and the industry.

Advanced Technology (AT) (25%)

Training in AT will be provided to Engineers, Geologists and Field Representatives. Engineers and Geologist are responsible for utilizing highly technical equipment such as x-ray florescence equipment, vapor operated equipments, meters to measure the pH of soil and water, and sonic sifter separators designed for research and quality assurance. ENGEO must also train in the use of nuclear density gauges which uses radioactive sources to measures and assess moisture and density of the material (soil or water) being tested. These occupations require specialized skills and training to maintain high level quality controls and quality assurance practices required to meet EPA and environmental standards and requirements prior to any construction moving forward.

Training in the accurate use of the equipment is paramount because an improper technique or anlaysis could result in structural damage to a construction site. The cost to deliver this training may be as high as \$65 per hour per trainee. ENGEO request the AT rate of \$26 per hour to assist with offsetting its costs.

The trainer-to-trainee ratio is 1:10 for AT, to allow in-depth coverage and personal attention from the instructor.

Commitment to Training

The training ENGEO proposes complements its programs already in place which proactively respond to industry demands that are in a state of constant and rapid, change. ENGEO 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

As a with ENGEO's first Agreement, the Company has its dedicated administrative staff in place to enroll trainees, obtain rosters and enter the data into ETP's online system and has identified its internal trainers and vendors, so that training can begin immediately following approval by the Panel.

Productive Laboratory (30%)

The Panel recently adopted regulations to authorize reimbursement for training delivered in a Productive Laboratory (PL) setting. PL trainees may produce goods for profit as part of the training, in the courses identified under the Curriculum and with no more than 2 trainees per instructor. The instructor must be dedicated to training delivery during all hours of training, and special attendance rosters will be used to assist in monitoring.

The skills sets required by Engineers and Geologists, and Field Representitives is very specialized and technical in nature. Training must be performed on the job site, where trainees are able to apply hands-on procedures, that will be taught in the classroom. During PL, trainees will use Nuclear Gauges, Field Stake Readings and Hot Mix Ashphalt equipment and processes used in gathering and testing soil and/or water samples. PL training in Best Management Practices (BMP) is specific to the monitoring and sampling of water pollution. A high level of

proficiency in the accurate use and reading can only be learned while applying its use to actual materials at the job site. Field Representative will observe, test, and report on density testing.

ENGEO projects Engineers and Geologists and Field Representatives in Job Number 2 may receive a maximum of 40 hours. Engineers and Geologists in Job 2 may also receive up to 40 hours in PL, while 10 Field Representatives could receive up to a maximum of 80 hours of their training conducted in PL methodology.

Training in the proper use, handling, and operation of ENGEO's technical equipment cannot be learned in a class/lab environment because the soil and/or water conditions of the site are pertinent in acquiring samples for testing and analysis. The trainers role will be to provide specific tasks and conduct side by side testing and analysis.

PL training will also be conducted at ENGEO's testing Laboratories where Geologists and Engineers and Field Representative will learn first hand how to perform lab testing and analysis on a variety of soil types and water samples taken from the job sites. They will then be required to write reports based on their findings all under the direction and guidance of Senior Engineers.

PL Trainees will be trained with a trainer-to-trainee ratio between 1:1 to 1:2, PL hours will be capped at 80 hours per trainee.

Retrainee - Job Creation

In support of job creation, the Panel is offering incentives to companies that commit to hiring new employees. Under the Retrainee-Job Creation program, 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, ENGEO has committed to expanding its business capacity by adding 16 new employees – six (6) Engineers/Geologists and ten (10) Field Representatives, as shown in Job Number 2. To be eligible for reimbursement under this Job Number, the trainees must be hired within the three-month period prior to Panel approval or during the term of contract.

Business Skills (15%) - Training in Project Management will be delivered to Engineers and Geologists who have been employed with ENGEO for at least six months. This course has been designed by ENGEO's and is specific to ENGEO and the industry. This course was not offered during the first ETP contract. Project Manager Master Series will be delivered to Engineers and Geologists who have been employed with ENGEO for at least 2 years. Topics include Value-Added Engineering, Time Management and Teamwork Effectiveness, Financial Analysis and Project Funding, Contract Negotiation, and Client Relationship Development. Although this course was offered in ENGEO's first ETP contract, it will be taught to a different group of employees who did not participate in the last project.

Commercial Skills (15%) - New Staff Engineer Training will be delivered to newly-hired Engineers/Geologists who may take 18-24 course modules depending on the discipline for which the employee is hired - Geotechnical, Environmental, Water Resources. This series of topics will be taught in a classroom setting followed with one-on-one trainer-to-trainee PL sessions. Geotechnical Engineering is designed to fully equip geotechnical engineering staff in newly established seismic building code regulations and on-going advances in corrective earthwork, ground improvement techniques, and construction practices.

Water Resource training will be delivered to Engineers and Geologists in water resources relating to recently adopted stormwater management regulations. Environmental Engineering is

to train Engineers and Geologists performing this work with new sampling and analysis techniques, the selection of new equipment and the use of new equipment.

Training for all Field Representatives will be provide geotechnical and water resources disciplines. This occupational group has very physically demanding field duties (transporting/using the nuclear gauge, carrying soil samples, carrying/using hand sampling equipment, driving in uneven construction sites). Therefore, the majority of their training will be provided by PL method.

Training for newly hired Field Representatives will include Nuclear Gauge Operator training to perform testing and observation services. Additionally, they will receive Technical Performance Training consisting of 20 modules. This class was developed and designed to cover all of the skills and industry knowledge that a newly hired Field Representative needs to perform his/her job. Trainig which will be taught in a classroom setting or one-on-one by a trainer. The modules consist of both Productive Lab and Advanced Technology topics.

Computer Skills (15%) – Training in Finite Element Modeling in geotechnical engineering will provide the tools for solving complex engineering problems. The course is delivered in both theoretical and practical aspects with a computer component called Plaxis. The application simulates soil behavior. The training will provide the skills necessary to complete more accurate numerical modeling. This course was included in ENGEO’s last ETP contract but the course under this contract will be given to new employees who have not previously received this training.

RECOMMENDATION

Staff recommends approval of this proposal.

PRIOR PROJECTS

The following table summarizes performance by ENGEO Corporation under an ETP Agreement that was completed withing the last five years.

Agreement No.	Location (City)	Term	Approved Amount	Payment Earned
ET12-0398	San Ramon	5/11/2012 – 5/10/2014	\$49,920	\$49,920

DEVELOPMENT SERVICES

N/A

ADMINISTRATIVE SERVICES

N/A

TRAINING VENDORS

Pacific Nuclear Technology of Antioch has been retained to provide Nuclear Gauge training at \$1,500 per class. Applied GeoBynamics, Inc. of El Cerrito has been retained to provide Commercial Skills at \$3,000 per class. Other trainers will be identified for ETP record-keeping purposes, as they are retained by ENGEO.

Exhibit B: Menu Curriculum

Class/Lab Hours

8 – 200

Trainees may receive any of the following:

BUSINESS SKILLS

- + Master Series
- + Project Management
- + New Staff Engineer Training
- + Technical University

COMMERCIAL SKILLS

- + Nuclear Gauge Operator Training
- + Qualified SWPPP Developer (QSD)
- + Qualified SWPPP Practitioner (QSP)
- + Field Representative Performance Training
- + Field Representative Winter Field Training

COMPUTER SKILLS

- + Finite Element Modeling
- + Plaxis

Productive Lab Hours

0 – 80

PRODUCTIVE LAB (PL)

New Hire Engineers/Geologists

- + Laboratory Testing Introduction (Interpret, Assign Values for Analysis)
- + Site USA and Field Exploration Types (Mud, Auger, Pitcher, Shelby)
- + Environmental Site Reconnaissance (Greenfield, Brownfield, Commercial/Industrial)

Field Representatives

- + Nuclear Gauge – Usage, Testing/Corrections, Data to document
- + Safety –Driving, Parking, Testing (grading, improvements, concrete)
- + Field Test Locating – Plans and Technology
- + Field Stake Reading
- + Moisture Only (Drybacks) and Fill Specification Selection
- + Construction Observation Activities – Grading, Utilities, Streets, Walls
- + Hot Mix Asphalt – equipment, aggregate size/type, temperatures
- + Pad Moisture Observations
- + BMP Monitoring and Sampling
- + Lab Training (Construction Testing) – Curves, PI, Gradations, Sieves

AT Hours

20 – 60

ADVANCED TECHNOLOGY

Geotechnical Engineers/Geologists (40% of total curriculum)

- ✚ Soil Index/Strength Testing- Triaxial, Shear, Consolidation, Atterberg
- ✚ Construction Observation for Engineering/Geologists
- ✚ Foundation Construction Observation Introduction
- ✚ Geotechnical Exploration for Schools/Hospitals – CGS Note 48
- ✚ Grading Plan Review and Corrective Grading Plan Preparation
- ✚ Analysis Topic – Liquefaction/Lateral Spreading Analysis
- ✚ Analysis Topic – Compressible Soils/Bay Mud Analysis
- ✚ Analysis Topic – Developing Foundation Design Criteria
- ✚ Analysis Topic – Ground Improvement Techniques
- ✚ Analysis Topic – Stabilized Earth Retaining Wall Design
- ✚ Analysis Topic – Structural Retaining Wall Design
- ✚ Analysis Topic – Soil Structure Interaction Analysis

Environmental Engineers/Geologists

- ✚ Phase II Environmental Site Assessment Scoping/Field Work
- ✚ Phase III Environmental Site Assessment Scoping/Field Work
- ✚ Analysis Topic – Environmental Risk Assessment
- ✚ Analysis Topic – Environmental Sustainability
- ✚ Analysis Topic – Green and Sustainable Remediation Practices

Water Resource Engineers/Geologists

- ✚ Stormwater Management Plan Analysis/C3 BMP Analysis
- ✚ Stormwater Pollution Prevention Plan/Erosion Control Plan
- ✚ Hydraulics/Hydrology – Creek Mitigation & Restoration Analysis
- ✚ Analysis Topic – Advanced Modeling Analysis
- ✚ Analysis Topic – Advanced AutoCAD for hydraulics
- ✚ Analysis Topic – Stormwater Design Guideline Development

Field Representatives

- ✚ Advanced Remedial/Corrective Grading Techniques and Methods
- ✚ Geotechnical Product Installation and Observations - subdrainage, geotextiles, geogrid reinforcement
- ✚ Foundation Construction Observations – structural mat, piers, footings, piles, soil nail walls

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



OPERATING ENGINEERS LOCAL UNION No. 3

3920 LENNANE DRIVE, SACRAMENTO, CA 95834 • (916) 993-2055 • FAX (916) 419-3491
Jurisdiction: Northern California, Northern Nevada, Utah, Hawaii, and the Mid-Pacific Islands

April 24, 2014

Ms. Valerie Davis
ENGEO, Incorporated
2010 Crow Canyon Place, Suite 250
San Ramon, CA 94583-4634

Re: California ETP Letter of Concurrence

Ms. Davis,

The Operating Engineers Local Union No. 3 is in receipt of your request for concurrence that employees covered by the collective bargaining agreement between ENGEO and the Operating Engineers Local Union No. 3, AFL-CIO participate in training funded by the State of California's Employment Training Panel (ETP).

The Operating Engineers prides itself on offering the finest training available to the Technical Engineering Industry but always encourage our employer-partners to offer as an option employer, or site specific training it deems beneficial. Please accept this letter as our concurrence for any and all additional training ENGEO believes beneficial to members of the ENGEO / Operating Engineers family.

Respectfully,

Michael Strunk
Sr. Tech. Engineers Rep.
IUOE Local Union No. 3