

## TECHNICAL INSTRUCTION (NAVSEA TEMPLATE)

Ref: (a) NAVSEA 5252.242-9115 (TECHNICAL INSTRUCTIONS)

Enclosure (if applicable): [1]

This Technical Instruction (TI) is issued pursuant to reference (a). The TI will be effective upon incorporation into a modification. This TI is within the present scope of the contract/order and it does not change the statement of work or other terms and conditions. Nothing herein should be construed as amending the subject contract/order or as changing any contractual requirements. If the contractor believes that compliance with anything herein would constitute a change in the requirements of the subject contract/order, the contractor should not accept the TI and notify the Procuring Contracting Officer (PCO), in writing, within ten (10) working days, specify the reason(s) for such belief, and take no further action. A copy should also be sent to the COR.

**Note: The contractor shall inform the COR, in writing, when 75% of the costs allotted to this TI have been expended. Expenditures for this TI shall not exceed the allotted amount. This TI is contingent upon the availability of funds and performance shall not commence until funding has been obligated on the contract/order.**

TI No./Revision No.	TI #21			
TI Revision Issue Date (if applicable)				
Original TI Issue Date	9/1/2014			
Purpose of Revision (if applicable)				
Contract/Task Order No.	N00178-07-D-4963-0002			
Government Agency/Activity	NSWC Dahlgren Division			
Sponsoring Office	<b>Organization</b>	<b>Code</b>		
	Directed Energy Division	Q20		
Program/Technical Office	<b>Name</b>	<b>Code</b>	<b>Telephone</b>	<b>Email Address</b>
	Ed Huber	Q2e	540-284-1222	Edward.Huber@navy.mil
Contracting Officer's Representative (COR)	<b>Name</b>	<b>Code</b>	<b>Telephone</b>	<b>Email Address</b>
	Arline Parker	Q20	540-284-0374	Arline.Parker@navy.mil
Procuring Contracting Officer (PCO)	<b>Name</b>	<b>Code</b>	<b>Telephone</b>	<b>Email Address</b>
	Dana Phillips	CS40	540-653-8871	Dana.phillips@navy.mil
Contractor	Applied Technology, Inc.			
Contractor POC	<b>Name</b>	<b>Code</b>	<b>Telephone</b>	<b>Email Address</b>
	Bill Taczak		540-663-0050	btaczak@appliedti.com
Severability	Severable <input checked="" type="checkbox"/> Non-Severable <input type="checkbox"/>			
Special Skills Required	Software Engineering, Controls Engineering, Optical and Sensor Systems Design			
Applicable SOW/PBWS Paragraph Number(s)	C.2.2.1, C.2.2.2, C.2.2.3, C.2.4.1, C.2.5.1, C.2.5.2, C.2.5.3, C.2.5.5, C.2.5.6, C.2.5.7, C.2.6.1, C.2.6.2, C.2.6.3			
TI Title	QRC Installation and Deployment			
TI Description	<p>TI #21 Title: QRC Ponce</p> <p>TI Description: Provide programmatic and engineering design, software and hardware developments, and installation and deployment support for the Solid State Laser Quick Response Capability (SSL-QRC) Program.</p> <p>For each of these programmatic efforts, the contractor will provide program and financial analysis, documentation, and management support. These efforts will include the generation of Work Breakdown Structures (WBS), program plans, schedules, statements of work, and additional program documents, as required.</p>			



The contractor will also provide various staffing as required to support the technical requirements of each program. The staffing will be supplied by the contractor as technical requirements are identified and funding is authorized.

**TI Subtask Descriptions**

**Solid State Laser-Quick Reaction Capability Program (SSL-QRC):** The intent of the tasking covered in this instruction is to upgrade the current Laser Weapon System (LaWS) by providing hardware (HW) and software (SW) component design, assembly, integration support, testing for multiple weapon system functional areas, and installation and deployment support of these subsystems. Specific function task areas that shall be addressed are:

- (1) **Beam Control:** The contractor shall develop, integrate, and update as required the HW/SW interfaces. The contractor will also participate in the integration, test, and evaluations to support the beam control developments. These efforts will include the Real-time Control (RTC), video tracking, beam stabilization, sensor controls, and marinization of the system components for the at-sea environment.
- (2) **Sensors Systems:** The contractor shall develop or modify the various sensor systems to meet the more stringent long term operational environment of the upgraded weapon system. The contractor shall integrate all components and participate in the various laboratory, field, and operational tests as required to validate performance objectives are met.
- (3) **Laser and Beam Director:** The contractor shall design, develop or modify hardware and software elements, including interface requirements, integration of all components, optical and mechanical subsystems including electrical and cooling subsystems to satisfy the more stringent long term operational requirements.
- (4) **Laser weapon automation and control:** The contractor shall modify all hardware and software elements as necessary to upgrade the overall performance of the control system. Of particular importance is the consolidation and automation of the critical functions. Tasking in this area include predictive avoidance customization and integration, EMI and functional testing in various environments, including laboratory, field, and operational.
- (5) **Systems engineering:** The contractor shall support the system engineering efforts associated with development and control of technical documentation, schedule developments, HW/SW detailed specifications, and risk mitigation activities.
- (6) **Operation Console:** The contractor shall design and develop the HW/SW elements of the operator's console. Additionally, the contractor shall develop all necessary documents for the operation of the console. In addition, the contractor will develop all necessary simulators, graphical user interfaces, and support all elements of testing. Tasking will include documenting all developed source code and maintaining the code with the appropriate management tools.

<b>Applicable Documents If none, insert N/A</b>	N/A
<b>Government Furnished Information (GFI), Government Furnished Equipment (GFE), Government Furnished Material (GFM); Government Furnished Facilities (GFF)</b>  <b>If none, insert N/A</b>	<b>GFI: Information on the current LaWS testbed operation</b> <b>GFE: Existing and being developed LaWS system and related components, HW and SW</b> <b>GFM: N/A</b> <b>GFF: HEL Development area, High bay facilities at Bldg 213, NSWCDD Dahlgren VA</b> <b>Other: N/A</b>
<b>Duty Location</b>	N/A

Temporary Duty/ Travel Requirements

If none, insert N/A

Travel Authorization (TA) requests shall be submitted to and/or authorized by the Contracting Officer's Representative (COR).

**CONUS**

Trips	People	Duration	From	Destination

**OCONUS**

Trips	People	Duration	From	Destination

**Funding Information (e.g., CLIN, SLIN, ACRN)**

**SEE SECTION G FOR FUNDING INFORMATION**

**LABOR**

Funding Identifier	Project/Program Name	Appropriation FY	Appropriation Type	Funded Amount
Option 2 Labor	SSL-QRC	FY14/ FY 15	RDT&E	See Section G

**ODC**

Funding Identifier	Project/Program Name	Appropriation FY	Appropriation Type	Funded Amount
Option 2 ODC	SSL-QRC	FY14/ 15	RDT&E	See Section G

**Period of Performance**

FROM	TO
9/1/2014	8/31/2015

**Deliverable(s)**

Deliverable Identifier	Description	Medium	Frequency	Due Date
A001	Contractor's Progress, Status and Management Report	e-mail	Monthly	TBD
A002	Presentation Material (sponsor format) - Quarterly IPRs with ONR sponsor, technical, financial and programmatic reviews	Email	Quarterly and as Required	TBD
A003	Revisions to Existing Government Documents - Reviews, edits, and updates of existing and developed QRC documents including project technical, programmatic, and financial plans	Email	As Required	TBD
A004	Technical Report – Contractor generated reports on studies, assessments, and testing	Email	As Required	TBD
A007	Engineering Drawings - electrical and mechanical drawings for build, reproducibility, and documentation.	Email	As Required	TBD

**Security Classification**

Unclassified to Classified Secret

**Hazard and Safety Information**  
 (The checked (X) Hazard and Safety Instructions are applicable to this TI)

Known Hazards: (List known hazards here)  
 No Hazard or Safety Information applicable  
 Other (Specify: Training as required for all employees working on this TI: Laser Safety Training)  
 Other (Specify: \_\_\_\_\_)  
 Other (Specify: \_\_\_\_\_)



TI ROM Cost Estimate:	<b>Total Labor</b>	<b>ODCs</b>	<b>Travel</b>	<b>Total Estimate</b>
	██████████	██████████	██████████	██████████

This TI shall not be construed as a change to the terms or conditions of the subject contract/order.

**PCO concurrence:**

\_\_\_\_\_  
 (Signature) Dana Philips  
 Contracting Officer (print name) (date)

**PARKER.ARLINE.W.1241946572**

Digitally signed by PARKER.ARLINE.W.1241946572  
 DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USN, cn=PARKER.ARLINE.W.1241946572  
 Date: 2014.08.26 10:07:33 -04'00'

\_\_\_\_\_  
 (Signature) Arline W. Parker  
 Contracting Officer's Representative (print name) (date)

**Acknowledgement of receipt by Contractor:**

William J. Taczak Jr.      WILLIAM J. TACZAK JR.      27 AUG 14  
 (Signature) (print name) (date)  
 Authorized Representative of Contractor

**NOTE - ALL TECHNICAL INSTRUCTIONS MUST BE CONCURRED WITH BY THE PCO PRIOR TO RELEASE.**