

**TECHNICAL INSTRUCTION (NAVSEA TEMPLATE)**

Ref: (a) NAVSEA 5252.242-9115 (TECHNICAL INSTRUCTIONS)  
 Enclosure (if applicable): [       ]

This Technical Instruction (TI) is issued pursuant to reference (a) from my capacity as the Contracting Officer's Representative (COR) for the contract/order identified below. This TI is issued with the understanding that implementation is within the present scope of the contract/order and that 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- 28 , Rev. 0  |      |              |                        |
| TI Revision Issue Date (if applicable)     |  |      |              |                        |
| Original TI Issue Date                     | 1 September2014  |      |              |                        |
| Purpose of Revision (if applicable)        |  |      |              |                        |
| Contract/Task Order No.                    | N00178-07-D-4963-0002  |      |              |                        |
| Government Agency/Activity                 | NSWCDD   |      |              |                        |
| Sponsoring Office                          | Organization   |      | Code         |                        |
|  | Directed Energy Division   |      | Q20          |                        |
| Program/Technical Office                   | Name   | Code | Telephone    | Email Address          |
|  | Robert Pawlak  | Q21  | 540-653-4057 | Robert.pawlak@navy.mil |
| Contracting Officer's Representative (COR) | Name   | Code | Telephone    | Email Address          |
|  | Arline Parker  | Q20  | 540-284-0374 | Arline.parker@navy.mil |
| Procuring Contracting Officer (PCO)        | Name   | Code | Telephone    | Email Address          |
|  | Dana Phillips  | CS40 | 540-653-8871 | Dana.phillips@navy.mil |
| Contractor                                 | ATI  |      |              |                        |
| Contractor POC                             | Name   | Code | Telephone    | Email Address          |
|  | 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                                   | HPAT)  |      |              |                        |
| TI Description                             | The contractor shall assist in the collection and analysis of EO/IR data on the 5" High Velocity Projectile (HVP). To accomplish this effort, the contractor will assemble a tracking testbed capability that consists of a small gimbal with a sensor payload. This gimbal and sensors will be transported to the test location, data will be collected, and then data and post-test analysis will be provided by the contractor. As part of this effort, the contractor will participate in preparatory and post-test meetings as required. Listed below are the specific tasks involved with this effort: |      |              |                        |

1. Preparation of the VOSS mount to support testing at White Sands Missile Range, to include the following:
  - a. Rental of necessary sensors and optics to support the data collection.
    - i. The sensor payload shall include MWIR and SWIR sensors at a minimum.
    - ii. A NIR sensor is desirable but not required.
  - b. Radiometric calibration of those sensors to enable collection of data on the HVP.
  - c. Mounting and alignment of sensors on the VOSS gimbal.
  - d. Transportation of gimbal and sensors to the test location.
  - e. Setup of the equipment onsite.
  - f. Participating in meetings and teleconferences in preparation for the test to coordinate sensor payloads and logistics.
2. Participation in the test, to include the following at a minimum:
  - a. Aligning of systems to common reference points on the range.
  - b. Coordinating with other systems to enable data collection to a common time reference.
  - c. Manning and supporting the system as required to support the test.
  - d. Collecting video and sensor parameter settings for the test.
  - e. Participating in data collection over a time period not to exceed three days.
3. Post-test teardown and analysis activities to include the following:
  - a. Several slides of quicklook analysis on the data to be due two weeks after test completion.
  - b. Analysis of the data, with a whitepaper that discusses results and finding from the test, to include the analysis and material listed below. This whitepaper will be delivered no later than (NLT) October 3<sup>rd</sup>, 2014.
    - i. Description of the test setup and data.
    - ii. An estimate of the temperature of the round as a function of time.
    - iii. Estimates of accuracy obtained for localizing the round position.
    - iv. Estimates of the round position (time-tagged az/el), and platform position.
    - v. Recommendations for a sensor suite to support further testing in the Jan/Feb 2015 timeframe.
  - c. The contractor will provide a USB hard drive containing video data taken at the test from all sensors. This video will be in a standard format TBD, and Matlab code will be provided to extract or read image data from the files on the drive. This data will be delivered NLT October 3<sup>rd</sup>, 2014.
  - d. Participation in three reviews in the Washington/Baltimore area. Each review will take approximately two days.
  - e. Preparation of materials to support the reviews in 3.d, in the form of



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|--|--|--|----------------|-----------|----------|
| Period of Performance  | FROM   |  | TO             |           |          |
|  | 1 Sept 2014  |  | 31 August 2015 |           |          |
| Deliverable(s)   | Deliverable Identifier   | Description  | Medium         | Frequency | Due Date |
|  | A001, A002   | A001: Contractor's Progress, Status and Management Report; | e-mail         |           |          |
|  |  | A002: Presentation Material for Quarterly IPRs;            |                |           |          |
|  | See attached Task Statements   |  |                |           |          |
| Security Classification  | Unclassified to Classified Secret  |  |                |           |          |
| Hazard and Safety Information<br><i>(The checked (X) Hazard and Safety Instructions are applicable to this TI)</i> | <input type="checkbox"/> Known Hazards: (NA )<br><input type="checkbox"/> No Hazard or Safety Information applicable<br><input checked="" type="checkbox"/> Other (Specify: Training as required for all employees working on this TI: Laser Safety Training.)<br><input type="checkbox"/> Other (Specify: _____)<br><input type="checkbox"/> Other (Specify: _____) |  |                |           |          |

|                       |             |        |        |                |
|-----------------------|-------------|--------|--------|----------------|
| TI ROM Cost Estimate: | Total Hours | ODCs   | Travel | Total Estimate |
|                       | ██████      | ██████ | ██████ | ██████         |

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

PCO concurrence:

\_\_\_\_\_  
 (Signature)  
 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 10:34:39 -04'00'

\_\_\_\_\_  
 (Signature)  
 Contracting Officer's Representative

\_\_\_\_\_  
 (print name) \_\_\_\_\_ (date)

Acknowledgement of receipt by Contractor:

*William J. Toezak Jr.*  
 \_\_\_\_\_  
 (Signature)  
 Authorized Representative of Contractor

*WILLIAM J. TOEZAK JR.* *27 AUG 14*  
 \_\_\_\_\_  
 (print name) (date)

|                     |                |
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| TI No./Revision No. | TI-XX, Rev. XX |
|---------------------|----------------|

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

Copy to: