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MOD/AMD P00003

Name of Offeror or Contractor: ADI ENGINEERING &

SECTION A - SUPPLEMENTAL INFORMATION

CONTRACT: DAAE07-03-C-T022

MODIFICATION: P00001

PURPOSE: CORRECTS DELIVERY SCHEDULES DATES FOR THE FOLLOWING CLINS.

Was:

C.6.5.4.1.1 The following procedures will be performed by government soldiers during the Supportability Demonstration:

- All Crew level PMCS
- All Unit level PMCS
- Remove and replace starter
- Remove and replace fuel injection pump
- Remove and replace hydraulic pump
- Remove and replace muffler
- Remove and replace radiator
- Remove and replace alternator
- Remove and replace brake pad/shoe
- Remove and replace bucket lift cylinder
- Remove and replace backhoe bucket cylinder
- Remove and replace hydraulic hose reel

Replace with:

C.6.5.4.1.1 The following procedures will be performed by government soldiers during the Supportability Demonstration:

- All Crew level PMCS
- All Unit level PMCS
- Remove and replace starter
- Remove and replace hydraulic pump
- Remove and replace muffler
- Remove and replace radiator
- Remove and replace alternator
- Remove and replace brake pad/shoe
- Remove and replace bucket lift cylinder
- Remove and replace backhoe bucket cylinder
- Remove and replace hydraulic hose reel

ALL OTHER TERMS AND CONDITIONS OF CONTRACT REMAINED UNCHANGED AND IN FULL FORCE AND EFFECT.

*** END OF NARRATIVE A 002 ***

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SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

C.1 Scope: This statement of work describes Government and Contractor responsibilities in support of the HMEE program. The support effort includes providing production representative vehicles for developmental and operational testing, developing technical manuals, training of Government personnel, and providing on-site technical personnel to support the Government's System Demonstration Test.

C.2 HIGH MOBILITY ENGINEER EXCAVATOR (HMEE) PRODUCTION REPRESENTATIVE VEHICLE (CLIN 0001)

C.2.1 Three (3) Type I (Heavy) High Mobility Engineer Excavator (HMEE) production representative vehicles shall be provided in accordance with Section J, Attachment 001, Purchase Description (PD) 2301 Type I (Heavy) and clause H-18 "Government Lease of Contractor Owned High Mobility Engineer Excavators and attachments" for a period of up to seven to thirteen months. All vehicles shall be the same configuration. The DoD Index of Specifications and Standards (DODISS) in effect at time of contract award is the issue that will be used.

C.2.2 At the contractor's discretion, these items are not required on the Phase 1 (SD) vehicles. The PD requirements listed below must be addressed in your Phase 1 (SD) proposal, provided in the Phase 2 (Production) vehicles and demonstrated during the production contract Production Verification Test/First Article Test.

PD paragraph	Requirement
3.2.1.5	Finish
3.6.6	Marking

C.3 ATTACHMENTS AND KITS: One (1) forklift attachment (CLIN 0002) per contractor shall be provided in accordance with paragraph 3.2.4.1.2 of PD 2301, one (1) auger attachment (CLIN 0003) per contractor shall be provided in accordance with paragraph 3.2.4.2.3 of PD 2301, one (1) set of tool attachments (CLIN 0004) per contractor shall be provided in accordance with paragraph 3.2.4.3 of PD 2301 and one (1) Arctic Cold Weather kit (CLIN 0005) per contractor shall be provided in accordance with paragraph 3.3.1.2 of PD 2301. (See Attachment 001 and clause H-18 "Government Lease of Contractor Owned High Mobility Engineer Excavators and attachments")

C.4 DATA DELIVERIES

C.4.1 The contractor shall deliver all data in English, in accordance with the DD Forms 1423. The contractor shall deliver all data electronically via diskette or electronic mail in MS Office Suite and Windows compatible format, unless otherwise specified in the contract. The government will provide electronic mail addresses during the Start of Work Meeting.

C.4.2 When the contractor is delivering data using paper as the media, the contractor will deliver the quantities of data on the CDRLs listed in Section J, Exhibits A through F. When the contractor uses electronic media, only one copy of the data will be delivered to each address on the CDRL.

C.4.3 All tailored Data Item Descriptions (DIDs) are part of the contract (Attached to CDRL's) and identified by a (T) after the DID number. Non-tailored DIDs may be obtained from the following website: <http://astimage.daps.dla.mil/online/new/>. Click on the "Quick Search" link.

C.5 CONFERENCES

C.5.1 Start of Work Conference: The contractor shall participate in a two day Start of Work conference in Warren, MI within thirty (30) days after contract award. The purpose of this conference is to review all statements of work, data requirements and the program schedule to assure a complete understanding of the requirements. The Government and the contractor will agree to the date of the start of work conference and the agenda. Minutes will be prepared by the Government.

C.5.2 Integrated Product Team (IPT): Joint Government/Contractor IPTs shall be established to serve as the primary management tool for monitoring contract status. The IPT shall provide a means for coordinating and monitoring schedules and contract performance and CAIV updates thereby insuring adequacy, timeliness, and compliance with contractual requirements. The first IPT will be held concurrently with the start of work conference. The remainder will be held quarterly until the completion of testing. The Government will host all IPTs. The contractor shall provide appropriate representative(s) to attend meetings. An agenda will be developed jointly with the contractor and Government at least 5 days before the meeting. Each IPT meeting will last up to two days.

C.6 INTEGRATED LOGISTICS SUPPORT (ILS)

C.6.1 Logistics Management: The contractor shall present an overview of his plan to manage and develop logistics products and services at the start of work meeting. The contractor shall participate in Government scheduled Supportability Integrated Product Team (SIPT) meetings as necessary.

C.6.2 Equipment Publications, Technical Manuals (TM) (CLIN 0006)

C.6.2.1 The contractor shall use the military performance standard, MIL-STD-40051A(TM) (Attachment 003) for guidelines and examples of the TM content and format that meet Army requirements. This all inclusive standard includes information on TM preparation and assembly,

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introduction, theory, operation, troubleshooting, maintenance, repair parts and special tools lists and supporting information. The contractor shall prepare and deliver the following:

C.6.2.1.1 TM 5-2420-XXX-10, Operator's Manual (ELIN A001): This manual will cover the operation and operator maintenance of the HMEE and its attachments. The manual shall be prepared in DATM format IAW with MIL-STD-40051A (TM), and Attachment 003. This manual shall be delivered as a validated draft IAW Section J, Exhibit A, CDRL A001. The Government reserves the right to witness the contractor's validation.

C.6.3 Test Support Training

C.6.3.1 Training for the Production Proveout Test (PPT) (CLIN 0007): The contractor shall develop a training package and conduct an introductory training course to the vehicle for Government PPT test support personnel (technical testers and data collectors) before initial PPT testing. The contractor and Government will negotiate training dates. The training will cover system operation, operator level maintenance, safety and controls required to safely operate the vehicle. The training shall be at least 50% hands on training. The maximum length of the training class will be 18 hours with a maximum of 12 students per class. The training shall be conducted at an APG facility negotiated by the Government.

C.6.3.2 Training for the Limited User Test (LUT)

C.6.3.2.1 Operator Training (CLIN 0008 ELIN A002): The contractor shall develop a training package and conduct an operator training course for Government personnel and test participants (soldiers), who will conduct the LUT. Training dates and locations at ATC will be negotiated between the contractor and Government. The training course will cover system operating principles and procedures, characteristics, capabilities and limitations, operator maintenance and safety. At the conclusion of the training, all operators shall be able to properly and safely operate the vehicle. The maximum length of the training class is 40 hours with a maximum of 12 students per class. The training package shall be delivered in accordance with Section J, Exhibit B, CDRL A002. The following is a sample of an operator training course outline and may be used as a guide.

- Vehicle Introduction and Familiarization
- Controls and Instrumentation
- Safety Practices and Procedures
- Operator Preventive Maintenance Checks & Services (PMCS) - Before Operation of the Vehicle
- Operator PMCS - During Operation of the Vehicle
- Operator PMCS - After Operation of the Vehicle
- Installation, Operation, and Disconnection of the Attachments & Attachment PMCS
- Maintenance of Significant Items (Include anticipated problem areas and items required to be maintained during the test.)
- Training Review and Critique

C.6.3.2.2 Maintainer Training (CLIN 0008 ELIN A003): Develop a training package and conduct training course to cover the unit level maintenance, troubleshooting and repair procedures required to satisfy Government testing. The maintainer training will be a simple orientation of the vehicle, its major components, the uniqueness of the system, diagnostics/troubleshooting, theory of operation and its maintainability features. This training shall last no more than 16 hours. The training package shall be delivered in accordance with Section J, Exhibit C, CDRL A003.

C.6.4 TRANSPORTABILITY REPORT (CLIN 0009 ELIN A004): The contractor shall submit a Transportability Report that includes the information requested on DI-PACK 80880B (T) in accordance with Section J, Exhibit F, CDRL A006.

C.6.5 CONTRACTOR SUPPORT OF GOVERNMENT TESTING (CLIN 0010): The contractor shall support Government testing for the entire length of the lease.

C.6.5.1 The government will provide grease, oil and lubricants, shop facilities, training facilities and heavy lift capability as required in support of test.

C.6.5.2 The contractor shall provide all other support to include all parts required to perform scheduled maintenance, all part(s) that may require replacement due to failure, special tools with a transportable means of storage, technical personnel and other requirements to support government testing on an "as-needed" basis. The contractor's representative(s) will provide advice, troubleshooting, maintenance assistance and perform repairs when needed. The contractor must be at the test site within 24 hours of notification by the government and without any additional cost to the government. The contractor shall also provide Commercial Off-The-Shelf maintenance

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procedures for the vehicle that will cover maintenance of the HMEE and its attachments at the Army Unit Level (-20) of maintenance (including, but not limited to, the maintenance procedures for tasks listed in C.6.5.4.1.1). This data will be in the contractor's format.

C.6.5.3 Contractor Support of the PPT: The contractor shall be responsible for providing all support on the HMEE candidate vehicles in accordance with paragraph C.6.5.2 above.

C.6.5.4 Contractor Support of the LUT: During the LUT, the Government wants to receive unit level maintenance comments on the systems. Government unit maintenance personnel will make initial attempts at troubleshooting and fixing any unit level maintenance problems. These attempts will be made with the contractor technical personnel present. The contractor will assist only when asked by the Government. However, the contractor may intervene, at their discretion, to prevent any damage to the equipment.

C.6.5.4.1 Supportability Demonstration: The contractor shall support and the Government shall conduct a Supportability Demonstration as part of the LUT. The demonstration will consist of nondestructive disassembly and assembly of vehicle components. The demonstration shall last no more than thirty days.

C.6.5.4.1.1 The following procedures will be performed by government soldiers during the Supportability Demonstration:

- All Crew level PMCS
- All Unit level PMCS
- Remove and replace starter
- Remove and replace hydraulic pump
- Remove and replace muffler
- Remove and replace radiator
- Remove and replace alternator
- Remove and replace brake pad/shoe
- Remove and replace bucket lift cylinder
- Remove and replace backhoe bucket cylinder
- Remove and replace hydraulic hose reel

C.6.5.4.1.2 The objectives of the supportability demonstration are:

C.6.5.4.1.2.1 Review and analyze the system design for maintainability (time or ease to perform maintenance), the need for special tools and safety while operating or maintaining the system by recording and validating the following logistics parameters for each task performed as part of the supportability demonstration. No more than two (2) mechanics shall be required for each maintenance task.

- Task time
- Tools required
- Safety of maintenance procedures
- Accuracy and completeness of the maintenance procedures and operator's equipment publications

C.6.5.4.1.3 The contractor shall prepare a SD Plan (CLIN 0011) (ELIN A005). The plan shall include a day by day schedule of events. The plan shall be in the contractor's format and additional data may be added as required. The plan shall be delivered IAW Section J, Exhibit E, CDRL A005.

C.7 SAFETY ENGINEERING AND HEALTH HAZARDS

C.7.1 Safety Engineering Principles: The contractor shall address the Safety and Health requirements of the PD in technical reviews. The contractor shall follow good safety engineering practices in establishing the HMEE designs and operational procedures, to include modifications to commercial components. The contractor shall use MIL-STD-882C in determining whether safety-engineering objectives are met. As a minimum, the contractor shall do the following:

C.7.1.1 Identify hazards associated with the system by conducting safety analyses and hazard evaluations. Analyses shall include operational, maintenance, and transport aspects of the HMEE.

C.7.1.2 Eliminate or reduce significant hazards by appropriate design or material selection. If hazards to personnel cannot be avoided or eliminated, take steps to control or minimize those hazards.

C.7.1.3 Locate equipment components and controls so that access to them by personnel during operation, maintenance or adjustments shall not require exposure to hazards. Examples of hazards to be considered include: high temperature, chemical burns, electrical shock, cutting edges, sharp points, or concentrations of toxic fumes above established threshold limit values. All moving parts, mechanical power transmission devices, exhaust system components, pneumatic components and hydraulic components which are of such a nature or so located as to be a hazard to operating or maintenance personnel shall either be enclosed or guarded. Protective devices shall not impair operational functions.

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C.7.1.4 Assure that suitable warning and caution notes are included in instructions/manuals for operation, maintenance, assembly and repairs and that distinct markings are placed on hazardous components of equipment.

C.7.2 Safety Assessment Report (SAR) (CLIN 0012 ELIN A006): As a result of system safety analyses, hazard evaluations, and any contractor independent testing, the contractor shall perform and document a safety and health hazard assessment. The safety (and health hazard) assessment shall identify all safety features of the hardware, system design and inherent hazards and shall establish special procedures and/or precautions to be observed by our test agencies and system users. Identified hazards shall have recommended engineering controls, equipment, and/or protective procedures to reduce the associated risk. It shall also outline any operations, maintenance and transport procedures needed by the test agencies and the system user. Assessments shall include consideration of the generation of hazardous wastes. The contractor shall prepare the SAR in accordance with Section J, Exhibit D, CDRL A004 DI-SAFT-80102B. The contractor shall identify Health Hazards associated with the system and incorporate them into the SAR. MIL-STD-882C shall be used in the preparation of the Safety Assessment Report and Health Hazard Assessment. In preparing the health hazard portion of the Safety Assessment Report, the contractor shall provide a description and discussion of each potential or actual health hazard issue of concern for each subsystem or component. The contractor shall include classification of severity and probability of occurrence, and when the hazards may be expected under normal or unusual operating or maintenance conditions. Include in the SAR copies of Material Safety Data Sheets (MSDS) for all hazardous materials incorporated into the system. Identify all data sources for the SAR. Examples of hazards to be included in the report are:

C.7.2.1 Sharp edges/moving parts.

C.7.2.2 Noise: Identify any hearing protection and type required, (e.g., single, double, muffs, or plugs). Identify the 85-dB (A) noise profile around the vehicle.

C.7.2.3 Electrical issues.

C.7.2.4 Whole body vibration: Provide test data, or perform equivalent testing, conforming to the guidelines and measuring procedures set forth in ISO2631-1 and SAEJ1013.

C.7.2.5 Toxic fumes (exhaust emission hazards) and hazardous materials, to include those formed by the introduction of the system, or by the manufacture, test, maintenance or operation of the system.

C.7.2.6 Chemical hazards: (e.g., flammables, corrosives, carcinogens or suspected carcinogens, systemic poisons, asphyxiates, including oxygen deficiencies, respiratory irritants, etc.).

C.7.2.7 Physical hazards: (e.g., acoustical energy, heat or cold stress, ionizing and non-ionizing radiation).

C.7.2.8 Biological hazards: (e.g., bacteria, fungi, etc.).

C.7.2.9 Ergonomic hazards: (e.g., lifting requirements, task saturation, etc.).

C.7.2.10 Material Safety Data Sheets for chemicals and hazardous materials.

C.7.3 The SAR shall address:

C.7.3.1 System, facility and personnel protective equipment design requirements (e.g., ventilation, noise attenuation, radiation barriers, etc.) to allow safe operation and maintenance.

C.7.3.2 When feasible engineering designs are not available to reduce hazards to acceptable levels, alternative protective and measures must be specified (e.g., protective clothing, specific operation or maintenance practices to reduce risk to an acceptable level).

C.7.3.3 Potential non- or less hazardous material substitutions and projected handling and disposal issues. The HHA will discuss the rationale for using a hazardous material and long term effects (such as potential for personnel and environmental exposure, handling and disposal issues/requirements, protection/control measures, and life cycle costs) over a non-or less hazardous material. The effects and costs should be considered over the life of the systems, including the cost of handling and disposal. Identify potential non- or less hazardous alternatives if they exist and provide a justification why an alternative cannot be used.

C.7.3.4 Hazardous material data: The HHA shall describe the means for identifying and tracking information for each hazardous material.

C.7.3.5 The HHA part of the SAR shall:

C.7.3.5.1 Identify the hazardous materials by name(s); the affected system components and processes; the quantity, characteristics, and concentrations of the materials in the system; and source documents relating to the materials.

C.7.3.5.2 Determine under which conditions the hazardous materials can release or emit materials in a form that may be inhaled, ingested, absorbed by living organisms, or leached into the environment and if the materials pose a health threat.

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C.7.3.5.3 Characterize material hazards and determine reference quantities and hazard ratings. Acute health, chronic health, carcinogenic, contact, flammability, reactivity and environmental hazards will be examined.

C.7.3.5.4 Estimate the expected usage rate of each hazardous material for each process or component for the subsystem, total system and program-wide impact.

C.7.3.5.5 Recommend the disposition of each hazardous material identified. If for any scale of operation the reference quantity is exceeded by the estimated usage rate, material substitution or altered processes shall be considered to reduce risks associated with the material hazards while evaluating the impact on program costs.

C.7.3.6 The contractor shall provide as part of the Safety Assessment Report the degree to which the vehicles supplied under this contract meet the following Federal Motor Vehicle Safety Standard for trucks over 10,000 lbs. GVW or for a vehicle of this weight class:

FMVSS 101	FMVSS 108	FMVSS 124	FMVSS 208
FMVSS 102	FMVSS 111	FMVSS 201	FMVSS 209
FMVSS 103	FMVSS 113	FMVSS 205	FMVSS 210
FMVSS 104	FMVSS 119	FMVSS 206	FMVSS 302
FMVSS 106	FMVSS 121	FMVSS 207	

As part of the SAR, the contractor, in contractor format, shall provide a cross-reference between a) obtained certifications and conducted testing to b) each listed FMVSS. The report shall contain tests that support compliance with FMVSS. It shall identify the degree of compliance with each FMVSS and discuss areas of each FMVSS, showing where the vehicle does not meet the standard".

Also, as part of the SAR, indicate compliance to SAE and ANSI for the vehicle type with a construction mission (Example: SAE/ANSI standards for the ROPS and hydraulics).

C.7.3.7 In the event the system is modified or procedural changes made after the final SAR is submitted, the contractor shall update the SAR to reflect those modifications or changes

C.8 COST AS AN INDEPENDENT VARIABLE (CAIV) REPORT

C.8.1 The contractor shall prepare a report updating the Phase I (SD) production price estimate. The status shall be briefed at the quarterly IPT meetings. The report shall be in contractor format and, as a minimum, include current estimated production price per vehicle, potential additional costs to meet requirements and/or desired capabilities, any cost or performance trade-offs the contractor may propose and all other costs that will affect the total hardware price per HMEE. The report will reflect any changes in cost and the reason for the change.

C.8.1.1 The contractor shall also prepare, as part of the CAIV report, an Economic Order Quantities chart. The contractor shall provide various production levels per month and the estimated hardware costs for each production year. This will aid the Government's program manager in an attempt to budget for the most economic order quantity in conjunction with the Department of the Army. (See Attachment 004)

C.9 TEST INCIDENT REPORTS (TIRS) (DA Pamphlet 73-1, Chapter 10): Test Incident Reports (TIRS) are the means by which data collected during Government testing will be reported. The Government will prepare TIRS in accordance with DA Pamphlet 73-1 the Army Test Incident Reporting System (ATIRS) at URL: (<http://vision.atc.army.mil/atirs/support>). Contractors shall gain access to ATIRS for the duration of the contract. The Government will input TIRS into the ATIRS system. The contractor is responsible for accessing ATIRS and obtaining all TIRS issued under this contract. The POCs for the ATIRS at Aberdeen Test center (ATC), Aberdeen, Maryland, are listed on the web page. The Government shall provide the ATIRS software at the contractor's request in accordance with the instructions at the ATIRS web site. As part of the Phase 2 (Production) proposal, the contractor shall respond to all TIRs that are categorized as critical, major, and minor using a Failure Analysis and Corrective Action Report.

*** END OF NARRATIVE C 003 ***