AGENT'S ACTIVITY SUMMA	NRY	Control Number 0024-2003-CID113-34960					
TIME, DATE, AND AGENT	SUM	MARY OF INVESTIGATIVE ACTIVITY					
0:45 Investigative		Camden AR 22-26 Jan 06 to visit Red River Army kheed Martin production facility in AR.					
01/17/2006 15:00	To RAC for review						
	, , , , , , , , , , , , , , , , , , , ,						
0:15 Investigative 01/17/2006 18:00	RAC Review: Pending additional interviews of Government and LM						
0:15 Investigative	personnel on fire control issue. These issues should be wrapped-up by End of Jan 06. To discuss with upon her return from TDY						
01/22/2006 10:00		pensed for 14 Feb 06. in 06, the second traveled from residence to					
8:30 Investigative	Texarkana, TX.						
01/23/2006 09:00	About 0900, 23 Jan 06. met with						
3:00 Investigative	Launch Rocket Sy fire control systems be systems would be the fire control systems of the fire control systems when the fire control system was the MLRS arrives testing is complet units. (NFI), that was promeet the contract at the same time; in order for testing decisions.	and all employees with Defense Red River Army Depot (DDRT), Texarkana, TX. and discussed the status of the Multiple retem (MLRS) which were delivered to DDRT lacking its. As of this date, there are six that lack the fire ut the systems had recently been delivered and the placed on the MLRS. The MLRS have been lacking stems since 14 Sep 01. The fire control systems were len, AR at the LOCKHEED MARTIN facility once the signed by the US Government. Placed that at DDRT in a condition code of D and once additional ed, the condition code is upgraded and sent to the field stated that he believed that the company. It is also the Martin stated that he believed that the company oducing the line replaceable units (LRUs) couldn't usel demands for the M270A1, spares, and HIMARS all therefore, HIMARS "borrowed" the fire control systems to be completed on the system to meet milestone and provided their documents relative to the ms and the MLRS as received by DDRT from Camden, EKHEED MARTIN.					
	systems and MLF LOCKHEED but t transfer between HIMARS.	of this date, LOCKHEED has delivered all fire control RS contracted. The issue doesn't seem to be with the Project Management Office who authorized the systems and the expenditure of MLRS funds to pay for					
01/25/2006 08:00 BADDLEY, Laura L 2:00 Investigative	About 0800, 25 J. Camden, AR.	an 06, traveled from Texarkana, TX to					
01/25/2006 10 00 BADDLEY, Laura L. 2.00 Investigative	Contract Manage related upon the Lockheed Martin inventory of the Lockheed the smissing or had be utilized their own upon the end of the River Army Depo	an 06, Quality Assurance Representative (QAR), Defense ment Activity (DCMA), Camden, AR end of the contract term on DAAH01-00-C-0109, Missiles and Fire Control (LMMFC) conducted an US Government-furnished rotable spares. LMMFC tock when they determined that some parts were een cannibalized. The rotable spares were stated that the contract the rotable spares were shipped to Red t (RRAD), Texarkana, TX to be put back into the US system.					

10/10/2002 10:58 FAX 703 692 5220

HQDA ARMY, GS DAPR-FDS

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DEPARTMENT OF THE ARMY OFFICE OF THE DEPUTY CHIEF OF STAFF, G-3 400 ARMY PENTAGON WASHINGTON, DC 20310-0400

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DAMO-SSW

7 October 2002

MEMORANDUM FOR Commander, U. S. Army FORSCOM, ATTN: AFOP-PLF, 1777 Hardee Avenue SW, Fort McPherson, GA 30330-1062

SUBJECT: Out of DAMPL Fielding Request for M270A1

- 1. Reference message from Commander, FORSCOM, 2 October 2002 subject as above.
- 2. I approve your request for immediate fielding of 19 M270A1s Multiple Launch Rocket Systems to the 2 4 FA (MLRS). This equipment will improve the unit's ability to accomplish its critical mission.

3.	The	point	of	contact	for	this	action	15
U.	11103	POHIL	U	COMIGCI	101	11110	CCHOIL	1,

DSN:

or

DAVID H. HUNTOON
Major General, GS
Director of Strategy,
Plans and Policy



DEPARTMENT OF THE ARMY

UNITED STATES ARMY AVIATION AND MISSILE COMMAND 5300 MARTIN ROAD REDSTONE ARSENAL, ALABAMA 35898-5000

REPLY TO ATTENTION OF

AMSAM-AC-TM-C

MLRS Acquisition Division

15 October 2002

SUBJECT: Contract DAAH01-00-C-0109, M270A1 LRIP III Launcher Acceleration

Lockheed Martin Missiles and Fire Control-Dallas Post Office Box 65003 Dallas, Texas 75265-0003

Dear

Lockheed Martin Missile and Fire Control - Dallas' request for Government approval to accelerate delivery of the last five (5) upgraded LRIP III M270A1 launchers utilizing slaved hardware, which is defined as the process of using the same set of Fire Control System (FCS) hardware i.e.; FCP, LIU, WIU, PSU and PNU; to test and sell-off up to five (5) M270A1 launchers, with the FCS hardware being removed following signing of the DD-250 and used on the next launcher to be tested and sold allowing LMMFC-D to invoice in full is authorized.

However, the approval to deliver is contingent upon the parties agreeing to the following:

- FCS hardware to be removed following DD-250;
- Contractor is authorized to expend and collect all cost over and above normal production,
 i.e. to install and remove slave hardware before and after PUT, final function, DD-250 and
 protection/preservation prior to Care of Supplies in Storage (COSIS). Specific tasks
 associated with protection/preservation will be provided to the contractor not later than 31
 October 2002;
- Warranties to remain until hand-off if agreed upon COSIS procedures are followed.

If you have any further comments or questions on this matter you may contact the undersigned at telephone

Sincerely,

Contracting Officer

AGENT'S INVESTIGATION REPORT	ROI NUMBER 0024-03-CID113-34960
CID Regulation 195-1	Page 1 of 1 Page(s)
DETAILS:	
About 0830, 8 Dec 05, fine properties interview. Acquisition Center (AC), regarding her knowled Rocket System (MLRS) weapon system.	red Contract Specialist, AMCOM dge of questioned issues related to the Multiple Launch
Fires Rockets Missiles Sensors Project Office (the TDLs but began doing so around 1998. TDL to the AC and her supervisor. LOCKHEED MARTIN (LM) legal counsel.	
Agent's Note: TDLs are only issued under the LM on the MLRS.	Industrial Engineering Services (IES) contracts awarded to
fire control systems. provided a five M270A1 launchers utilizing fire control syst signature on the DD Form 250. prior to authorizing LM the acc the PFRMS PO signed on the DD Form 250 ac the fire control systems and use them on the H systems being assets of the project office.	rizing LM to accelerate delivery of MLRS launchers lacking letter she authored on 15 Oct 02 authorizing LM to deliver tems which would then be removed, after acceptance related that she had coordinated with AMCOM Legal Counsel celerated delivery and that the permoved had opined that once coepting the launchers, then the PFRMS PO could then take IIMARS weapon system if they wanted to due to both weapon provided a memorandum detailing the actions of approved the accelerated delivery in support of Operation
would pay back the MLRS program. attempting to obtain the additional funding to pay	stated that in October 2002 the HIMARS program was ay back the MLRS program, \$4 Million, but as of this date, gram with the five fire control systems given in October 2002.
LM paid for delivery. If the program office shift such an act and could not be held responsible	td, the assets are under the control of the program office and its assets between the programs, LM is not responsible for for non-delivery of contracted deliveries. AST ENTRY////////////////////////////////////
TYPED AGENT'S NAME AND SEQUENCE NUMBER	GREANIZATION Huntsville Fraud Resident Agency U.S. Army Criminal Investigation Command Redstone Arsenal, AL 35898
SIGNATURE	DATE EXHIBIT 8 Dec 05

AGENT'S INVESTIGATION REPORT	ROI NUMBER 0024-03-CID113-34960
CID Regulation 195-1	Page 1 of 1 Page(s)
DETAILS	
(LMMFC) conducted an inventory of the US Govern stock when they determined that some parts were related that LMMFC utilized their own funds to buys the contract the rotable spares were shipped to Rei	nent Activity (DCMA), Camden, AR. 101-00-C-0109, Lockheed Martin Missiles and Fire Control nment-furnished rotable spares. LMMFC replenished the missing or had been cannibalized. Is the parts. Is the parts. Is the parts. Is the parts. Is the parts of the protection of the rotable spares was withey determined the condition code.
HIMARS weapon system due to the fact that HIMA	funding was lacking. Due to the delays and lack of
In January 2006, six M270A1 fire control systems vigiven to the HIMARS program years ago.	were delivered to Red River Army Depot to replace those
Agent's Note: The MLRS Program Manager's Office program from HIMARS.	ce doesn't have \$4,000,000 00 to repay the M270A1
short the M270A1 fire control systems and he com	tions from the procuring contracting officer (PCO) to ship plied with those orders. ENTRY////////////////////////////////////
TYPED AGENT'S NAME AND SEQUENCE NUMBER	ORGANIZATION Huntsville Fraud Resident Agency U.S. Army Criminal Investigation Command Redstone Arsenal, AL 35898

SIGNATURE

DATE

25 Jan 06

EXHIBIT

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Page 21

The contractor shall ensure that his major subcontractors initiate and maintain a vendor quality conformance program. Approval of such vendor quality conformance program, as establish by the major subcontractors, shall be the responsibility of the prime contractor.

E-18 PRODUCTION RELIABILITY ACCEPTANCE TEST (PRAT) FOR M270 LAUNCHER

- (a) Immediately subsequent to the completion of quality conformance inspection IAW the TDP, each completely assembled MLRS Launcher shall be run through an integrated 50 km road/field test and 40 firing cycles. A firing cycle is defined as all nonmobile operations of the Launcher required to fire a launcher load of rockets. The load, emplace, lay-ready-fire, and unload operations at least 8 of these cycles shall be ordered as in actual tactical operations and utilize the range and aim points approved in the Production Reliability Acceptance Test Plan, 4-40,000/2R-158 under contract DAAH01-80-C-0681. The remaining cycles shall be structured by the contractor to accommodate test efficiency provided the Government's approval is obtained for the proposed firing cycle equivalents. Rocket pod containers (RP/Cs) used in the performance of the PRAT shall be hallasted and configured to simulate the functions of a tactical RP/C. If no failures occur, it shall be accepted. If one failure occurs anywhere in the sequence of the first 40 cycles, the 40 cycle test shall be repeated. If more than one failure occurs in the 80 cycles, the test shall be terminated and the Launcher rejected. A failure is defined as the inability of the Launcher to execute the integrated 50 km mad/field test and 40 firing cycles without repair. Ballasted RP/Cs accountable under contract DAAH01-80-C-038 and used to conduct PRAT under contract DAAH01-80-C-0881 are to be used in the performance of PRAT for this contract. No ballasted RP/Cs shall be produced under this contract.
- (b) When a reject decision is reached or a failure pattern is determined, the contractor shall notify the procuring activity within 2 working days of the condition and shall implement corrective action. The contractor shall also notify the procuring activity of the corrective action to be taken, and the impact on the program and the hardware reliability.
- (c) Results of PRAT, including failure analysis as applicable for each launcher tested, shall be prepared IAW DI-QCIC-81187.

E-19 WARRANTY:

(a) Definitions:

- (1) Acceptance. The execution of an official document (DD Form 250) by an anthorized representative of the Government.
- (2) Defect. A condition or characteristic of the warranted items that is not in compliance with the requirements of this contract.
- (3) Defect Free Warranty. A warranty that provides a period of time during which the contractor repairs or replaces, at no increase in contract price, all design, manufacturing, material and workmanship defects that existed in the warranted item at the time of acceptance or that were injected into the warranted items by the contractor during the repair or replacement of the items.
- (4) Handoff. The point at which the Government turns the items over to the using (military) unit(6) (usually by a material fielding team), and the DA Form 5666-R is signed.



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- (5) Individual Item Coverage. Warranty coverage that requires individual warranty claim actions for each defect. These claim actions will be made only on a warranted item when the item or a component of that item is sent to either the intermediate/general support facility or the higher level maintenance facility for repair or replacement.
 - (6) Repair. The elimination of a defect.
- (7) Systemic Defect. Defects of a repetitive nature which are of the same root cause and affect a specific group or population of items.
- (8) Systemic Defect Coverage. Warranty coverage, providing systemic defect protection to the lowest level of impact or expense, requires a contract remedy IAW this contract and applies to all warranted items under systemic defect coverage.
- (9) Warranted Item. The Armored Vehicle Mounted Rocket Launcher, and each component thereof, and the Tactical and Reduced Range Training Rocket Pod (to include the rocket), and each component thereof.
- (10) Warranty Periods. (1) Individual item coverage begins with Government acceptance (DD 250) of each warranted item and ends with handoff of the warranted item. (2) Systemic defect coverage begins with Government acceptance (DD 250) of the first warranted item and ends 36 months after acceptance of the last warranted item. The coverage includes all systemic defects occurring during this period.
- (b) Warranty Requirements. Notwithstanding inspection and acceptance by the Government of the warranted items furnished under this contract or its provisions regarding the conclusiveness thereof, the contractor warrants during the warranty period that the warranted items:
 - (1) Will conform to the design and manufacturing requirements of this contract.
 - (2) Were free from all defects in material and workmanship when accepted by the Government.
- (3) Will conform to all the performance requirements specified in the Production Configuration Identification (PCI) Technical Data Package (TDP), and as further defined in the following requirements specified in Section E of this contract: Environmental Stress Screening, Microcircuit and Semiconductor Receiving Inspection, Soldering and Assembly, Production Reliability Acceptance Test for M270 Launcher, and Fly-to-Buy Lot Acceptance.

(c) Warranty Coverage

- (1) Individual Item Coverage: From acceptance through handoff, the contractor shall provide a defect free warranty.
- (2) Systemic Defect Coverage: From acceptance through the end of the warranty period, the contractor shall provide a systemic defect warranty.

(d) Warranty Procedure

- (1) The contractor shall provide the materials and services necessary to implement this warranty and shall assign a single point of contact to communicate with the Government on all warranty related items.
- (2) Individual Item Coverage: In the event a warranted item does not meet the conditions specified in this contract, the Government will provide written notification to the contractor within 90 days of the date of

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discovery of the defective item. The contractor, notwithstanding any disagreement with the Government regarding this warranty, shall promptly comply with the direction provided by the Contracting Officer to either correct or partially correct the defective item at no increase in the contract price. Unless agreement has been obtained from the Government, repair or replacement of the defective item shall be accomplished within 10 days after receipt of the item at the contractors facility. If it is determined at a later date that the defective item was not subject to the provisions of this warranty, the contract price will be equitably adjusted.

- (3) Systemic Defect Coverage: In the event a warranted item does not meet the conditions specified in this contract and the defect is systemic, the Government will provide written notification to the contractor within 60 days of the date that the defect is determined to be systemic. In the event that the systemic defect coverage is invoked, the contractor shall prepare a corrective action plan IAW DI-RELI-80254. Upon Government approval of the plan, the contractor shall take corrective action at no increase in the contract price. The corrective action shall provide for the repair/replacement/retrofit of the warranted item on an inventory-wide or total asset basis when applicable. This action shall include redesign of the item if redesign is required to meet the requirements of this contract.
- (4) Government or contractor repaired/replaceditems or parts shall be warranted to the end of the original warranty periods stated above.
 - (5) The contractor shall provide Warranty Performance Reports IAW DI-MNTY-81217.
- (e) TransportationCosts. When warranted items are returned to the contractor pursuant to this warranty, the Government will pay cost of transporting defective/failed warranty items to the contractor's repair facility. If the warranty claim is determined to be valid, the contractor shall reimburse the Government for the cost of transporting items to the contractor's repair facility and pay cost of transporting repaired/replaceditem to the appropriate depot.
 - (f) Exclusions
- (1) The contractor shall not be obligated to repair or replace warranted items if the facilities, tooling, drawings, or other equipment necessary to accomplish the repair or replacement is not available to the contractor by action of the Government. In the event that repair or replacement is directed by the Government, the contractor shall promptly provide written notification to the Contracting Officer of the nonavailability. The unavailability of this specific remedy does not affect other available remedies.
- (2) For the purpose of this warranty, the term "performance requirements" does not include performance characteristics that are described as goals or objectives.
- (3) All implied warranties, including but not limited to warranties of merchantability and "fitness for a particular purpose," are excluded from any obligation contained in this contract.
 - (4) The provisions of this warranty do not apply to:
 - (i) Items damaged in combat.
 - (ii) Liability for loss, damage, or injury to third parties.
- (iii) Items with defects which are beyond the control of, and not attributable to, to the contractor. Such items are those which have been damaged through willful misconduct; accident; misuse; abuse; improper installation or application; unauthorized maintenance or maintenance not executed IAW applicable technical

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manuals; negligence in storage; negligence in transportationor handling; catastrophic damages such as fire, flood, and explosion; or an act of God.

- (iv) Items with faded or chipped paint, scratches, dents, nick, or any other cosmetic damage resulting from usual and customary use.
- (5) Government-furnished property (GFP) shall be warranted only to the extent of proper installation so as not to degrade its performance or reliability. If the contractor modifies or otherwise performs work on the GFP, this warranty shall extend to such modification or other work.

(g) Other Rights and Remedies:

- (1) The Government shall not be responsible for any extension or delay in the scheduled deliveries or periods of performance under this contract as a result of the contractor's obligation to repair or replace defective items. Furthermore, there shall not be any adjustment of the delivery schedule or periods of performance as a result of the repair or replacement of defective items unless provided for by the inclusion of a supplemental agreement, with adequate consideration to the Government, to this contract.
- (2) The rights and remedies of the Government provided for in this warranty are in addition to, and do not limit, the rights the Government has under any other clause of this contract. Disputes arising regarding this warranty will be resolved IAW the clause of this contract entitled Disputes."
 - (3) The rights and remedies of the Government provided for in this warranty shall survive final payment.
- (4) This warranty shall not be voided by any Government performed repair of any warranted item when accomplished IAW standard military service maintenance procedures. This includes the substitution of parts procured by the Government from any other source except for the substituted part.
- (5) If the contractor fails to repair or replace defective parts in the time specified, the contractor shall pay the costs incurred by the Government in procuring such parts and in accomplishing the repair/replacement.
- (6) If the Government determines that repair or replacement of defective parts is not required, the Government shall be entitled to an equitable adjustment in the price of such parts.

E-20 COMPONENT SAFETY

The contractor shall establish a Government approved Critical Safety Item Program (CSIP) IAW this SOW prior to the delivery of the first production unit. The contractor shall document the CSIP in a plan prepared IAW DI-RELI-80685. The program shall include the following elements.

- (a) Identification and designation of a Critical Safety Item (CSI) and characteristic list. The CSI and characteristic list shall include the identification of all CSI items by nomenclature, contractor part number, critical characteristic or attribute, and test or inspection required. The CSI list shall consist of all items containing a critical characteristic (CC) identified in the supplementary quality assurance provisions (SQAP) or specification for that item.
- (b) Validation of Requirements. The requirements affecting CSIs shall be validated to ensure that all critical safety aspects of the design are accurately reflected.

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Hoist, Rocket Pod	13027524	511466	A4	1	32,980.00		12278.45	45,258.45	
Hoist, Rocket Pod	13027524	511745		1	32,980.00		12278.45	45,258,45	
Control Assy, Elect	13029120	472057	B5	1	7,454,00		2775.12	10,229.12	
Control Assy, Elect	13029120	472502	A4	1	7,454.00		2775.12	10,229.12	
FCU 130201125	13210265	413048	A4	1	41,687.00	0.3723	15520.07	57,207.07	
FCU 130201125	13210265	413068	A4	1	41,687.00	0.3723	15520.07	57,207.07	
FCU 130201125	13210265	413051	A4	1	41,687.00		15520.07	57,207.07	
FCU 130201125	13210265	413072	A4	1	41,687.00	0.3723	15520.07	57,207.07	
FCU 130201125	13210265	413055	A4	1	41.687.00	0.3723	15520.07	57,207.07	
FCU 130201125	13207593	410921	A4	1	41,687.00	0.3723	15520.07	57,207.07	
Boom Controller	13031127	1000008	A4	1	1,161.00	0.3723	432.24	1,593.24	
FCP 13031129	13209110	531175	A4	1	21,459.00	0.3723	7989.19	29,448.19	
EU	13210269	57779		1	68,699.00	0.3723	25576.64	94,275 64	
EU	13210269	572116		1	68,699.00	0.3723	25576.64	94,275.64	
EU	13210255	573027		1	68,699.00	0.3723	25576.64	94,275.64	
EU	13210255	573125	A4	1	68,699.00	0.3723	25576.64	94,275 64	
EU	13210255	573087	A4	1	68,699.00	0.3723	25576.64	94,275.64	
EU	13210255	573154	A4	1	68,699.00	0.3723	25576.64	94,275.64	
Gear Box	13026550	1 860316	A4	1	14,535 45	0.3723	5411.55	19,947.00	
Gear Box	13026550	861400	A5	1	14,535.45	0.3723	5411.55	19,947.00	
Control Assy	13026553	452532	A5	1	5,368.95	0.3723	1998.86	7,367.81	
Actuator, Travel Lock	13026653	351063		1	8,642.70	0.3723	3217.68	11,860,38	
Transmission Brake	13026663	171510		1	14,753.70	0.3723	5492.80	20,246.50	
Motor, AZ Servo	13027126	321325		1	14,892.00	0.3723	5544.29	20,436.29	
Motor, AZ Servo	13027126	231449		1	14,892.00	0.3723	5544.29	20,436.29	
Motor, AZ Servo	13027126	231456		1	14,892.00	0.3723	5544.29	20,436.29	
Motor, EL Servo	13027127	241339		1	16,776.00	0.3723	6245.70	23,021.70	
Coupling Half	13027121-2		A1	3@	476.13		177.26	653.39	
Transducer, AZ	13027536	290371	A5	1	4,047.53		1506.90	5,554.43	
Transducer, AZ	13027536	291541	A4	1	4,047.53		1506.90	5,554,43	
Transducer, AZ	13027536	290533		1	4,047.53		1506.90	5,554 43	
EB	13032070	183009		1	1	0.3723	0.00	0.00	
EB	13032070	183147		1	1	0 3723	0.00	0.00	
PIM	13210270	651211	B7	1	1	0.3723	0.00	0 00	

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PIM	13209125	651334	A4	1		0.3723	0.00	0 00
PIM	13209125	651521	A4	1		0.3723	0.00	0.00
EL Valve Mod Assy	13027131	461	A4	1	7,196.30	0.3723	2679.18	9,875 48
EL Valve Mod Assy	13027131	548	A4	1	7,196.30	0.3723	2679.18	9,875.48
Micro Cir.	13207802		CONSUME	4@		0.3723	0.00	0 00
Micro C(r.	13207803		CONSUME	2@		0.3723	0.00	0.00
EMI Filter	91020-01N	XX	CONSUME		Q	0.3723	<u>0.00</u>	0,00
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Offers must acknowledge receipt of this	amendment prior I	io the hour and	dele specified	l in the solicite	thion or as amended by
one of the following methods:					
(a) By completing Items 8 and 15, and	returning co	pies of the ame	ndments; (b) B	y ocknowledging	receipt of this amendment
on each capy of the offer submitted;	or (c) By set	parate letter or	telegram whic	ch includes a r	eference to the solicitation
and amendment numbers. FAILURE OF YO	UR ACKNOWLEDGMENT	TO BE RECEIVED	AT THE PLACE	DESIGNATED FOR	THE RECEIPT OF OFFERS PRIOR
TO THE HOUR AND DATE SPECIFIED MAY	RESULT IN REJECTION	OF YOUR OFFER.	If by virtue	of this amendm	ent you desire to change an
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B. THE ABOVE NUMBERED CONTRACT/ORDER : etc.) SET FORTH IN ITEM 14, PURSUANT TO			E CHANGES (such	as changes in pa	ying office, appropriation data.
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Except as provided herein, all terms and condition	s of the document ref.	orenced in Item 9A :	or 10A, as hereta	fore changed remo	ing unchanged and in full
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Page 1A

Loral Vought Systems Corporation

SIGNATURE PAGE

MLRS International Corporation P.O. Box 650003, Mailstop MC-09 Dallas, TX 75265-0003 By: Name and Title: PRESIDENT, MIC	Date: 5/9/95
Loral Vought Systems Corporation P.O. Box 650003, Mailstop MC-09 Dallas, TX 75265-0003 By: Name and Title:	Date: 5/9/95
U.S. Army Missile Command ATTN: AMSMI-AC-CBCB Red By: Name and Title: MAJ, EN Contracting Officer (Contracting Officer)	Date:5/10/95

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Name of Offeror or Contractor	LORAL VOUGET SYS	STERS CORP			

"ION A - SUPPLEMENTAL INFORMATION

A-I PREAMBLE

22001

WHEREAS, THERE IS NOW IN FORCE BETWEEN THE PARTIES HERETO A NOT-TO-EXCEED CONTRACT IDENTIFIED AS LETTER CONTRACT DAMAGI-94-C-A005 REPRENAFTER REFERRED TO AS LETTER CONTRACT; AND

WHEREAS, BY THE TERMS OF SAID LETTER CONTRACT THE PARTIES UNDERTOOK TO REGULATE FOR THE EXECUTION OF A MORE DEFINITIVE AGREEMENT, AND NOW HAVING CONSUMMATED THEIR REGULATION TO THAT END, DESIGE TO SUPERSEDE THE LETTER CONTRACT BY SAID DEFINITIVE AGREEMENT; AND

NOW. THEREFORE, IT IS UNDERSTOOD AND MUTUALLY AGREED BETWEEN THE PARTIES THAT:

- 1. This Hadification PZ0008 is entered into pursuant to and supersedes the Letter Contract and constitutes the definitive contract contemplated by the Letter Contract, which contract is completely set forth in the following pages; except that those documents previously previded to the contractor and not herein changed are incorporated by reference. The Letter Contract as modified to date, is incorporated by this superseding contract except to the extent changed by this superseding contract.
- 2. In the event that this modification contains provisions which may be construed to be inconsistent in any particular way with the provisions of the Letter Contract, then the provisions of this Modification PZ0008 shall be deemed to state the complete agreement and intent of the parties hereto and any rights, duties, and obligations created by the provisions of the Letter Contract which are inconsistent with the terms of this modification are hereby waived, cancelled, and released.

THIS HODIFICATION DEFINITIZES THE LETTER CONTRACT WHICH IS HEREBY SETTLED AT A FIRM-FIXED PRICE AMOUNT OF \$174,130,646.00 IN ACCORDANCE WITH THE CLAUSE ENTITLED "CONTRACT DEFINITIZATION." CLIN PRICES ARE AS SPECIFIED BELOW:

A-3 CLIN UNIT PRICES

		UNIT PRICE	917	TOTAL
<u>u.s</u> .				
	OOGLAA U.S. LAUNCHERS	\$2,033,927	34	\$ 69,153.518
	OOGAA U.S. FRPR RPC'S	50,055	955	47,803,480
	OOMAE U.S. RPPR RPC'S	50,056	185	9,260,360
	TOTAL U.3.			\$126,217,358
<u> SRAEL</u>				
	0005AA ISRAEL LAUNCHERS	\$1,937,561	6	\$ 11,625,366
	OOMAA ISRAEL TACTICAL RPC'S	42,484	119	5,055,596
	OUMAB ISRAEL TACTICAL RPC'S	42,484	2	84,968
	OOMAB ISKAEL REPE EPC'S	50,056	24	1,201,344
	DOMAC ISRAEL REPR RPC'S	50,055	95	<u>a.805,376</u>
	TOTAL ISRAEL			\$ 22,772,650
JAPAN				
	OOGAD JAPAN ERPE EPC'S	\$ 51,768	12	\$ 621,216
	OOBAA JAPAN RRPR RPC'S	51 ,768	21	1,087,128
	DOSSAA JAPAN TACTICAL RECTS	57,022	36	2,052,792

CONTINUATION SHEET	Reference No. of Document t	Seing Continu	ed	Page
OOMMON OFFICE	DAAH01-94-C-A005	нор.	No.: 20008	<u>(3 %r 55</u>
Name of Offeror or Contractor LORAL VOUGET SYSTEM	es corp			
000BAB JAPAN TACTICAL RPF'S	57,622	1	57,022	
TUTAL JAPAN			\$ 3,818.158	
GPEECE				
0007AA GREECE LAUNCHERS	\$2,234.302	9	\$ 20,108,718	
0006AA GREECE ERPE RPC'S	55,171	22	1.213.762	
TOTAL GREECE			\$ 21.322.480	
GRAND TOTAL - ALL CLINS			\$174,130.546	

THE ORIGINAL CONTRACT NTE FOR CLIN 0005AA WAS ESTABLISHED AT \$11,296,000. THE FINAL NEGOTIATED PRICE INCLUDES AN EQUITABLE ADJUSTMENT TO THE NTE OF \$782,032.00 TO COVER ADDITIONAL COSTS FOR OZONE DEPLETING CHEMICAL. DESOLESCENCE AND SOURCE VALIDATION TEAM EFFORTS. THIS ADDITIONAL EFFORT WAS NOT INCLUDED AS PART OF THE ORIGINAL CONTRACT NTE PRICE AND IS HEREBY ADDED AS AN EQUITABLE ADJUSTMENT TO THE CONTRACT NTE PRICE AS PEFLECTED BY THE FINAL NEGOTIATED PRICE.

THE DRIGINAL CONTRACT RITE FOR CLIN 0007AA WAS ESTABLISHED AT \$17,719,506. THE FINAL NEGOTIATED PRICE INCLUDES EQUITABLE ADJUSTMENTS OF \$1,159,464 AND \$2,871,119. THE ADJUSTMENT OF \$1,159,464 IS TO COVER ADDITIONAL COSTS FOR OZONE DEPLETING CHEMICAL, DESOLESCENCE, AND SOURCE VALIDATION TEAM EFFORTS. THE ADJUSTMENT OF \$2,871,119 IS TO COVER ADDITIONAL ADMINISTRATIVE COSTS FOR THE IMPLEMENTATION OF THE GREEK OFFSET PROGRAM BY THE CONTRACTOR. THESE ADDITIONAL COSTS WERE NOT INCLUDED IN THE ORIGINAL CONTRACT NIE AND ARE HEREBY ADDED AS EQUITABLE ADJUSTMENTS TO THE CONTRACT NIE PPICE AS REFLECTED BY THE FINAL NECOTIATED PRICE.

A-3 THE FOLLOWING ADDITIONAL AND REVISED CLAUSES ARE REPEBY INCORPORATED INTO THE PROVISIONS AND REQUIREMENTS OF THE CONTRACT.
ALL OTHER PREVIOUSLY INCORPORATED VERSIONS, IF ANY, ARE HEPEBY DELETED:

SECTION B THE CLARSE ENTITLED "BULK STORAGE MEMORY UNITS (BSMU) PART NUMBER 13210267." H-1.

THE CLAUSE ENTITLED "REOPENER FOR NOT-TO-EXCEED (NTE) SUBCONTRACTS." H-14.

THE CLASSE ENTITLED "RENT-FREE AUTHORIZATION FOR COVERNMENT FURNISHED PROPERTY (GFP)," H-15.

THE CLARSE ENTITLED "INITIAL PRODUCTION FACILITIES," H-8

THE CLAUSE ENTITLED "SPECIAL TOOLING, SPECIAL TEST EQUIPMENT, AND SPECIAL INSPECTION EQUIPMENT," $H\!-\!12$

THE CLAUSE ENTITLED "MAKE OR BUY PLAN," H-19

THE CLAUSE ENTITLED "PROVISION FOR USE OF COVERNMENT FURNISHED MATERIAL." H-20

SECTION C - THE CLAUSE ENTITLED "DIMINISHING HARDFACTURING SOURCES AND MATERIAL SHORTAGES (DHSMS)," C-11.

THE CLAUSE ENTITLED "SUBMISSION OF REWS," C-1

THE CLAUSE ENTITLED "SERIALIZATION/LOT CONTROL," C-3

THE CLAUSE ENTITLED "ENGINEERING CHANGE PROPOSALS," C-6

SECTION E - THE CLAUSE ENTITLED "WARRANTY," E-19. (WARRANTY PROVISIONS ARE APPLICABLE TO CLINS 0001AA, 0004AA, AND 0004AE).

THE CLASSE ENTITLED "QUALIFICATION OF SUPPLIEPS." E-8

THE CLAUSE ENTITLED "ENVIRONMENTAL STRESS SCREENING (ESS)," E-9

THE CLAUSE ENTITLED "INSPECTION AND ACCEPTANCE," E-11

CONTINUATION SHEET		Reference No. of Document Saing Continued Page		
		DAAH01-94-C-A003	HOD, No.: _0008	4 of 55
Name of Offerer or Confractor	LORAL VOUGHT SYSTEM	S CORP		

THE CLAUSE ENTITLED "MICROCIRCUIT AND SEMICONDUCTOR RECEIVING INSPECTION PROGRAM," E-15

THE CLAUSE ENTITLED "SOLDERING AND ASSEMBLY REQUIREMENTS," E-16

THE CLAUSE ENTITLED "QUALITY VERIFICATION TESTING (QVI)," E-23

THE CLAUSE ENTITLED "STATISTICAL PROCESS CONTROL," E-25

SECTION (- THE CLAUSE ENTITLED "REPORTING OF COMMERCIAL TRANSACTIONS WITH THE COVERNMENT OF A TERRORIST COUNTRY," AFARS 252.209-7004, (SEP 94).

THE CLAUSE ENTITLED "CHANGES OF ADDITIONS TO MAKE OF BUY PROGRAM" FAR 52.215-21 (APR 84).

- A-5 THE TOTAL PRICE FOR CLINE 0006AA AND 0007AA INCLUDES COSTS ASSOCIATED WITH THE CONTRACTOR IMPLEMENTATION OF GREEK OFFSETS ONLY AS THEY RELATE TO THE NEW PRODUCTION OF 9 LAUNCHERS AND 22 REDUCED RANGE PRACTICE ROCKETS UNDER THE TERMS AND CONDITIONS OF THIS CONTRACT. NO OTHER GREEK OFFSET COSTS ARE APPLICABLE TO THIS CONTRACT.
- A-6 PARACRAPH E-22 ENTITLED "FLY TO BUY LOT ACCEPTANCE OF THE CONTRACT IS HERENY DELETED IN ITS ENTIRETY.
- A-7 THE REVISED OZONE DEPLETING CHEMICAL ATTACHMENT ENTITLED "TAILORING OF SPECIFICATIONS" DATED 17 JAN 95 IS REREBY INCORPORATED INTO THE CONTRACT AS ATTACHMENT "07". THE PREVIOUSLY INCORPORATED TAILORING IS HEREBY DELETED.
- A-8 THE SCOPES OF WORK (SOW) ENTITLED "OZONE DEPLETING CHEMICALS" AND "MLRS PARTS OBSOLESCENCE" ARE HERREY INCORPORATED AS ATTACHMENTS 09 AND 10 RESPECTIVELY.
- A-9 THE CONTRACT DELIVERY SCHEDULE IS HEREBY REVISED AS DEPICTED AT CLIN LEVEL OF THIS MODIFICATION.
- A-10 ATTACHMENT ENTITLED, "SUBCONTRACTING PLAN FOR SMALL AND SMALL DISADVANTAGED BUSINESS CONCERNS," DATED 13 APRIL 1995, IS INCORPORATED INTO THE SUBJECT CONTRACT AS ATTACHMENT 08, ALL OTHER PLANS INCORPORATED ARE DELETED IN THEIR ENTIRETY.
- A-11 ATTACHMENT ENTITLED "LIST OF ROTABLE SPARES" HEREBY IS INCORPORATED AS ATTACHMENT "11" TO THE CONTRACT. THE SPARES SHALL BECOME THE PROPERTY OF THE GOVERNMENT AT THE END OF THE CONTRACT WARRANTY PERIOD. SPARES NOT CONSUMED IN THE PERFORMANCE OF THE WARRANTY REQUIREMENTS SHALL BE SUBJECT TO DELIVERY TO THE GOVERNMENT "AS IS" AS DEFINED BY THE GOVERNMENT PROPERTY CLAUSE.
- A-12 BY EXECUTION OF THIS MODIFICATION PZODOS TO CONTRACT DAMBOI-94-C-A005, LVS AND THE MLRS INTERNATIONAL CORPORATION AGREE TO BE JOINTLY AND SEVERABLY RESPONSIBLE FOR PERFORMANCE OF CLINS 0008 AND 0009 ONLY. LVS REMAINS SOLELY RESPONSIBLE FOR ALL OTHER PERFORMANCE.
- A-13 EXCEPT AS PROVIDED IN A-3 ABOVE, CLAUSE ENTITLED "REOPEMER FOR NOT-TO-EXCEED (NTE) SUBCONTRACTS," THIS MODIFICATION CONSTITUTES COMPLETE, FULL, AND FINAL SETTLEMENT FOR ALL THE CONTRACTUAL CHANGES OF THIS MODIFICATION. THE PARTIES HEREBY MUTUALLY RELEASE EACH OTHER FROM ANY AND ALL LIABILITY UNDER THIS CONTRACT FOR FURTHER EQUITABLE ADJUSTMENTS ATTRIBUTABLE TO SUCH FACTS OR CIRCUMSTANCES GIVING RISE TO THESE CRANGES.

(End of narrative A006)

Attachment 02

DAAH01-94-C-A005 PZ0008 Page 45

E-19 Warranty

1. Definitions:

- a. Acceptance. The execution of an official document (DD Form 250) by an authorized representative of the Government.
- b. Correction. The elimination of a defect by repair or replacement.
- c. Supplies. The end items furnished by the Contractor required under this contract. The word does not include "data."
- d. Defect. Any condition or characteristic in any supplies or services furnished by the Contractor under this contract that is not in compliance with the requirements of this clause and Section E of this contract.
- e. Design and manufacturing requirements. Include measurements, tolerances, materials and finished product tests, as specifically defined in the following Engineering Release Records (ERR's) and approved ECP's listed in Attchment 3 of contract:
- (1) Launcher, Rocket, Armored Vehicle Mounted; M270, ERR MI-C0904, part number 13029700-203.
- (Z) Rocket Pod; 298MM, M26, ERR MI123360, part number
- (3) Reduced Range Practice Rocket, 13031950, part number TBD
- f. Defect Free Warranty. A warranty that provides a period of time during which the Contractor repairs or replaces, at no increase in contract price, all manufacturing, material and workmanship defects that existed in the warranted item at the time of acceptance.
- g. Handoff. The point at which the Government turns the items over to the using (military) unit(s), excluding foreign military customers (defined as Ft. Sill, Ok.) and the DA Form 5666-R is signed.
- h. Essential Performance Requirements. The performance requirements specified in Section 3 of the Product Specifications and drawings listed on the Engineering Record Release of the warranted items, approved ECP's listed in Attachment 3 of the contract, and any amendments thereof.

- i. Individual Item Coverage. Warranty coverage that requires individual warranty claim actions for each defect. These claim actions will be made only on a warranted item when the item or component of that item is sent to either the intermediate/general support facility or the higher level maintenance facility for repair or replacement.
- j. Systemic Defect. Defect of a repetitive nature which are of the same root cause and affect a specific group or population of items. Root cause analysis will be conducted by the Government in accordance with technical report RF-75-2 entitled "Root Cause Analysis A Diagnostic Failure Analysis Technique for Managers." The root cause analysis findings shall be the basis of any determination of a systemic defect. Any failure which is covered pursuant to paragraph 2.c.(i) shall not be considered a systemic defect. If a performance failure is later classified as a systemic defect, systemic warranty coverage shall apply.
- k. Systemic Defect Coverage. Warranty coverage that provides protection to the lowest level of impact or expense within the affected subsystem for defects which requires a contract remedy that may cover all contract deliverables. In no event shall a defect be considered systemic if corrective action would require a design (technical data package) change under this contract to the item.
- l. Failure. Breakage of a part, malfunction of a part, or damage to a part, which renders it unserviceable, or a condition which causes or would cause a warranted item to fail to meet any performance requirements. A failure is also a defect.

2. Specific Warranties

a. Design/Manufacturing Warranty

The Contractor warrants that beginning at acceptance (DD 250) and ending at handoff (or 9 months after acceptance) which ever occurs first, the M270 Launcher furnished under this contract shall be free from defects in design and manufacturing requirements defined in Paragraph 1. of this clause or any amendments to the contract.

b. Materials and Workmanship Warranty

The Contractor warrants that beginning at acceptance (DD 250) and ending at handoff (or 9 months after acceptance) which ever occurs first, the M270 Launcher furnished under this contract shall be free from all defects in materials and workman-ship.

c. Performance Warranty

- (i) For the period from Government acceptance until the end item is handed off to the user (or 9 months after acceptance, which ever occurs first) as verified by the applicable handoff document, the Contractor warrants that the M270 Launcher(s) will conform to all essential performance requirements as defined in 1.h. While the launcher(s) are at Red River Army Depot (RRAD) or at the handoff location, Government personnel shall notify the Contractor directly at the address stated in Paragraph 7 of suspected defects. A Contractor representative shall verify the suspected defect prior to removal of any hardware from the launcher and remove the defective item.
- (ii) To insure prompt notification to the Contractor of possible damage incurred during shipment of the launcher to RRAD or the handoff location, the Government will conduct an incoming and cyclic inspection within 15 days of receipt.
- (iii) It is the Government's responsibility, before shipment from RRAD, to perform pre-shipment inspections to assure that the end item is operational. Appropriate certification of such inspection shall be maintained with each launcher and shall be available to the Contractor for verification upon delivery of the end item to the U.S. Army Fielding Team.
- (iv) The Contractor shall provide the materials and services necessary to implement this warranty and shall assign a single point of contact to communicate with the Government on all warranty related items.
- (v) The Rocket Pod is not covered by the performance warranty.
 - d. Systemic Warranty; applicable to all hardware:
- (1) The Contractor warrants that it will provide systemic defect coverage for design/manufacturing, materials and workmanship defects of which it is notified during the applicable systemic warranty period.
- (2) When the Government suspects that a systemic defect exists, the Government, at Government expense, will conduct a root cause analysis using any applicable methodology to determine if systemic contract remedies should be initiated. (See paragraph 3 for an explanation of contract remedies.) When systemic defect coverage is invoked the Contractor shall prepare a corrective action plan in accordance with DI-RELI-80254. The Contracting Officer, using the contract remedies, shall arrange with the Contractor for an inventory-wide or total asset remedy when applicable. The Contractor shall be liable for the cost of

corrective action when systemic contract remedies are indicated by the root cause analysis. In no event shall corrective action under this contract require the Contractor to accomplish a design (technical data package) change to the item.

- (3) The period of the systemic warranty shall be: from the date of the DD 250 of each deliverable M270 Launcher through 24 months; and from the date of the DD 250 for the last deliverable Rocket Pod for each Program Year through 24 months for all the Rocket Pods of that Program Year.
- e. ALL IMPLIED WARRANTIES INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY AND "FITNESS FOR A PARTICULAR PURPOSE" are excluded from any obligation contained in the contract. The Contractor shall not be liable for any loss, damage or injury to any employee or agent of the Government, or any third part, or for any incidental or consequential damages.

3. Remedies Available to the Government

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- a. The Contractor's warranties under this claim shall apply only to those defects discovered during the period specified in applicable "Specific Warranties" paragraph above and of which the Contractor is notified, in writing, within the time period specified in paragraph c(1) below.
- b. If the Government determines that a warranted defect exists in any of the supplies or services accepted by the Government under this contract, the Government may, at no increase in contract price, (1) require the Contractor, at Contractor's plant, to repair or replace, at the Contractor's election, defective or nonconforming supplies; or (2) require the Contractor to furnish, at the Contractor's plant, the materials or parts and installation instruction required to successfully accomplish the correction or (3) if mutually agreed in accordance with paragraph 7.b to repair at a site other than Contractor's facility.
- c. Defects in Materials, Workmanship, Design/Manufacturing or Performance.
- (1) The Contracting Officer shall promptly notify the Contractor of the defect, in writing, (e.g. DA Form 2407) within 90 days after the defect is discovered. Notification shall include, furnishing of the applicable equipment serial number and pare number of the defective part, location of the equipment, a point of contact to include telephone number, and circumstances surrounding the defect.
- (2) Upon timely notification of the existence of a defect in accepted supplies, the Contractor shall submit to the Contracting Officer, in writing, within 30 days, a recommendation

for corrective actions, together with supporting information in sufficient detail for the Contracting Officer to determine what corrective action, if any, shall be undertaken.

- (3) Not later than 15 days after receipt of the recommendation for corrective action, the Contracting Officer will respond in writing, as to the remedy selected by the Government.
- (4) The Contractor, notwithstanding any disagreement regarding the existence of, or responsibility for a defect, shall promptly comply with the written direction provided by the Contracting Officer in (3) above. If it is determined at a later date that an alleged defect is not a defect subject to this warranty clause, the contract price will be equitably adjusted. Failure of the parties to agree as to the existence of a defect or as to the amount of an equitable adjustment shall be considered a dispute concerning a question of fact within the meaning of the "Disputes" clause of this contract.

d. Systemic Defects

- (1) Upon completion of Government root cause analysis, the Contracting Officer shall promptly notify the Contractor of the defect, in writing, within 90 days after the defect is discovered. Notification shall include furnishing of a copy of the root cause analysis report, the applicable equipment serial numbers and part number of the defective part, location of the equipment, a point of contact(s) to include telephone number, and circumstances surrounding the defect.
- (2) Upon the above notification of the existence of a defect in accepted supplies, the Contractor shall submit to the Contracting Officer, in writing and LAW DI-RELI-80254, a corrective action plan within 60 days, to allow the Contracting Officer to determine what corrective action, if any, shall be undertaken.
- (3) Not later than 30 days after receipt of the recommendation for corrective action, the parties shall agree upon the logistics of performing the warranty and the Contracting Officer shall arrange for an inventory wide or total asset remedy if applicable. This agreement shall be reflected in a supplemental agreement to this contract.
- e. In the event of timely notice by the Contracting Officer of a decision not to correct or only to partially correct, the Contractor shall submit a technical and cost proposal within 90 days to equitable adjust the contract price downward.
- f. The rights and remedies of the Government provided in this clause:

- (1) shall not be affected in any way by any terms or conditions of this contract concerning the conclusiveness of inspection and acceptance;
 - (2) shall survive final payment;
- (3) are in addition to, are not limited by, and do not limit any rights and remedies afforded to the Government by any other clause of this contract.
- g. Contractor corrected or replaced supplies or parts shall be warranted to the end of the original warranty period stated in the applicable paragraph above.
- h. This warranty will not, in any way, be voided by any Government performed repair, accomplished with standard Military Service Maintenance procedures, of any item, or component thereof covered by the warranty. The Government performed repairs may include the substitution of parts or components procured by the Government from another source, however, such substituted part or component and any resulting damage caused by failure of the substituted part or component are not the responsibility of the Contractor. However, all repairs to the Improved Stabilization Reference Package (ISRP) shall be repaired by the actual manufacturer during the term of this warranty.

4 Transportation Cost

- a. When failed warranted items are to be returned to the Contractor they shall be transported to the Contractor's plant at Government expense via Government Bill of Lading unless agreed otherwise in accordance with the terms of this warranty.
- b. Repaired Rocket Pod Containers (RP/Cs) shall be returned to the Red River Army Depot (or other designated destinations via Government Bills of Lading.
- c. All other corrected warranted items shall be returned by the Contractor to Red River Army Depot at Contractor's expense.

5. Exclusions

- (a) The provisions of this warranty shall not apply to warranted supplies if failure has been caused by:
- (1) improper installation or maintenance by the Government not in accordance with Technical Manuals;

- (2) operation contrary to the technical manuals or other written instructions provided to and approved by the Government not in accordance with Technical Manuals;
- (3) repair or alteration by the Government in such ${\bf a}$ way as to induce a failure;

misuse, neglect or accident;

combat damage;

- (6) improper installation or operation by the Government in other than its intended use;
- (7) acts of God, subversion, riots, vandalism, or sabotage, fire, flood, explosion or damage induced or originating from sources external to the warranted supplies;
- (8) damage attributable to improper packaging, crating, handling, or storage by the Government, to the extent of said damage; or
- (9) any other circumstance for which the Government may expressly assume the risk.
- b. Evidence of disassembly other than removal of the item for Government repair in accordance with paragraph 3.h shall void the performance warranty in its entirety with respect to the warranted item.
- c. With respect to Government-furnished property (GFP), the Contractor's warranty shall extend only to the extent of proper installation unless the Contractor performs some modification or other work on the property, in which case the Contractor's warranty shall extend to such modification or other work.
- d. In no event shall there be warranty coverage unless the Government has delivered the warranted item(s) to the Contractor's facility in Camden, Arkansas, not later than 90 days after the end of the warranty period unless otherwise agreed to IAW the terms of this warranty.
- e. The Contractor shall not be obligated to pay removal, reassemble, or handling costs when it is necessary to remove the supplies to be inspected and/or returned to the Contractor for correction or replacement.
- f. The Contractor shall not be obligated to correct or replace supplies if the facilities, tooling, or other equipment necessary to accomplish the correction or replacement have been deleted from the contract by action of the Government. In the

event that correction or replacement has been directed, the Contractor shall promptly notify the Contracting Officer, in writing, of the nonavailability. The Government shall then be entitled to an equitable reduction in price.

g. Faded or chipped paint, scratches, dents, nicks or any other cosmetic damage which results from usual and customary use.

6. Markings:

- a. At acceptance, a warranty label reflecting a performance warranty expiration date of 9 months shall be applied by the Contractor. (No label required for the systemic warranty, see para. 2(d) of this clause).
- b. Warranted items delivered under this contract shall be stamped or marked IAW MIL STD-129 and MIL STD-130.
 - c. Marking shall be as follows:
- (1) A warranty identification label or plate shall be securely applied, fastened, or attached to each LRU of the warranted item in a conspicuous location. No other items shall have a warranty label.
- (2) The Contractor shall submit a warranty label plate identification to be used on the warranted item(s).
- (3) The warranty label of plate identification shall be of an alternating blue and white diagonal stripe background color.
- (4) The plate or label shall have imprinted the following data:
- (a) Warranty: The word warranty shall be in predominate bold letters.
- (b) NSN: National Stock Number shall imprinted.
- (c) TB: TB shall identify the applicable technical bulletin for warranted item(s). TB number will be provided by the Government.
- (d) EXP: EXP shall indicate the date of warranty expiration by month/day/year, i.e., 12/15/86.
- (e) CAGE: Contractor and Government Entity (CAGE) code shall be indicated, i.e., 96906.

7. Repair Point

a. The parties agree that, for purposes of this warranty, the normal repair point shall be:

> Loral Vought Systems Corporation Highland Industrial Park Camden, Arkansas 71701

- b. Warranted supplies may be repaired at another location if mutually agreed between the Government and the Contractor.
- c. The Contractor, upon receipt of the direction from the Contracting Officer shall provide all material, labor, facilities, and tools needed to effect repair and shall commence to repair/replace such supplies. Repair/replacement shall be accomplished within an average of 90 days of receipt of defective items at the repair point.
- d. At Government direction, the Contractor may utilize Government stocks to effect repair. At the Contractor's election, the Contractor may: (1) replace stocks used (with new, rebuilt, or serviceable parts of like value) within normal production leadtimes; or (2) reimburse Government for said items at a negotiated price.
- e. In the event the Contractor is unable to effect repairs because the manufacturer of an item has discontinued operation, the Government may agree to allow the Contractor to return the item to a U.S. Army repair facility and to reimburse the Government for the repair effort at a negotiated price.
- f. At its option, the Government may furnish a supply of circuit cards for the Contractor's use in a rotable pool to expedite repair time on electronic parts. At any time the Government may, at its option, withdraw all circuit cards to Government stores. The Contractor agrees that it would not be entitled to any contract adjustment in the event the Government withdraws any of the circuit cards.

Page 1 of

Attachment <u>"11"</u>
IAAH01-94-C-A005
PZ0008

Rotable Spares

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^{*} Rotable Spares

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Rotable Spares

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*Rotable Spares

DAAH01-94-C-A005

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Rotables Spares

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^{*} Rotable Spares

----Original Message----

From: Daniels, Clarence N CIV USA AMC Sent: Thursday, October 16, 2008 8:59 AM

To: Mr CIV USA AMC

Cc: CIV USA USACIDC; Myles, James R MG MIL USA CIV USA AMC; 'fraudnet@gao.gov'; 'npftf@usdoj.gov';

'inspector.general@usdoj.gov'; 'OIGHotline@opm.gov'; 'oversight@opm.gov'; 'criminal.division@usdoj.gov'; 'hotline@dodig.mil'; 'inspector.general@eeoc.gov' Subject: Information Request concerning DA Secretary Report of Investigation of

DI-00-1499. (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE



The OSC directed an Army Secretary investigation of DI-00-1499 more than 5 years ago with a statutory due date 60 days after the request, do you have any idea what happened between then and now?

Thanks, Clarence

----Original Message----

Mr CIV USA AMC From: Sent: Wednesday, October 15, 2008 5:44 PM

To: Daniels, Clarence N CIV USA AMC

Subject: RE: Information/Statement Request concerning OSC, DI-00-1499.

(UNCLASSIFIED)

Clarence

Thanks for the response.

I wanted to make sure you understood about the AR 15-6 investigation and my role. The investigation is part of the overall Office of Special Counsel investigation into the allegations. They directed that the Army conduct an administrative investigation (AR 15-6) into the allegations I listed below. I was assigned as the investigative officer by MG Myles.

I took your response to mean you do not have anything further to add to what you have already submitted.

Thanks again for your reply.

----Original Message----

From: Daniels, Clarence N CIV USA AMC Sent: Tuesday, October 14, 2008 5:32 PM Mr CIV USA AMC

Cc: (doj.prao@usdoj.gov'; 'OIGHotline@opm.gov'; 'fraudnet@gao.gov'; Myles, James R MG MIL USA AMC; 'oversight@opm.gov'; 'inspector.general@usdoj.gov'; 'criminal.division@usdoj.gov'; 'hotline@dodig.mil'; (IV USA AMC Subject: Information/Statement Request concerning OSC, DI-00-1499. (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

All affidavits and privacy statements concerning my disclosures delineated in Office of Special Counsel (OSC) case DI-00-1499, including those of DA management whistleblower reprisals and prohibited personnel practices, are a matter of record with the OSC and the CID.

The required Army Secretary Report of Investigation and DA reporting of my allegations contained in OSC case DI-00-1499 is more than 5 years past due the completion date required by statute.

I have no present knowledge of your responsibility of conducting a AR 15-6 investigation into the issues and allegations that I raised with both AMCOM and PEO management almost nine years ago and some five years after the OSC required DA Secretary report of investigation due date.

Any on-going investigations that I would be aware of at this point in time would be at the Department of Army or Congressional level. The following list of individuals may be able to provide you with additional information concerning the 5 year delinquent DA Secretary Report of Investigation or any other on-going investigations or Congressional inquiries.

Attorney
U.S. Office of Special Counsel

Special Agent USA USACIDC

Alice H. Martin US Attorney, Northern District of Alabama 1801 Fourth Ave., North Birmingham, AL 35203-2101 (205)244-2001

Major, US Army Deputy Staff Judge Advocate USACIDC Thank you, Clarence N. Daniels Contract Specialist

Notice: This E-mail (including attachments) is covered by the Electronic Communications Privacy Act, 18 USC 2510-2521, is confidential and may be legally privileged. If you are not the intended recipient, you are hereby notified that any retention, dissemination, distribution, or copying of this communication is strictly prohibited. Please reply to the sender that you have received the message in error and then delete it.

From: Mr CIV USA AMC
Sent: Tuesday, October 14, 2008 10:08 AM
To: Daniels, Clarence N CIV USA AMC

Subject: Information/Statement Request

Clarence

- 1. As you may be aware, MG Myles assigned me the responsibility of conducting a AR 15-6 investigation into the issues and allegations you raised with the Office of Special Counsel. Specifically, the allegations that I have been directed to address are as follows:
- a. The Multiple Launch Rocket System (MLRS) Project Office utilized unauthorized Technical Direction Letters (TDLs) to improperly grant Lockheed Martin additional funding. Specific elements of the allegation are:
- The Project Office issued several TDLs under the Industrial and Engineering Services (IES) contract for tasks that were already included in the price of the production contract.
- The Project Office approved TDLs for tasks which the government had funded under research and development contracts DAAH01-92-C-0432 and DAAH01-95-C-0329.
- Improperly issued TDLs included TDL TR-99-001A (revision B), TDL LM-98-03, TDL IL-99-01, TDL PT-P-99-020 and TDL LO-99-05.
- b. The Government Accepted Non-Conforming and Unsafe MLRS Launchers from Lockheed Martin. Specific elements of the allegation are:
- AMCOM accepted and deployed to the field M270A1 launchers that did not satisfy critical safety requirements, including the "uncommanded cage movement", that Program Office knew about the deficiencies in 2000, did not alert the contracting office until two years had elapsed and authorized the contractor to continue deliveries of unsafe launchers.
- Lockheed Martin failed to provide a safety assessment report for the M270A1 launcher as it was required to do under the contract. The MLRS Project

Office improperly expended appropriated funds to contract with another contractor to provide an Independent Safety Assessment for which Lockheed Martin was contractually obligated.

- Lockheed Martin failed to provide a safety assessment report for the M270A1 launcher as it was required to do under the contract. The MLRS Project Office improperly expended appropriated funds to contract with another contractor to provide an Independent Safety Assessment for which Lockheed Martin was contractually obligated.
- Lockheed Martin presented the Government with a safety assessment in October 2002 that reported more serious deficiencies that previously reported, some deemed to be "catastrophic", and that based on this new information the Safety Office concluded that the M270A1 launchers were not compliant with MIL-PRF-35500. The information in the safety report caused the Contracting Officer to halt acceptance of the launchers. The launchers were defective and useless to the military until the Government expended more money to render the launchers safe and compliant.
- c. The Government deployed launchers that pose a substantial and specific danger to the safety of the soldiers; and The Army relied on Fielding Operating Restrictions to mitigate potentially catastrophic dangers rather than design features as required by Military Standard 882 (MIL-STD-882).
- 2. If you would like to provide me with information to include or consider in the investigation, I will be happy to get a sworn statement and Privacy Act Statement from you to include in the file. The statement will need to be entered on the attached DA Form 2823, signed by you and witnessed/signed by me (you will keep a copy signed by both of us for your records) and I will need a signed Privacy Act Statement (also attached) as well.
- 3. If you have any questions or need further information, please contact me at the email address above, or at the email address above, and the email address above and the email address above.

Thank you.

Investigative Officer

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

- 1. ENGINEERING SERVICES CONTRACT. In accordance with Engineering Services Contract DAAH01-87-C-0157, CLIN 0009 (Range Option). ESMs 1.8.100; 2.8.100; 3.8.100 and 4.8.100 are allocated for the following activities:
- 2. SCOPE: This TDL cancels TDL #TM-98-01 Analysis for Fire Control System Enhancement and TDL #2 Digitized Cell Initiative. Further, this TDL redirects all remaining hours from those two TDLs to continue porting the M270Al Software from the VADs/Rational environment to the commercial VxWorks operating system and to continue efforts to integrate and qualify a Digitized Cell (DC) capable of supporting the requirements for Force XXI Embedded: Battlefield Command (EBC) applications.
- 3. Continue the re-hosting of the LMVS developed CSCIs in version Bravo (OT) software to the VxWorks operating system operating on a PowerPC based Executive Processor (EP).
- 4. Upgrade test equipment necessary to support the VxWorks effort.
- 5. Support the lab integration of the PowerPC based EP into the _____ development environment consisting of test racks and lab LRUs.
- 6. Start the re-hosting of the Allied Signal Position/Navigation Unit software to VxWorks operating on a 486-66 based processor.
- 7. Continue the re-hosting activities of Man Machine Interface and Communications Manager to the new digitized cell.
- 8. Procure necessary hardware to develop a stationary and mobile test set capable of supporting the LRIP and Digitized Cell Architectures.
- 9. Conduct studies to define approaches that could be used to provide the necessary Soldier Machine Interface capable of meeting the requirements of the First Digitized Corp (FDC) needs. Documents findings and recommendations in a final report.
- 10. Support as required meetings and discussions that deal with FDC needs.
- 11. Complete Digitized Cell Trade Studies.
- 12.DELIVERABLES: Deliver final reports for SMI and DC trade study approaches by 31 May 1999. On a as needed basis, informal reports and briefings may be required by the Government during the time frame of this effort to assist the Government in decision making.

TECHN	TICAL	DIRECTION	LETTER	LM-98-03
Stop	STEP	/Continue	Rehost	

28-Apr-99

13.Re-Allocation of Hours by ESMs:

ESM 1.8.100 -	System Engineering:	33,555
ESM 2.8.100 -	Configuration Mgt:	233
ESM 3.8.100 -	Product Assurance and Test:	1,806
ESM 4.8.100 -	Logistics:	641
	*	
Total Hours		136,235

14. No additional funding is required.

TECHNICAL DIRECTION LETTER LM-98-03 Stop STEP/Continue Rehost 29-Apr-99

MLRS Program Management

29 Aga 99 Date

Project Manager/Deputy Project Manager

10 psil 99

Contractor Signature Signifying Receipt of Task 13 May 1999 Date

Page 3 of 3

/AU9-26-98 16:05

DA NIBI-98- C-0157P.

TECHNICAL DIRECTION LETTER #1 ANALYSIS FOR FIRE CONTROL SYSTEM ENHANCEMENT

- ENGINEERING SERVICES CONTRACT. In accordance with Engineering Services Contractor DAAHOI-98-C-0157, CLIN 0009 (Range Option), ESMs 1.8.100; 2.8.100; 3.8.100; & 4.8.100 hours are allocated for the following activity.
- 2. OBJECTIVE. The objective of this TDL is to decrease future MLRS launcher unit and sustainment cost. Specific objectives are to reduce the Production Cost of the Launcher Interface Unit (LIU), Weapon Interface Unit (WIU), Position Navigation Unit (PNU), Power Switching Unit (PSU), and the Fire Control Panel (PCP) by fifty percent (50%) of the Production Unit Cost of \$958K per contract DAAH01-98-C-0138 and to decrease the projected sustainment Cost of the IFCS by thirty percent (30%). The projected sustainment cost of the IFCS is \$461.8M and is based on the LMVS PRICE-HL Model (800 Launchers, 20 years) dated May 4, 1998.
- 3. REQUIREMENTS. Perform cost/trade studies and analyses for a low cost fire control system that meets the requirements of the M270A1 Launcher System as defined in MIL-PRF-35500. Additionally, any hardware/software under review must be compatible with MLRS JTA-A Migration Plan. Methodologies include, but are not limited to:
 - 2. CAIV. Identify potential requirement changes, perform cost analysis, and present recommendation. Examine and analyze for cost savings potential MLRS IFCS requirements including, but not limited to, the following:
 - 1) Technical requirements generated for future weapons. Examples are the PNU azimuth pointing accuracy that was not allocated from a weapon/launcher error budget and the requirement to supply 50-amp power to the pods.
 - 2) Environmental and nuclear requirements.
 - b. NEW TECHNOLOGY. Identify and recommend the utilization of new technology for cost reduction where possible. As a consequence of rapid advancement in the electronics industry, the MLRS improved Fire Control System (IFGS) design is based on technology that now is several generations old. As a result, there is potential for combining functionality on fewer chips, fewer boards, for fewer LRUs.
 - c. COMMERCIALIZATION. Work with vendors to utilize lower cost to achieve the required functionality and performance of the MLRS launcher.
 - d. OBSOLESCENCE MANAGEMENT. Develop a preliminary obsolescence management of plan/process. The plan will include the management of electronic parts obsolescence that will become the sole responsibility of the prime contractor and his subcontractors/vendors. The plan/process must address:
 - 1) Upgrade and parts incorporation philosophies and methodologies;
 - 2) Processes (Test, Analysis, Demonstration, etc.) for ensuring parts upgrades will not degrade performance.
 - e. WARRANTIES. Define preliminary, recommended LRU warranties for a period to be determined, but certainly five to ten years, to reduce logistics support and sustainment costs. Preliminary cost/performance impacts of such warranties shall be examined and reported.
 - f. CONTRACTOR LOGISTICS SUPPORT/PRIME, VENDOR SUPPORT, Identify and analyze candidate logistics support processes to be utilized and report results and submit recommendations.
 - g. HORIZONTAL TECHNOLOGY INSERTION. Explore apportunities to use HTI to the maximum extent possible.
- 4. INDUSTRY SEARCH. Conduct industry search to identify requirement trade options and potential vendors and candidate low cost solutions for MLRS implementation.

TECHNICAL DIRECTION LETTER #1 ANALYSIS FOR FIRE CONTROL SYSTEM ENHANCEMENT

- 5. ASSUMPTIONS. The MLRS Program shall be produced in sufficient quantities to equip the combined production/remanufacture number of M270A1 and IIIMARS launchers to be produced annually. No long-term, multiyear buys are assumed.
- 6. DELIVERABLES. Deliver Interim Cost/performance Trade Reports by 30 November 1998 including methodologies, interim results and recommendations and Final Cost/Performance Trade Reports by 31 March 1999; Final reports will include options and a recommended approach that will facilitate moving forward to the award of a follow-on contract. Informal interim reports and briefings may be required by the Government from time to time during the period of performance to assist the Government in decision making.
- 7. HOURLY ALLOCATIONS BY ESMs:
 - L ESM 1.8.100-SYSTEM ENGINEERING: 10,067
 - b. ESM 2.8.100-CONFIGURATION MANAGEMENT: 528
 - c. ESM 3.8.100-PRODUCT ASSURANCE/TEST: 728
 - d. ESM 4.8.100-LOGISTICS: 1.057
 - c. TOTAL EFFORT- 12,380 HOURS

			2/11/19
C	ONCLIRRENCE BY INITIATING BIVISIO	ON CHIEF	DATE
	DNCURRENCE BY CHIVE, MLRS PROC	SKAM MANAGEMENT	26 Oug 98
	ROJECT MANAGER/DEPUTY PROJECT		21 Aug 88
	ONTRACTOR SIGNATURE		26 Aug 98

P. 04

TECHNICAL DIRECTION LETTER #2 DIGITIZED CELL INITIATIVE

- 1. ENGINEERING SERVICES CONTRACT. In accordance with Engineering Services Contract DAAH01-98-C-0157, CLIN 009 (Range Option), ESMs 1.8.100; 2.8.100; 3.8.100; 4.8.100 hours are allocated for the following activities.
- 2 SCOPE: The scope of this TDI, is to conduct the industry search and source selection of a fire control panel, and interface hardware/software to support a separate follow-on maturation contract to procure and qualify, thru tests, a new fire control panel system to meet Force XXI Battle Command Brigade and Relow (FBCB2) applications. Also, this same activity shall be conducted for a replacement executive processor card.
- 3. Modify the M270A1 Fire Control System design as defined in MIS-46307E to incorporate the expabilities of Force XXI Battle Command Brigade and Below (FBCB2). Perform industry trade study and required analysis to identify Fire Control Panel replacement hardware that supports both the Fire Control System Man Machine Interface and FBCB2 applications using a single display.
- Perform industry trade study and required analysis to identify replacement Executive Processor Circuit Card Assembly for use in the M270A1 Fire Control System.
- Rehast M270A1 Computer Software Configuration Items (CSCIs) to a commercial off-the-shelf operating system or systems.
- Modify the LMVS MIFOM Integration Facility to support efforts associated with this 710L. This modification, will support the integration of an improved Fire Control Panel (now known as a Digitized Cell), the Executive Processor and commercial off-the-shelf operating system integration activities.
- 7. Complete processes to support Streamlined Acquisition of Digitized Cell and Executive Processors from selection to production readiness.
- ٤. DELIVERIABLES: Deliver interim cost and performance made reports by 31 December 1998. Deliver final cost/performance trade reports by 31 March 1999. Final reports will include options and recommended approach that will facilitate moving forward to the possible award of a followon contract. On a as needed basis, informal reports and hriefings may be required by the Government during the time frame of this effort to assist the Government in decision making.
- 9. Allocation of Hours by ESMs:

ESM 1.8.100-SYSTEM ENGINEERING: 42.717 ESM 2.8.100-CONFIGURATION MGT: 1.278

ESM 3.8.100-PRODUCT ASSURANCE

TEST

4,357

ESM 4.8.100-LOGISTICS

1,268

TOTAL HOURS

CONCURRENCE BY INITIATING DIVISION CHIEF

DATE

DATE

DATE

DATE

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RUJECT MANAGERODEPUTY PROJECT MANAGER SIGNATURE

TECHNICAL DIRECTION LETTER IL-99-01

In accordance with MLRS Industrial Engineering Services (IES) contract DAAH01-98-C-0157, ESM's 1.9.100 and 3.9.100 (sub ESM 3.9.105 - M270A1), Lockheed Martin Vought Systems (Vought Systems) is requested to perform the following tasks:

DATE: 23 Apr 99

- A. Provide management and support to the M270A1 Launcher Program:
 - 1. Mechanical Systems: Provide Product Design, Design Support, and Structural Technologies Support to Camden, Marconi, and Vickers (5,000 hours).
 - 2. Electronic Systems: Provide Electronic Systems Technical support to Camden, Harris, and AlliedSignal; upgrade the MLRS SPORT Test Set (MST) and the Launcher Adapter Group (LAG) to support M270A1 OT; develop a LAG Level 2 TDP and update the MST TDP (2,840 hours).
 - 3. Systems Engineering: Provide Systems Engineering support to Camden, Harris, AlliedSignal, Marconi, and Vickers; Coordinate Launcher-to-Munitions interface requirements and develop/maintain the resultant interface specification(s) (832 hours).
 - 4. Specialty Engineering: Provide Reliability Engineering, Safety Engineering, Human Factors Engineering, and Maintainability Engineering Support; develop an electronic reliability and maintainability database for the fielded M270A1 (2,006 hours).
 - 5. Provide Management support to all IES Upgrade support efforts to include: (1,909 hours)
 - Perform M270A1 trade studies and evaluate alternatives to reduce procurement costs. Provide recommendations to PEO, Tactical Missiles, SFAE-MSL-ML-IL and SFAE-MSL-MS-LO, for evaluation.
 - Support M270A1 cost reduction initiatives by the Cost of Ownership Reduction IPT.
 - Provide liaison and coordination with other Vought Systems technical managers, MFOM Integration Program Management, Fire Support Program Management and PEO, Tactical Missiles, SFAE-MSL-ML-IL.
 - Ensure cost and schedule control. Define cost, scope and schedule requirements for revised or new remanufacturing planning tasks in coordination with PEO, Tactical Missiles, SFAE-MSL-ML-IL. Provide management, technical and financial reports as required.
 - 6. Travel as directed by PEO, Tactical Missiles, SFAE-MSL-ML-IL, and/or Vought Systems Management to support related efforts. Attend bi-weekly, monthly, quarterly, semi-annual and annual M270A1 MLRS related meetings as required.

4/28/99

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B. The estimated hours for tasks 1-6 by ESM:

1.9.100 - 11,081 3.9.100 - 1.506Total hours -12,587 (\$1,316,600.20)

- II. The period of performance shall extend through March 31, 2000.
- III. The Vought Systems POC for this TDL is A.E. FitzGerald (972-603-2093)/D. R. Shipp (972-603-1338) and the AMCOM POC is LTC S. D. Kreider (256-955-7981).

Concurrence By Initiating Product Manager

J&Ayr99 Date

Concurrence By Chief, MLRS Program Management

28 Apr 99

29 cpn 99

Deputy Project Manager Signature

13 May 1999

Contractor Signature Signifying Receipt Of Task and the state of t

Technical Direction Letter PT-P-99-020

1. In accordance with MLRS Industrial Engineering Services Contract DAAH01-98-C-0157, CLIN 0011, ESMs 1.9.100, 3.9.100, 4.9.100.

a. Objective:

To conduct the IFCS Maintainability Demonstration Dry Run and the Formal IFCS Maintainability Demo

b. Task:

LMVS is to complete the preparation for and conduct the IFCS Maintainability

Demonstration (M Demo) LRU Dry Runs. LMVS is also to perform a formal IFCS M Demo
during 3 – 28 May 99. The government will select 50 faults to be demonstrated during the IFCS

M Demo. LMVS shall demonstrate that at least 95% of the inserted faults will be detected and
isolated to the LRU Level using the 21 Apr 99 Engineering Release Software Version. The

M Demo Dry Run and the formal IFCS M Demo shall be conducted per the applicable portions
of the IFCS M Demo plan that was developed under contract DAAH01-92-G-0432. The
M Demo Dry Run and the formal IFCS M Demo shall be conducted using the M270A1
Launcher, MLRS Sport Tester (MST) and the IFCS Console. The software and the Interactive
Electronic Technical Manual (IETM) shall be updated as a result of the M Demo Dry Runs as
required. LMVS shall provide status reports to the MLRS Project Office of the M Demo Dry
Runs and the formal IFCS M Demo. In addition, LMVS shall provide a final report to the
MLRS Project Office for the IFCS M Demo.

Technical Direction Letter PT-P-99-020

2. The estimated hours for this task is 2477 hours (ESM 1.9.100 - 1797 hours, ESM 3.9.100 - 420 hours, ESM 4.9.100 - 260 hours). The breakouts of the hours are as follows:

LMVS Hours	<u>IES 1999</u>
Maintainability	420 Hrs (3.9.100)
System Engineering	137 Hrs (1.9.100 - Allied Signal)
System Engineering	380 Hrs (1.9.100 - Harris)
System Engineering	260 Hrs (1.9.100)
Electronic Systems (Support Equip) Electronic Systems (Lab Support) Logistics Total Hours	720 Hrs (1.9.100) 40 Hrs (1.9.100) 260 Hrs (4.9.100) 2477 Hrs

3. The task is expected to be completed in 3 months.

4. The LMVS POC is

and the MLRS POC is

APPROVAL FOR TECHNICAL DIRECTION LETTER PT-T-99-020

Chief, Product Assurance & Test Division MLRS Project Office (Initiating Office)	280 ful 99 Date
Chief, Program Management Division	28 Apr 99 Date
MLRS/Project Manager/ Deputy Project Manager	30apu 99 Date
Lockherd Martin Vought Systems	13 May 1999
Acknowledgement Noted MLRS Project Manager/ Deputy Project Manager	Date

Technical Direction Letter -M270A1 IETMs #LO-99-05 11 Aug 99

In accordance with System Engineering and Industrial services Contract DAAH01-98-C-0157, CLIN 00018, ESM 4.9.200 request that Lockheed Martin Missiles and Fire Control perform the following task(s):

Background:

- 1. The development of the M270A1 IETM includes incorporation of legacy technical manual information from all M270 launcher operation and maintenance manuals that are not changed by modification of the launcher software or hardware. Incorporation of this information requires changes to the legacy data format to integrate this data within the M270A1 technical data. Additionally, all legacy maintenance and operational tasks must be validated on an operational system to insure that the procedures are accurate and understandable to the operators and maintainers. In many cases the format of the legacy information must be altered substantially to insure that the IETM format is consistent.
- 2. The M270A1 software development cycle necessitated continual update to the system operating and maintenance instructions. These changes invalidated much of the effort expended in validating the M270A1 operating and maintenance procedures. An additional effort was expended to track changes causing expenditure of budget planned for use in the jointly developed publications (1999-2000 publications schedule). Current funding to support this effort is inadequate.

Requirements:

- 1. Review legacy operation and maintenance procedures within the M270A1 for consistency and update the format and content as necessary.
- Update the M270A1 Validation plan and validate the correctness and completeness of all legacy operation and maintenance tasks in the IETM.

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- Validate any additional or changed operation and maintenance tasks necessitated by changed process or hardware.
- 4. Perform all remaining tasks on the 1999-2000-publication schedule.

Estimated Hours: 1300 Hours

Estimated Dollar Value: \$124,007 (\$95.39 x 1300)

Estimated Completion Date: 31 Mar-2000

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CONCURRENC	E BY	CHIEF,	DATE	SIGNA	W RE	OF	MLRS	date		•
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Francisco Court 1340 Nones Francisca (23fm Sauc St.) 4,000 (S90, 10 of 100) success Completion Date 31 May 2004.

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07/06/99

Subject: Technical Direction Letter TM99-009

- 1. In accordance with Engineering Services contract DAAH01-98-C-0157, CLINs 0010 and 0011, ESMs 1.9.100 and 4.9.100, LMVS is directed to perform the following tasks:
- a) Provide on-site technical and analytical support to the MLRS Program Management Office. LMVS personnel will be permanently relocated to Huntsville. The assigned personnel will perform specific tasks as requested by the MLRS PMO. Travel, as required, will be covered under this effort.
- 2. The estimated ROM effort for this task is 3,000 hours and the period of performance extends through 31 March 2000. The breakdown by CLIN and ESM is as follows:

CLIN 0010: ESM 1.9.100 - 500 hours, ESM 4.9.100 - 500 hours

Total CLIN0010: \$113.31 x 1000 = \$113,310

CLIN 0011: ESM 1.9.100 - 1,500 hours, ESM 4.9.100 - 500 hours

Total CLIN0011: $$104.60 \times 2000 = $209,200$

Grand Total for this effort: \$322,510

3. The AMCOM POCs are Billy Crosswhite, 256-876-4662, and Carlos Kingston, 256-876-3779. The LMVS POCs are Matt Stone, 972-603-1878, and Jim Wilson, 256-876-1518.

This TDL was withdrawn by the MIRS, PMO after it was revealed that this was an attempt to place excess IMMFC employees under the government IES contract

Charence N. Daniels Contract Specialist

52A

STATEMENT OF WORK

Fiscal Years (FY) 98/99 M270A1 Launcher June 29, 1998

1.0 SCOPE INTRODUCTION

- 1.1 <u>FY-98</u>. The contractor, as an independent contractor and not as an agent of the U.S. Government, shall furnish all services, materials, equipment and parts, except as otherwise specified in the contract, to upgrade the LAUNCHER, ROCKET: M269 with the M270A1 components and to integrate the resulting M269A1 with the M993A1 carrier vehicle to meet the M270A1 launcher requirements defined herein.
- 1.2 FY-99. The contractor, as an independent contractor and not as an agent of the U.S. Government, shall furnish all services, materials, equipment and parts, except as otherwise specified in the contract, to remanufacture the LAUNCHER, ROCKET MOCKET MOCKET MOCKET MOCKET MOCKET MOCKET: MOCKET

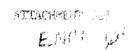
2.0 GENERAL

2.1 FY-98

- 2.1.1 The contractor shall, upon receipt of a LAUNCHER, ROCKET: M269, apply those components of MWO 9-1055-648-50-2M270A1 MOD to upgrade the M269 to a M269A1 and incorporate Drawing 13210657. Upon receipt of a M993A1 from the Government, the contractor shall integrate the M269A1 to the originally associated M993A1 to form the M270A1 Launcher. The integrated M270A1 shall meet the performance requirements of MIL-PRF-35500.
- 2.1.2 The Government will provide LAUNCHER, ROCKET: M269's and upgraded M993A1 carrier vehicles to the contractor as GFE as defined in H-2 of this contract.

2.2 FY-99

2.2.1 The contractor shall, upon receipt of the LAUNCHER, ROCKET: M269, remanufacture the LAUNCHER, ROCKET: M269 to Condition Code A and upgrade in accordance with (IAW) paragraph 5.2.1 herein. Upon receipt of the remanufactured M993A1 from the Government, the contractor shall integrate the remanufactured



LAUNCHER, ROCKET: M269A1 to the originally associated remanufactured M993A1 to form the remanufactured M270A1 launcher. The integrated M270A1 shall meet the performance requirements of MIL-PRF-35500.

- 2.2.2 The Government will provide LAUNCHER, ROCKET: M269's and remanufactured and upgraded M993A1 carrier vehicles to the contractor as GFE as defined in H-2 of this contract.
- 2.2.3 The contractor shall produce new M270A1 launchers to meet the performance requirements of MIL-PRF-35500.

3.0 INSPECTION AND ACCEPTANCE

3.1 Quality

- 3.1.1 Quality System: The contractor shall develop, implement and maintain a quality system. The system shall provide controls of process and product characteristics and include criteria and methodology that are used to validate conformance to performance specifications and to achieve continuous improvement. The quality system shall be integrated with other functional areas in the design, test, production and management processes.
- 3.1.2 Special Equipment: The contractor shall design, develop, fabricate, procure, and/or upgrade existing special tooling, special test equipment, and special inspection equipment, as necessary in support of M270A1 production. The inspection shall be capable of measuring or testing to accuracy representing one tenth or less, of the prescribed product tolerance. The contractor to verify that the special equipment will perform the function for which it has been designed shall perform a special equipment validation/proofing. The Government reserves the right to observe the validation activities. The special equipment design shall represent the final production configuration. The contractor shall obtain government approval prior to fabricating, procuring and/or modifying equipment. Any computer based special equipment shall be certified by the contractor to be Year 2000 compliant.
- 3.1.3 Supplier Qualification: The contractor shall assure qualification of all vendors.

3.2 Production Qualification Test

3.2.1 The contractor shall perform a flight test at White Sands Missile Range using an M270A1 Launcher that is representative of the manufacturer's production processes. The M270A1 Launcher shall meet the performance requirements of MIL-PRF-35500 prior to and after flight tests. The flight tests shall consist of 10 Basic MLRS Rockets and 1 ATACMS. Test plans shall be prepared IAW DI-NDTI-80759. Test reports shall be prepared IAW DI-NDTI-80809.

- 3.2.2 Production qualification testing of Line Replaceable Unit's (LRU) and the quantities of LRU's to be tested shall be at the discretion of the contractor. The contractor shall base the need for testing on time from last production, major design changes or production changes and significant changes in the production facility.
- 3.3 <u>Final Acceptance</u>. The contractor shall perform a production Acceptance Test and a Production Reliability Test (PRAT) on each M270A1 Launcher, as specified in MIS-PRF-35500. The contractor shall prepare both an Acceptance Test Plan (ATP) and a Production Reliability Acceptance Test (PRAT) plan IAW DI-NDTI-80759. Results of PRAT shall be prepared IAW DI-NDTI-80809. The M270A1 Launcher shall pass the Acceptance Test and PRAT prior to being delivered to the Government.

4.0 GOVERNMENT FURNISHED EQUIPMENT (GFE)

4.1 The contractor shall prepare GFE Status Report IAW DI-ILSS-80620.

5.0 CONFIGURATION OF HARDWARE TO BE DELIVERED.

5.1 FY-98

5.1.1 Existing Hardware; Maintenance and Modifications Requirements. The contractor shall, upon receipt of a LAUNCHER, ROCKET: M269 less the components defined in exhibit 1 of this SOW, apply those components of MWO9-1055-648-50-2 M270A1 MOD to upgrade the M269 to a M269A1 and incorporate Drawing 13210657. Upon receipt of a M993A1 from the Government, the contractor shall integrate the M269A1 to the originally associated M993A1 to form the M270A1 Launcher. The integrated M270A1 shall meet the performance requirements of MIL-PRF-35500.

5.2 FY-99

- 5.2.1 Existing Hardware; Maintenance and Modifications Requirements.
- 5.2.1.1 The contractor shall apply the following DMWR'S, Modification Work Orders (MWO), Engineering Change Proposals (ECP) and Engineering Orders (EO) to upgrade the M269:

DMWR 9-1425-646-1 Launcher, Rocket, and Armored Vehicle Mounted: M270

DMWR 9-1425-646-2 Launcher, Rocket, and Armored Vehicle Mounted: M269

ECP MI-C-1372R1 IPDB Connector Gaskets, Testing

ECP MI-C-1429 Harness Trough Door Hinge Change

ECP MI-C-1446 Elevation Actuator Anti-Rotation Keys

ECP MI-C-1451 Hoist Carriage Assembly Limit Switch

ECP MI-C-1484A1 Duffel Bag Assembly Container

ECP MI-C-1494 Caterpillar Roller Assembly MOD

ECP MI-C-1499 Storage Container Hold Down Change

ECP MI-C-1548 Hoist Hook Return Spring
ECP MI-C-1551 Rocket Pod Hold Down MOD
ECP MI-C-1643 Elevation Actuator Rod Lubricator
ECP MI-C-1793 Hook & Pulley Assembly, Hoist-Bolt Removal
Drawing 13210657 - Hoist Bumper, Installation
MWO 9-1425-646-50-18 Upper Elevation Actuator Attached Fitting

- 5.2.1.2 The contractor shall apply those components of MWO 9-1055-648-50-2 M270A1 MOD necessary to upgrade the remanufactured M269 to a M269A1.
- 5.2.1.3 The contractor shall, upon receipt of a GFE M993A1 from the Government, integrate the M269A1 to the originally associated GFE M993A1 to form the M270A1 launcher. The integrated M270A1 LAUNCHER shall meet the performance requirements of MIL-PRF-35500.
- 5.2.2 New M270A1 launchers shall be IAW the contractors Product Definition Data Package (PDDP) and meet the performance requirements of MIL-PRF-35500.
- 5.3. Replaced Components. All spare LRU's removed from the GFE M270 launchers by the Contractor shall be documented on DD Form 1149 and returned to Red River Army Depot in an "as is" condition. All other components and/or parts removed from the GFE M270 launchers by the Contractor and replaced as a result of either the M270A1 modification/integration or remanufacture of the GFE M269 shall be managed In accordance with Contractor's Camden Property Control Operating Procedure (PCOP) No. 48.

6.0 CONFIGURATION MANAGEMENT (CM)

- 6.1 The contractor shall implement and maintain a configuration management (CM) system, including software CM, configuration control, configuration status accounting, configuration identification and configuration audits.
- 6.1.1 Configuration Identification. The configuration identification for the M270A1 shall consist of the Government controlled Product Performance Baseline and the contractor controlled Product Baseline.
- 6.1.2 Product Performance Baseline (PPB). The Government Product Performance Baseline shall consist of:

MIL-PRF-35500 M270A1 Performance Specification
MIS-48648 Improved Fire Control System ICD
MIS-35360 Electrical and Mechanical Interface Definition between LDS/IFCS and M993 Carrier for M270A1 Launcher
11508910/01 MLRS FCS Version 6.0 ICD, International
11508910/02 MLRS FCS Version 6.0 ICD

MIS-48758 Fire Control Panel, Development Specification,

MIS-48650 ICD for Fire Control Panel MC

MIS-48764 Weapon Interface Unit Development Specification

MIS-48652 ICD for Weapon Interface Unit

MIS-48784 Power Switching Unit Development Specification

MIS-48701 ICD for Power Switching Unit

MIS-48897 Position and Navigation Unit Development Specification

MIS-48654 ICD for Position and Navigation Unit

MIS-35361 Performance Specification for the MLRS Improved Launcher Mechanical System

MIS-35362 Hydraulic Pump Unit

MIS-35363 Hydraulic Reservoir Unit

MIS-35364 Hydraulic Heat Exchanger Unit

MIS-35365 Azimuth Drive Unit

MIS-35366 Hydraulic Swivel Unit

MIS-35367 LDS Azimuth and Elevation Hydraulic Motor Unit

MIS-35368 Elevation Transmission Unit

13213307 Elevation Angle Drive Unit

MIS-35370 Hydraulic Hoses and Tubes

13213267 Battery Box Unit

13213268 Battery Box Cover

13213269 Crew Storage Box

13213270 Crew Storage Box Cover

MIS-48651/1 Launcher Interface Unit Electrical ICD.

MIS-48776/1 Commercial Item Description Specification for the Launcher Interface Unit

6.1.3 Product Baseline (PBL). The Product baseline shall consist of the contractor controlled Product Definition Data Package (PDDP). The PDDP shall be adequate for provisioning and procurement of spare parts, manufacturing, retrofit, installation, test, inspection, qualification, and acceptance of the M270A1 and its components. The PDDP shall be for tactical hardware and software, special inspection equipment, and support equipment and tools. Contractor shall prepare product drawings and associated lists IAW DI-DRPR-81000. For items, components, and processes for which the contractor would assert "Limited Rights" in detailed design data, the contractor shall submit form, fit, and function configuration documentation that is adequate for procurement from other sources of functionally and physically interchangeable items, components and processes. Otherwise, the contractor shall submit configuration documentation with unlimited rights. It is noted that in accordance with the Rights in Technical Data and Computer Software clause, DFARS 252.227-7013-(b) (1), form, fit, and function data shall be delivered with unlimited rights to the government.

- 6.2 <u>Configuration Documentation (CD)</u>. Contractor and Government Entity (CAGE) codes assigned by the government shall appear on all M270A1 peculiar drawings and specifications. Government assigned drawings numbers shall be required for top assembly drawings only. The CD to be prepared under this SOW shall be as follows:
- a. Product Drawings- Product drawings and associated lists shall be prepared IAW DI-DRPR-81000. The product drawings and lists are defined as all drawings and data required to produce, maintain and provide spare for the M270A1 launcher, as reflected in the contractor's PDDP.
- b. A launcher to munitions ICD shall be prepared IAW DI-CMAN-81248 to define the launcher to munitions interface.
- 6.2.1 Contractor Use of CD. The contractor (and his subcontractors) shall use the CD as specified above for process sheets, fabrication, and procurement of spare parts, inspection and test of hardware/software produced under this SOW.
- 6.2.2 Classified CD. All CD containing classified information shall be marked and handled IAW DOD 5220.22-M.
- 6.3 TDP Option (New Launchers). The contractor shall integrate the ILMS and IFCS modification kit technical data packages, as well as all other applicable improvements, into a common complete production technical data package for the M270A1 configuration. For items, components, and processes for which the contractor would assert "Limited Rights" in detailed design data, the contractor shall submit form, fit, and function configuration documentation that is adequate for procurement from other sources of functionally and physically interchangeable items, components and processes. Otherwise, the contractor shall submit configuration documentation with unlimited rights. It is noted that in accordance with the Rights in Technical Data and Computer Software clause, DFARS 252.227-7013-(b) (1), form, fit, and function data shall be delivered with unlimited rights to the government.

6.4 Configuration Change Control

6.4.1 Government Change Control. Documentation that is Government controlled shall be changed only as a result of a Government approved Engineering Change Proposal (ECP) prepared IAW DI-CMAN-80639 with Notices of Revision (NOR) prepared IAW DI-CMAN-80642. Documentation prepared for Government control as a result of this SOW shall be provided with an Engineering Release Record (ERR) prepared IAW DI-CMAN-80463. Electronic transfer of information shall be used to the maximum extent possible.

- 6.4.2 Request for Deviation (RFD) and Request for Waiver (RFW). A RFD or RFW shall be prepared IAW DI-CMAN-80640 and DI-MAN-80641, respectively, against Government controlled documentation. The RFD/RFW-shall include not only a detailed description of the alternative, but also sufficient justification and technical qualification status to allow for complete Government evaluation.
- 6.4.3 The contractor shall follow the CMP for change control against technical documentation under his control. The Contractor shall allow Government attendance at the Contractor's Configuration Control Board (CCB). The contractor shall provide internally approved product baseline changes to the Government for information purposes. The contractor shall submit changes to the product baseline IAW DI-ILSS-81309 and DI-DRPR-81000. All documentation supporting the change decision shall also be included. Changes to the product baseline shall result in a common configuration for Government operational use and maintenance activities that provides for interchangeability and interoperability to the replaceable part level. Any changes which are assessed by the Government to affect the performance of the MLRS hardware or software will be identified to the contractor. Electronic transfer of information shall be used to the maximum extent possible.
- 6.4.4 Changes Prepared by the Government or Other Contractor Organizations. The contractor shall evaluate these ECPs upon request by the Government and shall assess all areas normally addressed in an ECP prepared by the contractor. The contractor's concurrence/comments shall be prepared IAW DI-MISC-80508. Approved changes shall be incorporated into documentation for which the contractor has maintenance responsibility.
- 6.5 <u>Serialization</u>, Lot and <u>Block Control</u>. The Contractor shall maintain a serialization; lot and block control program IAW the Contractor's internal procedures. This program shall be used for manufacturing, identification of required hardware, and lot and block control of hardware to be delivered under this contract.
- 6.6 <u>Data Management</u>. The Contractor shall maintain a data management function to monitor contract deliverable item status, provide reproductions and deliver contract deliverable items to the Government. The government shall have access to the contractor's internal data prepared IAW DI-MGMT-81453.
- 6.6.1 Delivery of Engineering Data. The media delivery requirements of engineering data, and all other data that forms a part of the performance baseline, and the product baseline shall be as stated in MIS-52406.
- 6.7 Engineering Release of Documentation. The contractor shall prepare Engineering Release Records (ERRs) IAW DI-CMAN-80463 for the Government release of baselines

- 6.2. Subsequently, the contractor shall release the affected CD into the configuration status accounting system.
- 6.8 <u>Configuration Status Accounting</u>. The contractor shall continue to utilize the automated status accounting systems established for the as-designed, as-built, and asmodified configurations. This data shall be retrievable by on-line access or in report format, by item, and by range of items, as applicable IAW DI-CMAN-81253. The automated status accounting systems shall be described in the CMP.
- 6.9 <u>Configuration Management Audits and Reviews</u>. The contractor shall conduct and/or participate in audits, reviews, and associated activities as specified in the CMP.
- 6.9.1 Production Audits and Reviews. The contractor shall arrange and participate in audits/reviews of end item fabrication progress and procedures as required to ensure that the end item is being prepared IAW the CD as documented and contract requirements.

7.9 TRAINING

- 7.1 Multimedia training materials shall be designed to provide a structured, coherent training program that can be used in support of New Equipment Training, institutional training or as an exportable training package. Any development of the training materials shall make maximum use of the LSA/LSAR database and existing training materials.
- 7.2 Training courses shall be developed and conducted IAW 9.3 to provide Training and Doctrine Command (TRADOC) institutions with the skills and knowledge's necessary to establish institutional Military Occupational Specialty (MOS) courses, to provide Army units receiving M270A1 launchers with operator and maintainer training. The class size for hands on training shall not exceed 12 persons each.
- 7.3 Courses shall be as follows:
 - a. Operator Instructor & Key Personnel Training (IKPT) Course
 - b. Maintainer Instructor & Key Personnel Training (IKPT) Course
 - c. Operator New Equipment Training (NET)
 - d. Maintainer New Equipment Training (NET)
- 7.3.1 One iteration each at two locations of the Operator and Maintainer Instructor and Key Personnel Training (IKPT) courses shall be conducted for United States Army Field Artillery School (USAFAS) and Ordinance Missile and Munitions School (OMMCS). Three iterations of the Operator New Equipment Training (NET) course and one iteration of the Maintainer NET course shall be conducted for each fielded M270A1 unit.

7.4 Preparation of Course of Instruction Material -The contractor shall prepare and deliver course documentation training materials for all courses conducted IAW the Data Item Descriptions (DID) shown below:

a.	DI-ILSS-81521	Training Program Structure Document	
b.	DI-ILSS-81523	Training Conduct Support Document	
C.	DI-ILSS-81525	Test Package	
d.	DI-ILSS-81526	Instructional Media	
e.	DI-ILSS-81520	Instructional Media Design Package	

7.5 Any computer based training material shall be certified by the contractor to be Year 2000 compliant.

8.0 PRODUCTION ENGINEERING

8.1 <u>Manufacturing Planning</u>. The contractor generated, maintained, or implemented manufacturing planning documentation necessary to support the required production activities shall be available for Government review.

EXHIBIT 1

A. REMOVE HYDRAULIC COMPONENTS FROM THE VEHICLE

QIY	PART NO.	<u>DESCRIPTION</u>
1	13027127	ELEVATION MOTOR
1	13027126	AZIMUTH MOTOR
1	13027137	HEAT EXCHANGER ASSY.
1	13027132	SWIVEL ASSY.
1	13027131	EL VALVE MODULE ASSY.
1	13029626	AZ VALVE MODULE ASSY.
1	13217123	HYDRAULIC POWER SUPPLY ASSEMBLY (ADDED)

B. REMOVE ALL (20) HYDRAULIC HOSES AND TUBES.

44. 490ma N	an	Was also be about war about to
QIY.	<u>PART NO</u> .	DESCRIPTION
1	13030231	HOSE ASSEMBLY, HYDRAULIC
1	13030232	HOSE ASSEMBLY, HYDRAULIC
1	13030233	HOSE ASSEMBLY, HYDRAULIC
*	13030152-1	HOSE ASSEMBLY
1	13030152-2	HOSE ASSEMBLY
1	13030153-1	HOSE ASSEMBLY
1	13030153-2	HOSE ASSEMBLY
1	13030153-3	HOSE ASSEMBLY
1	13030153-4	HOSE ASSEMBLY
1	13030154-1	HOSE ASSEMBLY
1	13030154-2	HOSE ASSEMBLY
1	13030155-1	HOSE ASSEMBLY
1	13030155-4	HOSE ASSEMBLY
1	13030155-5	HOSE ASSEMBLY
1	13030155-6	HOSE ASSEMBLY
1	13030140	TUBE ASSEMBLY
1	13030141	TUBE ASSEMBLY
1	13030142	TUBE ASSEMBLY
1	13030146	TUBE ASSEMBLY
1	13030147	TUBE ASSEMBLY

EXHIBIT 1 (CONTINUED)

C. REMOVE (18) CABLE ASSY'S

QIY.	PART NO.	<u>DESCRIPTION</u>
1	13030310	CABLE ASSY W1
1	13030312	CABLE ASSY W4
1	13030313	CABLE ASSY W6
1	13030314	CABLE ASSY W9
1	13030315	CABLE ASSY W12
1	13030295	CABLE ASSY W13
1	13030317	CABLE ASSY W15
1	13288862	CABLE ASSY W16
1	13030322	CABLE ASSY W23
1	13030323	CABLE ASSY W24
1	13207530	CABLE ASSY W30
1	13207531	CABLE ASSY W31
1	13030326	CABLE ASSY W32
1	13030328	CABLE ASSY W34
1	13030329	CABLE ASSY W35
1	13030330	CABLE ASSY W38
1	13030335	CABLE ASSY W43
1	13030339	CABLE ASSY W59
1	13030340	CABLE ASSY W60
1	13030342	CABLE ASSY W65
1	13030343	CABLE ASSY W67
1	13030344	CABLE ASSY W68

D. REMOVE FROM CAGE:

QIY.	PART NO.	<u>DESCRIPTION</u>
1	13031125	FIRE CONTROL UNIT
1	13030770	STABILIZING REFERENCES UNIT
3	13030180	JUMPER ASSY'S, GROUND
1	13208034	BLAST SHIELD
1	13030280	SHORT, NO VOLTAGE TESTER
1	13210270	PAYLOAD INTERFACE MODULE (MOVED FROM PAGE 2)

EXHIBIT 1

(CONTINUED)

E. REMOVE FROM BASE/TURRET:

QTY.	PART NO	DESCRIPTION
1	13027441-2	LIMIT SWITCHES
1	13027440	SWITCH
1	13030149	SWITCH COVER ASSY
1	13027438	SPRT MTG. 1.25 DEG AZ SWITCH
1	13027436	STRIKER ASSY
1	13026663	ELEVATION TRANSMISSION, MECHANICAL
1	13029756	DRIVE UNIT, ANGLE
1	13026372	AZIMUTH DRIVE ASSEMBLY

F. REMOVE THE FOLLOWING FROM THE VEHICLE:

QTY	PART NO.	DESCRIPTION
1	132110269	ELECTRONIC UNIT ASSY
1	13209110	FIRE CONTROL PANEL
1	13032070	ELECTRONIC BOX ASSY
1	13030196	SPRT ASSY- FCP
1	13030197	SPRT ASSY-FCP
1		BATTERY BOX ASSY
*A/R	N/A	RADIO EQUIPMENT
*A/R	N/A	COMSEC EQUIPMENT
1	13032365	COMMUNICATIONS PROCESSOR

^{*} A/R - As Required.

52B

STATEMENT OF WORK

40

For the Multiple Launch Rocket System (MLRS)
Fiscal Years (FY) 98/99
M270A1 Launcher
June 29, 1998
(REVISED December 1, 1998)

1.0 SCOPE INTRODUCTION

- 1.1 <u>FY-98</u>. The contractor, as an independent contractor and not as an agent of the U.S. Government, shall furnish all services, materials, equipment and parts, except as otherwise specified in the contract, to upgrade the LAUNCHER, ROCKET: M269 with the M270A1 components and to integrate the resulting M269A1 with the M993A1 carrier vehicle to meet the M270A1 launcher requirements defined herein.
- 1.2 FY-99. The contractor, as an independent contractor and not as an agent of the U.S. Government, shall furnish all services, materials, equipment and parts, except as otherwise specified in the contract, to remanufacture the LAUNCHER, ROCKET: M269 to an operational and serviceable (Condition Code A), upgrade the LAUNCHER, ROCKET: M269 with the M270A1 components and to integrate the resulting M269A1 with the M993A1 carrier vehicle to meet the M270A1 launcher requirements defined herein. In addition the contractor shall produce new M270A1 Launchers to meet the M270A1 requirements defined herein.

2.0 GENERAL

2.1 FY-98

- 2.1.1 The contractor shall, upon receipt of a LAUNCHER, ROCKET: M269, apply those components of MWO 9-1055-648-50-2M270A1 MOD to upgrade the M269 to a M269A1 and incorporate Drawing 13210657. Upon receipt of a M993A1 from the Government, the contractor shall integrate the M269A1 to the originally associated M993A1 to form the M270A1 Launcher. The integrated M270A1 shall meet the performance requirements of MIL-PRF-35500.
- 2.1.2 The Government will provide LAUNCHER, ROCKET: M269's and upgraded M993A1 carrier vehicles to the contractor as GFE as defined in H-2 of this contract.

2.2 FY-99

2.2.1 The contractor shall, upon receipt of the LAUNCHER, ROCKET: M269, remanufacture the LAUNCHER, ROCKET: M269 to Condition Code A and upgrade in accordance with (IAW) paragraph 5.2.1 herein. Upon receipt of the remanufactured M993A1 from the Government, the contractor shall integrate the remanufactured

LAUNCHER, ROCKET: M269A1 to the originally associated remanufactured M993A1 to form the remanufactured M270A1 launcher. The integrated M270A1 shall meet the performance requirements of MIL-PRF-35500.

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- 3.1.2 Special Equipment: The contractor shall design, develop, fabricate, procure, and/or upgrade existing special tooling, special test equipment, and special inspection equipment, as necessary in support of M270A1 production. The inspection shall be capable of measuring or testing to accuracy representing one tenth or less, of the prescribed product tolerance. The contractor to verify that the special equipment will perform the function for which it has been designed shall perform a special equipment validation/proofing. The Government reserves the right to observe in the validation activities. The special equipment design shall represent the final production configuration. The contractor shall obtain government approval prior to fabricating, procuring and/or modifying equipment. Any computer based special equipment shall be certified by the contractor to be Year 2000 compliant.
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3.2.1 The contractor shall perform a flight test at White Sands Missile Range using an M270A1 Launcher that is representative of the manufacturer's production processes. The M270A1 Launcher shall meet the performance requirements of MIL-PRF-35500 prior to and after flight tests. The flight tests shall consist of 10 Basic MLRS Rockets and 1 ATACMS. Test plans shall be prepared IAW DI-NDTI-80759. Test reports shall be prepared IAW DI-NDTI-80809.

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3.3 <u>Final Acceptance</u>. The contractor shall perform a production Acceptance Test and a Production Reliability Test (PRAT) on each M270A1 Launcher, as specified in MIS-PRF-35500. The contractor shall prepare both an Acceptance Test Plan (ATP) and a Production Reliability Acceptance Test (PRAT) plan IAW DI-NDTI-80759. Results of PRAT shall be prepared IAW DI-NDTI-80809. The M270A1 Launcher shall pass the Acceptance Test and PRAT prior to being delivered to the Government.

4.0 GOVERNMENT FURNISHED EQUIPMENT (GFE)

1

4.1 The contractor shall prepare GFE Status Report IAW DI-ILSS-80620.

5.0 CONFIGURATION OF HARDWARE TO BE DELIVERED.

5.1 FY-98

5.1.1 Existing Hardware; Maintenance and Modifications Requirements. The contractor shall, upon receipt of a LAUNCHER, ROCKET: M269 less the components defined in exhibit 1 of this SOW, apply those components of MWO9-1055-648-50-2 M270A1 MOD to upgrade the M269 to a M269A1 and incorporate Drawing 13210657. Upon receipt of a M993A1 from the Government, the contractor shall integrate the M269A1 to the originally associated M993A1 to form the M270A1 Launcher. The integrated M270A1 shall meet the performance requirements of MIL-PRF-35500.

5.2 <u>FY-99</u>

- 5.2.1 Existing Hardware; Maintenance and Modifications Requirements.
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ECP MI-C-1446 Elevation Actuator Anti-Rotation Keys

ECP MI-C-1451 Hoist Carriage Assembly Limit Switch

ECP MI-C-1484A1 Duffel Bag Assembly Container

ECP MI-C-1494 Caterpillar Roller Assembly MOD

ECP MI-C-1499 Storage Container Hold Down Change
ECP MI-C-1548 Hoist Hook Return Spring
ECP MI-C-1551 Rocket Pod Hold Down MOD
ECP MI-C-1643 Elevation Actuator Rod Lubricator
ECP MI-C-1793 Hook & Pulley Assembly, Hoist-Bolt Removal
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MWO 9-1425-646-50-18 Upper Elevation Actuator Attached Fitting

- 5.2.1.2 The contractor shall apply those components of MWO 9-1055-648-50-2 M270A1 MOD necessary to upgrade the remanufactured M269 to a M269A1.
- 5.2.1.3 The contractor shall, upon receipt of a GFE M993A1 from the Government, integrate the M269A1 to the originally associated GFE M993A1 to form the M270A1 launcher. The integrated M270A1 LAUNCHER shall meet the performance requirements of MIL-PRF-35500.
- 5.2.2 New M270A1 launchers shall be IAW the contractors Product Definition Data Package (PDDP) and meet the performance requirements of MIL-PRF-35500.
- 5.3. Replaced Components. All spare LRU's removed from the GFE M270 launchers by the Contractor shall be documented on DD Form 1149 and returned to Red River Army Depot in an "as is" condition. All other components and/or parts removed from the GFE M270 launchers by the Contractor and replaced as a result of either the M270A1 modification/integration or remanufacture of the GFE M269 shall be managed In accordance with Contractor's Camden Property Control Operating Procedures (PCOPs).

6.0 CONFIGURATION MANAGEMENT (CM)

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- 6.1 The contractor shall implement and maintain a configuration management (CM) system, including software CM, configuration control, configuration status accounting, configuration identification and configuration audits.
- 6.1.1 Configuration Identification. The configuration identification for the M270A1 shall consist of the Government controlled Product Performance Baseline and the contractor controlled Product Baseline.
- 6.1.2 Product Performance Baseline (PPB). The Government Product Performance Baseline shall consist of:

MIL-PRF-35500 M270A1 Performance Specification
MIS-48648 Improved Fire Control System ICD
MIS-35360 Electrical and Mechanical Interface Definition between LDS/IFCS and M993 Carrier for M270A1 Launcher
11508910/01 MLRS FCS Version 6.0 ICD, International
11508910/02 MLRS FCS Version 6.0 ICD

MIS-48758 Fire Control Panel, Development Specification,

MIS-48650 ICD for Fire Control Panel MC

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MIS-48764 Weapon Interface Unit Development Specification

MIS-48652 ICD for Weapon Interface Unit

MIS-48784 Power Switching Unit Development Specification

MIS-48701 ICD for Power Switching Unit

MIS-48897 Position and Navigation Unit Development Specification

MIS-48654 ICD for Position and Navigation Unit

MIS-35361 Performance Specification for the MLRS Improved Launcher Mechanical System

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MIS-35362 Hydraulic Pump Unit

MIS-35363 Hydraulic Reservoir Unit

MIS-35364 Hydraulic Heat Exchanger Unit

MIS-35365 Azimuth Drive Unit

MIS-35366 Hydraulic Swivel Unit

MIS-35367 LDS Azimuth and Elevation Hydraulic Motor Unit

MIS-35368 Elevation Transmission Unit

13213307 Elevation Angle Drive Unit

MIS-35370 Hydraulic Hoses and Tubes

13213267 Battery Box Unit

13213268 Battery Box Cover

13213269 Crew Storage Box

13213270 Crew Storage Box Cover

MIS-48651/1 Launcher Interface Unit Electrical ICD.

MIS-48776/1 Commercial Item Description Specification for the Launcher Interface Unit

6.1.3 Product Baseline (PBL). The Product baseline shall consist of the contractor controlled Product Definition Data Package (PDDP). The PDDP shall be adequate for provisioning and procurement of spare parts, manufacturing, retrofit, installation, test, inspection, qualification, and acceptance of the M270A1 and its components. The PDDP shall be for tactical hardware and software, special inspection equipment, and support equipment and tools. Contractor shall prepare product drawings and associated lists IAW DI-DRPR-81000. For items, components, and processes for which the contractor would assert "Limited Rights" in detailed design data, the contractor shall submit form, fit, and function configuration documentation that is adequate for procurement from other sources of functionally and physically interchangeable items, components and processes. Otherwise, the contractor shall submit configuration documentation with unlimited rights. It is noted that in accordance with the Rights in Technical Data and Computer Software clause, DFARS 252.227-7013-(b) (1), form, fit, and function data shall be delivered with unlimited rights to the government.

6.2 <u>Configuration Documentation (CD)</u>. Contractor and Government Entity (CAGE) codes assigned by the government shall appear on all M270A1 peculiar drawings and specifications. Government assigned drawings numbers shall be required for top assembly drawings only. The CD to be prepared under this SOW shall be as follows:

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Product Drawings- Product drawings and associated lists shall be prepared IAW DI-DRPR-81000. The product drawings and lists are defined as all drawings and data required to produce, maintain and provide spares for the M270A1 launcher, as reflected in the contractor's PDDP.

- 6.2.1 Contractor Use of CD. The contractor (and his subcontractors) shall use the CD as specified above for process sheets, fabrication, and procurement of spare parts, inspection and test of hardware/software produced under this SOW.
- 6.2.2 Classified CD. All CD containing classified information shall be marked and handled IAW DOD 5220.22-M.
- 6.3 TDP Option (New Launchers). The contractor shall integrate the ILMS and IFCS modification kit technical data packages, as well as all other applicable improvements, into a common complete production technical data package for the M270A1 configuration. For items, components, and processes for which the contractor would assert "Limited Rights" in detailed design data, the contractor shall submit form, fit, and function configuration documentation that is adequate for procurement from other sources of functionally and physically interchangeable items, components and processes. Otherwise, the contractor shall submit configuration documentation with unlimited rights. It is noted that in accordance with the Rights in Technical Data and Computer Software clause, DFARS 252.227-7013-(b) (1), form, fit, and function data shall be delivered with unlimited rights to the government.

6.4 Configuration Change Control

- 6.4.1 Government Change Control. Documentation that is Government controlled shall be changed only as a result of a Government approved Engineering Change Proposal (ECP) prepared IAW DI-CMAN-80639 with Notices of Revision (NOR) prepared IAW DI-CMAN-80642. Documentation prepared for Government control as a result of this SOW shall be provided with an Engineering Release Record (ERR) prepared IAW DI-CMAN-80463. Electronic transfer of information shall be used to the maximum extent possible.
- 6.4.2 Request for Deviation (RFD) and Request for Waiver (RFW). A RFD or RFW shall be prepared IAW DI-CMAN-80640 and DI-MAN-80641, respectively, against Government controlled documentation. The RFD/RFW shall include not only a detailed description of the alternative, but also sufficient justification and technical qualification status to allow for complete Government evaluation.

6.4.3 The contractor shall follow the CMP for change control against technical documentation under his control. The Contractor shall allow Government attendance at the Contractor's Configuration Control Board (CCB). The contractor shall provide internally approved product baseline changes to the Government for information purposes. The contractor shall submit changes to the product baseline IAW DI-ILSS-81309 and DI-DRPR-81000. All documentation supporting the change decision shall also be included. Changes to the product baseline shall result in a common configuration for Government operational use and maintenance activities that provides for interchangeability and interoperability to the replaceable part level. Any changes which are assessed by the Government to affect the performance of the MLRS hardware or software will be identified to the contractor. Electronic transfer of information shall be used to the maximum extent possible.

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- 6.4.4 Changes Prepared by the Government or Other Contractor Organizations. The contractor shall evaluate these ECPs upon request by the Government and shall assess all areas normally addressed in an ECP prepared by the contractor. The contractor's concurrence/comments shall be prepared IAW DI-MISC-80508. Approved changes shall be incorporated into documentation for which the contractor has maintenance responsibility.
- 6.5 <u>Serialization</u>, <u>Lot and Block Control</u>. The Contractor shall maintain a serialization; lot and block control program IAW the Contractor's internal procedures. This program shall be used for manufacturing, identification of required hardware, and lot and block control of hardware to be delivered under this contract.
- 6.6 <u>Data Management</u>. The Contractor shall maintain a data management function to monitor contract deliverable item status, provide reproductions and deliver contract deliverable items to the Government. The government shall have access to the contractor's internal data prepared IAW DI-MGMT-81453.
- 6.6.1 Delivery of Engineering Data. The media delivery requirements of engineering data, and all other data that forms a part of the performance baseline, and the product baseline shall be as stated in MIS-52406.
- 6.7 <u>Engineering Release of Documentation</u>. The contractor shall prepare Engineering Release Records (ERRs) IAW DI-CMAN-80463 for the Government release of baselines
- 6.7.1 Subsequently, the contractor shall release the affected CD into the configuration status accounting system.

6.8 <u>Configuration Status Accounting</u>. The contractor shall continue to utilize the automated status accounting systems established for the as-designed, as-built, and as-modified configurations. This data shall be retrievable by on-line access or in report format, by item, and by range of items, as applicable IAW DI-CMAN-81253. The automated status accounting systems shall be described in the CMP.

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- 6.9 <u>Configuration Management Audits and Reviews</u>. The contractor shall conduct and/or participate in audits, reviews, and associated activities as specified in the CMP.
- 6.9.1 Production Audits and Reviews. The contractor shall arrange and participate in audits/reviews of end item fabrication progress and procedures as required to ensure that the end item is being prepared IAW the CD as documented and contract requirements.

7.0 TRAINING

- 7.1 Multimedia training materials shall be designed to provide a structured, coherent training program that can be used in support of New Equipment Training, institutional training or as an exportable training package. Any development of the training materials shall make maximum use of the LSA/LSAR database and existing training materials.
- 7.2 Training courses shall be developed and conducted to provide Training and Doctrine Command (TRADOC) institutions with the skills and knowledge's necessary to establish institutional Military Occupational Specialty (MOS) courses, to provide Army units receiving M270A1 launchers with operator and maintainer training. The class size for hands on training shall not exceed 12 persons each.
- 7.3 Courses shall be as follows:
 - a. Operator Instructor & Key Personnel Training (IKPT) Course
 - b. Maintainer Instructor & Key Personnel Training (IKPT) Course
 - c. Operator New Equipment Training (NET)
 - d. Maintainer New Equipment Training (NET)
- 7.3.1 One iteration each at two locations of the Operator and Maintainer Instructor and Key Personnel Training (IKPT) courses shall be conducted for United States Army Field Artillery School (USAFAS) and Ordinance Missile and Munitions School (OMMCS). Three iterations of the Operator New Equipment Training (NET) course and one iteration of the Maintainer NET course shall be conducted for each fielded M270A1 unit.
- 7.4 Preparation of Course of Instruction Material -The contractor shall prepare and deliver course documentation training materials for all courses conducted IAW the Data Item Descriptions (DID) shown below:
 - a. DI-ILSS-81521 Training Program Structure Document
 - b. DI-ILSS-81523 Training Conduct Support Document

c. DI-ILSS-81525 Te

Test Package

d. DI-ILSS-81526

Instructional Media

e. DI-ILSS-81520

Instructional Media Design Package

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7.5 Any computer based training material shall be certified by the contractor to be Year 2000 compliant.

8.0 PRODUCTION ENGINEERING

8.1 <u>Manufacturing Planning</u>. The contractor generated, maintained, or implemented manufacturing planning documentation necessary to support the required production activities shall be available for Government review.

For the Multiple Launch Rocket System (MLRS)
Fiscal Years (FY) 98/99
M270Al Launcher
June 29, 1998
(REVISED December 1, 1998)
(Revised April 27, 2000)

1.0 SCOPE INTRODUCTION

1.1 <u>FY-98</u>. The contractor, as an independent contractor and not as an agent of the U.S. Government, shall furnish all services, materials, equipment and parts, except as otherwise specified in the contract, to upgrade the LAUNCHER, ROCKET: M269 with the M270Al components and to integrate the resulting M269Al with the M993Al carrier vehicle to meet the M270Al launcher requirements defined herein.

1.2 FY-99. The contractor, as an independent contractor and not as an agent of the U.S. Government, shall furnish all services, materials, equipment and parts, except as otherwise specified in the contract, to remanufacture the LAUNCHER, ROCKET: M269 to an operational and serviceable (Condition Code A), upgrade the LAUNCHER, ROCKET: M269 with the M270A1 components and to integrate the resulting M269A1 with the M993A1 carrier vehicle to meet the M270A1 launcher requirements defined herein. In addition the contractor shall produce new M270A1 Launchers to meet the M270A1 requirements defined herein.

2.0 GENERAL

2.1 FY-98

- 2. 1.1 The contractor shall, upon receipt of a LAUNCHER, ROCKET: M269, apply those components of MWO 9-1055-648-50-2, M270AI MOD to upgrade the M269 to a M269A1 and incorporate Drawing 13210657. Upon receipt of a M993A1 from the Government, the contractor shall integrate the M269A1 to the originally associated M993A1 to form the M270A1 Launcher. The integrated M270A1 shall meet the performance requirements of MIL-PRF-35500.
- 2.1.2 The Government will provide LAUNCHER, ROCKET: M269's and upgraded M993AI carrier vehicles to the contractor as GFE as defined in H-2 of this contract.

2.2 FY-99

2.2.1 The contractor shall, upon receipt of the LAUNCHER, ROCKET: M269, remanufacture the LAUNCHER, ROCKET: M269 to Condition Code A and upgrade in accordance with (IAW) paragraph 5.2.1 herein. Upon receipt of the remanufactured M993A1 from the Government, the contractor shall integrate the remanufactured



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For the Multiple Launch Rocket System (MLRS)
Fiscal Years (FY) 98/99
M270Al Launcher
June 29, 1998
(REVISED December 1, 1998)
(Revised April 27, 2000)

1.0 SCOPE INTRODUCTION

- 1.1 <u>FY-98</u>. The contractor, as an independent contractor and not as an agent of the U.S. Government, shall furnish all services, materials, equipment and parts, except as otherwise specified in the contract, to upgrade the LAUNCHER, ROCKET: M269 with the M270Al components and to integrate the resulting M269Al with the M993Al carrier vehicle to meet the M270Al launcher requirements defined herein.
- 1.2 FY-99. The contractor, as an independent contractor and not as an agent of the U.S. Government, shall furnish all services, materials, equipment and parts, except as otherwise specified in the contract, to remanufacture the LAUNCHER, ROCKET: M269 to an operational and serviceable (Condition Code A), upgrade the LAUNCHER, ROCKET: M269 with the M270A1 components and to integrate the resulting M269A1 with the M993A1 carrier vehicle to meet the M270A1 launcher requirements defined herein. In addition the contractor shall produce new M270A1 Launchers to meet the M270A1 requirements defined herein.

2.0 GENERAL

2.1 FY-98

- 2. 1.1 The contractor shall, upon receipt of a LAUNCHER, ROCKET: M269, apply those components of MWO 9-1055-648-50-2, M270AI MOD to upgrade the M269 to a M269A1 and incorporate Drawing 13210657. Upon receipt of a M993A1 from the Government, the contractor shall integrate the M269A1 to the originally associated M993A1 to form the M270A1 Launcher. The integrated M270A1 shall meet the performance requirements of MIL-PRF-35500.
- 2.1.2 The Government will provide LAUNCHER, ROCKET: M269's and upgraded M993AI carrier vehicles to the contractor as GFE as defined in H-2 of this contract.

2.2 FY-99

2.2.1 The contractor shall, upon receipt of the LAUNCHER, ROCKET: M269, remanufacture the LAUNCHER, ROCKET: M269 to Condition Code A and upgrade in accordance with (IAW) paragraph 5.2.1 herein. Upon receipt of the remanufactured M993A1 from the Government, the contractor shall integrate the remanufactured



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For the Multiple Launch Rocket System (MLRS)
Fiscal Years (FY) 98/99
M270Al Launcher
June 29, 1998
(REVISED December 1, 1998)
(Revised April 27, 2000)

LOSCOPE INTRODUCTION

- 1.1 <u>FY-98</u>. The contractor, as an independent contractor and not as an agent of the U.S. Government, shall furnish all services, materials, equipment and parts, except as otherwise specified in the contract, to upgrade the LAUNCHER, ROCKET: M269 with the M270Al components and to integrate the resulting M269Al with the M993Al carrier vehicle to meet the M270Al launcher requirements defined herein.
- 1.2 FY-99. The contractor, as an independent contractor and not as an agent of the U.S. Government, shall furnish all services, materials, equipment and parts, except as otherwise specified in the contract, to remanufacture the LAUNCHER, ROCKET: M269 to an operational and serviceable (Condition Code A), upgrade the LAUNCHER, ROCKET: M269 with the M270A1 components and to integrate the resulting M269A1 with the M993A1 carrier vehicle to meet the M270A1 launcher requirements defined herein. In addition the contractor shall produce new M270A1 Launchers to meet the M270A1 requirements defined herein.

2.0 GENERAL

2.1 FY-98

- 2. 1.1 The contractor shall, upon receipt of a LAUNCHER, ROCKET: M269, apply those components of MWO 9-1055-648-50-2, M270AI MOD to upgrade the M269 to a M269A1 and incorporate Drawing 13210657. Upon receipt of a M993A1 from the Government, the contractor shall integrate the M269A1 to the originally associated M993A1 to form the M270A1 Launcher. The integrated M270A1 shall meet the performance requirements of MIL-PRF-35500.
- 2.1.2 The Government will provide LAUNCHER, ROCKET: M269's and upgraded M993AI carrier vehicles to the contractor as GFE as defined in H-2 of this contract.

2.2 FY-99

2.2.1 The contractor shall, upon receipt of the LAUNCHER, ROCKET: M269, remanufacture the LAUNCHER, ROCKET: M269 to Condition Code A and upgrade in accordance with (IAW) paragraph 5.2.1 herein. Upon receipt of the remanufactured M993A1 from the Government, the contractor shall integrate the remanufactured



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For the Multiple Launch Rocket System (MLRS)
Fiscal Years (FY) 98/99
M270Al Launcher
June 29, 1998
(REVISED December 1, 1998)
(Revised April 27, 2000)

1.0 SCOPE INTRODUCTION

- 1.1 <u>FY-98</u>. The contractor, as an independent contractor and not as an agent of the U.S. Government, shall furnish all services, materials, equipment and parts, except as otherwise specified in the contract, to upgrade the LAUNCHER, ROCKET: M269 with the M270Al components and to integrate the resulting M269Al with the M993Al carrier vehicle to meet the M270Al launcher requirements defined herein.
- 1.2 FY-99. The contractor, as an independent contractor and not as an agent of the U.S. Government, shall furnish all services, materials, equipment and parts, except as otherwise specified in the contract, to remanufacture the LAUNCHER, ROCKET: M269 to an operational and serviceable (Condition Code A), upgrade the LAUNCHER, ROCKET: M269 with the M270A1 components and to integrate the resulting M269A1 with the M993A1 carrier vehicle to meet the M270A1 launcher requirements defined herein. In addition the contractor shall produce new M270A1 Launchers to meet the M270A1 requirements defined herein.

2.0 GENERAL

2.1 FY-98

- 2. 1.1 The contractor shall, upon receipt of a LAUNCHER, ROCKET: M269, apply those components of MWO 9-1055-648-50-2, M270AI MOD to upgrade the M269 to a M269A1 and incorporate Drawing 13210657. Upon receipt of a M993A1 from the Government, the contractor shall integrate the M269A1 to the originally associated M993A1 to form the M270A1 Launcher. The integrated M270A1 shall meet the performance requirements of MIL-PRF-35500.
- 2.1.2 The Government will provide LAUNCHER, ROCKET: M269's and upgraded M993AI carrier vehicles to the contractor as GFE as defined in H-2 of this contract.

2.2 FY-99

2.2.1 The contractor shall, upon receipt of the LAUNCHER, ROCKET: M269, remanufacture the LAUNCHER, ROCKET: M269 to Condition Code A and upgrade in accordance with (IAW) paragraph 5.2.1 herein. Upon receipt of the remanufactured M993A1 from the Government, the contractor shall integrate the remanufactured



LAUNCHER. ROCKET: M269A1 to the originally associated remanufactured M993A1 to form the remanufactured M270A1 launcher. The integrated M270A1 shall meet the performance requirements of MIL-PRF-35500.

- 2.2.2 The Government will provide LAUNCHER, ROCKET: M269's and remanufactured and upgraded M993A1 carrier vehicles to the contractor as GFE as defined in H-2 of this contract.
- 2.2.3 The contractor shall produce new M270A1 launchers to meet the performance requirements of MIL-PRF-35500.

3.0 INSPECTION AND ACCEPTANCE

3.1 Quality

- 3. 1.1 Quality System: The contractor shall develop, implement and maintain a quality system. The system shall provide controls of process and product characteristics and include criteria and methodology that are used to validate conformance to performance specifications and to achieve continuous improvement. The quality system shall be integrated with other functional areas in the design, test, production and management processes.
- 3.1.2 Special Equipment: The contractor shall design, develop, fabricate, procure, and/or upgrade existing special tooling, special test equipment, and special inspection equipment, as necessary in support of M270A1 production. The inspection shall be capable of measuring or testing to accuracy representing one tenth or less, of the prescribed product tolerance. The contractor to verify that the special equipment will perform the function for which it has been designed shall perform a special equipment validation/proofing. The Government reserves the right to observe in the validation activities. The special equipment design shall represent the final production configuration. The contractor shall obtain government approval prior to fabricating, procuring and/or modifying equipment. Any computer based special equipment shall be certified by the contractor to be Year 2000 compliant.
- 3.1.3 Supplier Qualification: The contractor shall assure qualification of all vendors.

3.2 Production Qualification Test

3.2.1 The contractor shall perform a flight test at White Sands Missile Range using an M270A1 Launcher that is representative of the manufacturer's production processes. The M270A1 Launcher shall meet the performance requirements of MIL-PRF-35500 prior to and after flight tests. The flight tests shall consist of 10 Basic MLRS Rockets and 1 ATACMS. Test plans shall be prepared IAW DI-NDTI-80759. Test reports shall be prepared IAW DI-NDTI-80809.

- 3.2.2 Production qualification testing of Line Replaceable Unit's (LRU) and the quantities of LRUs to be tested shall be at the discretion of the contractor. The contractor shall base the need for testing on time from last production, major design changes or production changes and significant changes in the production facility.
- 3.3 Final Acceptance. The contractor shall perform a Production Acceptance Test and a Production Reliability Test (PRAT) on each M270A1 Launcher, as specified in MIL-PRF-35500. The contractor shall prepare both an Acceptance Test Plan (ATP) and a Production Reliability Acceptance Test (PRAT) plan IAW DI-NDTI-80759. Results of PRAT shall be prepared IAW DI-NDTI-80809. The M270A1 Launcher shall pass the Acceptance Test and PRAT prior to being delivered to the Government.

4.0 GOVERNMENT FURNISHED EQUIPMENT (GFE)

4.1 The contractor shall prepare GFE Status Report IAW DI-ILSS-80620.

5.0 CONFIGURATION OF HARDWARE TO BE DELIVERED.

5.1 FY-98

5. 1.1 Existing Hardware; Maintenance and Modifications Requirements. The contractor shall, upon receipt of a LAUNCHER, ROCKET: M269 less the components defined in exhibit 1 of this SCW, apply those components of MW0 9-1055-648-50-2, M270Al MOD to upgrade the M269 to a M269Al and incorporate Drawing 13210657. Upon receipt of a M993Al from the Government, the contractor shall integrate the M269Al to the originally associated M993Al to form the M270Al Launcher. The integrated M270Al shall meet the performance requirements of MIL-PRF-35500.

5.2 FY-99

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- 5.2.1 Existing Hardware; Maintenance and Modifications Requirements.
- 5.2. 1.1 The contractor shall apply the following DMWR'S, Modification Work Orders (MWO), Engineering Change Proposals (ECP) and Engineering Orders (EO) to upgrade the M269:

DMWR 9-1425-646-1 Launcher, Rocket, and Armored Vehicle Mounted: M270

DMWR 9-1425-646-2 Launcher, Rocket, and Armored Vehicle Mounted: M269

ECP MI-C-1372RI IPDB Connector Gaskets, Testing

ECP MI-C-1429 Harness Trough Door Hinge Change

ECP MI-C-1446 Elevation Actuator Anti-Rotation Keys

ECP MI-C-1451 Hoist Carriage Assembly Limit Switch

ECP MI-C-1484A1 Duffel Bag Assembly Container

ECP MI-C₁ 1494 Caterpillar Roller Assembly MOD

11508910/02 MLRS FCS Version 6.0 ICD

MRS-48758 Fire Control Panel, Development Specification,

MIS-48650 ICD for Fire Control Panel MC

MIS-48764 Weapon Interface Unit Development Specification

MIS-48652 ICD for Weapon Interface Unit

MIS-48784 Power Switching Unit Development Specification

MIS-48701 ICD for Power Switching Unit

MIS-48897 Position and Navigation Unit Development Specification

MIS-4665- ICD for Position and Navigation Unit

MIS-35361 Performance Specification for the MLRS Improved Launcher Mechanical System

MIS-35362 Hydraulic Pump Unit

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MIS-35365 Azimuth Drive Unit

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MIS-48651/ALauncher Interface Unit Electrical ICD.

MIS-48776/1 Commercial Item Description Specification for the Launcher Interface Unit

6.1.3 Product Baseline (PBL). The Product baseline shall consist of the contractor controlled Product Definition Data Package (PDDP). The PDDP shall be adequate for provisioning and procurement of spare parts, manufacturing, retrofit, installation, test, inspection, qualification, and acceptance of the M270A1 and its components. The PDDP shall be for tactical hardware and software, special inspection equipment, and support equipment and tools. Contractor shall prepare product drawings and associated lists IAW DI-DRPR-81000. For items, components, and processes for which the contractor would assert "Limited Rights" in detailed design data, the contractor shall submit form, fit, and function configuration documentation that is adequate for procurement from other sources of functionally and physically interchangeable items, components and processes. Otherwise, the contractor shall submit configuration documentation with unlimited rights. It is noted that in accordance with the Rights in Technical Data and Computer Software clause, DFARS 252.227-7013-(b) (1), form, fit, and function data shall be delivered with unlimited rights to the government.

6.2 Configuration Documentation (CD). Contractor and Government Entity (CAGE) codes assigned by the government shall appear on all M270A1 peculiar drawings and specifications. Government assigned drawings numbers shall be required for top assembly drawings only. The CD to be prepared under this SOW shall be as follows:

Product Drawings- Product drawings and associated lists shall be prepared IAW DI-DRPR-81000. The product drawings and lists are defined as all drawings and data required to produce, maintain and provide spares for the M270A1 launcher, as reflected in the contractor's PDDP.

- 6.2.1 Contractor Use of CD. The contractor (and his subcontractors) shall use the CD as specified above for process sheets, fabrication, and procurement of spare parts, inspection and test of hardware/software produced under this SOW.
- 6.2.2 Classified CD. All CD containing classified information shall be marked and handled IAW DOD 5220.22-M.
- 6.3 TDP Option (New Launchers). The contractor shall integrate the ILMS and IFCS modification kit technical data packages, as well as all other applicable improvements, into a common complete production technical data package for the M270A1 configuration. For items, components, and processes for which the contractor would assert "Limited Rights" in detailed design data, the contractor shall submit form, fit, and function configuration documentation that is adequate for procurement from other sources of functionally and physically interchangeable items, components and processes. Otherwise, the contractor shall submit configuration documentation with unlimited rights. It is noted that in accordance with the Rights in Technical Data and Computer Software clause, DFARS-252.227-7013-(b)-(1), form, fit, and function data shall be delivered with unlimited rights to the government.

6.4 Configuration Change Control

- 6.4.1 Government Change Control. Documentation that is Government controlled shall be changed only as a result of a Government approved Engineering Change Proposal (ECP) prepared IAW DI-CMAN-80639 with Notices of Revision (NOR) prepared IAW DI-CMAN-80642. Documentation prepared for Government control as a result of this SOW shall be provided with an Engineering Release Record (ERR) prepared IAW DI-CMAN-80463. Electronic transfer of information shall be used to the maximum extent possible.
- 6.4.2 Request for Deviation (RFD) and Request for Waiver (RFW). A RFD or RFW shall be prepared IAW DI-CMAN-80640 and DI-CMAN-80641, respectively, against Government controlled documentation. The RFD/RFW shall include not only a detailed description of the alternative, but also sufficient justification and technical qualification status to allow for complete Government evaluation.

- 6.4.3 The contractor shall follow the CMP for change control against technical documentation under his control. The Contractor shall allow Government attendance at the Contractor's Configuration Control Board (CCB). The contractor shall provide internally approved product baseline changes to the Government for information purposes. The contractor shall submit changes to the product baseline IAW DI-ILSS-09 and DI-DRPR-8 1000. All documentation supporting the change decision shall also be included. Changes to the product baseline shall result in a common configuration for Government operational use and maintenance activities that provides for interchangeability and interoperability to the replaceable part level. Any changes which are assessed by the Government to affect the performance of the MLRS hardware or software will be identified to the contractor. Electronic transfer of information shall be used to the maximum extent possible.
- 6.4.4 Changes Prepared by the Government or Other Contractor Organizations. The contractor shall evaluate these ECPs upon request by the Government and shall assess all areas normally addressed in an ECP prepared by the contractor. The contractor's concurrence/comments shall be prepared IAW DI-MISC-80508. Approved changes shall be incorporated into documentation for which the contractor has maintenance responsibility.
- 6.5 Serialization, Lot and Block Control. The Contractor shall maintain a serialization; lot and block control program IAW the Contractor's internal procedures. This program shall be used for manufacturing, identification of required hardware, and lot and block control of hardware to be delivered under this contract.
- 6.6 <u>Data Management.</u> The Contractor shall maintain a data management function to monitor contract deliverable item status, provide reproductions and deliver contract deliverable items to the Government. The government shall have access to the contractor's internal data prepared IAW DI-MGMT-81453.
- 6.6.1 Delivery of Engineering Data. The media delivery requirements of engineering data, and all other data that forms a part of the performance baseline, and the product baseline shall be as stated in MIS-52406.
- 6.7 Engineering Release of Documentation. The contractor shall prepare Engineering Release Records (ERRs) IAW DI-CMAN-80463 for the Government release of baselines.
- 6.7.1 Subsequently, the contractor shall release the affected CD into the configuration status accounting system.



- 6.8 Configuration Status Accounting. The contractor shall continue to utilize the automated status accounting systems established for the as-designed, as-built, and as-modified configurations. This data shall be retrievable by on-line access or in report format, by item, and by range of items, as applicable IAW DI-CMAN-81253. The automated status accounting systems shall be described in the CMP.
- 6.9 Configuration Management Audits and Reviews. The contractor shall conduct and/or participate in audit: reviews, and associated activities as specified in the CMP.
- 6.9.1 Production Audits and Reviews. The contractor shall arrange and participate in audits/reviews of end item fabrication progress and procedures as required to ensure that the end item is being prepared IAW the CD as documented and contract requirements.

7.0 TRAINING

- 7.1 Multimedia training materials shall be designed to provide a structured, coherent training program that can be used in support of New Equipment Training, institutional training or as an exportable training package. Any development of the training materials shall make maximum use of the LSA/LSAR database and existing training materials.
- 7.2 Training courses shall be developed and conducted to provide Training and Doctrine Command (TRADOC) institutions with the skills and knowledge's necessary to establish institutional Milita. Occupational Specialty (MOS) courses, to provide Army units receiving M270A i launchers with operator and maintainer training. The class size for hands on training shall not exceed 12 persons each.
- 7.3 Courses shall be as follows:
 - a. Operator Instructor & Key Personnel Training (IKPT) Course
 - b. Maintainer Instructor & Key Personnel Training (IKPT) Course
 - c. Operator New Equipment Training (NET)
 - d. Maintainer New Equipment Training (NET)
- 7.3.1 One iteration each at two locations of the Operator and Maintainer Instructor and Key Personnel Training (IKPT) courses shall be conducted for United States Army Field Artillery School (USAFAS) and Ordinance Missile and Munitions School (OMMCS). Three iterations of the Operator New Equipment Training (NET) course and one iteration of the Maintainer NET course shall be conducted for each fielded M270A1 unit.
- 7.4 Preparation of Course of Instruction Material -The contractor shall prepare and deliver course documentation training materials for all courses conducted IAW the Data Item Descriptions (DID) shown below:
 - a. DI-ILSS-81521 Training Program Structure Document
 - b. Df-ILSS-81523 Training Conduct Support Document



- c. DI-ILSS-81525 Test Package
- d. DI-ILSS-81526 Instructional Media
- e. DI-ILSS-81520 Instructional Media Design Package
- 7.5 Any computer based training material shall be certified by the contractor to be Year 2000 compliant.

8.0 PRODUCTION ENGINEERING

& I Manufacturing Planning. The contractor generated, maintained, or implemented manufacturing planning documentation necessary to support the required production activities shall be available for Government review.

9.0 ADDITIONAL TASKS

- 9.1 Additional Testing. The contractor shall perform the following additional testing to ensure to ensure the Government that the M270A1 LAUNCHER meets the Safety, Reliability and Environmental requirements of MIL-PRF-35500.
- 9.1.1 Vibration Environment Testing. The contractor shall test the production configuration fire Centrol Panel (FCP) configured with the Power PC Executive Processor Circuit Card Assembly and Solid State Mass Storage Device (SSMSD) to the vibration environments specified is MIS-26432E at the vibration fixture. The FCP shall be mounted on the FCP mounting brackets affixed to the vibration fixture. The vibration testing shall be conducted at RTTC, Redstone Arsenal, AL. The contractor shall prepare a test plan and report and shall make the results of testing available to the Government for review.
- 9.1.2 Electromagnetic Interference (EMI) Testing. The contractor shall complete EMI testing at the Line Keplaceable Unit (LRU) level for all LRUs containing the Power PC Circuit Card Assembly. The contractor shall prepare a test plan and report and shall make the results of testing available to the Government for review.
- 9.2 Functional Configuration Audit Action Items. The contractor shall review all incomplete Action Items (AI) remaining from the Improved Fire Control System (IFCS) Functional Configuration Audit (FCA) and classify AIs in one of the following categories.
- 9.2.1 Critical Action Items. The contractor shall classify any AI as Critical which could affect M270A1 LATINCHER or Fire Control System (FCS) safety, operations, reliability or maintainability. The contractor shall work and close all Critical AIs prior to Harris FCA and delivery of the first M270A1 LAUNCHER to the Government.

9.2.2 Non-Critical Action Items. The contractor shall classify all other incomplete AIs as Non-Critical. The contractor shall propose to the Government a plan for working and closing all Non-Critical AI in a timely manner.

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SWORN STATEMENT For use of this form, see AR 190-45; the proponent agency is PMG. PRIVACY ACT STATEMENT Title 10, USC Section 301; Title 5, USC Section 2951; E.O. 9397 Social Security Number (SSN), AUTHORITY: INCIPAL PURPOSE: To document potential criminal activity involving the U.S. Army, and to allow Army officials to maintain discipline, law and order through investigation of complaints and incidents. Information provided may be further disclosed to federal, state, local, and foreign government law enforcement OUTINE USES: agencies, prosecutors, courts, child protective services, victims, witnesses, the Department of Veterans Affairs, and the Office of Personnel Management. Information provided may be used for determinations regarding judicial or non-judicial punishment, other administrative disciplinary actions, security clearances, recruitment, retention, placement, and other personnel actions. Disclosure of your SSN and other information is voluntary. DISCLOSURE: 2. DATE (YYYYMMDD) 3. TIME 4. FILE NUMBER 1 LOCATION 2008/07/07 HO USAAMCOM, Redstone Arsenal AL 6. SSN LAST NAME, FIRST NAME, MIDDLE NAME 7. GRADE/STATUS 8. ORGANIZATION OR ADDRESS AMRDEC, Redstone Arsenal, AL , WANT TO MAKE THE FOLLOWING STATEMENT UNDER OATH: I was the Engineering Services Program manager in 2000 when some of the issues related to the M270A1 launcher safety release arose. The M270A1 program was trying to prepare for a successful material release decision. Part of this process was a safety review. LM Dallas would not certify that the M270A1 was safe. This followed an internal LM Dallas managed safety Tigor Team. The purpose of this LM Tiger Team was to find out why the M270A1 Launcher had uncontrolled cage motion. This uncontrolled motion caused the MLRS LLM to move at tactical speeds and thereby posed a serious risk to personnel in and around the immediate launcher area. LM had completed their review and but claimed that they could not find the root cause(s) of the problem. I had significant background concerning the basic M270 launch and its drive system. I was asked to lead a Gov't team to perform safety testing on the M270A1 launcher. Additionally, I was responsible for managing the requirements for the Industrial Engineering Services (IES) contract, and I managed the TDLs that were issued while I was the engineering PM. During this time we had separate contracts for the Improved auncher and the Improved Fire Control. The program was restructured into one contract for the M270A1 to get control of costs d move into low rate production. The IES contract was to maintain the fielded fleet, not for research and development or oduction. So, I watched the TDLs to make sure they were in the scope of the IES contract and did not duplicate effort on the ier contracts. The SRRE was a Gov't ran and staffed team that was needed because Lockheed Martin wouldn't certify that the M270A1 launcher was safe (specifically that it did not have any unacceptable single point failures that posed serious risk to either personnel or equipment). So, we took a launcher and tested it extensively. We found a number of issues such as limit switches being removed and the launcher solely depending on resolvers to monitor cage position. We created conditions that caused the resolvers to lose track of cage position. As a reaction, the M270A1 Fire Control System would react by commanding cage motion at tactical speeds. We thought Lockheed Martin might have found some of the problems but they would not say so. Lockheed would only certify that the launcher was safe to the extent they tested it, which was the same as saying they wouldn't certify it. Additionally, they tried to say that the design was Gov't furnished errors resulting from the previous contract efforts. These previous efforts (the ILMS and the IFCS contracts were restructured due to extensive LM cost and schedule overruns). It was LM's contention that the Gov't GFE'd these "errors" to them during the contract restructure. from the Safety Office worked on the SRRE also. The SRRE did identify the issues with the launchers and proposed fixes. The newly restructured/firm fixed priced contract required Lockheed Martin to deliver launchers with no single point failures At the time we discovered the problems, some of the launchers had been delivered under the LRIP and required fixing. The fixes were made, but I never knew what contract paid for them (specifically, any software release after software version "Charlie or Delta" which is what we tested during the Gov't ran SRRE exercise. After the SRRE exercise was completed, MLRS PMO Management removed me from participating on the SRRE and corrective action phase. A few months later, I left the MLRS PMO to go to the NLOS LS Task Force. 11. INIDIALS OF PERSON MAKING STATEMENT 10 EXHIBIT PAGES PAGE 1 OF DDITIONAL PAGES MUST CONTAIN THE HEADING "STATEMENT _____ TAKEN AT ____ DATED

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TAKEN AT Redstone Arsenal	DATED 2008/07/07
STATEMENT (Continued)	
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Richardson, Randy J Mr CIV USA AMC

From: Sent:

CIV USA AMC Thursday, June 05, 2008 9:44 AM

To: bject: Mr CIV USA AMC

RE:

Retirement (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

I was out on Wed but you are right, retired on 3 Jun 03.

----Original Message-----

Mr CIV USA AMC

Sent: Monday, June 02, 2008 5:39 PM CIV USA AMC Subject: Retirement

Do you keep records on when people retire? I am interested in the timeframe of retirement (I think it was around June 2003). If you know and it's not too much trouble, it would help me.

Thanks

.assification: UNCLASSIFIED

caveats: NONE

----Original Message----

From: Ms CIV USA AMC Sent: Wednesday, October 22, 2008 6:06 PM To: Mr CIV USA AMC

Subject: RE: Follow-Up to Investigation (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

With the exception of knowing that none of the following TDL(s) were included in the settlement, I do not remember exactly why Clarence was objecting to them. Also, FYI We also have the Safety issue that has been in LMMFC's Legal Department for well over a year.

I am sorry I could not have been of more help.

----Original Message----

From: Mr CIV USA AMC Sent: Monday, October 20, 2008 4:56 PM To: Ms CIV USA AMC

Subject: RE: Follow-Up to Investigation (UNCLASSIFIED)

These are the ones I was asked to investigate: TDL TR-99-001A (revision B), TDL LM-98-03, TDL IL-99-01, TDL PT-P-99-020 and TDL LO-99-05.

Here were the conclusions from my notes on the TDL's:

- TDL TR-99-001A (revision b) provided for engineering work on the Low Cost Reduced Range Practice Rocket (LCRRPR) pursuant to IES contract DAAH01-98-C-0157. The LCRRPR practice rockets have no relevance to the IFCS addressed by Contract DAAH01-92-C-0432 or to the ILMS addressed by Contract DAAH01-95-C-0329. Accordingly, the TDL tasking would not have been properly assigned to either Contract. Payments to Lockheed Martin pursuant to the TDL would not have duplicated payments to Lockheed under either Contract.
- TDL LM-98-03, provided for engineering services required to improve the M270A1's operating software, "porting the M270A1 software from the VADS/Rational environment to the commercial VX Works operating systems and to continue efforts to integrate and qualify a Digitized Cell (DC) capable of supporting the requirements for Force XXI Embedded Battlefield Command (EBC) applications" As stated above, DAAH01-92-C-0432 was for the development of the launcher's IFCS and DAAH01-95-C-0329 was for the development of the launcher's ILMS. Neither Contract pertained to the launcher's operating software. Therefore, this TDL tasking could not properly have issued against either contract. Further, this TDL was

issued on April 28, 1999, after the funding cap was issued for DAAHO1-92-C-0432, so placement of this TDL tasking against this contract would have been legally and factually impossible.

- TDL IL-99-01 calls for a broad statement of effort on Lockheed's part, tasking various types of engineering support for both mechanical and electrical systems and various types of systems engineering and specialty engineering related to the production of the M270A1 launcher. This TDL was issued on April 23, 1999, after the funding cap was issued for DAAHO1-92-C-0432. This TDL does provide for 5000 hours for support for "mechanical systems." However, the TDL directs Lockheed to allocate hours for engineering support to "Camden," the location of the Lockheed Martin facility at which the M270A1 launcher was manufactured. Accordingly, review by the Investigative Officer determined that the tasks assigned by this TDL related to manufacturing engineering and as such, these tasks would have been outside the scope of DAAH01-95-C-0329, which provided for the development (not the production or manufacture) of the ILMS.
- TDL PT-P-99-020 required an "IFCS Maintainability Demonstration Dry Run and the formal IFCS Maintainability Demo" on the Improved Fire Control System of the M270A1 launcher. The TDL is dated April 30, 1999, after the funding cap was issued for DAAHO1-92-C-0432. The TDL does not involve work on the launcher's ILMS and thus would not have been within the scope of DAAHO1-95-C-0329.

Any thoughts, insights or information would be appreciated.

Thanks