Selected Acquisition Report (SAR)

Military Global Positioning System (GPS) User Equipment Increment 1 (MGUE Inc 1)

FY 2024 President's Budget

Defense Acquisition Visibility Environment (DAVE)

Table of Contents

Common Acronyms and Abbreviations

$B - Billions of Dollars
$K - Thousands of Dollars
$M - Millions of Dollars
ACAT - Acquisition Category
Acq O&M - Acquisition-Related Operations and Maintenance
ADM - Acquisition Decision Memorandum
APB - Acquisition Program Baseline
APPN - Appropriation
APUC - Average Procurement Unit Cost
BA - Budget Authority/Budget Activity
Blk - Block
BY - Base Year
CAPE - Cost Assessment and Program Evaluation
CARD - Cost Analysis Requirements Description
CDD - Capability Development Document
CLIN - Contract Line Item Number
CPD - Capability Production Document
CY - Calendar Year
DAB - Defense Acquisition Board
DAE - Defense Acquisition Executive
DAMIR - Defense Acquisition Management Information Retrieval
DoD - Department of Defense
DSN - Defense Switched Network
EMD - Engineering and Manufacturing Development
EVM - Earned Value Management
FMS - Foreign Military Sales
FOC - Full Operational Capability
FRP - Full Rate Production
FY - Fiscal Year
FYDP - Future Years Defense Program
ICE - Independent Cost Estimate
Inc - Increment
IOC - Initial Operational Capability
JROC - Joint Requirements Oversight Council
KPP - Key Performance Parameter
LRIP - Low Rate Initial Production
MDA - Milestone Decision Authority
MDAP - Major Defense Acquisition Program
MILCON - Military Construction
N/A - Not Applicable
O&M - Operations and Maintenance
O&S - Operating and Support
ORD - Operational Requirements Document
OSD - Office of the Secretary of Defense
PAUC - Program Acquisition Unit Cost
PB - President's Budget

PE - Program Element
PEO - Program Executive Officer
PM - Program Manager
POE - Program Office Estimate
RDT&E - Research, Development, Test, and Evaluation
SAR - Selected Acquisition Report
SCP - Service Cost Position
TBD - To Be Determined
TY - Then Year
U.S. - United States
UCR - Unit Cost Reporting
USD(A&S) - Under Secretary of Defense (Acquisition and Sustainment)
USD(AT&L) - Under Secretary of Defense (Acquisition, Technology and Logistics)

Program Information

Program Name

Military Global Positioning System (GPS) User Equipment Increment 1 (MGUE Inc 1)

DoD Component

Air Force

Responsible Office

Program Manager

Name: Col Matthew Spencer
Date Assigned: March 7, 2022
Address: 483 N. Aviation
El Segundo, CA 90245
Phone: (310) 653-3930

Mission and Description

The objective of the Military Global Positioning System (GPS) User Equipment (MGUE) program is to deliver affordable advanced GPS capabilities to military users as rapidly as possible and to meet the needs of a broad user base. The MGUE program has developed a comprehensive acquisition strategy to provide modernized GPS capabilities to US and Allied forces by establishing time certain and low risk development, bounding requirements to leverage mature technology to the maximum extent possible, implementing cost and schedule controls during Engineering & Manufacturing Development (EMD) and Low Rate Initial Production (LRIP). There will be a focus on implementing a proactive, collaborative MGUE Platform integration activity to mitigate risk and reduce cost for DoD modernization. MGUE willdevelop form factors based on well-defined standards to support lead platform integration and will introduce the Common GPS Module (CGM) to support long term vision and modernized capabilities for non-lead platform and unique applications.

Executive Summary

MGUE Inc 1

Program Highlights Since Last Report

MGUE Increment 1 delivers two circuit card receiver form factors, ground & aviation/maritime, to be demonstrated in four Service-nominated lead platforms: The Air Force B-2 bomber, the Navy Arleigh Burke Guided Missile Destroyer (DDG), the United States Marine Corps Joint Light Tactical Vehicle, and the Army Stryker Combat Vehicle. The Space Systems Command contracted with three vendors to develop MGUE technologies: L3Harris (L3H), Raytheon Technologies Corp (RTX) (formerly Raytheon Company), and BAE Systems (formerly Collins Aerospace). L3H and RTX are developing the primary ground and aviation/maritime cards, respectively that are integrating into the lead platforms. To assist the Services, the MGUE Increment 1 program will provide MGUE card-level Integration Guides for the integration of the MGUE GPS Receiver Application Module (GRAM) Standard Electronic Module (GRAM- S/M) and Ground Based GRAM Modernized (GB-GRAM-M) receiver cards in host systems. After lead platform Field Testing, the Services will procure and sustain MGUE Increment 1 receivers in their weapon systems identified for GPS modernization.Since the last SAR, L3Harris (L3H) delivered its final Build 7 card to the government on November 16, 2021 and completed regression testing February 2022. The final Delta Security Certification and Approval was completed April 13, 2022 and April 28, 2022, respectively. The L3H Ground-Based Global Positioning Systems (GPS) Receiver Application Module-Modernized (GB-GRAM-M) card development is complete and available for services procurement.The Aviation/Maritime card (i.e., the GRAM-Standard Electronic Module/Modernized (GRAM-S/M)) continues to make substantial progress towards meeting the Technical Requirements Verification Acquisition Program Baseline (APB) milestone objective date of April 2023. Raytheon completed Formal Qualification Test on software Build 6.2.1 in September 2022. Additionally, the government successfully completed Hardware Reliability Demonstration Test November 2022, 10K-hour Mean Time Before Failure (MTBF) test. Card demonstrated 10K-hours with no reliability failures. Raytheon delivered software Build 6.3 as scheduled on September 29, 2022. The Government verified it met all anti-spoof requirements, which were the most complex. The Government has verified 98.3% (963 of 980) of the GRAM-S/M requirements as of December 2022. Furthermore, MGUE Program Office (PO) delivered software Build 6.3 to the Miniature Airborne GPS Receiver-2000-Modernized (MAGR-2K-M) and GPS-Based Positioning, Navigation and Timing Services (GPNTS) line replaceable unit (LRU) PO's on October 31, 2022. Finally, the MGUE Inc 1 PO and Raytheon are active in assisting these LRU PO's with any integration challenges they encounter.There are no significant software-related issues with this program at this time.

History of Significant Developments Since Program Initiation

History of Significant Developments Since Program Initiation

Date	Significant Development Description
Nov - 2022	Completed Hardware Reliability Demonstration Test, 10K-hour MTBF test.
Sep - 2022	Raytheon delivered software Build 6.3; Government verified it met all anti-spoof requirements, which were the most complex.
Apr - 2022	The L3H GB-GRAM-M card development is complete and available for services procurement.
Nov - 2021	Raytheon delivered GRAM-S/M software Build 6.2 on November 23, 2021 which is the Full -Technical Baseline software and is currently on track to the two remaining lead platform PEO certifications, pending funding resolution.
Sep - 2021	Completed Marine Corps Operational test and Evaluation Activity began JLTV Field User Evaluation on August 24, 2021 and completed September 13, 2021; this evaluation is a MGUE Inc 1 Program Exit Criteria.
Mar - 2021	PEO certified the GB-GRAM-M as ready to enter field testing in the Army Stryker lead platform on March 18, 2021.
Jan - 2021	Updated APB approved January 27, 2021. This update to the original APB was due to schedule breach documented in the October 2019 MGUE Inc 1 Program Deviation Report.
Dec - 2020	Converted remaining Raytheon GRAM-S/M development effort to FFP on December 18, 2020.

Dec - 2020	ECP-7, which includes a new NSA crypto key structure and Pseudo Random Noise Expansion, was awarded to Raytheon on December 18, 2020.
Aug - 2020	Completed Developmental Testing of the Army Stryker lead platform on August 15, 2020.
Jun - 2020	ECP-7, which includes a new NSA crypto key structure and Pseudo Random Noise Expansion, was awarded to L3H on June 18, 2020.
Jun - 2020	PEO certified the GB-GRAM-M as ready to enter field testing in the JLTV lead platform on June 26, 2020.
May - 2020	Completed first Developmental Test of a MGUE Inc 1 Lead Platform on May 8, 2020.
May - 2020	L3H GB-GRAM-M Build 5.4 achieved Delta Security Certification on May 12, 2020.
Apr - 2020	ECP-7, which includes a new National Security Agency (NSA) crypto key structure and Pseudo Random Noise Expansion, was awarded to BAE Systems on April 21, 2020.
Oct - 2019	L3H GB-GRAM-M was granted Delta Security Certification on September 13, 2019 and Security Approval on October 6, 2019.
Oct - 2019	The program manager signed a program deviation report on October 31, 2019 indicating the first GRAM-S/M TRV, DDG PEO Certification, and B-2 PEO Certification events will extend beyond current APB threshold dates.
Sep - 2019	Collins Aerospace GB-GRAM-M achieved the 10,000 hours reliability requirement at the US Army Electronic Proving Ground test facility in Fort Huachuca, AZ on September 19, 2019.
Sep - 2019	L3H GB-GRAM-M card successfully closed all remaining Technical Requirements Verification (TRV) liens on September 30, 2019.
Jul - 2019	All three MGUE contracts were updated with ECP-6. Raytheon ECP 6 was awarded on June 24, 2019, L3H on June 28, 2019, and Collins Aerospace on July 31, 2019.
Mar - 2019	In March 2019, the US Army conducted a very successful "live-fire" test of a Precision Guidance Kit with a L3H MGUE Inc 1 ASIC. The successful test gave the Army confidence to move out on a substantial Inc 1 ASIC procurement in late FY 2019.
Nov - 2018	Raytheon received GRAM-S/M initial security certification.
Sep - 2018	L3T received GB-GRAM-M delta security approval.
Aug - 2018	L3T received GB-GRAM-M delta security certification.
Aug - 2018	L3T's GB-GRAM-M card successfully completed Electromagnetic Interference/Electromagnetic Compatibility, Environmental, and Reliability testing.
Jun - 2018	United States Marine Corps (USMC) JLTV Joint Program Office delivered the five JLTVs to be used for the upcoming USMC lead platform integration.
May - 2018	Completed the 1st edition MGUE Integration Guides, fulfilling an MGUE Increment 1 APB Exit Criteria.
May - 2018	US Navy Communications and Navigation GPS Program Office awarded a contract modification to support M-Code Integration efforts aligning the GPS-based PNT Service development effort with MGUE program objectives and delivery schedules with Roving Channel Hot Start capabilities.
Dec - 2017	All three MGUE contracts updated with ECP 4 for Roving Channel Hot Start modification.
Nov - 2017	USD(AT&L) delegated the MDA to the Secretary of the Air Force as an ACAT IC.
Jul - 2017	Four B-2 Developmental flight tests to confirm B-2 Operational Flight Program compatibility using an MGUE-based prototype Miniature Airborne Global Positioning System Receiver 2000 M-Code completed on July 14, 2017.
Mar - 2017	PEO Ammunition conducted a Live Fire event at Yuma Proving Ground to assess the maturity of MGUE Inc 1 technology for Precision Guided Munitions (PGMs). Conducted a combination of 5 ballistic trajectory shots and 3 First-Ever M-Code Guide-to-Hit test shots for each of the two vendors using a U.S. government-designed 81mm Mortar PGM.

Jan - 2017	USD(AT&L) approved the MGUE Inc 1 2366B certifications and determinations, the Milestone B APB and ADM, and established MGUE Inc 1 as an Acquisition Category (ACAT) ID MDAP. The ADM also relieved the program of Milestone C as production decisions will be made by the hosting platforms.
Oct - 2016	L3 Technologies (L3T) became the first MGUE contractor to receive security and compatibility certification.
Jun - 2015	Existing contracts modified again adding resiliency and increasing software assurance.
Apr - 2015	USD(AT&L) signed an updated Acquisition Strategy capturing accelerated approach.
Jan - 2015	In response to the February 2014 ADM, the GPS Directorate awarded ECPs on all three MGUE Inc 1 development contracts for additional test hardware deliveries.
Nov - 2014	Completed a MGUE Technology Readiness Assessment indicating all critical technologies were at a Technology Readiness Level of 6 or higher.
Sep - 2014	MGUE Inc 1 Preliminary Design Reviews were completed by all three MGUE vendors.
Jul - 2014	JROC operational requirements approved. Four KPPs identified in the CDD: (1) Positioning, Navigation, and Timing (PNT) Determination, (2) PNT Accuracy, (3) Integrity and (4) Cryptography, Security Architecture, and Key Distribution.
Jun - 2014	In response to the February 2014 ADM, the GPS Directorate awarded Engineering Change Proposals (ECPs) on all three MGUE Inc 1 development contracts to add software development risk reductions scope.
Feb - 2014	USD(AT&L) signed an ADM to accelerate the MGUE Inc 1 effort via a combined Milestone B/C. This ADM added software risk reduction efforts and accelerated delivery of security certification and test material into the Technology Development phase of the MGUE Inc 1 program previously planned for the EMD phase.
Sep - 2012	Competitively awarded three technology development contracts to Raytheon, L-3 Interstate Electronics Corporation, and Rockwell Collins Inc.
Apr - 2012	USD(AT&L) approved the Milestone A Acquisition Decision Memorandum (ADM) and 2366a certifications were made for the MGUE Inc 1 program, initiating awarding technology development contracts. Materiel Development Decision approved for Inc 2 and MGUE Inc 2 designated as a pre-Major Defense Acquisition Program (MDAP) with the Air Force as lead.
Jun - 2006	The Secretary of the Air Force submitted an Analysis of Alternatives (AoA) providing Congress with a summary of the studies conducted to modernize GPS. The AoA found that developing new Military-Code (M-Code) signals as the most cost effective solution to mitigate growing denial of service and integrity threats to the warfighter.
May - 2006	The GPS Program Office continued the work of the PRDA contracts via three competitively awarded Modernized User Equipment development contracts in 2006.
May - 2003	The GPS Directorate first issued Program Research and Development Announcement (PRDA) contracts in 2003 to achieve technology demonstration of early MGUE concepts.

Schedule

MGUE Inc 1

Events	Milestone Baseline Objective	Current Baseline Objective/Threshold		Current Estimate/Actual	Deviation
Award Technology Development Contract	Sep 2012	Sep 2012	Sep 2012	Sep 2012	
System Requirements Review	Jul 2013	Jul 2013	Jul 2013	May 2013	
System Design Review	Mar 2014	Mar 2014	Mar 2014	Mar 2014	
Preliminary Design Review	Sep 2014	Sep 2014	Sep 2014	Sep 2014	
Milestone B	Jan 2017	Jan 2017	Jan 2017	Jan 2017	
1st GB-GRAM-M Card Technical Requirements Verification	Sep 2018	Mar 2019	Mar 2019	Mar 2019	
Card-level PEO Certification for JLTV	Dec 2019	Jun 2020	Jun 2020	Jun 2020	
Card-level PEO Certification for Stryker	Sep 2020	Sep 2020	Mar 2021	Mar 2021	
1st GRAM S/M Card Technical Requirements Verification	Jul 2019	Apr 2023	Oct 2023	Apr 2023	
Card-level PEO Certification for B-2	Feb 2020	Jan 2024	Jan 2025	Jan 2024	
Card-level PEO Certification for DDG	Oct 2019	Mar 2024	Sep 2024	Mar 2024	

Performance

MGUE Inc 1

Performance Characteristics					
Milestone Baseline	**Current Baseline Objective/Threshold**		**Demonstrated Performance**	**Current Estimate/Actual**	**Deviation**
(KPP) - Integrity					
Ground: MGUE shall reject invalid GPS signals 99% of the time so they are not used in the PNT solution; MGUE shall detect and reject MSI provided from GPS satellites and reject that data from the PNT solution. Aviation: MGUE shall report when GPS should not be used for PNT. Maritime: MGUE shall report when GPS should not be used for PNT.	Ground: MGUE shall reject invalid GPS signals 99% of the time so they are not used in the PNT solution; MGUE shall detect and reject MSI provided from GPS satellites and reject that data from the PNT solution. Aviation: MGUE shall report when GPS should not be used for PNT. Maritime: MGUE shall report when GPS should not be used for PNT.	(T=O) Ground: MGUE shall reject invalid GPS signals 99% of the time so they are not used in the PNT solution; MGUE shall detect and reject MSI provided from GPS satellites and reject that data from the PNT solution. Aviation: MGUE shall report when GPS should not be used for PNT. Maritime: MGUE shall report when GPS should not be used for PNT.	Ground Card: pass Aviation/Maritime Card: TBD, will first be assessed at Technical Requirements Verification (TRV) Milestone, Estimated Completion Date (ECD): April 2023.	Ground: MGUE shall reject invalid GPS signals 99% of the time so they are not used in the PNT solution; MGUE shall detect and reject MSI provided from GPS satellites and reject that data from the PNT solution. Aviation: MGUE shall report when GPS should not be used for PNT. Maritime: MGUE shall report when GPS should not be used for PNT.	
(KPP) - PNT Accuracy					
Ground: 10.0 m H, 20.0 m V, 0.1 m/s (velocity, per axis) and 100 nsec; Aviation: 3.0 m H, 5.25 m V and 30 nsec; Maritime: 7.0 m H, 12.5 m V and 50 nsec.	Ground: 10.0 m H, 20.0 m V, 0.1 m/s (velocity, per axis) and 100 nsec; Aviation: 3.0 m H, 5.25 m V and 30 nsec; Maritime: 7.0 m H, 12.5 m V and 50 nsec.	(T=O) Ground: 10.0 m H, 20.0 m V, 0.1 m/s (velocity, per axis) and 100 nsec; Aviation: 3.0 m H, 5.25 m V and 30 nsec; Maritime: 7.0 m H, 12.5 m V and 50 nsec.	Ground Card: pass Aviation/Maritime Card: TBD, will first be assessed at Technical Requirements Verification (TRV) Milestone, Estimated Completion Date (ECD): April 2023.	Ground: 10.0 m H, 20.0 m V, 0.1 m/s (velocity, per axis) and 100 nsec; Aviation: 3.0 m H, 5.25 m V and 30 nsec; Maritime: 7.0 m H, 12.5 m V and 50 nsec.	

(KPP) - PNT Determination					
MGUE shall use M-Code, P(Y)-Code, and C/ACode; MGUE shall be capable of acquiring M-Code in the presence of J/S<= 41 dB; MGUE shall use GPS signals needed to determine PNT in BFEA environments.	MGUE shall use M-Code, P(Y)-Code, and C/ACode; MGUE shall be capable of acquiring M-Code in the presence of J/S<= 41 dB; MGUE shall use GPS signals needed to determine PNT in BFEA environments.	(T=O) MGUE shall use M-Code, P(Y)-Code, and C/ACode; MGUE shall be capable of acquiring M-Code in the presence of J/S<= 41 dB; MGUE shall use GPS signals needed to determine PNT in BFEA environments.	Ground Card: pass Aviation/Maritime Card: TBD, will first be assessed at Technical Requirements Verification (TRV) Milestone, Estimated Completion Date (ECD): April 2023.	MGUE shall use M-Code, P(Y)-Code, and C/ACode; MGUE shall be capable of acquiring M-Code in the presence of J/S≤ 41 dB; MGUE shall use GPS signals needed to determine PNT in BFEA environments.	

Requirement Reference

CDD dated May 9, 2014 as approved and validated by JROC memorandum 077-14 dated July 24, 2014

Acquisition Budget Estimate

MGUE Inc 1

Total Acquisition Cost

		Milestone APB	Current Baseline		Budget Estimate PB 2024		
Category	**Base Year**	**Objective (BY$M)**	**Objective (BY$M)**	**Threshold (BY$M)**	**BY$M**	**TY$M**	**Deviation**
RDT&E	2017	1,505.7	1,655.5	1,821.1	1,634.9	1,722.1	
Procurement	2017						
MILCON	2017						
Acq. O&M	2017						
Total		1,505.7	1,655.5		1,634.9	1,722.1	
PAUC	2017						
APUC	2017						

Budget Note

Decrease in FY 2022 RDT&E of $6.9M due to realignment of funds between MGUE Inc 1 and MGUE Inc 2 ($3.3M) and higher Space Force priorities ($3.6M).

Decrease in FY 2023 RDT&E of $21.8M due to a reallocation of funds between MGUE Inc 1 and Inc 2 ($18.1) and a decrease due to higher Space Force priorities ($3.7M).

Net decrease in FY 2024 - 2025 RDT&E of $0.3M due to decrease in higher Space Force priorities ($0.7M) and an increase due to inflation adjustments (+0.4M).

Total End Item Quantity

Quantity Category	Current APB Quantity	Current Estimate Quantity
Development	0	0
Procurement	0	0
O&M-Acquired	--	--

Quantity Note

This program has no defined quantities.

Unit Cost
MGUE Inc 1

Current Baseline Compared with Current Estimate

This program has no defined quantities; therefore, Unit Cost Reporting does not apply.

Original Baseline Compared with Current Estimate

This program has no defined quantities; therefore, Unit Cost Reporting does not apply.

Risks

Risk and Sensitivity Analysis

MGUE Inc 1

Risk and Sensitivity Analysis
Current Procurement Cost (December - 2022)
1. There are no risks with this program at this time.
Original Baseline Estimate (January - 2017)
1. Development APB (BY17$M): Total Acquisition Cost - $1,505.7M (Qty 0); PAUC - N/A (Qty 0); APUC -N/A (Qty 0) Risks - MGUE cost/schedule baseline established prior to completion of outstanding Over Target Schedule/Over Target Baseline negotiations and aggressive Service-provided lead platform integration and operational test schedules.
Current Baseline Estimate (January - 2021)
1. Development APB (BY17$M): Total Acquisition Cost - $1,505.7M (Qty 0); PAUC - N/A (Qty 0); APUC -N/A (Qty 0) Risks - MGUE cost/schedule baseline established prior to completion of outstanding Over Target Schedule/Over Target Baseline negotiations and aggressive Service-provided lead platform integration and operational test schedules.

Significant Schedule Risks

Significant Schedule Risks
Current Estimate (December - 2022)
1. Aviation/Maritime card B-2 box-level functional qualification testing: any major deficiencies in the aviation/ maritime software could delay functional qualification testing for the B-2 lead platform. Risk will close October 2023 with the completion of the Miniature Airborne GPS Receiver-2000-Modernized confidence test.
2. Aviation/Maritime card Navy Arleigh Burke Guided Missile Destroyer (DDG) System Integration Testing (SIT): any major deficiencies in the aviation/maritime software could delay SIT for the DDG lead platform. Navy's PMW-A-170 has no Technical Problem Reports blocking SIT Run-for-Record scheduled for 3QFY2023.
Milestone B (January - 2017)
1. Late discovery of software deficiencies: Contractor incremental software deliveries will have new functionality that may result in deficiencies.
2. Late discovery of hardware deficiencies: Defects in contractor hardware designs discovered in the Government reliability testing could cause delays in lead platform integration and testing.
3. Test planning execution: Government test team may not be ready to test Final Test Articles. Test execution may be inefficient.
4. Test coverage gaps: Due to the large number of technical requirements, a Design of Experiment (DOE) was created to ensure validation of the CDD in the lab. However, there may be some functions or interfaces not uniquely tested as part of the DOE, which could be discovered at the next higher level of assembly, particularly for non-lead platforms where box- level testing is not identified.

Technologies and Systems Engineering

Significant Technical Risks

Current Estimate (December - 2022)

1. Raytheon (RTN) GPS Receiver Application Module (GRAM) Standard Electronic Module (GRAM- S/M) 6.2 Software (SW) Readiness for Miniature Airborne GPS Receiver-2000-Modernized (MAGR-2K)-M24 FQT: If RTX GRAM-S/M 6.2 Software (SW) fails short of minimum capability for integration and requires a change to the CGM-S then performing MAGR-2K-M24 Functional Qualification Testing will be dependent on release of RTX GRAM-S/M 6.3 SW. This will incur a six month slip onto the B-2 programs critical path. Risk will close October 2023 with the completion of the MAGR-2K-M confidence test. RTN GRAM-S/M 6.2 Readiness for DDG SIT: If RTX SW build plan baselined in Firm Fixed Price (FFP) contract does not address deficiencies blocking System Integration Testing (SIT) entrance criteria then there will be a slip in SIT for Navy Arleigh Burke Guided Missile Destroyer (DDG), and PEO Certification for DDG Lead Platform may be affected. Navy's PMW-A-170 has no Technical Problem Reports blocking SIT Run-for-Record scheduled for 3QFY23.

Milestone B (January - 2017)

1. Late discovery of software deficiencies: Contractor incremental software deliveries will have new functionality that may result in deficiencies.
2. Late discovery of hardware deficiencies: Defects in contractor hardware designs discovered in the Government reliability testing could cause delays in lead platform integration and testing.
3. Test planning execution: Government test team may not be ready to test Final Test Articles. Test execution may be inefficient.
4. Test coverage gaps: Due to the large number of technical requirements, a Design of Experiment (DOE) was created to ensure validation of the CDD in the lab. However, there may be some functions or interfaces not uniquely tested as part of the DOE, which could be discovered at the next higher level of assembly, particularly for non-lead platforms where box-level testing is not identified.

Low Rate Initial Production

MGUE Inc 1

There is no LRIP for this program.

MGUE Inc 1

Contracts & Efforts

Contract Data	
Contract Number	FA8807-12-C-0012
Effort Number	
Modification Number	
Award Date	09/28/2012
Definitization Date	09/28/2012
Order Number	
CAGE Code/CAGE Legal Name	4U884/Raytheon Company
Contract Title	Military GPS User Equipment (MGUE)
Contract Address	El Segundo, CA
Contracting Office	
Supported Phase	Development
Contract Strategy	
Contract Type	Firm-Fixed-Price
Modification Date	
Work Start Date	September 28, 2012
Technical Data Rights	
Work Completed	

Contracts/Effort Price, Quantity, and Performance (TY$M)		
Initial Target Price	Current Target Price	
$25.2	$156.4	
Initial Ceiling Price	Current Ceiling Price	
N/A	N/A	
Contractor EAC	PM EAC	
$116.2	$116.2	
Initial Quantity	Current Quantity	Delivered Quantity
0	0	0

Deliveries and Expenditures

MGUE Inc 1

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	0	0	0	0.00%
Production	0	0	0	0.00%
Total Program Quantity Delivered	0	0	0	0.00%

Expended and Appropriated (TY $M)

Years Appropriated to date: 12

Total Years Appropriated Funding (Current Baseline): 14

Percent Years Appropriated: 85.71%

Then-Year Funding Appropriated as Percentage of Total Acquisition Estimate: 94.09%

Then-Year Funding Expended as Percentage of Total Acquisition Estimate: 86.82%

Total Acquisition Cost: $1,722.1

Deliveries and Expenditures Note

The MGUE Inc 1 Expenditures to Date now includes the effort to support a study on Resiliency and Software Assurance for the next generation Application Specific Integrated Circuit.

Operating and Support Costs

MGUE Inc 1

O&S requirements will be addressed by the DoD Services following completion of the MGUE development program.