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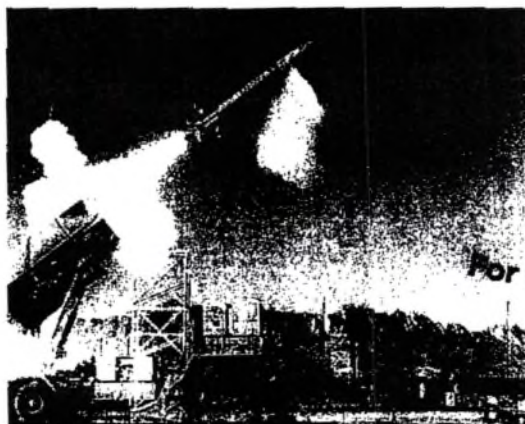
Defense Acquisition
Management Information
Retrieval (DAMIR)



Selected Acquisition Report
(SAR)

Classified Annex

RCS: DD-A&T(Q&A)823-148



AS AMENDED
CLEARED
For Open Publication
MAR 7 2008
Security Review
Department of Defense

PATRIOT PAC-3

AS OF DATE: December 31, 2007

~~Classified by: PATRIOT Security Classification Guide dated April 23, 2003~~

~~Reason:~~

~~Derived from:~~

~~Declassify on: April 23, 2028~~

For unclassified information, see the unclassified DAMIR version at DAMIR Link
<https://ebiz.acq.osd.mil/damir>.

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08-C-0487/1

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PATRIOT PAC-3, December 31, 2007

~~(S)~~ Performance

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|--------------------------|------------------------|------------------------|-------------------|------------------|------------|------------|
| | | | | | | | AS AMENDED |

(b)(1)

Fire Unit Mean
Time Between
Failure (hrs)

60

40

60

60

(U)

AS AMENDED

(b)(1)

Battlespace
(Non-TBMs)

(U)

(b)(1)

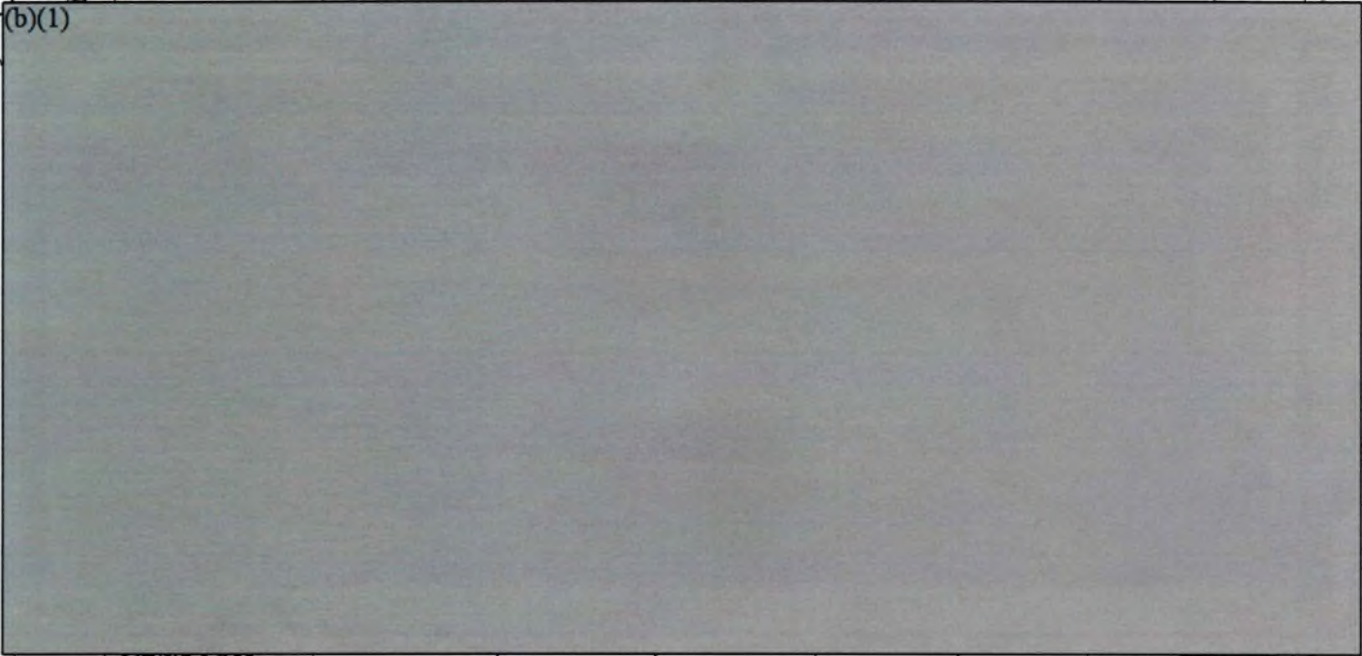
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PATRIOT PAC-3, December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|--------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|
|-----------------------------|--------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|

(b)(1)



END

Single Shot Engagement Kill Probability (SSEKP)

(U)

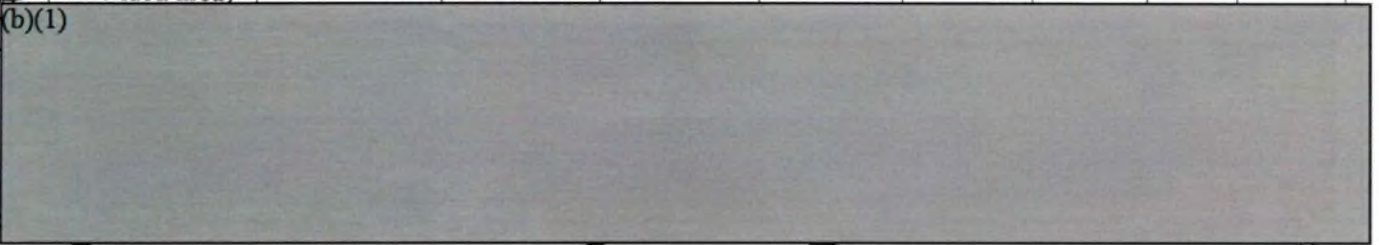
(b)(1)



Mass Attack (Defend any single critical asset within its defended area)

(U)

(b)(1)



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PATRIOT PAC-3, December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|--------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|
|-----------------------------|--------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|

AS AMEND

(b)(1)

| | | | | | | | |
|------------------------|--|---|--|--|---|--|-----|
| Joint Interoperability | | Battery and Bn should be capable of integrating into a joint composite tracking network | Tactical Data Link TADIL-J shall be primary protocol for receiving, processing, and transmitting jointly approved tactical Air Missile Defense (AMD) specific messages | Demonstrated via HWIL, ASCIET/JCIET and Roving Sands | Battery and Bn should be capable of integrating into a joint composite tracking network | | (U) |
|------------------------|--|---|--|--|---|--|-----|

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PATRIOT PAC-3, December 31, 2007

(U) Acronyms:

ABT - Air Breathing Threat
AGL - Above Ground Level
AMD - Air and Missile Defense
ASCIET - All Services Combat Identification and Evaluation Team
Bn - Battalion
ECM - Electronic Countermeasure
EMP - Electromagnetic Pulse
HWIL - Hardware In The Loop
JCIET - Joint Combat Identification and Evaluation Team
km - kilometer
kv/m - kilovolts/meter
MSL - Mean Sea Level
TADIL-J - Tactical Data Link-Joint
TBM - Tactical Ballistic Missile

(b)(1)

AS AMENDED

(U) All performance parameters are PAC-3 system parameters.

(b)(1)

(U) System Effectiveness = $P(\text{DET}) \times [1 - (1 - P(\text{SSK}))^n]$, where n=number of shots, and SSK=Single Shot Kill.

(U) Missile Reliability is based on the Reliability Growth Curve. This is a technical parameter which supports the key JROC validated characteristics.

(U) The Fire Unit Mean Time Between Failure parameter supports the key JROC validated characteristics.

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N-8 CVN 68

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Defense Acquisition
Management Information
Retrieval (DAMIR)



Selected Acquisition Report
(SAR)

Classified Annex

RCS: DD-A&T(Q&A)823-161



CVN 68 Class

AS OF DATE: December 31, 2007

Classified by:

Reason:

Derived from: ERDA-DOD Classification Guide CG-BN 1 Dated 1 Jan 1977

Downgrade instructions: Not Subject to Automatic Downgrade

Declassify on: Originating Agency Determination Required (OADR)

For unclassified information, see the unclassified DAMIR version at DAMIR Link
<https://ebiz.acq.osd.mil/damir>.

No Security Objection
to Open Publication

~~AS AMENDED~~

08-C-0121

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Naval Operations
Dept. of the Navy

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~~NAVY
AS AMENDED
SECURITY~~

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CVN 68, December 31, 2007

~~(S)~~ Performance

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Performance | Current Estimate | Change Num | Class |
|-----------------------------|-------------------------|------------------------|------------------------|--------------------------|------------------|------------|-------|
| Length Overall | 1092 | 1092 | 1092 | 1092 | 1092 | | (U) |
| Beam | 134 | 134 | 134 | 134 | 134 | | (U) |
| Maximum Width | 252 | 252 | 252 | 252 | 252 | | (U) |
| Draft (Combat Load) (ft) | 40.4 | 39.0 | 40.4 | 40.4 | 40.4 | | (U) |
| Displacement (tons) | 97337 | 99000 | 102500 | 102500 | 97337 | | (U) |
| Propulsion | Nuclear | Nuclear | Nuclear | Nuclear | Nuclear | | (U) |

(b)(1)

| | | | | | | | |
|--------------------------------------|------|------|------|------|------|--|-----|
| Store (days) | 75 | 75 | 75 | 75 | 75 | | (U) |
| Close in Weapons Systems | 4 | 4 | 4 | 4 | 4 | | (U) |
| NATO Sea Sparrow Missile Systems | 3 | 3 | 3 | 3 | 3 | | (U) |
| Aviation Strike Ordnance (Long Tons) | 2451 | 2400 | 2400 | 2451 | 2451 | | (U) |

(b)(1)

| | | | | | | | |
|---------------------------------------|-----|-----|-----|-----|-----|--|-----|
| Operational Number of Aircraft (Deck) | 151 | 151 | 151 | 151 | 151 | | (U) |
|---------------------------------------|-----|-----|-----|-----|-----|--|-----|

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UNCL

CVN 68, December 31, 2007

| | | | | | | | |
|---------------------------------|------|-----|-----|------|------|--|-----|
| Multiple in A4 Equivalents) | | | | | | | |
| Core Life (yrs) | 15 | N/A | N/A | TBD | 20 | | (U) |
| Number of Reactors | 2 | N/A | N/A | 2 | 2 | | (U) |
| Crew (Including Air Wing) | 6048 | N/A | N/A | 6040 | 6048 | | (U) |

(U) Acronyms:

A4 A-4, Skyhawk attack aircraft

CVN nuclear aircraft carrier

ft feet

gals gallons

K thousands

kts knots

NATO North Atlantic Treaty Organization

yrs years

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UNCLASSIFIED

A-2 ARH

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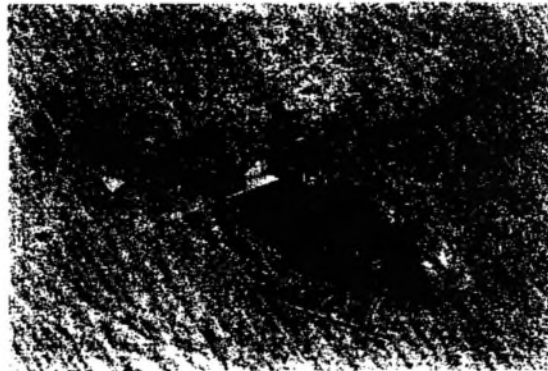
Defense Acquisition
Management Information
Retrieval (DAMIR)



Selected Acquisition Report
(SAR)

Classified Annex

RCS: DD-A&T(Q&A)823-179



ARH-70A

AS OF DATE: December 31, 2007

~~Classified by: ARH Security Classification Guide~~

~~Reason:~~

~~Derived from:~~

~~Declassify on: 23 August 2029~~

For unclassified information, see the unclassified DAMIR version at DAMIR Link
<https://ebiz.acq.osd.mil/damir>.

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MAR 07 2008 7

Directorate for Freedom of Information
and Security Review
1165 Defense Pentagon
Washington, DC 20301-1165

08-C-0499/1

~~SECRET~~

ARH, December 31, 2007

~~(S)~~ Performance

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Performance | Current Estimate | Change No. | Class |
|--|--------------------------|------------------------|------------------------------|--------------------------|------------------|------------|-------|
| Net Ready Interfaces, services, policy-enforcement controls, information exchange correctness, availability and processing requirements in the Joint Integrated architecture | 100% | 100% | Enterprise level or critical | TBD | 100% | | (U) |
| Deployability: No. of aircraft in C-130, fightable within 15 min per aircraft upon arrival | Three | Three | Two | TBD | Two | | (U) |
| Aircraft Performance | | | | TBD | | | (U) |
| HOGE | 6K/95F | 6K/95F | 4K/95F | TBD | 4K/95F | | (U) |
| Range | 424 km | 424 km | 212 km | TBD | 343 km | | (U) |
| Endurance | 3.0 hrs | 3.0 hrs | 2.2 hrs | TBD | 2.24 hrs | | (U) |
| Mission Reliability for 3.43 hr mission | 90% | 90% | 70% | TBD | 76.7% | | (U) |

(b)(1)



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ARH, December 31, 2007

(U) Acronyms:

TBD - To Be Determined

No. - Number

HOG - Hover Out of Ground Effect

km - kilometers

m - meters

IR - Infra-Red

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Defense Acquisition
Management Information
Retrieval (DAMIR)



Selected Acquisition Report
(SAR)

Classified Annex

RCS: DD-A&T(Q&A)823-180



DDG 51

AS OF DATE: December 31, 2007

~~Classified by:~~

~~Reason:~~

~~Derived from:~~

~~Downgrade instructions: OPNAVINST S5513.3B(30)~~

~~Declassify on: X4~~

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<https://ebiz.acq.osd.mil/damir>.

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DDG 51, December 31, 2007

~~(S)~~ Performance

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|---|--------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|
| SHIP: | | | | | | | (U) |
| Length (ft) | 466 | N/A | N/A | 471 | 471 | | (U) |
| Beam (ft) | 59 | N/A | N/A | 59 | 59 | | (U) |
| Navigational Draft (ft) | 30.6 | N/A | N/A | 31.7 | 31.7 | | (U) |
| Displacement (long tons) | 8300 | N/A | N/A | 9300 | 9300 | | (U) |
| Propulsion LM (Gas Turbine) | 2500 | N/A | N/A | 2500 | 2500 | | (U) |
| Accommodations | 341 | N/A | N/A | 380 | 380 | | (U) |
| MOBILITY: | | | | | | | (U) |
| Speed (knots) | 30 | 30 | 30 | 30 | 30 | | (U) |
| (b)(1) | | | | | | | |
| ANTI-AIR WARFARE: CONDUCT SUCCESSFUL AAW ENGAGEMENT: | | | | | | | (U) |
| (b)(1) | | | | | | | |
| ANTI-SURFACE WARFARE: CONDUCT SUCCESSFUL ASUW ENGAGEMENT: Probability of | | | | | | | (U) |

DDG 51, December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|---|--------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|
| Successful Engagement | | | | | | | |
| (b)(1) | | | | | | | |
| NAVAL SURFACE FIRE SUPPORT Probability of Successful Engagement | | | | | | | (U) |
| (b)(1) | | | | | | | |
| ANTI-SUBMARINE WARFARE: CONDUCT SUCCESSFUL ASW ENGAGEMENT: Figure of Merit: | | | | | | | (U) |
| (b)(1) | | | | | | | |
| MINE WARFARE: | | | | | | | (U) |
| Detection Range of Moored/Floating Mine (YDS) | N/A | 1000 | 800 | 1400 | 1400 | | (U) |
| SIGNATURE: | | | | | | | (U) |
| (b)(1) | | | | | | | |
| SURVIVABILITY/VULNER | | | | | | | (U) |

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DDG 51, December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|--------------------------|------------------------|------------------------|----------------------|----------------------|------------|-------|
| ABILITY: Nuclear | | | | | | | |
| (b)(1) | | | | | | | |
| Armament | | | | | | | (U) |
| Anti-Submarine Warfare | | | | | | | (U) |
| ASW System | AN/SQQ-89 | N/A | N/A | AN/SQQ-89(V)10 | AN/SQQ-89(V)10 | | (U) |
| ASROC | VLA | N/A | N/A | VLA | VLA | | (U) |
| Helo | SEAHAWK; LAMPS | 2 EM-BARKED HELOS | 2 EM-BARKED HELOS | 2 EM-BARKED HELOS | 2 EM-BARKED HELOS | | (U) |
| Anti-Air Warfare | | | | | | | (U) |
| Launchers | MK 41 VLS | N/A | N/A | MK 41 VLS | MK 41 VLS | | (U) |
| Missiles | SM-2 MR | N/A | N/A | SM-2 MR | SM-2 MR | | (U) |
| Missile Fire Control System | 3 MK 99 | N/A | N/A | 3 MK 99 | 3 MK 99 | | (U) |
| Guns | 2 PHALANX | N/A | N/A | 2 PHALANX | 2 PHALANX/ ESSM | | (U) |
| Anti-Surface/Strike Warfare | | | | | | | (U) |
| Guns | 1 5"/54 | N/A | N/A | 1 5"/54 | 1 5"/54 | | (U) |
| Gunfire Control System | MK 160 | N/A | N/A | MK 160 | MK 160 | | (U) |

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DDG 51, December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|--------------------------|------------------------|------------------------|-------------------------------|-------------------------------|------------|-------|
| Anti-Ship Cruise Missile | HARPOON | N/A | N/A | N/A | N/A | | (U) |
| Cruise Missile | TOMA-HAWK | N/A | N/A | TOMA-HAWK | TOMA-HAWK | | (U) |
| Electronic Warfare | SLQ-32 SRBOC | N/A | N/A | SLQ-32 (V)3, SRBOC, Combat DF | SLQ-32 (V)3, SRBOC, Combat DF | | (U) |
| Radars | | | | | | | (U) |
| Surface | SPS-67 | N/A | N/A | SPS-67 | SPS-67 | | (U) |
| 3D | SPY-1D | N/A | N/A | SPY-1D | SPY-1D | | (U) |

(U) Acronyms:

AAW = Anti-Air Warfare
ASROC = Anti-Submarine Rocket
ASUW = Anti-Surface Warfare
ASW = Anti Submarine Warfare
dbsm = decibels per square inch
ESSM = Evolved Sea Sparrow Missile
nm = nautical mile
psi = pounds per square inch
VLS = Vertical Launching System
VLA = Vertical Launching ASROC (Anti-Submarine Rocket)
SM2 = Standard Missile 2
HELO = Helicopter

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(b)(1)

Production Estimates are for the Flight I configuration.

Demonstrated Performance characteristics reflect testing through the TEMP 801-OT-IIIH report dated July 20, 2006.

(U) 1/ Probability of Kill, Single Shot (PKSS)

(b)(1)

(U) 3/ DBSM reduction from conventionally constructed ships of similar displacement, e.g. CG 47 Class ship.

(U) 4/ For structure and developmental systems.

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Defense Acquisition
Management Information
Retrieval (DAMIR)



Selected Acquisition Report
(SAR)

Classified Annex

RCS: DD-A&T(Q&A)823-185



AMRAAM

AS OF DATE: December 31, 2007

~~Classified by: AMRAAM SECURITY CLASSIFICATION GUIDE, 21 Dec 05~~

~~Reason:~~

~~Derived from:~~

~~Declassify on: 21 Dec 2030~~

For unclassified information, see the unclassified DAMIR version at DAMIR Link
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AMRAAM, December 31, 2007

~~(S)~~ Performance

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|---|-------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|
| Weight (lbs) | 327 | 327 | 350 | 344 | 345 | | (U) |
| Reliability | | | | | | | (U) |
| Ready Storage (hrs) (mature msl - 90K operational flight hours) | 60000 | 60000 | 45000 | N/A | 45000 | | (U) |
| Availability (%) | 86 | 86 | 82 | N/A | 91.1 | Ch-1 | (U) |
| Captive-Carry (MTBM-Type I) (hrs) | 600 | 600 | 450 | 1126 | 1167 | Ch-2 | (U) |
| On Alert Storage MTBM | 30000 | 30000 | 22500 | N/A | 30000 | | (U) |

(b)(1)



| | | | | | | | |
|---|----|----|----|----|----|--|-----|
| Aircraft Configure/Load - 3 Man Load Crew | | | | | | | (U) |
| Install 4 Rail Launchers (mins) | 20 | 20 | 25 | 21 | 21 | | (U) |
| Load 4 Missiles from trailer (mins) | 15 | 15 | 20 | 18 | 18 | | (U) |

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AMRAAM, December 31, 2007

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|---------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------------|-------|
| Load 4 Missiles from container (mins) | 20 | 20 | 30 | 22 | 22 | | (U) |
| Missile checks (mins) | 1 | 1 | 5 | 1 | 1 | | (U) |
| All Weather Capability | Day, Night, Rain, Clouds | Day, Night, Rain, Clouds | Day, Night, Rain, Clouds | Day, Night, Rain, Clouds | Day, Night, Rain, Clouds | | (U) |

(b)(1)

| | | | | | | | |
|------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|--|-----|
| Aircraft Compatibility | F-15, F-16, F-14, F/A-18 | F-15, F-16, F-14, F/A-18 | F-15, F-16, F-14, F/A-18 | F-15, F-16, F/A-18 | F-15, F-16, F/A-18 F-22 | | (U) |
| All-Up Round | Control Surfaces field installed | Control Surfaces field installed | Control Surfaces field installed | Control Surfaces field installed | Control Surfaces field installed | | (U) |

(b)(1)

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AMRAAM, December 31, 2007

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|---|-------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|
| Target Discrimination (cluster target): Attack Multiple Targets which are unresolved by friendly fighter A/C radars | | | | | | | (U) |

(b)(1)



(U) Acronyms:

A-Pole - The distance between the shooter and the target when the missile goes active.
ECCM - Electronic Counter Counter Measure
ECM - Electronic Counter Measure
F-Pole - The distance between the shooter and the target when the missile intercepts the target.
Mins - Minutes
Msl - Missile
MTBM - Mean Time Between Maintenance
NM - Nautical Mile
Pk - Probability of Kill

(U) Current Change Explanations:

(U) (Ch-1) Potential safety of flight concerns with Aerojet rocket motors resulted in missiles being suspended from use and availability fell below Air Combat Command (ACC) standard of 90%. Aerojet rocket motors (RMs) had an 11 year service life limitation put in place. The System Program Manager (SPM), ACC, and ALC concurred with a plan to have AIM-120B/C missiles re-motored with ATK/Alliant RMs. These motors were acquired through cannibalization of serviceable AIM-120As with ATK/Alliant RMs. In September 2006, ACC provided \$4.6M GWOT funding to initiate the swap-outs. This funding returned 695 AIM-120B/C missiles to serviceable condition with ATK/Alliant RMs by September 30, 2007. As a result of this contract, the availability of AF missiles increased to 92.6% by the end of the contract period. The AMRAAM System Operational Requirements Document (SORD), Table 2-1, dated 18 January 1990, specifies an Availability requirement of 90% and a goal of 95%. The overall missile availability for AF and USN missiles is currently 91.1%.

(U) (Ch-2) The Field Captive Carry Mean Time between Maintenance (MTBM) is changed from an estimate of 1,173 hours to 1,167 hours cumulative actuals to date for the USAF which are: From 1,285 hours to 1,242 hours for the AIM-120A, from 980 hours to 1,040 hours for the AIM-120B, 1,285 hours to 1,259 hours for the AIM-120C. Field Captive Carry MTBM actual changes for the USN: From 732 to 718 hours for the AIM-120A, 453 hours to 452 hours for the AIM-120B, and from 1,088 hours to 1,152 hours

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AMRAAM, December 31, 2007

for the AIM-120C missile. The Joint Service Operational Requirement (JSOR) for the missile is 450 hours.

(b)(1)



- (U) BAHRAIN (BA-D-YBI) Case signed November 13, 1999
\$25.8M PURPOSE: 26 AMRAAMs (Lot 14), support, and integration.
- (U) BELGIUM (BE-D-YCD) Case signed December 22, 1995
\$31.1M PURPOSE: 72 AMRAAMs (Lot 11), and spares.
- (U) CANADA (CN-D-YAE) Case signed July 10, 2003
\$60.0M PURPOSE: 69 AMRAAMs (Lot 17), 38 AMRAAMs (Lot 14) and support.
- (U) CZECH REPUBLIC (EZ-D-YAB) Case signed April 06, 2005
\$15.5M PURPOSE: 24 AMRAAMs (Lot 19) and associated support.
- (U) CHILE (CI-D-SGB) Case signed February 28, 2005
\$5.6M PURPOSE: 8 AMRAAMs (Lot 14) and support.
- (U) DENMARK (DE-D-QBB) Case signed October 22, 2003
\$2.0M PURPOSE: AMRAAM support and software updates.
- (U) DENMARK (DE-D-QBJ) Case signed August 10, 2004
\$1.0M PURPOSE: AMRAAM software upgrade.
- (U) DENMARK (DE-D-QBN) Case signed December 12, 2004
\$2.2M PURPOSE: 2006 software Upgrade (SWUP).
- (U) FINLAND (FI-D-YAA) Missile procurement is FMS administered direct commercial sale. Case signed November 4, 1994
\$106.3M PURPOSE: 312 AMRAAMs (Lots 10, 11, 12, and 13), and software updates.
- (U) FINLAND (FI-D-QAB) Case signed February 21, 2006
\$6.5M PURPOSE: Software and Follow-on Support.
- (U) GERMANY (GY-D-QAP) Case signed November 12, 2001
\$1.3M PURPOSE: AMRAAM Software Upgrade Program of AIM-120B.
- (U) GERMANY (GY-D-QWV) Case signed January 03, 2003

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AMRAAM, December 31, 2007

\$4.9M PURPOSE: AMRAAM Test Firing.

- (U) GREECE (GR-D-SBD) Case signed September 26, 1996
\$107.2M PURPOSE: 240 AMRAAMs (Lots 11, 12, and 17).
- (U) GREECE (GR-D-YDT) Case signed December 05, 2001
\$37.3M PURPOSE: 100 AMRAAMs (Lot 15), and support.
- (U) GREECE (GR-D-YDV) Case signed November 20, 2007
\$109.0M PURPOSE: 130 AMRAAMs (Lot 22) and support.
- (U) GREECE (GR-D-YDT) Case signed December 5, 2001
\$37.5M PURPOSE: 40 AMRAAMs (Lot 19), support, software, and testing.
- (U) HUNGARY (HU-D-YCA) Case signed February 17, 2005
\$24.5M PURPOSE: 40 AMRAAMs (Lot 19), support, and testing.
- (U) ITALY (IT-D-YAC) Case signed December 01, 1997
\$110.3M PURPOSE: 233 AMRAAMs (Lots 12, 13, and 16), support, and software updates.

(b)(1)

- (U) ISREAL (IS-D-YES) Case signed July 01, 2001
\$25.3M PURPOSE: 48 AMRAAMs (Lot 15), support, and integration testing.
- (U) JAPAN (JA-D-YCL) Case signed March 21, 2001
\$9.3M PURPOSE: 21 AMRAAMs (Lot 15), support, and software updates.
- (U) JAPAN (JA-D-YYZ) Case signed January 30, 2002
\$10.7M PURPOSE: 21 AMRAAMs (Lot 16), and support.
- (U) JAPAN (JA-D-YZA) Case signed March 20, 2003
\$8.7M PURPOSE: 16 AMRAAMs (Lot 17), and support.
- (U) JORDAN (JO-D-YJD) Case signed April 15, 2005
\$13.0M PURPOSE: 15 AMRAAMs (Lot 19), and support.
- (U) KOREA (KS-D-YGY) Case signed December 27, 1999
\$66.0M PURPOSE: 159 AMRAAMs (Lot 14), support, and software updates.
- (U) KOREA (KS-D-SIR) Case signed June 12, 2002
\$80.8M PURPOSE: 157 AMRAAMs (Lot 16), spares, and support.

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AMRAAM, December 31, 2007

- (U) MALAYSIA (MF-D-YBD) Case signed May 26, 2005
\$14.6M PURPOSE: 20 AMRAAMs (Lot 20) and support.
- (U) NATO EF-2000 and Tornado Development, Production, and Logistics
Management Agency (NETMA) (M1-D-YAA) Case signed November 05, 1991
\$11.9M PURPOSE: 8 AMRAAMs (Lots 7, and 17).
- (U) NETHERLANDS (NE-D-QCL) Case signed March 18, 2005
\$4.3M PURPOSE: AMRAAM 2002 Software Upgrade and AMRAAM 2006 Software
Upgrade.
- (U) NORWAY (NO-D-QBI) Case signed December 20, 2000
\$1.3M PURPOSE: AMRAAM support.
- (U) NORWAY (NO-D-YDA) Case signed April 01, 1996
\$100.3M PURPOSE: 250 AMRAAMs (Lot 11), 228 MRLs, (Lot 11), and
software updates.
- (U) OMAN (MU-D-YEI) Case signed May 02, 2002
\$27.7M PURPOSE: 50 AMRAAMs (Lot 16), spares, and support.
- (U) PAKISTAN (PK-D-YAD) Case signed September 30, 2006
\$351.2M PURPOSE: 500 AMRAAMs (Lot 19), and support.
- (U) POLAND (PL-D-SAC) Case signed April 18, 2003
\$21.1M PURPOSE: 50 AMRAAMs (Lot 17), and support.
- (U) PORTUGAL (PT-D-YAP) Case signed June 27, 2002
\$8.7M PURPOSE: 12 AMRAAMs (Lot 16), spares, and support.
- (U) SAUDI ARABIA (SR-D-YPY) Case signed March 10, 2002
\$84.1M PURPOSE: 160 AMRAAMs (Lot 16), spares, and support.
- (U) SAUDI ARABIA (SR-YQA) Case signed April 5, 2006
\$27.0M PURPOSE: 42 AMRAAMs (Lot 19), spares, and support.
- (U) SINGAPORE (SN-D-YAD) Case signed March 27, 2001
\$59.2M PURPOSE: 100 AMRAAMs (Lot 15), and support.
- (U) SINGAPORE (SN-D-SAA) Case signed February 24, 2006
\$47.0M PURPOSE: 72 AMRAAMs (Lot 19), spares, and support.
- (U) SPAIN (SP-D-YAF) Case signed March 05, 1999
\$43.6M PURPOSE: 100 AMRAAMs (Lot 13), and support.

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AMRAAM, December 31, 2007

- (U) SPAIN (SP-D-YDI) Case signed September 30, 2002
\$16.7M PURPOSE: 37 AMRAAMs (Lot 16 and Lot 17), program management support, and logistics support.
- (U) SWEDEN (SW-D-YCD) Missile procurement is FMS administered direct commercial sale. Case signed September 01, 1994
\$44.2M PURPOSE: 110 AMRAAMs (Lots 10, and 12), and support.
- (U) SWEDEN (SW-D-YCE) Case signed December 27, 2003
\$3.3M PURPOSE: 2 AMRAAMs (Lot 17), and support.
- (U) SWITZERLAND (SZ-D-NAV) Case signed October 16, 2000
\$2.1M PURPOSE: Software updates.
- (U) SWITZERLAND (SZ-D-QAF) Case signed September 05, 2005
\$2.9M PURPOSE: Purchase of 5 NDI-AIU Field Kits for the AIM-120B AMRAAM and services in support of AIM-120B AMRAAMs.
- (U) TAIWAN (TW-D-YPH) Case signed November 20, 2007
\$193.7M PURPOSE: Purchased 218 AMRAAMs (Lot 23), and support.
- (U) TAIWAN (TW-D-SKA) Case signed December 13, 2000
\$68.8M PURPOSE: 120 AMRAAMs (Lot 15), support, and software updates.
- (U) THAILAND (TH-D-YJK) case signed June 28, 2001
\$2.5M PURPOSE: 4 AMRAAMs (Lot 15).
- (U) THAILAND (TH-D-YJL) Case signed July 13, 2001
\$3.6M PURPOSE: 4 AMRAAMs (Lot 15), and support.
- (U) TURKEY (TK-D-YDV) Case signed November 24 1997
\$51.0M PURPOSE: 138 AMRAAMs (Lot 12), support, and software updates.
- (U) TURKEY (TK-D-MNR) Case signed September 11, 2002
\$1.0M PURPOSE: Repair/Return in support of AIM-120 AMRAAM.
- (U) TURKEY (TK-D-GQP) Case signed December 25 2003
\$0.3M PURPOSE: Manning and tracking the AMRAAM support system.
- (U) TURKEY (TK-D-QOJ) Case signed December 08, 2004
\$4.6M: PURPOSE: 2006 Software Upgrade (SWUP).
- (U) UNITED ARAB EMIRATS (AE-D-SAA) Case signed August 08, 2000
\$4.5M PURPOSE: 2 AMRAAMs (Lot 14), support, software updates, and integration.

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AMRAAM, December 31, 2007

- (U) UNITED ARAB EMIRATES (AE-D-YAB) Case signed August 20, 2002
\$52.0M PURPOSE: 100 AMRAAMs (Lot 16), support equipment, and software.
- (U) UNITED KINGDOM (UK-D-QBV) Case signed May 31, 2002
\$13.1M PURPOSE: Integration and testing of AMRAAM.
- (U) UNITED KINGDOM (UK-D-QBW) Case signed May 31, 2002
\$0.6M PURPOSE: Integration and testing of AMRAAM.
- (U) UNITED KINGDOM (UK-D-QCJ) Case signed December 11, 2003
\$1.4M PURPOSE: Support and Program Management
- (U) Inactive Foreign Military Sales (FMS) cases.
- (U) DENMARK (DE-D-YAS) Case signed December 08, 1994
\$23.6M PURPOSE: 150 AMRAAMs (Lots 9 and 10) and support
- (U) GERMANY (GY-D-YEK) Case signed June 28, 1995
\$38.7M PURPOSE: 96 AMRAAMs (Lots 9, and 10)
- (U) GREECE (GR-D-YDR) Case signed June 30, 1995
\$32.5M PURPOSE: 100 AMRAAMs (Lot 10) and support.
- (U) ISREAL (IS-D-YEO) Case signed February 06, 1997
\$49.4M PURPOSE: 125 AMRAAMs (Lots 10, 11, 12, and 13), support, and software updates.
- (U) JAPAN (JA-D-YCJ) Case signed February 19, 1999
\$20.3M PURPOSE: 40 AMRAAMs (Lot 13).
- (U) JAPAN (JA-D-YCK) Case signed March 21, 2001
\$8.7M PURPOSE: 21 AMRAAMs (Lot 14), support, and software updates.
- (U) JAPAN (JA-D-YCL) Case signed December 27, 1999
\$9.3M PURPOSE: 21 AMRAAMs (Lot 15), support, and software updates.
- (U) JAPAN (JA-D-YYZ) Case signed January 30, 2002
\$10.7M PURPOSE: 21 AMRAAMs (Lot 16), and support.
- (U) KOREA (KS-D-YGN) Case signed December 30, 1993
\$81.1M PURPOSE: 190 AMRAAMs (Lot 10).
- (U) KOREA (KS-D-YGQ) Missile procurement is FMS administered direct commercial sale. Case signed March 13, 1997

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AMRAAM, December 31, 2007

\$9.2M PURPOSE: 100 AMRAAMs (Lot 12), and software updates.

- (U) KOREA (KS-D-YGP) Missile procurement is FMS administered direct commercial sales. Case signed August 28, 1995
\$8.9M PURPOSE: 100 AMRAAMs (Lot 12).
- (U) KOREA (KS-D-YGY) Case signed December 27, 1999
\$66.0M PURPOSE: 159 AMRAAMs (Lot 14), support, and software updates.
- (U) NAMA (4-D-GAH) Case signed March 17, 2001
\$0.1M PURPOSE: To provide technical support.
- (U) NETHERLANDS (NE-D-YME) Case Signed September 29, 1995
\$77.0M PURPOSE: 200 AMRAAMs (Lot 10, and 11) and support.
- (U) NORWAY (NO-D-ICY) Case signed October 07, 1992
\$53.6M PURPOSE: 100 AMRAAMs (Lots 8, and 9) and support.
- (U) NORWAY (NO-D-YCZ) Case signed August 31, 1994
\$68.3M PURPOSE: 228 AMRAAMs (Lots 9, and 10) and support.
- (U) NORWAY (NO-D-YDA) Case signed April 01, 1996
\$100.3M PURPOSE: 250 AMRAAMs (Lot 11), 228 MRLs, (Lot 11), and software updates.
- (U) SPAIN (SP-D-YDH) Case signed July 11, 1996
\$12.6M PURPOSE: 32 AMRAAMs (Lot 11) and support.
- (U) SWEDEN (SW-D-YCE) Case signed December 27, 2003
\$3.3M PURPOSE: 2 AMRAAMs (Lot 17), and support.
- (U) SWITZERLAND (SZ-D-YBB) Missile procurement is FMS administered as direct commercial sale. Case signed August 05, 1994
\$1.4M PURPOSE: Support.
- (U) SWITZERLAND (SZ-D-NAV) Case signed October 16, 2000
\$2.1M PURPOSE: Software updates.
- (U) TURKEY (TK-D-YDT) Case signed October 25, 1993
\$17.1M PURPOSE: 60 AMRAAMs (Lots 9, and 10)
- (U) TURKEY (TK-D-YDU) Case signed December 01, 1994
\$22.7M PURPOSE: 80 AMRAAMs (Lots 9, and 10)
- (U) TURKEY (TK-D-YDV) Case signed November 24, 1997
\$51.0M PURPOSE: 138 AMRAAMs (Lot 17), support, and software updates.

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AMRAAM, December 31, 2007

- (U) TURKEY (TK-D-GQP) Case signed December 25, 2003
\$0.3M PURPOSE: Managing and Tracking the AMRAAM missile and support systems.
- (U) TURKEY (TK-D-MNR) Case signed September 11, 2002
\$1.0M PURPOSE: Repair/Return in support of AIM-120 AMRAAM.
- (U) UNITED KINGDOM (UK-D-YDR) Case signed March 03, 1992
\$100.1M PURPOSE: 210 AMRAAMs (Lots 7, and 8), support, and software updates.
- (U) UNITED KINGDOM (UK-D-NST) Case signed April 11, 1996
\$9.6M PURPOSE: Integration and testing of AMRAAM.

N-21 MH-60R

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Defense Acquisition
Management Information
Retrieval (DAMIR)



Selected Acquisition Report
(SAR)

Classified Annex

RCS: DD-A&T(Q&A)823-191



MH-60R

AS OF DATE: December 31, 2007

~~Classified by:~~

~~Reason:~~

~~Derived from: OPNAVINST C5513.2B, 28 July 2000~~

~~Downgrade instructions: OPNAVINST C5513.213~~

~~Declassify on: X3~~

For unclassified information, see the unclassified DAMIR version at DAMIR Link
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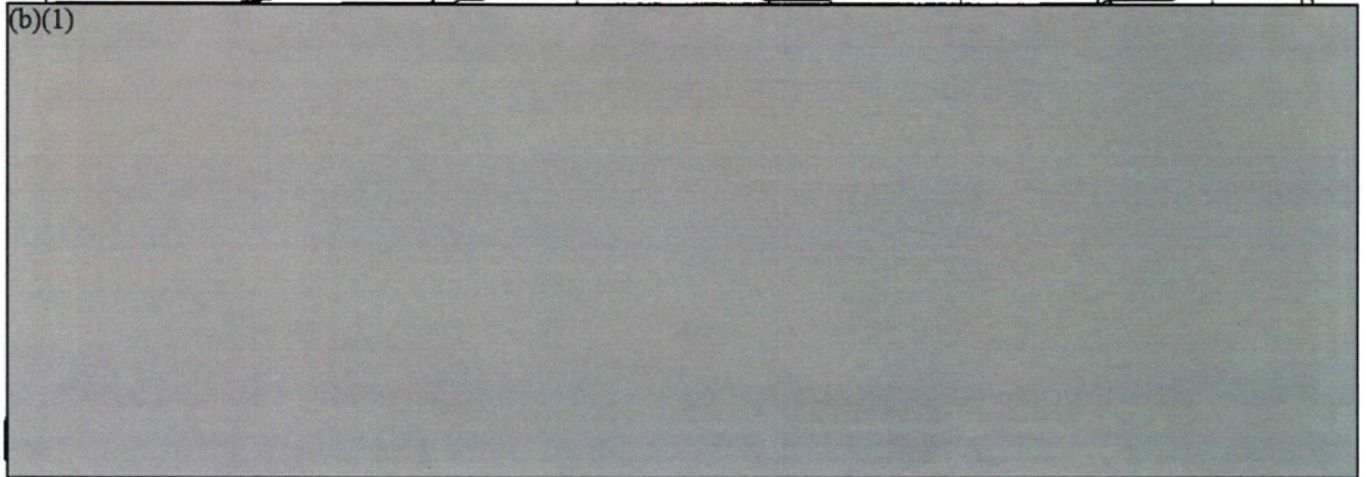
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08-C-0579/1

MH-60R, December 31, 2007

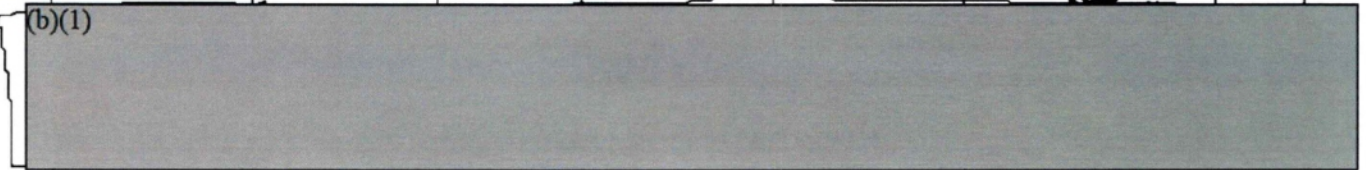
~~(S)~~ Performance

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Performance | Current Estimate | Change Num | Class |
|-----------------------------|-------------------------|------------------------|------------------------|--------------------------|------------------|------------|-------|
| Multi-Mode Radar | | | | | | | U |



| | | | | | | | |
|-----------------------------|--|--|--|--|--|--|---|
| Electronic Support Measures | | | | | | | U |
|-----------------------------|--|--|--|--|--|--|---|

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| | | | | | | | |
|-----------------------------------|----|----|----|-------|-----|--|---|
| Availability (%): Mission Capable | 82 | 82 | 70 | 82.3% | 82% | | U |
|-----------------------------------|----|----|----|-------|-----|--|---|

(U) Acronyms:

| | |
|-------|---|
| ALFS | Airborne Low Frequency Sonar |
| AOU | Area of Uncertainty |
| ASUW | Anti-Surface Warfare |
| ASUW | Anti-Submarine Warfare |
| Db | Decibel |
| GHZ | GigaHertz |
| HRS | Hours |
| IER | Information Exchange Requirements |
| ISAR | Inverse Synthetic Aperature Radar |
| KHZ | KiloHertz |
| MCBCF | Mean Cycles Between Critical Failure(s) |

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~~UNCLASSIFIED~~

MH-60R, December 31, 2007

| | |
|----------|---|
| MFHBCF | Mean Flight Hours Between Critical Failure(s) |
| MTBF | Mean Time Between Failure(s) |
| MTBMCF | Mean Time Between Mission Critical Failure(s) |
| MTTRMean | Time To Repair |
| Pd | Probability of detection |
| SEC | Second |
| SQ | Square |
| Sqnm | Square nautical miles |

(U) The ALFS, originally a separate ACAT II program, was incorporated into the MH-60R baseline in 1999 and performance objectives are tracked with the MH-60R program.

Demonstrated Performance and Current estimate updates are the results of OT-IIB (OPEVAL).

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Defense Acquisition
Management Information
Retrieval (DAMIR)



Selected Acquisition Report
(SAR)

Classified Annex

RCS: DD-A&T(Q&A)823-197



DDG 1000

AS OF DATE: December 31, 2007

~~Classified by: (SECRET)~~

~~Reason:~~

~~Derived from: Multiple Sources~~

~~Downgrade instructions: Not subject to automatic downgrade~~

~~Declassify on: X1, X3~~

For unclassified information, see the unclassified DAMIR version at DAMIR Link
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06-c-0585/1

DDG 1000, December 31, 2007

~~(S)~~ Performance

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|---|---------------------------------------|---------------------------------------|---|-------------------|---------------------------------------|------------|-------|
| (b)(1) | | | | | | | |
| Number of Advanced Gun Systems | 2 | 2 | 2 | TBD | 2 | | (U) |
| Number of Advanced Vertical Launch Cells | 128 | 128 | 80 | TBD | 128 | | (U) |
| Total Ship Advanced Gun System Magazine Capacity | 1200 rounds (600 rounds per magazine) | 1200 rounds (600 rounds per magazine) | 600 rounds total ship magazine capacity | TBD | 1200 rounds (600 rounds per magazine) | | (U) |
| Number of ship's company personnel (helicopter detachment included) | 125 | 125 | 175 | TBD | 125 | | (U) |
| Operational Availability (Ao) for mission critical systems: | | | | | | | (U) |
| Ao for 120-day wartime profile | 0.95 | 0.95 | 0.90 | TBD | 0.95 | | (U) |
| Ao for 18 month | 0.95 | 0.95 | 0.90 | TBD | 0.95 | | (U) |

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DDG 1000, December 31, 2007

| | | | | | | | |
|--|--|---|---|-----|--|--|-----|
| extended forward deployment | | | | | | | |
| Interoperability: All top-level IERs will be satisfied to the standards specified in the Threshold and Objective values. | Achieve 100% of top-level information Exchange Requirements. DD(X) joint tactical battle management and command and control computer programs shall conform to the Single Integrated Air Picture (SIAP) System Engineer's Integrated Architecture and Integrated Architecture Behavior Model now being developed. DD(X) will remain in compliance with CJCSI 6212.01 (Series), Interoperability and Supportability of Information Technology | Achieve 100% of top-level information Exchange Requirements. DD(X) joint tactical battle management and command and control computer programs shall conform to the Single Integrated Air Picture (SIAP) System Engineer's Integrated Architecture and Integrated Architecture Behavior Model now being developed DD(X) will remain in compliance with | Achieve 100% top-level Information Exchange Requirements designated as critical. DD(X) joint tactical battle management and command and control computer programs shall conform to the Single Integrated Air Picture (SIAP) System Engineer's Integrated Architecture and Integrated Architecture Behavior Model for Track Management now being developed | TBD | Achieve 100% of top-level Information Exchange Requirements. DD(X) joint tactical battle management and command and control computer programs shall conform to the Single Integrated Air Picture (SIAP) System Engineer's Integrated Architecture and Integrated Architecture Behavior Model | | (U) |

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DDG-1000, December 31, 2007

| | | | | | | | |
|--|---|---|---|--|---|--|--|
| | and National Security Systems (IT and NSS), including future updates. | CJCSI 6212.01 (Series), Interoperability and Supportability of Information Technology and National Security Systems (IT and NSS), including future updates. | DD(X) will remain in compliance with CJCSI 6212.0 (Series), Interoperability and Supportability of Information Technology and National Security Systems (IT and NSS), Including future updates. | | now being developed. DD(X) will remain in compliance with CJCSI 6212.01 (Series), Interoperability and Supportability of Information Technology and National Security Systems (IT and NSS), including future updates. | | |
|--|---|---|---|--|---|--|--|

(U) Acronyms:

| | |
|-----------------|---|
| AFATDS | Advanced Field Artillery Tactical Data System |
| BGIXS | Battle Group Information Exchange System |
| C4ISR | Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance |
| CEC | Cooperative Engagement Capability |
| CEP | Circular Error of Probability |
| CJCSI | Chairman, Joint Chiefs of Staff Instruction |
| cm ² | square centimeters |
| dBsm | decibel square meters |
| GHz | gigahertz |
| IERs | Information Exchange Rates |
| JSTARS | Joint Surveillance and Target Attack Radar System |

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UNCLASSIFIED

DDG 1000, December 31, 2007

| | |
|-------|--|
| JTIDS | Joint Tactical Information Distribution System |
| kts | knots |
| m | meter |
| mm | millimeter |
| MK | Mark |
| nm | nautical mile |
| RCS | Radar Cross Section |
| um | micrometers |
| uW | microwatts |
| W | Watts |
| UAV | Unmanned Aerial Vehicle |

(U) * The chart depicting the acoustics Objective / Threshold can be found in the DD(X) Operational Requirements Document (ORD).

The JROC approved the DD(X) ORD on February 23, 2004.

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Defense Acquisition
Management Information
Retrieval (DAMIR)



Selected Acquisition Report
(SAR)

Classified Annex

RCS: DD-A&T(Q&A)823-210



SBIRS HIGH

AS OF DATE: December 31, 2007

~~Classified by: DoDD 3500.2, October 1, 1997~~

~~Downgrade Instructions: Not subject to automatic downgrade~~

~~Reason:~~

~~Derived from:~~

~~Declassify on:~~

For unclassified information, see the unclassified DAMIR version at DAMIR Link
<https://ebiz.acq.osd.mil/damir>.

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SBIRS HIGH, December 31, 2007

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~~(S)~~ Performance

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|--------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|
| Coverage | | | | | | | (U) |
| | | | | | > or = | | |

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SBIRS HIGH, December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|--------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|
|-----------------------------|--------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|

(b)(1)



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SBIRS HIGH, December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|--------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|
|-----------------------------|--------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|

(b)(1)



Report Time

(U)

(b)(1)



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SBIRS HIGH, December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demon- strated Perf | Current Estimate | Change Num | Class |
|--------------------------------|--------------------------------|------------------------------|------------------------------|---------------------------|---------------------|---------------|-------|
|--------------------------------|--------------------------------|------------------------------|------------------------------|---------------------------|---------------------|---------------|-------|

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SBIRS HIGH, December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|--------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|
|-----------------------------|--------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|

(b)(1)



(U) Acronyms:

AIRCRF - Aircraft
CFLOS - Cloud-free Line of Sight
COMM - Communication

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SBIRS HIGH, December 31, 2007

FA - Focused Area
LAT - Latitude
MRC - Major Regional Conflict
MSL - Missile
MTR - Major Threat Region
N - North
NLT - Not Later Than
Pc - Probability of Collection
Pw - Probability of Warning
RV - Re-entry Vehicle
S - South
TBD - To Be Determined

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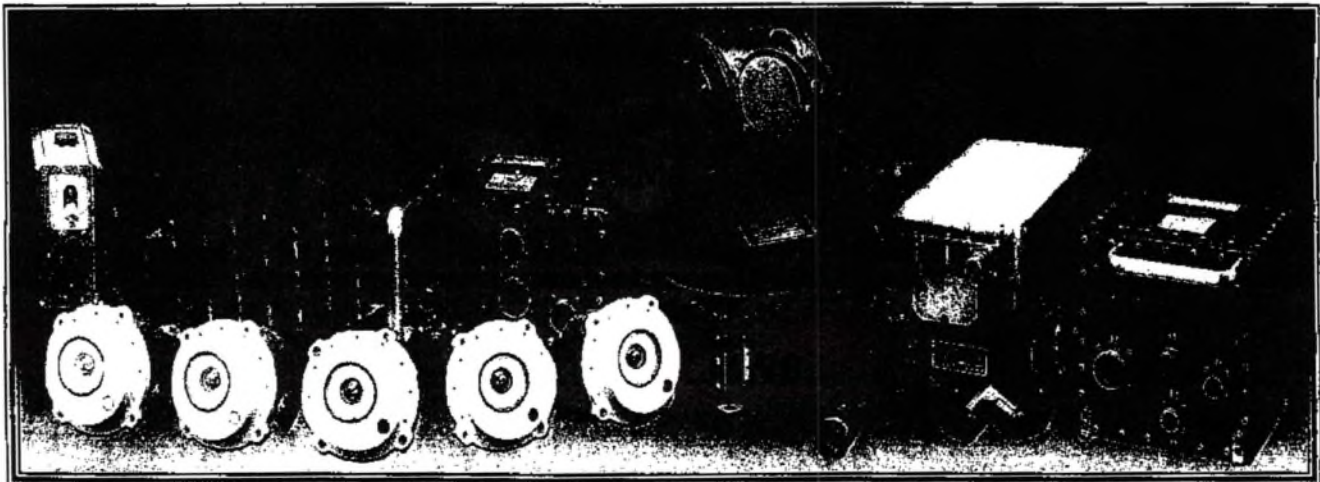
Defense Acquisition
Management Information
Retrieval (DAMIR)



Selected Acquisition Report
(SAR)

Classified Annex

RCS: DD-A&T (Q&A) 823-219



ATIRCM/CMWS

AS OF DATE: December 31, 2007

~~Classified by: SCG for ATIRCM/CMWS dated October, 2006~~

~~Reason: 1.4 a and g~~

~~Derived from: ATIRCM/CMWS SCG~~

~~Declassify on: 20310931 or current SCG~~

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ATIRCM/CMWS, December 31, 2007

(b)(1)

| Schedule Milestone | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Current Estimate | Change Num | Class |
|--------------------|-------------------------------|------------------------------|------------------------------|---------------------|---------------|-------|
|--------------------|-------------------------------|------------------------------|------------------------------|---------------------|---------------|-------|

(b)(1)

~~(S)~~ Performance

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demon- strated Perf | Current Estimate | Chan ge Num | Class |
|--------------------------------|-------------------------------|------------------------------|------------------------------|---------------------------|---------------------|-------------------|-------|
|--------------------------------|-------------------------------|------------------------------|------------------------------|---------------------------|---------------------|-------------------|-------|

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| | | | | | | | |
|--|-------------------------|-------------------------|--------------------|-----|----------|--|-----|
| Interoperability -Communicate via common data bus | 1553 Compat- ible | 1553 Compat- ible | 1553 Compatible | TBD | Complete | | (U) |
| Reliability - MeanTime Between Mission Affecting Failures | 300 hrs | 300 hrs | 150 hrs | TBD | 150 hrs | | (U) |

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(b)(1)

| | | | | | | | |
|--------------|-----|-----|-----|-----|-----|--|-----|
| weight (lbs) | | | | | | | (U) |
| AH-64D | 125 | 125 | 210 | TBD | 194 | | (U) |

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ATIRCM/CMWS, December 31, 2007

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|-------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|
| UH-60 | 125 | 125 | 220 | TBD | 197.4 | | (U) |
| MH-60K | 125 | 125 | 245 | TBD | 206 | | (U) |
| CH-47D | 125 | 125 | 500 | TBD | 310.4 | | (U) |
| MH-47E/G | 125 | 125 | 540 | TBD | 324.1 | | (U) |

(b)(1)

(U) Acronyms:

CMWS - Common Missile Warning System
ICMD - Improved Countermeasure Dispenser
lb - pound
Msls - Missiles
opn hr(s) - operational hour(s)
Perf - Performance

AS AMENDED

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N-29 SSDS

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Defense Acquisition
Management Information
Retrieval (DAMIR)



Selected Acquisition Report
(SAR)

Classified Annex

RCS: DD-A&T(Q&A)823-XXX



SSDS

AS OF DATE: December 31, 2007

~~Classified by:~~

~~Reason:~~

~~Derived from: OPNAVINST 65513-113.2 AND 134.1~~

~~Downgrade instructions:~~

~~Declassify on: X3~~

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SSDS, December 31, 2007

(b)(1)

SSDS MK 2

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demon- strated Ref | Current Estimate | Change Num | Class |
|--------------------------------|-------------------------------|------------------------------|------------------------------|--------------------------|---------------------|---------------|-------|
|--------------------------------|-------------------------------|------------------------------|------------------------------|--------------------------|---------------------|---------------|-------|

(b)(1)

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SSDS, December 31, 2007

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|-------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|
|-----------------------------|-------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|

(b)(1)



(U) Acronyms:

| | |
|--------|--|
| A(o) | Operational Availability |
| A/C | Aircraft |
| Kft | Thousand Feet |
| NM | Nautical Miles |
| Op | Operating |
| P(ED) | Probability of Correct Engagement Decision |
| P(ES) | Probability of Correct Engagement Sequence |
| P(EST) | Probability of Establishing a Valid SSDS Track |
| P(RTN) | Probability of Achieving Nominal Reaction Time |

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(b)(1)



SSDS MK 2 P3I

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|-------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|
|-----------------------------|-------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|

(b)(1)



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SSDS, December 31, 2007

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demon- strated Perf | Current Estimate | Change Num | Class |
|--------------------------------|-------------------------------|------------------------------|------------------------------|---------------------------|---------------------|---------------|-------|
|--------------------------------|-------------------------------|------------------------------|------------------------------|---------------------------|---------------------|---------------|-------|

(b)(1)



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SSDS, December 31, 2007

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|-------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|
|-----------------------------|-------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|

(b)(1)



(U) Acronyms:

| | |
|--------|--|
| A(o) | Operational Availability |
| A/C | Aircraft |
| Kft | Thousand Feet |
| NM | Nautical Miles |
| Op | Operating |
| P(ED) | Probability of Correct Engagement Decision |
| P(ES) | Probability of Correct Engagement Sequence |
| P(EST) | Probability of Establishing a Valid SSDS Track |
| P(RTN) | Probability of Achieving Nominal Reaction Time |

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Defense Acquisition
Management Information
Retrieval (DAMIR)



Selected Acquisition Report
(SAR)

Classified Annex

RCS: DD-A&T(Q&A)823-248



Minuteman III PRP

AS OF DATE: December 31, 2007

~~Classified by: IBCM Security Classification Guide, 30 Sep 97~~

~~Reason:~~

~~Derived from:~~

~~Declassify on: (X-2)~~

For unclassified information, see the unclassified DAMIR version at DAMIR Link
<https://ebiz.acq.osd.mil/damir>.

(THIS PAGE IS UNCLASSIFIED)

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MINUTEMAN III PRP, December 31, 2007

(b)(1)

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Performance | Current Estimate | Change Num | Class |
|-----------------------------|-------------------------|------------------------|------------------------|--------------------------|------------------|------------|-------|
|-----------------------------|-------------------------|------------------------|------------------------|--------------------------|------------------|------------|-------|

(b)(1)

Nuclear Hardness and Survivability (NH&S) (Each Stage)

Silo: Peace keeper In Flight: SICBM Hardness Levels Wpn sys spec hardness levels

Silo: Peace-keeper In Flight: SICBM Hardness Levels Wpn sys spec hardness levels

MMIII Wpn sys spec Hardness Levels

MMIII Wpn sys spec hardness levels

MMIII Wpn sys spec hardness levels

(U)

(b)(1)

Service Life (Each Stage) (yrs)

30

30

17

TBD*

17

(U)

(b)(1)

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MINUTEMAN III PRP, December 31, 2007

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demon- strated Performance | Current Estimate | Change Num | Class |
|--------------------------------|-------------------------------|------------------------------|------------------------------|----------------------------------|---------------------|---------------|-------|
|--------------------------------|-------------------------------|------------------------------|------------------------------|----------------------------------|---------------------|---------------|-------|

(b)(1)



(U) Acronyms:

FRD- Formerly Restricted Data
FS- Frequency Source
FT- Feet
HRS- Hours
MM- Minuteman
NM- Nautical Miles
SICBM- Small Intercontinental Ballistic Missile
SPEC- Specification
SYS- System
TBD- To Be Determined
WPN- Weapon
YRS- Years

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N-1 ADS

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Defense Acquisition
Management Information
Retrieval (DAMIR)



Selected Acquisition Report
(SAR)

Classified Annex

RCS: DD-A&T(Q&A)823-251

ANWQR-3, Advanced Deployable System (ADS)



ADS

AS OF DATE: December 31, 2007

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~~Classified by:~~

~~Reason:~~

~~Derived from: OPNAVINST 5513.5B ENCL. 115~~

~~Declassify on: X1, X3, X6~~

No Security Objection
to Open Publication

~~AS AMENDED~~

08-C-0115

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Dept. of the Navy

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NAVY
AS AMENDED
SECURITY

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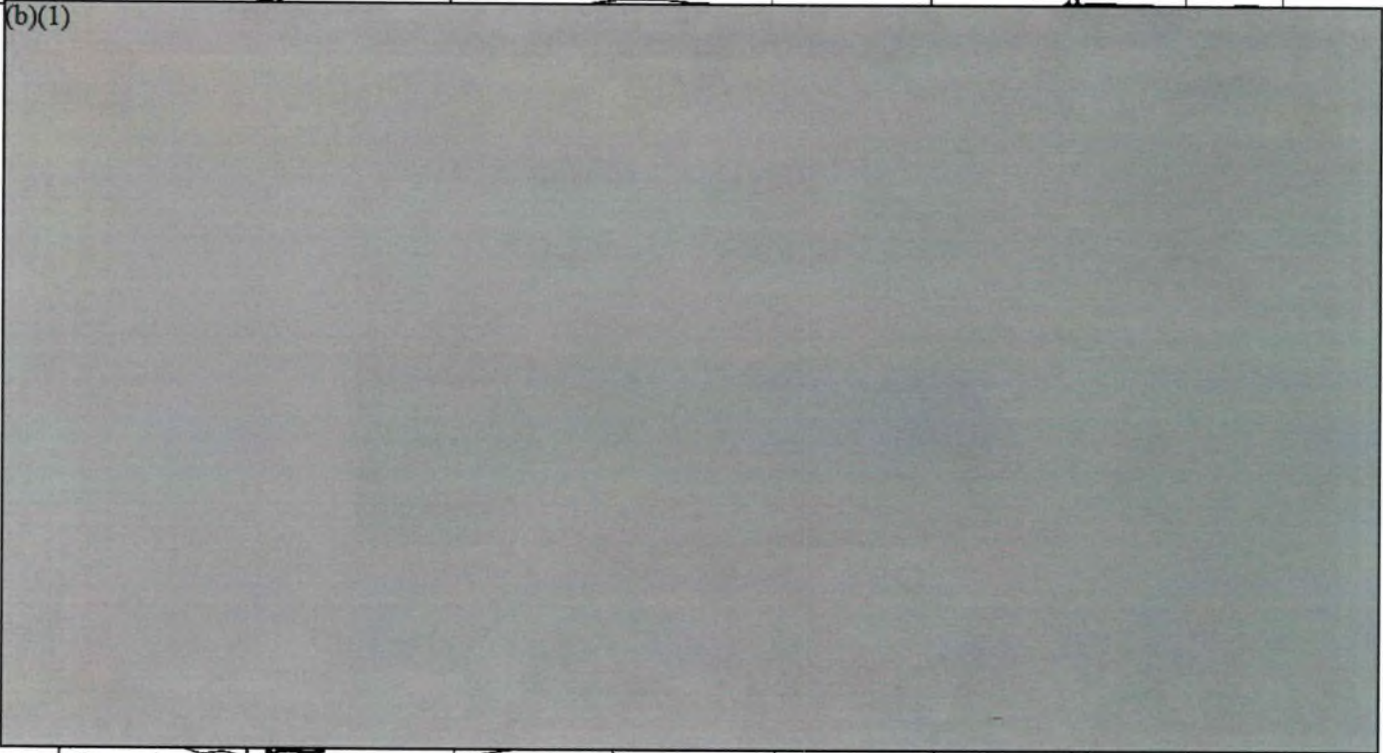
ADS, December 31, 2007

~~(S)~~ Performance

Handwritten: "AS NEW" and "REVIEW"

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|--------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|
|-----------------------------|--------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|

(b)(1)



| | | | | | | | |
|---|---------------------|------|------|-----|-----|------|-----|
| Operational Availability (Ao) | 0.9 | N/A | N/A | N/A | N/A | | (U) |
| Information Exchange Requirements (IER) | 100% Top Level (TL) | N/A | N/A | N/A | N/A | | (U) |
| String Install Time | 4 hrs | N/A | N/A | N/A | N/A | | (U) |
| Barrier Probability (Pd)per cross | 0.90 | 0.90 | 0.80 | N/A | N/A | Ch-1 | (U) |
| Field Probability of Detection (Pd) | 0.9/3hr | N/A | N/A | N/A | N/A | | (U) |

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ADS, December 31, 2007

Handwritten: *5-11-07*

(b)(1)

| | | | | | | | |
|--|-----|-------|-------|----------|----------|------|-----|
| Transmission Range | N/A | 45 NM | 30 NM | 34.5 NM | 34.5 NM | Ch-1 | (U) |
| Time to Install 4 Array Installation Modules (AIM) | N/A | 4 hrs | 8 hrs | 2.75 hrs | 2.75 hrs | Ch-1 | (U) |

(U) Acronyms:
hr/hrs-hour/hours
Pd-Probability of Detection
NM-Nautical Mile

(U) Ch-1 – Current estimate reflects values obtained at the System Integration Test (SIT) in November 2007. Barrier Pd was listed as "N/A" as it was not possible to be measured at SIT due to delays in deploying the arrays, coupled with target ship and SIT schedule constraints.

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Defense Acquisition
Management Information
Retrieval (DAMIR)



Selected Acquisition Report
(SAR)

Classified Annex

RCS: DD-A&T(Q&A)823-252



GLOBAL HAWK (RQ-4A/B)

AS OF DATE: December 31, 2007

~~Classified by: Global Hawk Systems Group, 1 Apr 02~~

~~Reason:~~

~~Derived from:~~

~~Declassify on: X1, X3~~

For unclassified information, see the unclassified DAMIR version at DAMIR Link
<https://ebiz.acq.osd.mil/damir>.

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GLOBAL HAWK (RQ-4A/B), December 31, 2007

~~(S)~~ Performance

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|---|---|------------------------|------------------------|-------------------|------------------|------------|-------|
| Block 5: Endurance - Air Vehicle (AV) | Should be capable of flying an enroute distance of 3000 NM, remaining on-station 24 hours, and recover at the launch base. | N/A | N/A | N/A | N/A | | (U) |
| Block 5: Airspace Coordination - Global Hawk System | The Global Hawk system must be sufficiently robust to allow world wide system employment in all classes of airspace. | N/A | N/A | N/A | N/A | | (U) |
| Block 5: Mission Execution - Ground Station | The ground station will allow UAV operators to perform NRT mission control, mission monitoring, and mission updates/modifications to include dynamic platform and payload | N/A | N/A | N/A | N/A | | (U) |

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GLOBAL HAWK (RQ-4A/B), December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|--|--|------------------------|------------------------|-------------------|------------------|------------|-------|
| | control and re-tasking. | | | | | | |
| Block 5: Information Exchange Requirements (IERs) | 100% of all top-level IERs. | N/A | N/A | N/A | N/A | | (U) |
| Block 10: System Survivability - Air Vehicle (AV) | The AV must be equipped to employ active counter-measures against radar and IR-guided threats to the system as identified in the STAR. | N/A | N/A | N/A | N/A | | (U) |
| Block 10: Mean Time Between Critical Failure (MTBCF) | System MTBCF of 160 hours. | N/A | N/A | N/A | N/A | | (U) |
| Block 10: Signal Intelligence (SIGINT) | TBD | N/A | N/A | N/A | N/A | | (U) |
| Increment Zero: Endurance -- Air Vehicle (AV) (KPP) | N/A | N/A | N/A | N/A | N/A | | (U) |
| Increment Zero: Airspace Coordination - Global Hawk System (KPP) | N/A | N/A | N/A | N/A | N/A | | (U) |

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GLOBAL HAWK (RQ-4A/B), December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|--|--------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|
| Increment Zero: Mission Execution - Ground Station (KPP) | N/A | N/A | N/A | N/A | N/A | | (U) |
| Basic ORD Increment 1: Information Exchange Requirements (KPP) | N/A | N/A | N/A | N/A | N/A | | (U) |

(b)(1)



| | | | | | | | |
|---|-----|-----|-----|-----|-----|--|-----|
| Basic ORD Increment 1: Mission Planning | N/A | N/A | N/A | N/A | N/A | | (U) |
| Basic ORD Increment 1: Delivery of first AV with a multi-Intelligence | N/A | N/A | N/A | N/A | N/A | | (U) |

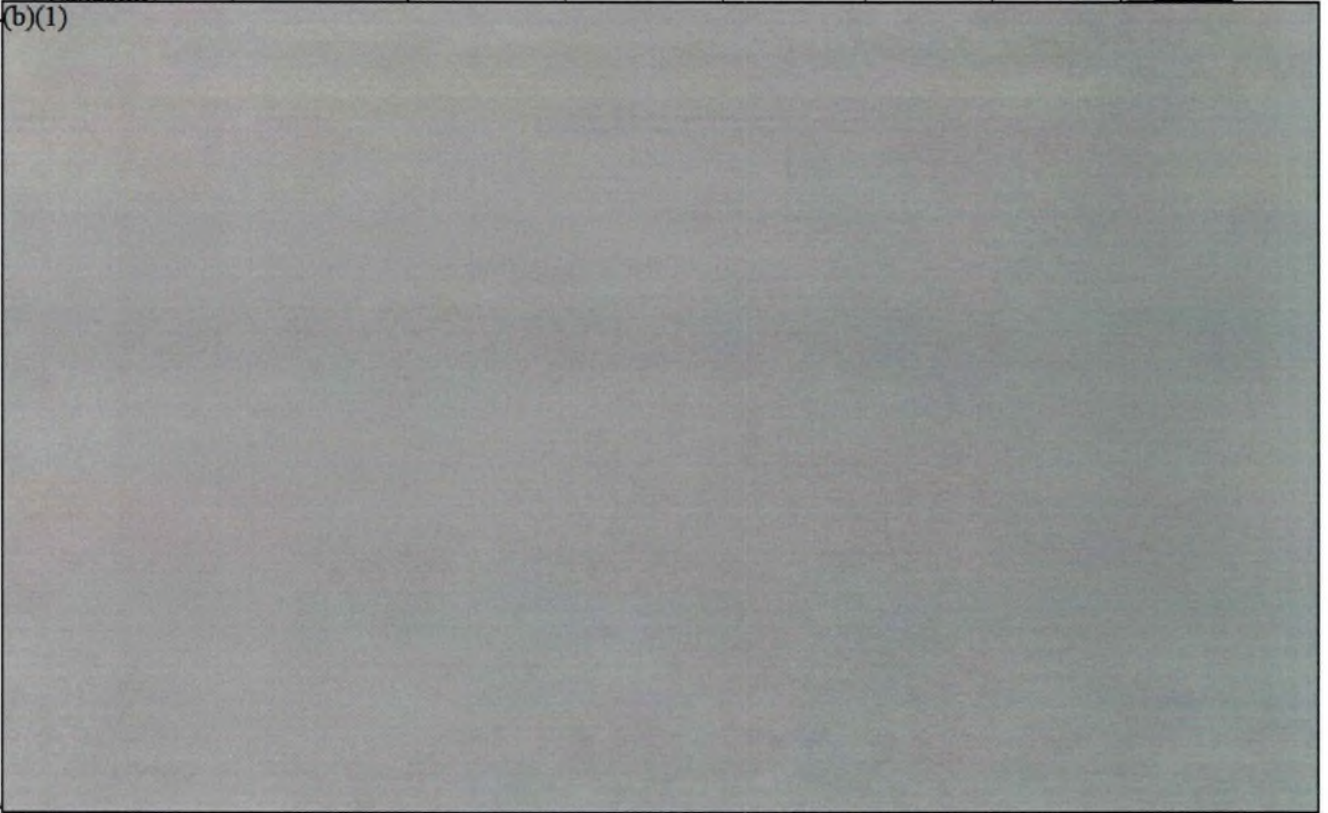
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GLOBAL HAWK (RQ-4A/B), December 31, 2007

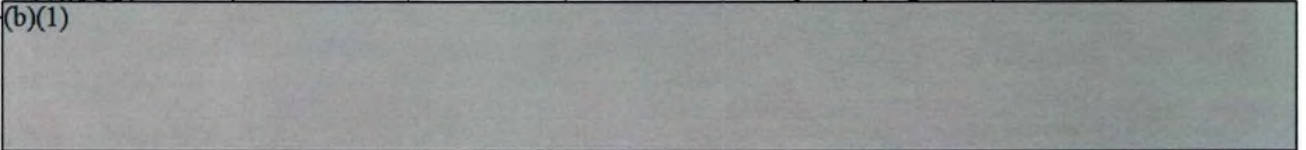
| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|--------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|
| (multi-Int) Capability | | | | | | | |

(b)(1)



| | | | | | | | |
|---|-----|-----|-----|-----|-----|--|-----|
| Basic ORD Increment 1: Effective Time on Station (ETOS) | N/A | N/A | N/A | N/A | N/A | | (U) |
|---|-----|-----|-----|-----|-----|--|-----|

(b)(1)



| | | | | | | | |
|---|-----|-----|-----|-----|-----|--|-----|
| Basic ORD Increment 2: System Survivability - Air Vehicle | N/A | N/A | N/A | N/A | N/A | | (U) |
|---|-----|-----|-----|-----|-----|--|-----|

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GLOBAL HAWK (RQ-4A/B), December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|--|--------------------------|---|--|---|--|------------|-------|
| (AV) | | | | | | | |
| (b)(1) | | | | | | | |
| Endurance -- Aircraft (all Lots) KPP | N/A | 40 hours | The Global Hawk aircraft, in mission capable configuration, must have a minimum total endurance of 28 hours plus appropriate fuel reserves IAW Air Force Instructions. | 28 hrs | 31 hrs | | (U) |
| Airspace Coordination -- Global Hawk System (All Lots) KPP | | The Global Hawk system must be sufficiently robust to allow world wide system employment in all | The Global Hawk system must be sufficiently robust to allow world wide system employment in all | Currently flying in all classes of airspace | Sufficiently robust to allow world wide system employment in all classes | | (U) |

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GLOBAL HAWK (RQ-4A/B), December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|--|--------------------------|---|---|--|---|------------|-------|
| | | classes of airspace | classes of airspace | | of airspace | | |
| Mission Execution -- Ground Station KPP | | The Global Hawk ground station must allow operators to perform NRT mission control, mission monitoring, and mission updates/modifications to include dynamic platform and payload control and re-tasking. | The Global Hawk ground station must allow operators to perform NRT mission control, mission monitoring, and mission updates/modifications to include dynamic platform and payload control and re-tasking. | Demonstrated ability to control and retask aircraft | Currently working software to enhance the processes | | (U) |
| Net Ready -- All activity interfaces, services, policy-enforcement controls, and data-sharing of the NCOW-RM and GIG-KIPs will be satisfied to the requirements of the specific Joint integrated | | 100 % of interfaces; services; policy-enforcement controls; and data correctness, availability and processing requirements in | 100% of interfaces; services; policy-enforcement controls; and data correctness, availability and processing requirements | Successfully exchanging data with multi-services IESs (Army) | Software in work to enhance time-lines | | (U) |

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GLOBAL HAWK (RQ-4A/B), December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|---|--------------------------|------------------------------------|--|-----------------------------------|---|------------|-------|
| architecture products (in | | the Joint integrated architecture. | designated as enterprise-level or critical in the Joint integrated architecture. | | | | |
| FY08 Information Exchange Requirements (IERs) KPP | | Satisfy 100% of all top-level IERs | Satisfy 100% of all top-level IERs designated critical. | Meeting all IERs required to date | Development work ongoing to improve useability and time-lines | | (U) |

(b)(1)

| | | | | | | | |
|--|--|----------------------------|----------------------------|-----|---|--|-----|
| Baseline EO Spot Mode (NIIRS X @ Km) | | 80 km at NIIRS 5 | 40 km at NIIRS 5 | TBD | 40 km at NIIRS 5 | | (U) |
| Baseline IR Sport Mode (NIIRS X @ Km) | | 40 km at NIIRS 5 | 30 km at NIIRS 5 | TBD | 30 km at NIIRS 5 | | (U) |
| Mission Planning /FY10 | | 8 hours | 12 hours | TBD | 12 hrs | | (U) |
| Delivery of first aircraft with a multi-Intelligence (multi-Int) | | Aircraft multi-Int-capable | Aircraft multi-Int-capable | TBD | Aircraft multi-Intcapable. 1st aircraft | | (U) |

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GLOBAL HAWK (RQ-4A/B), December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|--------------------------|------------------------|------------------------|-------------------|------------------------------|------------|-------|
| Capability | | | | | (Block 30/40) in production. | | |

(b)(1)

| | | | | | | | |
|---|--|------------------|------------------|-----|------------------|---|-----|
| Improved EO Spot Mode (NIIRS x @ Km)KPP | | 170 km at NIIRS5 | 80 km at NIIRS 5 | TBD | 80 km at NIIRS 5 | | (U) |
| Improved IR Spot Mode (NIIRS x @ Km)KPP | | 80 km at NIIRS 5 | 50 km at NIIRS 5 | TBD | 30 km at NIIRS 5 | 1 | (U) |
| Effective Time on Station (ETOS) | | 90% | 85% | TBD | 85% | | (U) |

(b)(1)

Change Explanations

(CH-1)

(U) Improved IR Sport Mode (NIIRS x @Km) KPP – Change reflects results of the ongoing testing of the Enhanced Integrated Sensor Suite from 50 Km to 30 Km

(U) Acronyms:

ACTD Advance Concept Technology Demonstration

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GLOBAL HAWK (RQ-4A/B), December 31, 2007

| | |
|-----------|--|
| ASIP | Airborne Signals Intelligence Program |
| AV | Air Vehicle |
| EMD | Engineering and Manufacturing Development |
| EO | Electro Optical |
| ETOS | Effective Time on Station |
| GHz | Giga-Hertz |
| HBS | High Band System |
| IAW | In Accordance With |
| IER | Information Exchange Requirements |
| IR | Infrared |
| Km | Kilometer |
| KPP | Key Performance Parameter |
| lbs | Pounds |
| MHz | Mega-Hertz |
| MP-RTIP | Multi Platform Radar Insertion Program |
| MSN | Mission |
| MTBCF | Mean Time Between Critical Failures |
| Multi-Int | Multiple Intelligence |
| NIIRS | National Intelligence Imagery Reference Standard |
| NM | Nautical Miles |
| NRT | Near Real Time |
| ORD | Operational Requirements Document |
| RF | Radio Frequency |
| PCU | Production Configuration Unit |
| SAR | Synthetic Aperture Radar |
| SIGINT | Signals Intelligence |
| STAR | System Threat Analysis Report |
| TBD | To Be Determined |
| UAV | Unmanned Air Vehicle |

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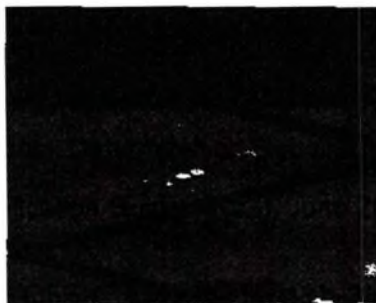
Defense Acquisition
Management Information
Retrieval (DAMIR)



Selected Acquisition Report
(SAR)

Classified Annex

RCS: DD-A&T(Q&A)823-261



AEHF

AS OF DATE: December 31, 2007

~~Classified by: Security Classification Guide (SCG), June 2003~~

~~Reason:~~

~~Downgrade instructions: Not Subject to Automatic Downgrade~~

~~Declassify on: Originating Agency Determination Required~~

For unclassified information, see the unclassified DAMIR version at DAMIR Link
<https://ebiz.acq.osd.mil/damir>.

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AEHF, December 31, 2007

~~(S)~~ Performance

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|--------------------------|--|--|-------------------|--|------------|-------|
| Coverage | N/A | N/A | N/A | N/A | N/A | | (U) |
| Capacity | N/A | 1.2 Gbps CMTW, 600 Mbps Strategic | Support at least 500 Mbps for CMTW Scenario and at least 350 Mbps for Strategic Scenario | N/A | Support at least 500 Mbps for CMTW Scenario and at least 350 Mbps for Strategic Scenario | | (U) |
| Nuclear Protection | N/A | Provide assured communications to survivable nuclear forces exposed to the environment specified in NCGS-89-06, and for those critical networks that support the following critical functions: situation monitoring, decision making, force direction, force | Provide assured communications to survivable nuclear forces exposed to the environment specified in NCGS-89-06, and for those critical networks that support the following critical functions: situation monitoring, decision making, force direction, force | N/A | Provide assured communications to survivable nuclear forces exposed to the environment specified in NCGS-89-06, and for those critical networks that support the following critical functions: situation monitoring, decision making, force direction, force | | (U) |

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AEHF, December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|--------------------------|--------------------------|--------------------------|-------------------|--------------------------|------------|-------|
| | | management, and planning | management, and planning | | management, and planning | | |

(b)(1)



| | | | | | | | |
|--------------------|-----|---|---|-----|---|--|-----|
| Access and Control | N/A | Provide users ability to plan, control, & reconfig- | Provide users ability to plan, control, & reconfig- | N/A | Provide users ability to plan, control, & reconfig- | | (U) |
|--------------------|-----|---|---|-----|---|--|-----|

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AEHF, December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|--------------------------|--|--|-------------------|--|------------|-------|
| | | ure their apportioned resources; critical functions such as situation monitoring, decision making, force direction, force management, & planning shall not be disrupted by communications configuration changes to noncritical functions | ure their apportioned resources; critical functions such as situation monitoring, decision making, force direction, force management, & planning shall not be disrupted by communications configuration changes to noncritical functions | | ure their apportioned resources; critical functions such as situation monitoring, decision making, force direction, force management, & planning shall not be disrupted by communications configuration changes to noncritical functions | | |
| Interoperability | | | | | | | (U) |
| AEHF Interoperability | N/A | Support joint interoperable war-fighter communications among all military branches EHF | Support joint interoperable war-fighter communications among all military branches EHF | N/A | Support joint interoperable war-fighter communications among all military branches EHF | | (U) |

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AEHF, December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|--------------------------|---|---|-------------------|---|------------|-------|
| | | terminals | terminals | | terminals | | |
| MILSTAR Backward Compatible | N/A | Operate with the Milstar system, at all LDR and MDR terminal supported data rates, throughout the Milstar transition to the AEHF system | Operate with the Milstar system, at all LDR and MDR terminal supported data rates, throughout the Milstar transition to the AEHF system | N/A | Operate with the Milstar system, at all LDR and MDR terminal supported data rates, throughout the Milstar transition to the AEHF system | | (U) |

(b)(1)



| | | | | | | | |
|---------------|-----|-----|-----|-----|-----|--|-----|
| Affordability | N/A | N/A | N/A | TBD | N/A | | (U) |
|---------------|-----|-----|-----|-----|-----|--|-----|

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AEHF, December 31, 2007

(U) Acronyms:

AEHF - Advanced Extremely High Frequency
CP - Command Post
CMTW - Combined Major Theater War
EHF - Extremely High Frequency
EIRP - Effective Isotropic Radiated Power
HGEC - High Gain Earth Coverage
HRCA - High Resolution Coverage
LDR - Low Data Rate
LGEC - Low Gain Earth Coverage
MDR - Medium Data Rate
MILSATCOM - Military Satellite Communications
MRCA - Medium Resolution Coverage
NCGS - Nuclear Criteria Group Secretariat
ORD - Operational Requirements Document
SMART-T - Secure Mobile Anti-jam Reliable Tactical Terminal
STAR - System Threat Assessment Report
SOD - Standoff Distance

(b)(1)



(U) Set up/tear down time less than one hour

(b)(1)



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AEHF, December 31, 2007

(b)(1)



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Defense Acquisition
Management Information
Retrieval (DAMIR)



Selected Acquisition Report
(SAR)

Classified Annex

RCS: DD-A&T(Q&A)823-265



F-22A

AS OF DATE: December 31, 2007

~~Classified by: Senior Jersey SCG, 20 March 2006~~

~~Reason:~~

~~Derived from:~~

~~Declassify on: 25X4~~

For unclassified information, see the unclassified DAMIR version at DAMIR Link
<https://ebiz.acq.osd.mil/damir>.

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F-22A, December 31, 2007

~~(S)~~ Performance

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|--|-------------------------|------------------------|------------------------|---------------------|---------------------|------------|-------|
| Range-Mission Radius | | | | | | | (U) |
| Sub & Supersonic** | 260+100 | 260+100 | 260+100 | 322+100 | 322+100 | | (U) |
| Payload, Internal | | | | | | | (U) |
| Missile Load** | 6 AIM-120 + 2 AIM-9 | 6 AIM-120 + 2 AIM-9 | 6 AIM-120 + 2 AIM-9 | 6 AIM-120 + 2 AIM-9 | 6 AIM-120 + 2 AIM-9 | | (U) |
| Reduced All-Aspect Radar Cross Section (RCS) | | | | | | | (U) |
| Front Sector RCS**/+ | * | * | * | * | *# | | (U) |
| Maneuverability (max power sustained G) (30000 ft) (Mach) @0.9 Mach** | 3.9 | 3.9 | 3.7 | 3.7 | 3.7 | | (U) |
| Reliability, Maintainability, and Supportability | | | | | | | (U) |
| C-17s / 24 Primary Aircraft Inventory (PAI) Squadron for Deployment (#a/c)** | 6 | 6 | 7 | 14## | 6.33 | | (U) |
| Sortie Generation Rate (Wartime, | | | | | | | (U) |

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F-22A, December 31, 2007

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|---|----------------------------|----------------------------|---|-------------------|--|------------|-------|
| per day) | | | | | | | |
| (b)(1) | | | | | | | |
| Mean Time Between Maintenance (MTBM) (hrs)** | 3.0 | 3.0 | 3.0 | 1.5### | 3.0 | | (U) |
| Supercruise** | | | | | | | (U) |
| Vmax/Opt Alt/Mil Power (Mn) | 1.5 | 1.5 | 1.5 | 1.76 | 1.76 | | (U) |
| Acceleration/.8-1.5/30K (sec)** | 54 | 54 | 54 | 52.4 | 52.4 | | (U) |
| (b)(1) | | | | | | | |
| Interoperability | Accomplishment of all IERs | Accomplishment of all IERs | Accomplishment of all critical top level IERs | 90% | 100% accomplishment of all critical top level IERs | | (U) |
| USD(A) Risk Assessment Items: | | | | | | | (U) |
| Direct on-and-off Maintenance Personnel (spaces per ac) | 10.5 | 10.5 | 12.5 | 12.46 | 9.7 | | (U) |

(U) Acronyms:

USD(A) - Undersecretary of Defense for Acquisition
IERs - Information Exchange Requirements
IOT&E - Initial Operational Test and Evaluation
FOT&E - Follow-on Operational Test and Evaluation

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F-22A, December 31, 2007

Mil - Military
Opt Alt - Optimum Altitude
Vmax - Maximum Speed

(U) * Classification/control is beyond the level of this document.

(U) ** Indicates Operational Requirements Document (ORD) Key Performance Parameter (KPP) [Note: Airlift and MTBM KPPs are based upon F-22 system maturity (100,000 flight hours), currently projected to occur in 2010.]

(U) + Classified KPP values beyond level of this document can be viewed in the classified annexes of the F-22 ORD.

(U) # Current estimate is better than threshold.

(U) ## The Airlift KPP was demonstrated during Initial Operational Test and Evaluation (IOT&E) and met the interim Joint Requirement Oversight Council (JROC) requirement of 15 C-17s. The threshold requirement at system maturity is 7 C-17s.

(U) ### The MTBM KPP was demonstrated during FOT&E2 and met the interim JROC requirement. The MTBM demonstrated at Nellis AFB during Force Development Evaluation was 1.8 while the requirement at system maturity is 3.0 (ORMET Developmental).

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A-13 JAVELIN

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Defense Acquisition
Management Information
Retrieval (DAMIR)



Selected Acquisition Report
(SAR)

Classified Annex

RCS: DD-A&T(Q&A)823-280



Javelin

AS OF DATE: December 31, 2007

~~Classified by:
Reason:
Derived from:
Declassify on: N/A~~

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For Open Publication

AS AMENDED
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Office of Security Review

Department of Defense

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AR-C-0490/1

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Javelin, December 31, 2007

~~(S)~~ Performance

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Performance | Current Estimate | Change Num | Class |
|-----------------------------|-------------------------|------------------------|------------------------|--------------------------|------------------|------------|-------|
| Min range (m) | | | | | | | (U) |

(b)(1)

Kill probability

(U)

(b)(1)

| | | | | | | | |
|---------------------------------|------|------|------|------|------|--|-----|
| System weight (lbs) | 35 | 35 | 49.5 | 48.6 | 48.6 | | (U) |
| Missile operational reliability | .92 | .92 | .92 | .94 | .94 | | (U) |
| Cmd Launch Unit MTBOMF (hrs) | 129 | 129 | 129 | 505 | 505 | | (U) |
| Cmd Launch Unit MTTR (hrs) | <1.5 | <1.5 | 1.5 | .77 | .77 | | (U) |

(U) Acronyms:

MTBOMF - Mean Time Between Operational Mission Failures
MTTR - Mean Time To Repair

~~CONFIDENTIAL~~

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Javelin, December 31, 2007

(U) NOTES:

- Objectives/thresholds/current estimates are at Milestone (MS) III except P(k/e) and Missile operational reliability. Values shown are objectives representing desired performance and minimum acceptable thresholds.
- Full lethality must be met at both minimum and maximum range.
- Probability of hit given a reliable round P(h/reliable round): Hit probabilities are specified for 7 km visibility (day/night) in benign environments. Must hit a fully exposed standard NATO target (2.3m H x 2.3m W x 4.6m L) stationary or moving (crossing velocity up to 20 km/hr) at all ranges (min to max). The hit probability must be attained given any attack azimuth or elevation angle (relative to target) given a shot with a reliable system.
- Probability of kill given a reliable shot P(k/s): A reliable shot is defined by a reliable launch and reliable flight. The P(k/s) must be attained against both stationary and evasively maneuvering targets at all ranges (min to max).
- Probability of kill given an engagement opportunity P(k/e): Values shown are defined at 1200 meters in fog oil or white phosphorous against a specific threat target.
- Missile Operational Reliability is established at system maturity which is three years after MSIII (May 2000).

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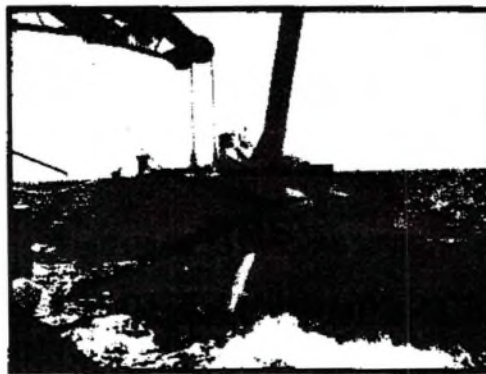
Defense Acquisition
Management Information
Retrieval (DAMIR)



Selected Acquisition Report
(SAR)

Classified Annex

RCS: DD-A&T(Q&A)823-286



RMS

AS OF DATE: December 31, 2007

~~Classified by:~~

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~~Derived from: OPNAVINST 65513.7C-(41.1)~~

~~Downgrade instructions:~~

~~Declassify on: X2 and X3~~

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RMS, December 31, 2007

~~(S)~~ Performance

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|-------------------------|------------------------|------------------------|---------------------|---------------------|--------------------------------|-------|
| (b)(1) | | | | | | | |
| Mine Type | Bottom, CCT, CT, IV | Bottom, CCT, CT, IV | Bottom, CCT, CT, IV | Bottom, CCT, CT, IV | Bottom, CCT, CT, IV | NAVY IS AMENDED SECURITY | (U) |
| High Level Reconnaissance | | | | | | | (U) |
| (b)(1) | | | | | | | |
| Mine Type | CCT, CT, IV | CCT, CT, IV | CCT, CT, IV | CCT, CT, IV | CCT, CT, IV | | (U) |
| High Level Reconnaissance | | | | | | | (U) |
| (b)(1) | | | | | | | |
| Transit Speed (kts) | 20 | 20 | 12 | 12 | 12 | NAVY IS AMENDED | (U) |
| (b)(1) | | | | | | | |
| Operational Availability | .85 | .85 | 0.80 | .83 | .85 | Ch-1 | (U) |

RMS, December 31, 2007

(U) Acronyms:

ASL - Achieved Search Level
ASR - Achieved Search Rate
CCT - Close, Close Tether
CT - Close Tether
hrs - hours
IV - In Volume
kts - knots
OPEVAL - Operational Test and Evaluation
KPP - Key Performance Parameter

(b)(1)



Ch-1: Operational Availability demonstrated performance is based on all formal tests since configuration was established in September 2006. Current estimate is based on additional hardware and software improvements incorporated for OPEVAL.



Defense Acquisition
Management Information
Retrieval (DAMIR)



Selected Acquisition Report
(SAR)

Classified Annex

RCS: DD-A&T(Q&A)823-289



TACTICAL TOMAHAWK

AS OF DATE: December 31, 2007

~~Classified by:~~

~~Reason:~~

~~Derived from: OPNAVINST S5513-2B~~

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TACTICAL TOMAHAWK, December 31, 2007

~~(S)~~ Performance

(b)(1)



(U) Acronyms:

| | |
|------|------------------------------------|
| CEP | Circular Error Probable |
| dBw | Decibels in Watts |
| ECCM | Electronic Counter Counter Measure |
| GPS | Global Positioning System |
| Km | kilometer |

NAVY
AS AMENDED
SECURITY

(b)(1)



[U] (Range Operational): Value in Kilometers. Contract Specification is stated as Operational Range, given standard conditions, Mach 0.65.

(U) Demonstrated Mission Reliability (MR) and Cruise Reliability (CR) are based upon a Point Estimate approach (successes/successes+failures) which include 53 MR and 53 CR credible test events. Credible test events include OPEVAL, TECHEVAL, Tactical Tomahawk Penetrating Vehicle flights, contractor flights, ground, and accredited hardware and software simulation testing. Both the current and demonstrated estimates are based on this approach which was concurred with Commander, Operational Test and Evaluation Force (OPTEVFOR).



Defense Acquisition
Management Information
Retrieval (DAMIR)



Selected Acquisition Report
(SAR)

Classified Annex

RCS: DD-A&T(Q&A)823-178



TRIDENT II MISSILE

AS OF DATE: December 31, 2007

~~Classified by: ~~(SECRET)~~~~

~~Reason:~~

~~Derived from: OPNAVINST S5513.5A - (27)~~

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~~(S)~~ Performance

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TRIDENT II MISSILE, December 31, 2007

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Performance | Current Estimate | Change Num | Class |
|-----------------------------|-------------------------|------------------------|------------------------|--------------------------|------------------|------------|-------|
|-----------------------------|-------------------------|------------------------|------------------------|--------------------------|------------------|------------|-------|

(b)(1)



(U) Acronyms:

KT kiloton
nm nautical mile

WENDEL
SECURITY

(b)(1)



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Defense Acquisition
Management Information
Retrieval (DAMIR)



Selected Acquisition Report
(SAR)

Classified Annex

RCS: DD-A&T(Q&A)823-290



NMT

AS OF DATE: December 31, 2007

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NMT, December 31, 2007

u ~~(S)~~ Performance

~~UNCLASSIFIED~~

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|--|--|--|-------------------|--|------------|-------|
| Coverage AEHF | Provide Global coverage | Provide Global coverage | Worldwide continuous anywhere between 65 deg N to 65 deg S lat | TBD | Provide Global coverage | | (U) |
| Coverage WGS | Capable of providing communications connectivity anywhere between 70 deg N and 65 deg S lat w/i the satellites field of view, 24 hrs per day | Capable of providing communications connectivity anywhere between 70 deg N and 65 deg S lat w/i the satellites field of view, 24 hrs per day | Capable of providing communications connectivity anywhere between 65 deg N and 65 deg S lat w/i the satellites field of view, 24 hrs per day | TBD | Capable of providing communications connectivity anywhere between 70 deg N and 65 deg S lat w/i the satellites field of view, 24 hrs per day | | (U) |
| Capacity AEHF | Shall support at least 1.2 Gbps for the CMTW Scenario; at least 600 Mbps for the Strategic Scenario | Shall support at least 1.2 Gbps for the CMTW Scenario; at least 600 Mbps for the Strategic Scenario | At least 500 Mbps for the CMTW Scenario; at least 350 Mbps for the Strategic scenario | TBD | Shall support at least 1.2 Gbps for the CMTW Scenario; at least 600 Mbps for the Strategic Scenario | | (U) |
| Capacity WGS | Min of 3.6 Gbps | Min of 3.6 Gbps | Min of 1.2 Gbps | TBD | Min of 3.6 Gbps | | (U) |

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NMT, December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|--------------------------------------|--|---|---|-------------------|---|------------|-------|
| Protection AEHF - Electronic Jamming | Support tactical and strategic forces to counter the medium probability threat in the 2000 MILSAT-COM STAR | Support tactical and strategic forces to counter the medium probability threat in the 2000 MILSAT-COM STAR | Support tactical and strategic forces to counter the medium probability threat in the 2000 MILSAT-COM STAR | TBD | Support tactical and strategic forces to counter the medium probability threat in the 2000 MILSAT-COM STAR | | (U) |
| Protection AEHF - Nuclear | Provide assured communications to survivable nuclear forces exposed to the environment specified in the NCGS89-06 and for those critical networks that support situation monitoring, decision making, force direction, force management and planning | Provide assured communications to survivable nuclear forces exposed to the environment specified in the NCGS89-06 and for those critical networks that support situation monitoring, decision making, force direction, force management and | Provide assured communications to survivable nuclear forces exposed to the environment specified in NCGS 89-06 and for those critical networks that support situation monitoring, decision making, force direction, force management and planning | TBD | Provide assured communications to survivable nuclear forces exposed to the environment specified in the NCGS89-06 and for those critical networks that support situation monitoring, decision making, force direction, force management and | | (U) |

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NMT, December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|--|--|---|-------------------|--|------------|-------|
| | | planning | | | planning | | |
| Access and Control AEHF | Provide users the ability to plan, control, and reconfigure critical functions such as situation monitoring, decision making, force direction, force management and planning; capabilities shall not be disrupted by communications configuration changes to noncritical functions; as a minimum, threshold requirements in Par. 4.2.4.1. 3.1, 4.2.4.2. 3, and 4.2.4.6 (subpar. 1-4) shall be accomplished to support these functions. | Provide users the ability to plan, control, and reconfigure critical functions such as situation monitoring, decision making, force direction, force management and planning; capabilities shall not be disrupted by communications configuration changes to noncritical functions; as a minimum, threshold requirements in Par. 4.2.4.1. 3.1, 4.2.4.2. 3, and 4.2.4.6 (subpar. 1-4) shall be accomplished | Provide users the ability to plan, control, and reconfigure critical functions such as situation monitoring, decision making, force direction, force management and planning; capabilities shall not be disrupted by communications configuration changes to noncritical functions; as a minimum, threshold requirements in Par. 4.2.4.1. 3.1, 4.2.4.2. 3, and 4.2.4.6 (subpar. 1-4) shall be accomplished to support these functions. The KPP objective criterion is accomplishment of | TBD | Provide users the ability to plan, control, and reconfigure critical functions such as situation monitoring, decision making, force direction, force management and planning; capabilities shall not be disrupted by communications configuration changes to noncritical functions; as a minimum, threshold requirements in Par. 4.2.4.1. 3.1, | | (U) |

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NMT, December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|---|--|--|-------------------|--|------------|-------|
| | The KPP objective criterion is accomplishment of objective requirements in these paragraphs. | lished to support these functions. The KPP objective criterion is accomplishment of objective requirements in these paragraphs. | objective requirements in these paragraphs. | | 4.2.4.2. 3, and 4.2.4.6 (subpar. 1-4) shall be accomplished to support these functions. The KPP objective criterion is accomplishment of objective requirements in these paragraphs. | | |
| Access and Control WGS | Platform and Payload control capabilities to perform launch and early orbit, on-orbit operations, station-keeping, satellite repositioning, platform and payload maintenance, anomaly identification and resolution | Platform and Payload control capabilities to perform launch and early orbit, on-orbit operations, station-keeping, satellite repositioning, platform and payload maintenance, anomaly identification and | Platform and Payload control capabilities to perform launch and early orbit, on-orbit operations, station-keeping, satellite repositioning, platform and payload maintenance, anomaly identification and resolution. | TBD | Platform and Payload control capabilities to perform launch and early orbit, on-orbit operations, station-keeping, satellite repositioning, platform and payload maintenance, | | (U) |

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NMT, December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|---|--|---|-------------------|---|------------|-------|
| | | resolution | | | anomaly identification and resolution | | |
| Interoperability AEHF | The AEHF system shall support joint interoperable war-fighter communications among all military Services EHF terminals up to their max data rate (Threshold). The System shall operate with the Milstar system at all LDR and MDR terminal supported data rates and selected modes (Threshold). The AEHF System shall support the critical IERs in Table 4-19 (Threshold) and all IERs in Table 4-19 (Objective). | The AEHF system shall support joint interoperable war-fighter communications among all military Services EHF terminals up to their max data rate (Threshold). The System shall operate with the Milstar system at all LDR and MDR terminal supported data rates and selected modes (Threshold). The AEHF System shall support the critical | The AEHF system shall support joint interoperable war-fighter communications among all military Services EHF terminals up to their max data rate (Threshold). The System shall operate with the Milstar system at all LDR and MDR terminal supported data rates and selected modes (Threshold). The AEHF System shall support the critical IERs in Table 4-19 (Threshold) and all IERs in Table 4-19 (Objective). | TBD | The AEHF system shall support joint interoperable war-fighter communications among all military Services EHF terminals up to their max data rate (Threshold). The System shall operate with the Milstar system at all LDR and MDR terminal supported data rates and selected modes (Threshold). The | | (U) |

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NMT, December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|---|--|--|-------------------|--|------------|-------|
| | | IERs in Table 4-19 (Threshold) and all IERs in Table 4-19 (Objective). | | | AEHF System shall support the critical IERs in Table 4-19 (Threshold) and all IERs in Table 4-19 (Objective). | | |
| Interoperability WGS | Satellites fully inter-operable with existing and programmed DSCS and GBS terminals | Satellites fully inter-operable with existing and programmed DSCS and GBS terminals | Satellites fully inter-operable with existing and programmed DSCS and GBS terminals | TBD | Satellites fully inter-operable with existing and programmed DSCS and GBS terminals | | (U) |
| Coverage | Terminnals capable of pointing and tracking satellites with elevation angles of 10 deg (20 deg for mast) above the horizon and 360 deg in azimuth with full platform motion | Terminnals capable of pointing and tracking satellites with elevation angles of 10 deg (20 deg for mast) above the horizon and 360 deg in azimuth with full platform | Terminals capable of pointing and tracking satellites with elevation angles of 10 deg (20 deg for mast) above the horizon and 360 deg in azimuth with full platform motion | TBD | Terminals capable of pointing and tracking satellites with elevation angles of 10 deg (20 deg for mast) above the horizon and 360 deg in azimuth | | (U) |

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NMT, December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|---|--|--|--|-------------------|--|------------|-------|
| | | motion | | | with full platform motion | | |
| Capacity | Terminal numbers assume the satellite meets its performance requirements contained in the AEHF Technical Requirements Document Revision 10 | Terminal numbers assume the satellite meets its performance requirements contained in the AEHF Technical Requirements Document Revision 10 | Terminal numbers assume the satellite meets its performance requirements contained in the AEHF Technical Requirements Document Revision 10 | TBD | Terminal numbers assume the satellite meets its performance requirements contained in the AEHF Technical Requirements Document Revision 10 | | (U) |
| AEHF Terminal Throughput | | | | | | | (U) |
| Ship | 2 Mbps | 2 Mbps | 2 Mbps | TBD | 2 Mbps | | (U) |
| Shore | 8 Mbps | 8 Mbps | 8 Mbps | TBD | 8 Mbps | | (U) |
| Submarine Periscope | 19.2 Kbps | 19.2 Kbps | 19.2 Kbps | TBD | 19.2 Kbps | | (U) |
| Submarine Mast | 512 Kbps | 512 Kbps | 512 Kbps | TBD | 512 Kbps | | (U) |
| Ka Throughput | | | | | | | (U) |
| Ship | 8 Mbps | 8 Mbps | 2 Mbps | TBD | 8 Mbps | | (U) |
| Protection Terminals - Electronic Jamming (AEHF only) | | | | | | | (U) |

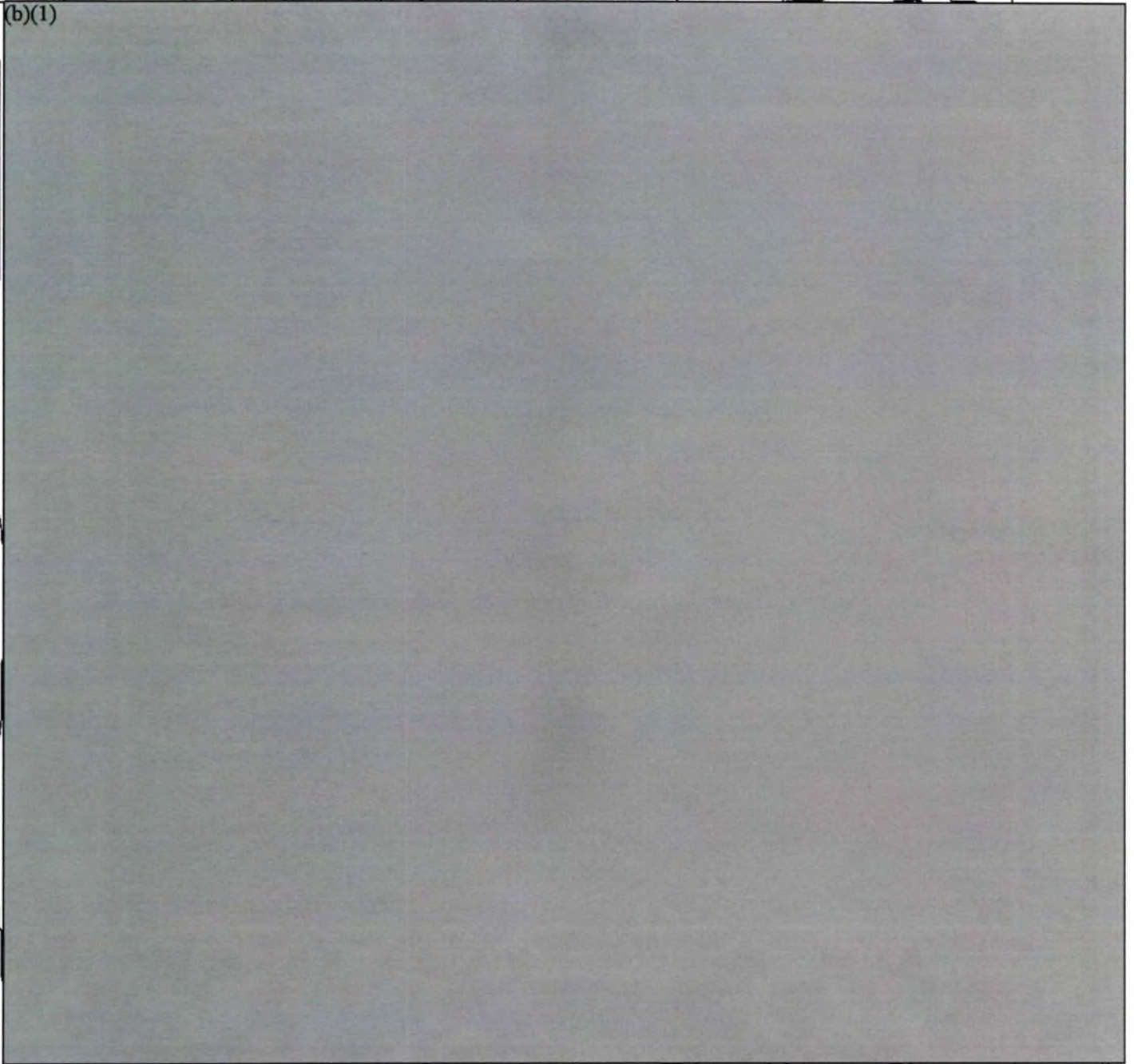
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NMT, December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|--------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|
|-----------------------------|--------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|

(b)(1)



| | | | | | | | |
|------------------------------|--|--|--|--|--|--|-----|
| Low Probability of Intercept | | | | | | | (S) |
|------------------------------|--|--|--|--|--|--|-----|

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NMT, December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demon- strated Perf | Current Estimate | Change Num | Class |
|--------------------------------|--------------------------------|------------------------------|------------------------------|---------------------------|---------------------|---------------|-------|
|--------------------------------|--------------------------------|------------------------------|------------------------------|---------------------------|---------------------|---------------|-------|

(b)(1)



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NMT, December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|---|---|---|-------------------|---|------------|-------|
| Access and Control | Functions shall include aspects of control required to gain access to satellite communications resources, initiate, maintain, modify, and terminate services; shall include the following access control protocols/ messages, which are identified in SI-3135 Appendix A and B: - Terminal LOGON - Terminal LOG-OFF - Antenna Point | Functions shall include aspects of control required to gain access to satellite communications resources, initiate, maintain, modify, and terminate services; shall include the following access control protocols/ messages, which are identified in SI-3135 Appendix A and B: - Terminal LOGON - Terminal LOG-OFF - Antenna Point | Functions shall include aspects of control required to gain access to satellite communications resources, initiate, maintain, modify, and terminate services; shall include the following access control protocols/ messages, which are identified in SI-3135 Appendix A and B: - Terminal LOGON - Terminal LOG-OFF - Antenna Point | TBD | Functions shall include aspects of control required to gain access to satellite communications resources, initiate, maintain, modify, and terminate services; shall include the following access control protocols/ messages, which are identified in SI-3135 Appendix A and B: - Terminal LOGON - Terminal LOG-OFF - Antenna Point | | (U) |

(b)(1)

NMT, December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|--------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|
|-----------------------------|--------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|

(b)(1)



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NMT, December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|--------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|
|-----------------------------|--------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|

(b)(1)

| | | | | | | | |
|------------------|---|--|---|-----|--|--|-----|
| Interoperability | Assuming interoperable cryptographic equipment, keying material, and baseband devices, the NMT shall support joint interoperable war-fighter communications with all other military branches EHF terminals up to the terminal's max data rate | Assuming interoperable cryptographic equipment, keying material, and baseband devices, the NMT shall support joint interoperable war-fighter communications with all other military branches EHF terminals up to the terminal's max data | Assuming interoperable cryptographic equipment, keying material, and baseband devices, the NMT shall support joint interoperable war-fighter communications with all other military branches EHF terminals up to the terminal's max data rate | TBD | Assuming interoperable cryptographic equipment, keying material, and baseband devices, the NMT shall support joint interoperable war-fighter communications with all other military branches EHF terminals | | (U) |
|------------------|---|--|---|-----|--|--|-----|

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NMT, December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|--|---|---|---|-------------------|--|------------|-------|
| | | rate | | | up to the terminal's max data rate | | |
| Backward Compatible (BC) w/ Existing EHF Systems | NMT shall be backwards-compatible with legacy Navy AN/USC-38(V)1-12EHF terminals; in the most robust LDR mode (75 bps) and least robust LDR mode (2.4 kbps), the ship NMT shall operate with a legacy NESP ship terminal maintaining a bit error rate of 10E-5 or less; in the most robust MDR mode (4.8 kbps) and least robust MDR mode (512 kbps), the ship NMT shall operate with a legacy NESP ship | NMT shall be backwards-compatible with legacy Navy AN/USC-38(V)1-12EHF terminals; in the most robust LDR mode (75 bps) and least robust LDR mode (2.4 kbps), the ship NMT shall operate with a legacy NESP ship terminal maintaining a bit error rate of 10E-5 or less; in the most robust MDR mode (4.8 kbps) and least robust MDR mode (512 kbps), the ship NMT shall | NMT shall be backwards-compatible with legacy Navy AN/USC-38(V)1-12EHF terminals; in the most robust LDR mode (75 bps) and least robust LDR mode (2.4 kbps), the ship NMT shall operate with a legacy NESP ship terminal maintaining a bit error rate of 10E-5 or less; in the most robust MDR mode (4.8 kbps) and least robust MDR mode (512 kbps), the ship NMT shall operate with a legacy NESP ship terminal maintaining a bit error rate | TBD | NMT shall be backwards-compatible with legacy Navy AN/USC-38(V)1-12EHF terminals; in the most robust LDR mode (75 bps) and least robust LDR mode (2.4 kbps), the ship NMT shall operate with a legacy NESP ship terminal maintaining a bit error rate of 10E-5 or less; in the most robust MDR mode (4.8 kbps) and least robust MDR mode (512 kbps), the ship NMT shall operate with a legacy NESP ship terminal maintaining a bit error rate of 10E-5 or less; in the most robust | | (U) |

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NMT, December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|--|--|------------------------|-------------------|---|------------|-------|
| | terminal maintaining a bit error rate of 10E-5 or less | operate with a legacy NESP ship terminal maintaining a bit error rate of 10E-5 or less | of 10E-5 or less | | MDR mode (4.8 kbps) and least robust MDR mode (512 kbps), the ship NMT shall operate with a legacy NESP ship terminal maintaining a bit error rate of 10E-5 or less | | |
| Reliability AEHF | | | | | | | (U) |
| MTBF | 4400 hrs | 4400 hrs | 300 hrs | TBD | 4400 hrs | | (U) |
| MTTR | 4 hrs | 4 hrs | 5 hrs | TBD | 4 hrs | | (U) |
| Availability AEHF | | | | | | | (U) |
| Ai for Ship | 0.999 | 0.999 | 0.983 | TBD | 0.999 | | (U) |
| Ai for Shore | 0.999 | 0.999 | 0.983 | TBD | 0.999 | | (U) |
| Ai for Submarine | 0.999 | 0.999 | 0.983 | TBD | 0.999 | | (U) |
| Ao for Ship | 0.999 | 0.999 | 0.900 | TBD | 0.999 | | (U) |
| Ao for Shore | 0.999 | 0.999 | 0.900 | TBD | 0.999 | | (U) |
| Ao for Submarine | 0.999 | 0.999 | 0.940 | TBD | 0.999 | | (U) |
| Effective Isotropic | | | | | | | (U) |

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NMT, December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|---|---|---|---|-------------------|---|------------|-------|
| Radiated Power (EIRP) | | | | | | | |
| (b)(1) | | | | | | | |
| Ka Ship | 67.0 dBW | 67.0 dBW | 67.0 dBW | TBD | 67.0 dBW | | (U) |
| Gain/Noise Temperature (G/T) | | | | | | | (U) |
| (b)(1) | | | | | | | |
| Ka Ship | 21 dB/K | 21 dB/K | 21 dB/K | TBD | 21 dB/K | | (U) |
| High Altitude Electromagnetic Pulse (HEMP) Protection | | | | | | | (U) |
| AEHF- All Platforms | Survive HEMP in accordance with DoD-STD-2169B | Survive HEMP in accordance with DoD-STD-2169B | Survive HEMP in accordance with DoD-STD-2169B | TBD | Survive HEMP in accordance with DoD-STD-2169B | | (U) |

(U) Acronyms:

Ai - Inherent Availability
 Ao - Operational Availability
 CEVR - Circularly Equivalent Vulnerability Radius
 CMTW - Combined Major Theater of War
 dB/K - Decibels per Kelvin
 FOV - Field of View
 HGEC - High Gain Earth Coverage
 HRCA - High Resolution Coverage Area
 IER - Information Exchange Requirements
 kpbs - Kilobits per second
 Mbps - Millibits per second
 MRCA - Medium Resolution Coverage Area

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Defense Acquisition
Management Information
Retrieval (DAMIR)



Selected Acquisition Report
(SAR)

Classified Annex

RCS: DD-A&T(Q&A)823-302



MINUTEMAN III GRP

AS OF DATE: December 31, 2007

~~Classified by: ICBM Security Classification Guide, 30 Sep 97~~

~~Reason:~~

~~Derived from:~~

~~Declassify on: (X-2)~~

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MINUTEMAN III GRP, December 31, 2007

~~(S)~~ Performance

(b)(1)



(U) Acronyms:

ft - feet

G&C - Guidance and Control

MOTR - Miss Other Than Reentry

sec - seconds

(b)(1)



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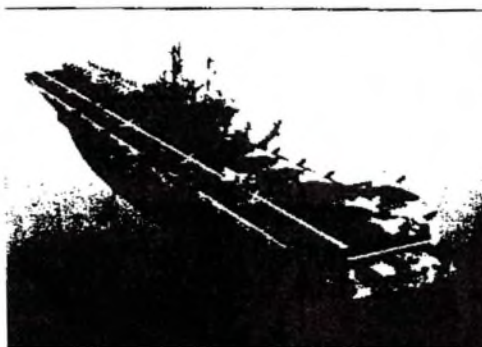
Defense Acquisition
Management Information
Retrieval (DAMIR)



Selected Acquisition Report
(SAR)

Classified Annex

RCS: DD-A&T(Q&A)823-333



LHA Replacement

AS OF DATE: December 31, 2007

Classified by: ~~(SECRET)~~

Reason:

Derived from: ~~Derived from Multiple Sources~~

Downgrade instructions: ~~Multiple Sources~~

Declassify on: ~~X1, X~~

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~~CONFIDENTIAL~~

December 31, 2007

U (S) Performance

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|---|--|--|---|-------------------|--|------------|-------|
| Net Ready | 100% of interfaces; services; policy-enforcement controls; and data correctness, availability and processing requirements in the joint integrated architecture | 100% of interfaces; services; policy-enforcement controls; and data correctness, availability and processing requirements in the joint integrated architecture | 100% of interfaces; services; policy-enforcement controls; and data correctness, availability and processing requirements designated as enterprise level or critical in the joint integrated architecture | TBD | 100% of interfaces; services; policy-enforcement controls; and data correctness, availability and processing requirements in the joint integrated architecture | | (U) |
| Vertical Take Off and Landing land/launch spots | 9 CH-53E/MV-22 | 9 CH-53E/MV-22 | 9 CH-53E/MV-22 | TBD | 9 CH-53E/MV-22 | | (U) |
| F-35B capacity | 23 Aircraft | 23 Aircraft | 20 Aircraft | TBD | 23 Aircraft | | (U) |
| Aviation operations | 6 Spots 12 hrs/day(Sustained) 6 Spots 24 hrs/day for six consecutive days (Surge) | 6 Spots 12 hrs/day(Sustained) 6 Spots 24 hrs/day for six consecutive days (Surge) | 6 Spots 12 hrs/day(Sustained) 6 Spots 24 hrs/day for six consecutive days (Surge) | TBD | 6 Spots 12 hrs/day(Sustained) 6 Spots 24 hrs/day for six consecutive days (Surge) | | (U) |
| Vehicle space | 12,000 sq. ft. | 12,000 sq. | 10,000 sq. | TBD | 12,000 sq. | | (U) |

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LHA, December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|--|--|---|--|-------------------|---|------------|-------|
| | | ft. | ft. | | ft. | | |
| Total manpower (includes ship's force and all embarked elements such as troops, staffs, detachments, etc.) | 2,891 Persons | 2,891 Persons | 2,891 Persons | TBD | 2,891 Persons | | (U) |
| Cargo space | 160,000 cu. ft. | 160,000 cu. ft. | 130,000 cu. ft. | TBD | 160,000 cu. ft. | | (U) |
| Troop accommodations | 1,686 Persons | 1,686 Persons | 1,626 Persons | TBD | 1,686 Persons | | (U) |
| Survivability: Navy Survivability Policy for Surface Ships | Equals threshold, implement recommendations of the NAVSEA COLE Survivability Review Group Phase II Analysis Report of Amphibious Ships, Apr 2003 | Equals threshold, implement recommendations of the NAVSEA COLE Survivability Review Group Phase II Analysis Report of Amphibious Ships, | Level II per OPNAV-INST 9070.1 of 23 Sep 1988 (LHA(R) cargo magazine protection as stated in para. 6.b.17 of the CDD | TBD | Equals threshold, implement recommendations of the NAVSEA COLE Survivability Review Group Phase II Analysis Report of Amphibious Ships, Apr | | (U) |

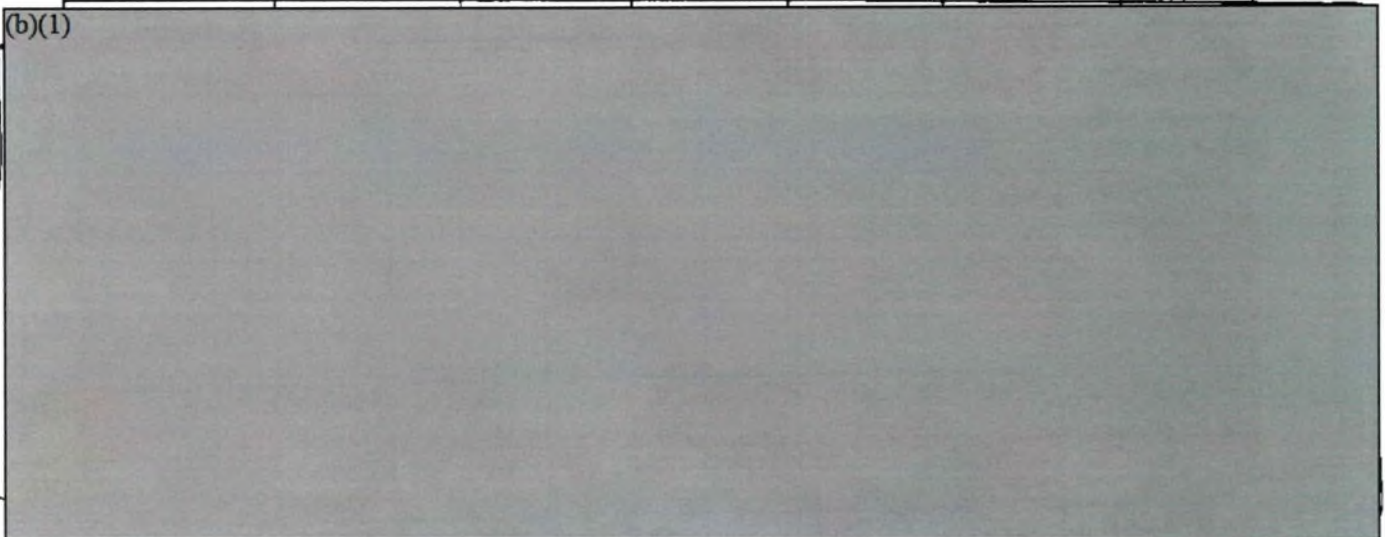
(b)(1)

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LHA, December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|--------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|
|-----------------------------|--------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|

(b)(1)



| | | | | | | | |
|--|--|---|---|-----|--|--|-----|
| Force Protection: Collective Protection System (CPS) | Expanded CBR protection that provides a toxic-free environment (where it is not necessary to wear protective clothing or masks) for 40% of crew in berthing, messing, sanitary, and battle dressing facilities as well as key operational spaces that can be affordably integrated | Expanded CBR protection that provides a toxic-free environment (where it is not necessary to wear protective clothing or masks) for 40% of crew in berthing, messing, sanitary, and battle dressing facilities as well as key operational spaces that | CBR protection that provides a toxic-free environment (where it is not necessary to wear protective clothing or masks) for 40% of crew in berthing, messing, sanitary, and battle dressing facilities | TBD | Expanded CBR protection that provides a toxic-free environment (where it is not necessary to wear protective clothing or masks) for 40% of crew in berthing, messing, sanitary, and battle dressing facilities as well as key operational spaces that can be | | (U) |
|--|--|---|---|-----|--|--|-----|

~~*** SECRET ***~~

LHA, December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|--|---|---|---|-------------------|---|------------|-------|
| | into ship design | can be affordably integrated into ship design | | | affordably integrated into ship design | | |
| Force Protection: Decontamination Stations | Four decontamination stations (two CPS, one casualty, and one conventional) providing a capability of decontamination an avg of ten people per hr per station | Four decontamination stations (two CPS, one casualty, and one conventional) providing a capability of decontamination an avg of ten people per hr per station | Four decontamination stations (two CPS, one casualty, and one conventional) providing a capability of decontamination an avg of ten people per hr per station | TBD | Four decontamination stations (two CPS, one casualty, and one conventional) providing a capability of decontamination an avg of ten people per hr per station | | (U) |

(U) Acronyms

avg. average
 CBR Chemical, Biological, Radiological
 CDD Capability Development Document
 cu. ft. cubic feet
 ft feet
 hr hour
 nm nautical mile
 sq. ft. square feet
 sqm square meters

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N-30 SSGN

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Defense Acquisition
Management Information
Retrieval (DAMIR)



Selected Acquisition Report
(SAR)

Classified Annex

RCS: DD-A&T(Q&A)823-337



SSGN

AS OF DATE: December 31, 2007

~~Classified by: Multiple Sources
Reason:
Derived from:
Downgrade instructions: Declassify on: X0, X4~~

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SSGN, December 31, 2007

(U) Performance

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|--|-------------------------|------------------------|--|-----------------------------|------------------------|------------|-------|
| *Interoperability | 100% of top-level IERs | 100% of top-level IERs | 100% of top-level IERs designated critical | Met. 100% of top-level IERs | 100% of top-level IERs | | (U) |
| *Land Attack/Strike Warfare - "A Full Strike Configured" | "x" = 154 | "x" = 154 | "x" = 132 | Met. 154 | "x" = 154 | | (U) |

(b)(1)

| | | | | | | | |
|--|---|---|---|-----|---|--|-----|
| Special Operations Forces (SOF) Operations Support | | | | | | | (U) |
| *SOF Mobility Assets | Ability to support 2 ASDS, or 2 DDS, or 1 ASDS and 1 DDS simultaneously | Ability to support 2 ASDS, or 2 DDS, or 1 ASDS and 1 DDS simultaneously | Ability to support 2 ASDS, or 2 DDS, or 1 ASDS and 1 DDS simultaneously | TBD | Ability to support 2 ASDS, or 2 DDS, or 1 ASDS and 1 DDS simultaneously | | (U) |

(b)(1)

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SSGN, December 31, 2007

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|-------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|
|-----------------------------|-------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|

(b)(1)



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SSGN, December 31, 2007

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demon- strated Perf | Current Estimate | Change Num | Class |
|--------------------------------|-------------------------------|------------------------------|------------------------------|---------------------------|---------------------|---------------|-------|
|--------------------------------|-------------------------------|------------------------------|------------------------------|---------------------------|---------------------|---------------|-------|

(b)(1)



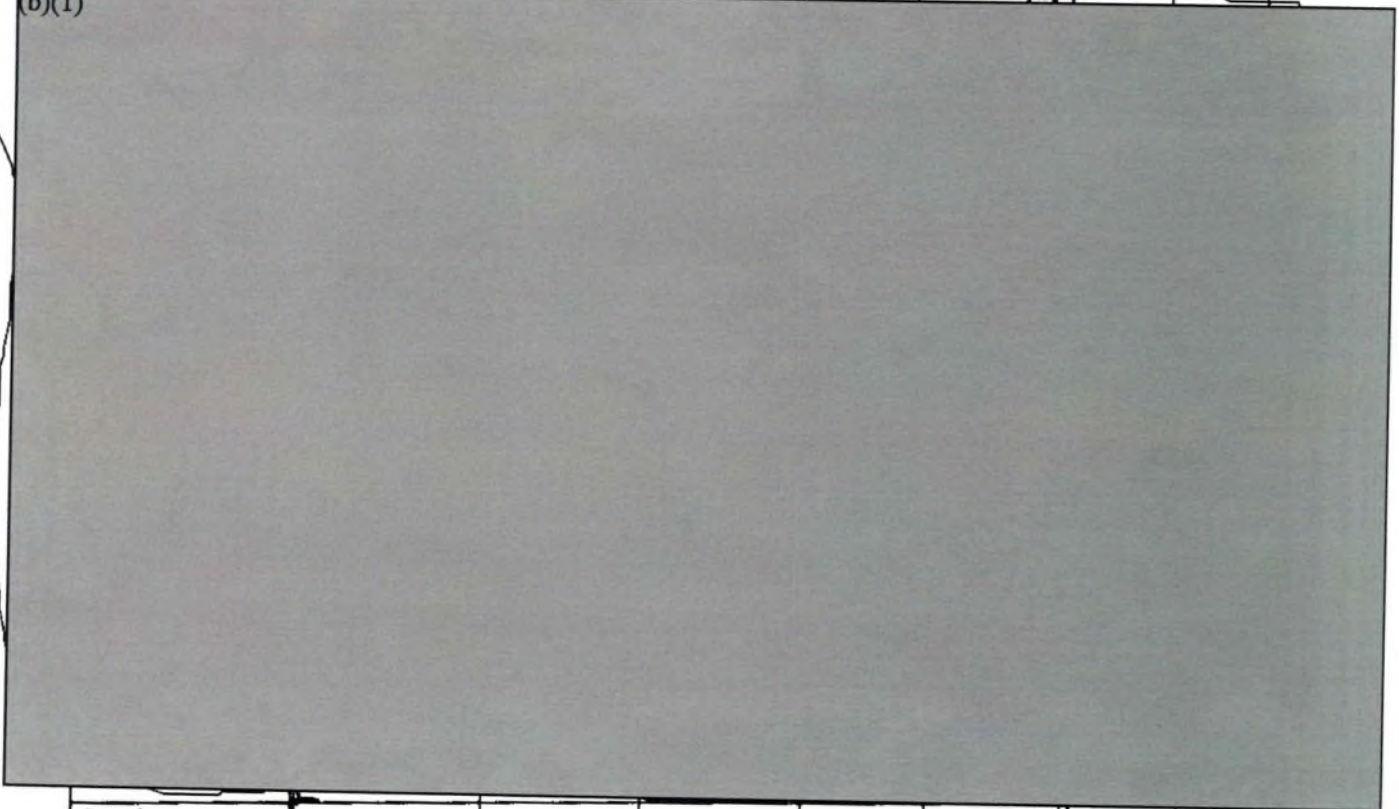
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SSGN, December 31, 2007

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|-------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|
|-----------------------------|-------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|

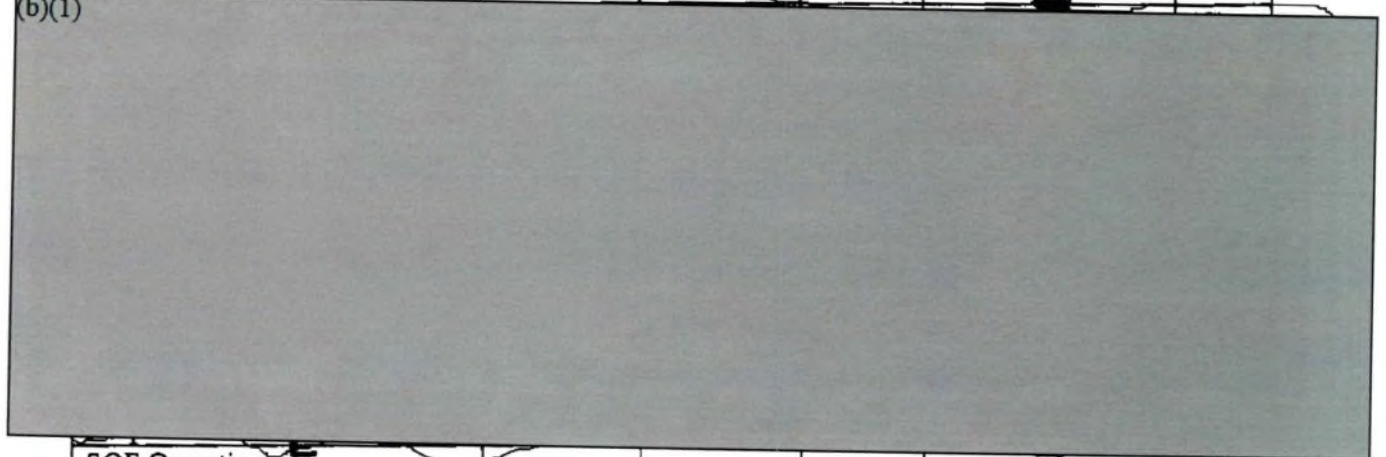
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Land Attack/Strike and Warfare Attributes

(U)

(b)(1)



SOF Operations

(U)

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SSGN, December 31, 2007

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|-------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|
| Support Attributes | | | | | | | |

(b)(1)

| | | | | | | | |
|--|------------|------------|------------|--------------|---------|---|-----|
| Internal Stowage - SEASUB Ordnance while SSGN is in a Land Attack/Strike Warfare configuration | 136 ft3 | 136 ft3 | 114 ft3 | Met. 114 ft3 | 114 ft3 | 1 | (U) |
| Internal Stowage - SEASUB Non-Ordnance while SSGN is in a Land Attack/Strike Warfare configuration | >= 224 ft3 | >= 224 ft3 | >= 200 ft3 | Met. 200 ft3 | 200 ft3 | 1 | (U) |

(b)(1)

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SSGN, December 31, 2007

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|-------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|
|-----------------------------|-------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|

(b)(1)

| | | | | | | | |
|------------------|------------------------|------------------------|------------------------|-----|------------------------|--|-----|
| Organic Lock-out | Dual Lock-out Chambers | Dual Lock-out Chambers | Dual Lock-out Chambers | TBD | Dual Lock-out Chambers | | (U) |
|------------------|------------------------|------------------------|------------------------|-----|------------------------|--|-----|

(U) Acronyms:

ASDS Advanced SEAL Delivery System
DDS DryDeck Shelter
ft³ Cubic feet
IER Information Exchange Requirement
Kts Knots
LOC Lock Out Chamber
SEASUB External stowage for Special Operation Forces Operations
SOF Special Operations Forces
TLAM Tomahawk Land Attack Missile

(U) * KPP (Key Performance Parameter)

(U) Change Notation Explanations:

(U) Ch-1: The Performance Parameters listed below were updated in both the Demonstrated Performance and Current Estimates to represent the results of Operational Test and Evaluation (OPEVAL) that completed in October 2007. OPEVAL results are provided in OHIO Class SSGN Conversion IOTE (OT-C-2) Final Report to the CNO. COMPOTEVFOR (1648-OT-C-2) Ser 43A2-S005 dated 12 February 2008. The Current Estimates have been updated to the Demonstrated Performance if results were satisfactory. Some COMOTEVFOR SOF Testing is completed (DDS Mass Swimmer Lock Out and DDS Swimmer Delivery Vehicle (SDV)) but final Demonstrated Performance for all SSGN SOF capabilities will not be updated until completion of ASDS and LOC FOT&E.



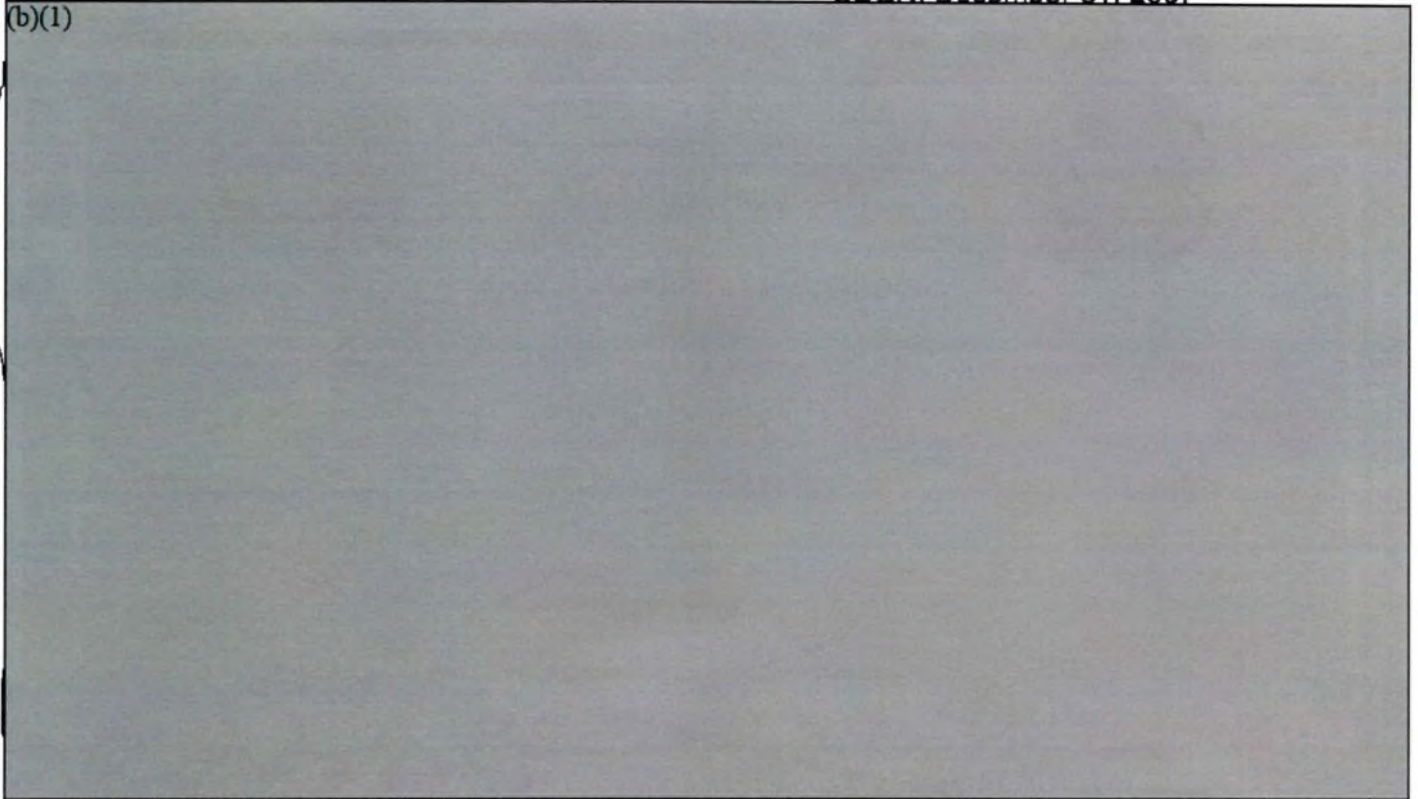
| Performance Characteristics | From | To | Class |
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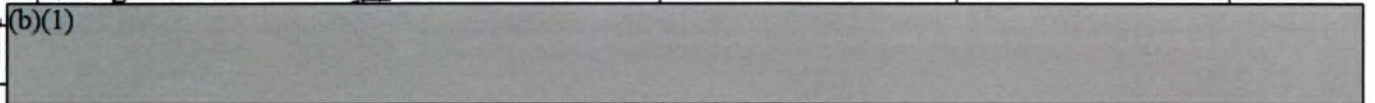
SSGN, December 31, 2007

(b)(1)



| | | | |
|--|-----------|---------|-----|
| Internal Stowage – SEASUB Ordnance while SSGN is in a Land Attack/Strike Warfare configuration | 130 ft3 | 114 ft3 | (U) |
| Internal Stowage – SEASUB Non-ordnance while SSGN is in a Land Attack/Strike Warfare configuration | >=224 ft3 | 200 ft3 | (U) |

(b)(1)



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Defense Acquisition
Management Information
Retrieval (DAMIR)



Selected Acquisition Report
(SAR)

Classified Annex

RCS: DD-A&T(Q&A)823-252

LAIRCM

AS OF DATE: December 31, 2007

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~~Declassify on: 30 June 2025~~

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~~SECRET//NOFORN~~

~~SECRET/NOFORN~~

~~(S//NF)~~ Performance

| Performance Characteristics | SAR Development Estimate | DRAFT APB Objective | DRAFT APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|--------------------------|---------------------|---------------------|-------------------|------------------|------------|-------|
|-----------------------------|--------------------------|---------------------|---------------------|-------------------|------------------|------------|-------|

(b)(1)

| | | | | | | | |
|--------------------------|--|--|--|--|--|--|--|
| (U) Operability (Note 2) | System shall not interfere with flight characteristics or mission requirements | System shall not interfere with flight characteristics or mission requirements | System shall not interfere with flight characteristics or mission requirements | | System shall not interfere with flight characteristics or mission requirements | | |
|--------------------------|--|--|--|--|--|--|--|

Notes:

1. (U) Missiles without valid exploitation data are listed as objectives only. When other DoD agencies provide exploitation data, missile type may be moved up to Tier 1 or Tier 2.

2. (U) Cockpit controls and/or operator interfaces such as control panels, status indicators, threat displays, heads-up displays, and flat panel displays/CRTs/LCDs shall be designed in compliance with aircraft interior lighting for night vision imaging system (NVIS) compatibility in accordance with MIL-L-85762A.

* Denotes Key Performance Parameter

(U) Acronyms:

MANPAD – Man Portable Air Defense System

AGL – Above Ground Level

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~~SECRET//REL TO USA, AUS and GBK//~~

FY 2008 BMDS BLOCK BASELINES AND GOALS (U)



~~Derived from: BMDS Security Classification
Grade, 26 April 2004
Declassify on: 26 April 2029~~

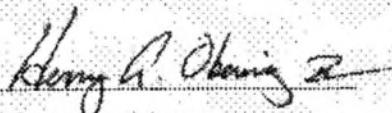
~~SECRET//REL TO USA, AUS and GBK//~~

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FY 2008
BALLISTIC MISSILE DEFENSE SYSTEM (BMDS)
BLOCK BASELINES AND GOALS (U)

(U) In accordance with Title X requirements for a Major Defense Acquisition Program, and the FY02-FY05 National Defense Authorization Acts, I approve the FY 2008 *BMDS Block Baselines and Goals*. Included herein are the BMDS Baselines for Blocks 1.0, 2.0 and 3.1/3.2, and Goals for Blocks 3.3, 4.0 and 5.0.

(U) The BMDS Block Baselines and Goals is a summary of key performance, schedule and budget parameters that are the basis for the achievement of a ballistic missile defense capability. My intent is that the BMDS development, integration, and fielding efforts be managed within the technical, schedule and financial data provided herein.



HENRY A. OBERING III
Lieutenant General, USAF
Director

29 Jan 2008

DATE

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~~SECRET//REL TO CDR, PAC and CDR, 7~~

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~~SECRET//REL TO USA, AUS, UK, CAN, NZ, J, C, D, F, G, I, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z~~

SECTION I

INTRODUCTION (U)

~~SECRET//REL TO USA, AUS, UK, CAN, NZ, J, C, D, F, G, I, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z~~

1.1 New Block Structure (U)

(U) In 2002, MDA was tasked with quickly developing and delivering a defensive capability against all ranges of enemy ballistic missiles in all phases of flight. To accomplish this mission, the Agency established a spiral development and acquisition process in which increasing levels of capability to defeat ballistic missiles would be delivered continuously to the warfighter.

(U) To organize MDA's program of work and communicate to the Congress and other key organizations the Agency's plans for continually improving the Ballistic Missile Defense System (BMDS), MDA created the biennial block structure. In recent years, however, the Congress and Government Accountability Office (GAO) have called on the Agency to revise its approach to blocks to enhance transparency, accountability, and oversight.

(U) In June 2007, the MDA Director approved a new block structure. It has several key tenets:

- Blocks will be based on fielded capabilities that address particular threats. They represent a discrete program of work.
- When a firm commitment can be made to the Congress, blocks will have schedule, budget, and performance baselines. Schedule delays, budget increases, and performance shortfalls will be explained as variances to the baselines.
- Once baselined, work cannot be moved from one block to another without rebaselining.
- A block is considered to be delivered after FCD is declared for all of the ESGs and delivery of the last piece of hardware associated with that block.

(U) The existing BMDS Program will be divided into five blocks. The block names are:

- Block 1.0: Defend U.S. from Limited North Korean Long-Range Threats
- Block 2.0: Defend Allies & Deployed Forces from Short- to Medium-Range Threats in One Region/Theater
- Block 3.0: Expand Defense of the U.S. to Include Limited Iranian Long-Range Threats
- Block 4.0: Defend Allies & Deployed Forces in Europe from Limited Iranian Long-Range Threats
- Block 5.0: Expand Defense of Allies & Deployed Forces from Short- to Intermediate-Range Threats in Two Regions/Theaters

(U) The new block structure is organized in a roughly chronological order. In other words, Block 1.0 represents a capability that is more "near-term" than Block 5.0. Also, in many cases the capability delivered by later blocks depends on capability provided by previous blocks. This does not mean, however, that the capability represented in each block must be delivered chronologically. For example, as will later be shown, Block 4.0, which includes the European Interceptor Site (EIS) and European Midcourse Radar (EMR), could be delivered after Block 5.0,

since Block 4.0 depends on external factors such as agreement between the government of the United States and the respective governments of Poland and the Czech Republic. On the other hand, Block 1 represents the foundation of the capability to protect the United States from long-range ballistic missiles from rogue nations, and is closely related to the capabilities in Blocks 3.0 and 4.0. Block 1.0 is therefore the most mature capability and will be the first block of capability fully delivered to the warfighter.

(U) Block 1.0 provides an initial capability to protect the United States from a limited North Korean attack employing long-range ballistic missiles. The block is comprised of 30 GBIs, fielded at Ft. Greely, Alaska and Vandenberg Air Force Base, California, combined with an array of sensors including the Beale UEWR and Cobra Dane radar, the Sea-Based X-Band (SBX) radar, and the SPY-1 radars from the 15 Aegis BMD destroyers and 3 Aegis cruisers, supported by a C2BMC system.

(U) Block 2.0 provides the capability to defend U.S. allies and deployed forces from short- to medium-range ballistic missile threats in one region or theater. The block is comprised of 71 Aegis Standard Missile-3 Block 1A missiles, 15 Aegis BMD Engagement Destroyers, 3 Aegis BMD Engagement Cruisers, 2 Terminal High Altitude Area Defense (THAAD) Fire Units with 48 operational THAAD interceptors and associated C2BMC support.

(U) Block 3.0 builds on the foundation established by Block 1.0 to expand the defense of the United States against limited Iranian long-range ballistic missile threats. Block 3.0 employs 14 additional GBIs with two key radars needed for defense of the U.S. from an Iranian threat – the Upgraded Early Warning Radars (UEWRs) at Fylingdales in the UK and at Thule in Greenland. Block 3.0 also provides the ability to address more sophisticated countermeasures in the midcourse phase of flight, a critical aspect of our plan to improve the effectiveness of the BMDS against the evolving threat. MDA is pursuing two parallel and complementary approaches to counter complex countermeasures: more sophisticated sensors and algorithms to discriminate the threat RV from associated countermeasures; and a volume kill capability to intercept the objects identified by the discrimination systems as potential threat RVs. Block 3.0 will focus the first of these approaches, and therefore includes upgrades to the Ground-Based Interceptors, sensors, and the C2BMC system to allow discrimination of the threat RV. The full implementation of this approach will be conducted in phases, with the first phase referred to as "Near Term Discrimination" (Block 3.1/3.2) and the second phase as "Improved Discrimination and System Track." (Block 3.3)

(U) Block 4.0 builds on the foundation established by Blocks 1.0 and 3.0 to expand the defense of the United States against limited Iranian long-range ballistic missile and to extend this defense to allies and deployed forces in Europe. Block 4.0 includes 10 Ground-Based Interceptors equipped with 2-stage Orbital Boost Vehicle (OBV) boosters (vice the 3-stage OBV boosters used on the interceptors deployed at Fort Greely and VAFB). These GBIs are scheduled for deployment in Poland pending an agreement with the Polish government. The European Mid-course Radar (EMR), an X-band radar currently located at the Kwajalein Atoll will be modified and relocated to a site in the Czech Republic pending an agreement with the Czech government. It will provide critical midcourse tracking data for the European Interceptor Site (EIS). The forward placement of an AN/TPY-2 radar will provide information early in the flight of a potential ballistic missile launch and helps discriminate threat RVs from associated

countermeasures. Block 4.0 also includes the C2BMC infrastructure required to support the EIS in Poland, the EMR in the Czech Republic, and the forward-based AN/TPY-2 radar.

(U) Block 5.0 builds on the foundation established by Block 2.0 by expanding the defense of allies and deployed U.S. forces from short- to intermediate-range ballistic missile threats and increasing the number of regions or theaters from one to two. Block 5.0 includes 23 SM-3 Block IA interceptors, 53 SM-3 Block IB interceptors, 2 THAAD Fire Units with 48 interceptors, one AN/TPY-2 radar for forward deployment, and the associated C2BMC support. Block 5.0 makes both quantitative and qualitative improvements by increasing the number of SM-3 and THAAD interceptors that can be deployed to a region or theater, and by improving and upgrading the Aegis Weapons System and the SM-3 Block IA interceptor to the Block IB. There are two primary differences between the Block IA and IB interceptors. The Block IB will provide a two-color seeker (vice the one-color seeker employed on the SM-3 Block IA) and a Throttleable Divert and Attitude Control System (TDACS) which, when combined with upgrades to the Aegis Weapons System such as the Aegis BMD Signal Processor and the Advanced Signal Processor, will improve the ability of the seeker to distinguish between threat RVs and countermeasures and expand the battlespace and allow for detection, acquisition and intercepts against more diverse and longer-range threats up to Intermediate-Range Ballistic Missiles (IRBMs).

(U) Future blocks (Block 6.0, etc.) will be added when Capability Development programs, such as the Airborne Laser (ABL), Multiple-Kill Vehicle (MKV), or Kinetic Energy Interceptor (KEI) mature and when significant new capabilities are expected to be fielded based on a consideration of technological advances, affordability, and need.

(U) The new block structure has been implemented in the FY 2009 President's Budget (PB) Submission. The 2008 BMDS Block Baselines and Goals are consistent with the FY09 PB and responds to Congressional direction in the FY2002 through 2005 Defense Authorization Act. It includes:

- **BMDS Baseline Capabilities** – Assets and Engagement Sequence Groups (ESG) that will be made available for fielding for a particular block. The Block 1.0, Block 2.0 and Block increments 3.1/3.2 schedule, budget, and performance data address the baseline requirement mandated by the FY05 National Defense Authorization Act. The block baselines include anticipated dates for Early, Partial, and Full Capability Deliveries (ECD, PCD, FCD), as well as performance goals for each baseline. Schedule delays, budget increases, and performance shortfalls will be explained as variances to the baselines.
- **BMDS Capability Goals** – Assets and ESGs expected to be made available for future blocks.
- **Adversary Benchmarks** – Adversary missile systems used for block performance estimates.
- **BMDS Budget Breakdowns** – Detailed Fielding, Development, and Integration budgets for each block and BMDS Capability Development activity.

1.2 Capability Delivery (U)

~~(FOUO)~~ The BMDS Baseline Capabilities and BMDS Capability Goals are consistent with the MDA Master Fielding Plan (MFP), which ensures the orderly and effective integration, testing, fielding and supportability of BMDS Elements and components for the warfighter. The delivery of a block capability is intended to ensure that the Agency delivers what it promised to deliver and the capability is safe, operationally effective, and is supportable before release for issue to the warfighter. In keeping with this philosophy, MDA has developed a set of definitions to help guide the placement of specific BMDS capabilities in specific Blocks.

- **(U) Early capability delivery (ECD)** is considered to be the first point at which an MDA capability could be utilized in the defense of the nation or of its allies. ECD applies to stand-alone or BMDS-integrated capabilities and is normally associated with the successful completion of Element, pair-wise integration, Final Qualification Testing (FQT), and software development complete. If integrated, the capability must be adequately demonstrated to build sufficient confidence that it will safely perform as intended without degrading the existing capabilities of the BMDS. Sufficient logistics support must be available to utilize the capability for contingency operations of limited durations.
- **(U) Partial Capability Delivery (PCD)** is an interim state of capability maturation achieved through a BMDS-level test campaign and usually culminates in a Quick-Look analysis from a BMDS-level distributed ground test (GTD). BMDS-level testing demonstrates the new capability will perform as intended in robust scenarios. PCD may be declared for each new component, function or upgrade as well as the ESGs that utilize them. PCD occurs when the MDA has sufficient confidence to declare the capability technically available to support the warfighter's Partial Military Capability (PMC) objectives and logistics support is adequate to achieve defensive operations.
- **(U) Full capability delivery (FCD)** is the point at which the capability fulfills the BMDS block objectives and is technically available to support the warfighter's Full Military Capability (FMC) objectives. FCD can apply to an entire block of capability, a single or set of ESGs, or a specific component, function or upgrade. Several BMDS-level test campaigns may be required to achieve FCD. The opportunity to declare the FCD will usually begin after the detailed analysis of the final BMDS-level distributed ground test is complete for that capability, including verification of system specifications and the final performance assessment against Technical Objectives and Goals (TOG), resulting in a positive assessment of BMDS system-level performance for sustained defensive operations. In addition, logistics support is available for sustained operations.

(U) Since the BMDS will operate across several areas of responsibility, MDA recognizes the necessity of integrating missile defense operational planning. Since operational planning is a cooperative endeavor, involving both the material developer and the warfighter, MDA works closely with US Strategic Command (USSTRATCOM), the Joint Staff, and other Combatant Commands (COCOM) to develop a BMDS Concept of Operations (CONOPS).

Further, the 2008 BMDS Block Baselines and Goals package was provided to USSTRATCOM for appropriate inputs. MDA also works with USSTRATCOM to integrate the warfighter's Prioritized Capability List (PCL) when establishing its development goals and fielding priorities. The establishment of the Near-Term Sea-Based Terminal program in the FY08 budget was such an example.

1.3 BMDS Capability Development (U)

~~(FOUO)~~ Capability Development programs are excluded from defined blocks until they are planned for fielding. As such, these programs cover a range of activities that are broken down into three informal phases with each phase involving higher levels of technology maturity: The first phase is to explore technology ideas and concepts: The purpose of this phase is to refine the initial concept. Laboratories turn paper proposals and analyses into viable, executable technology projects that might meet future war fighter capability needs. The second phase is to develop technologies: This phase involves developing a prototype and measuring performance to determine its feasibility and relevance to the warfighter. The last phase is to ready technologies. At the end of this phase, the prototype should be demonstrated in a relevant or even operational environment and readied for a decision on whether it can meet the capability needs of the war fighter and acquired within schedule and funding constraints.

(U) Much of the BMDS program funding does not fit into the 5 blocks and therefore is allocated to the following 4 general categories:

- **Capability Development** – Explained above
- **Sustainment** – funding for Contractor Logistics Support (CLS) and other operations and support budgets that cut across blocks
- **Mission Area Investment** – funding for activities, such as Intelligence and Security and Modeling and Simulation, that cut across blocks and Capability Development programs and cannot be assigned to them, and
- **MDA Operations** – funding to support Agency operations, such as management HQ, personnel, and the Base Realignment and Closure (BRAC)

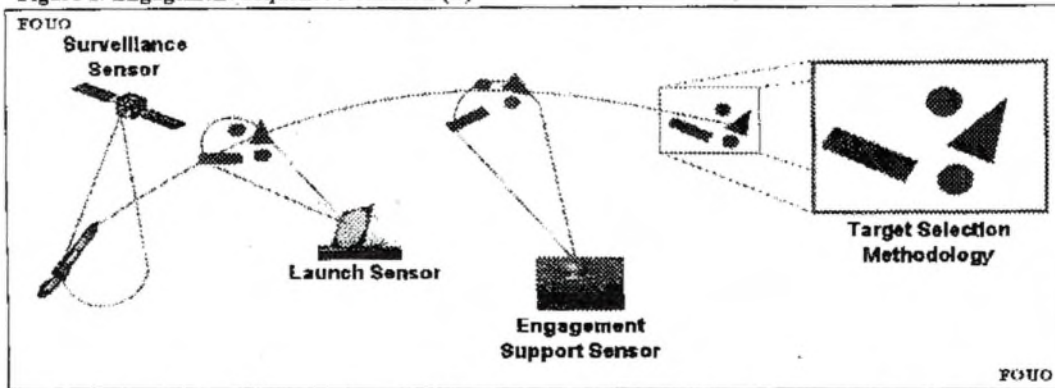
1.4 ENGAGEMENT SEQUENCE GROUP (ESG) APPROACH (U)

(U) Initially, the systems of the BMDS were individual, autonomous Elements focused on specific missions, but with the creation of the BMDS, missile defense is continuing to migrate towards operating as a system of systems. The BMDS is comprised of elements and components, i.e., weapons, sensors, C2BMC, and support assets. These form the system of logically grouped hardware and software that perform interacting tasks to provide BMDS functional capabilities. These functions, capabilities, architectures, and element contributions are organized into Engagement Sequence Groups (ESGs). The Engagement Sequence construct was created as an engineering tool to provide a simple representation of BMDS capabilities, integration and functionality and is defined as a unique combination of detect-control-engage functions performed by BMDS subsystems used to engage a threat ballistic missile. These engagement sequences specify the subsystems that will perform detection and initial tracking, provide data to support interceptor launch and engagement, and

perform target selection. The basic layout of an Engagement Sequence set of events is presented in Figure 1.

Figure 1: Engagement Sequence Definition (U)

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(U) For an integrated BMDS comprised of multiple weapons and sensors with the necessary interfaces, there can be various combinations of subsystems used to enable the engagement of a hostile ballistic missile. Engagement Sequences focus on identifying sources of available data to enable sensor-to-weapon activities required to put weapons on target. Thus, Engagement Sequences focus only on the principal capabilities necessary to arrive at a workable number of sequences, which are organized into ESGs. These ESGs include identification of the sources of sensor-to-weapon data, as presented in Table 1.

Table 1: Engagement Sequence Group (ESG) Nomenclature (U)

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| Engaging Weapon | Engagement Sequence Group | ESG Mod | Surveillance Initial Track | Launch Sensor | Engagement Support Sensor | Target Selection Methodology | Launch On | Engage On |
|---|--|---|---|---|---|---|---|---|
| The Weapon Component Used In The Engagement | Short Title Including BMDS Integration | The Key Capabilities And Interfaces Necessary To Enable The ESG, Including Identification Of The Subsystem Controlling An Asset Through Tasking Referred To As "Management" | The Sensor That Initially Detects The Threat And Provides Track Data Used To Initiate The Engagement Sequence | The Dominant Sensor Used To Supply Data To Launch The Interceptor | The Dominant Off-board (Not On The Interceptor) Sensor Used To Supply Data To Discriminate The Engagement | Short-hand Notation For The End-to-end Process Used To Select And Ultimately Discriminate The Threat Object To Be Engaged | Launch Weapon Using Identified Sensor Data (Or Fused System Track) With Additional Data Provided By A Different Sensor (s) To Complete The Engagement | Use Identified Sensor Data (Or Fused System Track) To Launch Weapon And Complete The Engagement |

FOUO

(U) Through the simplicity of its structure, the ESG construct can highlight a common theme desired to be added to the BMDS and synchronize normally disparate activities (e.g. concept, specifications, integration, and verification) to a single purpose and set of demonstrations.

(U) As new sensors, weapons and interfaces are integrated into the BMDS, the number of ESGs will increase, thereby increasing system capability. As improvements are made to existing components of the BMDS, an ESG may receive a "Mod" identifier to characterize

enhanced technical content of an existing "Launch On" or "Engage On" ESG. The "Mod" identifier will enable distinguishing a modification to an existing sequence within an ESG or an addition of a new Engagement Sequence within the existing group. New ESGs are defined when subsystems or capabilities are introduced that warrants a unique "Launch On" or "Engage On" ESG.

1.5 PROGRESS TOWARDS MAKING MISSILE DEFENSE A REALITY (U)

(U) Over the past seven years, the MDA has made major strides in developing and fielding a BMDS to defend the United States, its deployed forces, and friends and allies against ballistic missiles of all ranges in all phases of flight. In 2004, the United States took the unprecedented step of fielding an initial defense against the current threat with advanced hit-to-kill technology. Since then, the MDA has continued to develop and test an increasingly integrated system of interceptors, sensors, battle management, command and control, and communications systems to improve the depth, range and reliability of U.S. defenses and provide options to address uncertainty and surprise in the future.

(U) The MDA innovative acquisition strategy – fielding an operational capability while continuing to develop and improve it – was put to the test in the summer of 2006 when the MDA placed the BMDS on alert in response to a credible ballistic missile threat from North Korea. In conjunction with real-world operations, the MDA made significant progress in operating the first increment of the BMDS while continuing to simultaneously develop the BMDS. Today, the MDA continues to conduct a series of highly complex and realistic tests that use operational ground-based interceptors (GBI) and operational radar sensors that culminate in intercepts of threat representative targets.

(U) This section addresses specific FY 2007 accomplishments realized in the fielding and testing of sensors, C2BMC, and weapons.

Fielding (Sensors) (U)

(U) Cobra Dane (CD) was the first BMD system to be certified by U.S. STRATCOM for the missile defense mission

(U) Completed operational testing of Fylingdales and Beale AFB Early Warning Radars (UEWR)

(U) Achieved Air Force Space Command (AFSPC) operational acceptance of legacy missile warning and space surveillance missions for Fylingdales and Beale UEWRs

(U) Began upgrade of the early warning radar at Thule, Greenland

(U) 3 additional Long-range Surveillance and Track Aegis BMD ships upgraded
(Total of 13)

(U) The Sea-based X-band Radar (SBX) conducted winter shakedown and transit to Adak, AK. During the shakedown, SBX conducted 10 commercial helicopter landings for

personnel transfer, refueling and material transfer from an offshore support vessel in seas up to 12 feet and winds up to 40 knots while surviving in winds up to 100 knots and waves up to 50 feet. 2212 out of 2412 total SBX related Prime Item Development Specification (PIDS) requirements were successfully verified. Radar maturation continued with completion of initial software integration into BMDS, participation in three flight tests, a radar characterization test and many satellite tracks.

(U) AN/TPY-2 #3 forward based radar was delivered to the Vandenberg AFB (VAFB) test site in December 2006, Completed acceptance testing in March 2007 and continued demonstration of search and track capabilities in support of Block 2004 ESGs (old block nomenclature). AN/TPY-2 #2 was declared Partial Mission Capable (PMC) by PACOM in early FY 07. PMC was revalidated by PACOM after the radar moved to its permanent site in Q4 FY 07.

Testing (Sensors) (U)

(U) SBX - Conducted numerous satellite tracks both while stationary and during transit up to 7 knots on stable and dynamic targets. Tested low elevation track, and collected data for maturity of discrimination algorithms. SBX was green for 3 GMD flight tests. SBX also provided excellent acquisition, high quality track, discrimination, and wide-band data collection for hit assessment during FTG-03a. Additionally, SBX supported multiple ground tests leading to the flights tests in 2007.

(U) AN/TPY-2 - Ground tests were conducted in the contractor's hardware-in-the-loop facility (HWIL), and with the deployed radar in Shariki, Japan. MDA successfully conducted GTD-01 in November 2006 using the AN/TPY (FB) #2 at the Shariki interim site as one of the principal sensors. The test demonstrated the radar's ability to track strategic and regional threats and provide threat data messages to the BMDS Command, Control, and Battle Management System. In February 2007, the AN/TPY-2 (FB) test team participated in GTX-02a, a BMDS focused ground test. In August, AN/TPY-2 (FB) HWIL was part of the BMDS Integrated Ground Test-02 (GTI-02) with scenarios that demonstrated the Block 2006 capability. In February and March 2007, AN/TPY-2 (FB) #3 at VAFB, CA first tracked an AFSPC Target of Opportunity (TOO), Glory Trip (GT)-193. The second flight test was a MDA target flown to support SBX sensor integration (FTX-02). During this test, AN/TPY-2 (FB) was able to transmit track data to the External Sensor Lab (ESL) which was used to extend operational tracking range and prove track data correlation to the C2BMC. The radar also participated in the FTG-03a test in September 2007, where it tracked the target until it aborted.

Fielding (C2BMC) (U)

- (U) Incrementally fielded Spiral 6.0 software
 - AN/TPY-2 (FB) host nation interface - Dec 06
 - Active Interface Direct Connection of C2BMC to Space-Based Infrared System (SBIRS) resulting in 24/7 data feed for situational awareness - Feb 07
 - Ground-based Missile Defense (GMD) version 6A interface - Jun 07

- Completed move of Ballistic Missile Defense Communication Node (BCN) and Auxiliary Communication shelters (including base communication infrastructure) for AN/TPY-2 (FB) to the objective Shariki, Japan site and completed Readiness Demo – Jul 07

(U) Installed PACOM 2nd Server Suite

(U) Installed Parallel Staging Network (PSN) at NORTHCOM, STRATCOM, PACOM and Fort Greeley to enable concurrent development and operations

(U) Established developmental Extremely High Frequency (EHF) SATCOM Teleport and connectivity with Aegis BMD

(U) Completed requirements verification of Spiral 6.2 software and installed on PSN at all C2BMC locations and in the BCN at Shariki, Japan

(U) Successfully participated in 18 BMD System-level events/wargames/exercises

Fielding (Weapons) (U)

(U) Aegis BMD:

- Delivered 8 additional Aegis BMD SM-3 interceptors (short to intermediate-range), expended 3 for a total of 18 interceptors in inventory
- Delivered 5 Aegis BMD-capable engagement destroyers for a total of 6 Aegis Destroyers and 3 Aegis Cruisers

(U) GMD:

- Completed 11 GBI emplacements through LDC-24 at FGA and VAFB
- Fielded EKV 20.7 on operational interceptors
- Implemented initial Simultaneous Test and Operations upgrade at FGA and MDIOC.
- Demonstrated and fielded GMD Block 2006 initial capability upgrades (GFC 6A)

Testing (Weapons) (U)

(U) GMD

- Completed GTD-01, BMDS Distributed Ground Test
- Executed FTX-02 (GBI Engage on SBX simulated engagement)
- Executed FTG-03a (GBI Engage on UEWR ESG)
- Supported completion of GTI-02, BMDS Integrated Ground Test
- Completed Block 2004 final capability testing and assessment

(U) ABL

- Successfully completed First In-Flight Atmospheric Compensation with Tracking Illuminator Laser (TILL) tracking from ABL and a simulated Beacon return
- First open air lase with the TILL, Beacon Illuminator Laser (BILL), and the Surrogate High Energy Laser (SHEL)
- First Active Track with TILL demonstrated
- Completed Low Power Systems Integration-Active (LPSI-A) flight test series demonstrating first atmospheric compensation with a non cooperative target

(U) MKV – The MKV program delivered the Pathfinder Carrier Vehicle Focal Plane Array in March 2007; completed the Carrier vehicle Integrated Divert and Attitude Control System Firing in August 2007; and began building the Pathfinder Carrier Vehicle for Hover Test.

(U) Aegis BMD:

- ICBM Tracking Event (GT-193) - Conducted on 7 February 2007. The primary BMDS test objective was to demonstrate the C2BMC ability to integrate data from a number of different sensors to improve the BMDS' accuracy and responsiveness in detecting, identifying, tracking and targeting ballistic missiles. Aegis BMD test objectives included transmission of accurate and timely track data to GMD to support the generation of a sensor and weapon task plan (WTP).
- Flight Test Experiment-02 (FTX-02) – Conducted 20 March 2007. The primary objectives were to demonstrate the GBI Engage on SBX ESG through a simulated engagement, characterize the performance of the SBX radar for certification against ballistic missile threats and to assess the capability of Aegis BMD to launch a SM-3 missile to intercept a ballistic missile using track data from a remote source via a Tactical Data Link (TADIL).
- FTG-03a – Test objectives included tracking the long range ballistic target and transmission of accurate and timely track data to GMD to support the generation of a sensor and WTP in post mission analysis. The target was successfully tracked by the SBX and an Aegis BMD ship. Post mission analysis revealed sufficient accuracy and timeliness to support the generation of GMD sensor and WTP.
- Stellar Hunters Campaign (FTM-11) – Conducted in December 2006 and April 2007. Campaign consisted of test events that included: detection, tracking, and simulated engagements of a Medium Range Ballistic Missile (MRBM) Target; and live multiple, simultaneous engagements of a Short Range Ballistic Missile (SRBM) and Anti-Ship Cruise Missile surrogate targets. In this flight mission, tracking data from a Royal Netherlands Navy ship was exchanged with an Aegis BMD Destroyer
- Stellar Athena Campaign (FTM-12) – Demonstrated the multi-mission performance of the Aegis BMD 3.6 Weapon System aboard an Aegis Destroyer. Campaign consisted of three events. Event 1 was a successful engagement against a supersonic AAW target with a SM-2 Block IIIA missile, resulting in a direct hit. Second event was a risk reduction demonstration for

a future flight mission that detected and tracked two simultaneously launched SRBMs. Event 3 was the successful BMD flight test, FTM-12. The objective of this test was the lethal intercept of a separating Medium Range Target, where the target warhead or RV separates from its booster rocket. This was the first firing of a SM-3 from an Aegis BMD destroyer and the third occasion that an allied ship has participated in an Aegis BMD test.

- SM-3 Missile Testing- Hot fire test of Throttleable Divert and Attitude Control System (TDACS) was successfully completed on 20 August and the SM-3 Block IA Solid Divert Attitude and Control System (SDACS) were conducted on 29 March. The upgraded SDACS was successfully flight tested in FTM-11 and FTM-12.

Development Progress (U)

(U) Airborne Laser (ABL)

In August 2007, Completed Low Power Systems Integration-Active (LPSI-A) flight test series demonstrating first atmospheric compensation with a non cooperative target. Significant accomplishments include:

- o First ever demonstration of active tracking with the TILL and compensation for atmospheric disturbances between the ABL and an airborne target with the BILL
- o Verification of the aero-optic disturbances at various turret angles was demonstrated multiple times in flight

(U) Theater High Altitude Air Defense (THAAD)

- o Test unit completed a March Order and Emplacement from White Sands Missile Range (WSMR) to the Pacific Missile Range Facility (PMRF) with soldier participation
- o Demonstrated successful intercepts of a unitary SRBM in January and April 2007 (PMRF)
- o Participated in BMDS flight tests by passing LINK-16 target tracks to and from an Aegis ship in June 2007 (PMRF)
- o Demonstrated THAAD interceptor capabilities under stressing low-endo flight conditions in July 2007 (WSMR)
- o Successfully completed multiple Live Fire Test & Evaluation events in gas gun and rocket sled tests.
- o Successfully participated in multiple ground tests and exercises

(U) Kinetic Energy Interceptor (KEI)

- o Successful static motor firing of first and second stages of the kinetic energy booster
- o Completed modal survey of kinetic energy booster
- o Completed separation test for stages 1 and 2
- o Static motor firing of second stage of the kinetic energy booster in Oct 2007

(U) Space Tracking and Surveillance System (STSS)

- o Completed thermal vacuum testing on Space Vehicle 1

- o Completed STSS Demonstration Satellites ground software acceptance testing
- o Successfully integrated Payload 2 on Space Vehicle 2

(U) Multiple Kill Vehicle (MKV)

- o Completed an integrated static rocket firing of the carrier vehicle bi-propellant divert and attitude control system (critical to 2008 hover test)
- o Built models and simulation framework to MKV engagement management algorithms
- o Began development and testing of large format, 2 color focal planes

(U) Near-Field Infrared Experiment (NFIRE)

- o Successful launch of NFIRE satellite in April 2007
- o The NFIRE 2A mission was conducted in August 2007, and yielded significant boost phase data, and lessons learned for MDA space testing. NFIRE 2B will be conducted later in FY08 with goal of greater success tracking a boosting missile through point of closest approach (<10km).

(U) Net Centric Airborne Defense Element (NCADE)

- o Modified AIM-9X seeker successfully tracked a boosting missile target and completed a plume-to-hardbody aimpoint transision

(U) External Sensors – Develop and integrate cueing and tracking algorithm from “best-of-best” techniques as identified in FY07 algorithm soak test.

SECTION II

BMDS BASELINE CAPABILITIES (U)

BLOCK 1.0 (U)
BLOCK 2.0 (U)
BLOCK 3.1/3.2 (U)

2.0 BMDS BASELINE CAPABILITIES (U)

(U) In compliance with the FY05 Defense Authorization language, the Block 1.0, 2.0, and 3.1/3.2 Baseline Capabilities contained in this section are the program baselines for the Agency. These Baseline Capabilities describe the inventory and early capability ESGs that will be made available to the warfighter by the end of each of these baseline blocks.

(U) These Baseline Capabilities highlight: 1) The specific BMDS assets and ESGs that MDA will make available for fielding, development, and integration in a particular Block; 2) The quantities of each Component; 3) Development, Fielding and Integration budgets; and 4) A range of BMDS performance metrics (per threat class) based upon a predictive analysis of the worst-performing available ESG to the best-performing available ESG. Applicable effectiveness metrics include:

- ~~(FOUO)~~ **Probability of Engagement Success (P_{ES})**: The probability that the BMDS will prevent an adversary warhead from carrying out its mission. In general, each threat missile/warhead launch is unique and its P_{ES} is affected by both adversary- and BMDS-related variables, highlighted in Table 2, including, but not limited to:

Table 2 – P_{ES} Variables (U)

| Adversary Variables |
|--------------------------------|
| Threat Missile Characteristics |
| Launch Point/Aim Point |
| Trajectory |
| Raid Timing and Spacing |
| Attack Strategy |
| Countermeasures |

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| BMDS Variables |
|--|
| Defense Deployment |
| Quantities of Defensive Resources |
| System (Kill Chain) Performance |
| Battle Management (Shot Doctrine, Tactics, etc) |
| Reliability/Availability of the Defense Elements |

(U) A major factor in determining the P_{ES} of an operational BMDS is the Probability of Destroying the threat, which is sometimes commonly referred to as the Probability of Kill with Single Shot (P_{SSK}) of the engaging weapon. P_{SSK} represents the lethality of a weapon system – generally referring to a system's armaments (e.g., missiles and ordnance).

- (U) **Launch Area Denied (LAD)**: The geographic area from which an adversary targeting a designated Defended Area cannot launch a ballistic missile without it being engaged by the BMDS.
- ~~(FOUO)~~ **Defended Area (DA)**: The geographic area that the BMDS is capable of defending against adversary ballistic missiles originating from specified launch positions or a designated launch area.

***Note:** The "Block BMDS Performance Goals" column includes references to multiple defended areas and launch area defended regions represented in an "A) x; B) y" format. The A) portion of LAD corresponds to the A) portion of DA; the B) portion of LAD corresponds to the B) portion of DA for that threat class.

- **(U) Threat Countermeasures:** Various threat techniques (i.e., tactical, environmental), devices (i.e. decoys, jammers), and/or combinations (suites) of both that are designed to aid in the defeat/disruption of a defensive weapon system's performance.
- **(U) Environmental Resistance:** The ability of the BMDS to satisfy the TOG Effectiveness metrics in the presence of the designated stressing natural and hostile environments:
 - Includes countermeasure devices and techniques
 - Includes adversary missile attacks on defense assets

(U) The Block 1.0, 2.0 and 3.1 & 3.2 Baseline Capabilities for Budget Year 2009 (Tables 3, 4 and 5) follow.

(b)(1)



(b)(1)

~~SECRET // REF TO USA, AUS AND GDR //~~

SECTION III

APPENDICES (U)

~~SECRET // REF TO USA, AUS AND GDR //~~

Appendix A. BMDS CAPABILITY GOALS (U)

(U) The Block 3.3, 4.0 and 5.0 Capability Goals have been developed to describe Component-level development efforts that serve as the foundation for the U.S. missile defense effort. The primary categories of BMDS Components are Sensors, C2BMC and Weapons Systems and specific parameters comprise the Output section of the tables. Assets listed in the Capability Goals are expected to provide increased capabilities and once they attain sufficient technical maturity will be declared as a new baseline to be reported against.

(b)(1)

(b)(1)

Appendix B. CROSS-WALK BETWEEN PREVIOUS AND CURRENT BLOCK STRUCTURE (U)

(U) Pursuant to Section 234 of the National Defense Authorization Act of 2005 (Public Law 108-375), MDA has established budget, schedule, and performance baselines for each block configuration being fielded. Baselines have been established for Block 2004, Block 2006, and for the first time last year, Block 2008. Modifications to those baselines are annually enumerated in this document. Unfortunately, the new block construct discussed above establishes new baselines that do not readily lend themselves to clear delineation of the modifications being made. However, comparisons can be made between the old and new block constructs and are contained within tables 9, through 13 below.

(U) Table 9 examines the Block 2006 fielding Baseline as modified in the 2007 BMDS Baselines and Goals, dated 2 February 2007 and lays out how these assets are accounted for as Available Assets within the new block construct contained within the 2008 delivery. Notable differences are:

- The Fylingdales UEWR does not contribute to defense the North Korean Threat and therefore has been allocated to Block 3.0 which addresses the threat from the Middle East
- The AN/TPY-2 #3, currently being used as a forward-based radar test asset at VAFB, will be fielded in Block 5.0.
- Completion of commercial power work at AN/TPY-2 #2 forward based radar site in Shariki, Japan was moved to Block 1.0
- SM-3 missiles have been re-allocated to Block 2.0 to provide the capabilities to address the threat to Allied Forces. One key point to note is that although 71 missiles will be delivered, 9 missiles will be used for test purposes, leaving 62 in inventory.
- The remaining items in Block 2006 are assets that are not contained within MDA's budget line and therefore have been removed as part of an MDA block baseline.

(U) Table 10 examines the Block 2008 fielding Baseline as initially baselined in the 2007 BMDS Baselines and Goals, dated 2 February 2007 and lays out how these assets are accounted for as Available Assets within the new block construct contained within the 2008 delivery. Notable differences are:

- AN/TPY-2 #5 radar will be moved to Block 2.0 as THAAD Fire Unit Radar #1. AN/TPY-2 #6 radar will be moved to Block 4.0 to be available for fielding as European forward-based radar.
- The remaining items in Block 2008 are assets that are not contained within MDA's budget line and therefore have been removed as part of an MDA block baseline.
- Completion of commercial power work at AN/TPY-2 #2 forward based radar site in Shariki, Japan was moved to Block 1.0.

++

(U) Table 9 – Block 2006 Crosswalk

| BLOCK 2006 TO BLOCKS 1.0-3.0 CROSSWALK | | | |
|--|---|--|--|
| BLOCK 2006 | BLOCK 1.0 | BLOCK 2.0 | BLOCK 3.0 |
| GBIs 1-24 Cobra Dane SBX Radar UEWR (Beale) UEWR (Fylingdales) AN/TPY-2 #2 (Shariki) AN/TPY-2 (VAFB Asset)** 3 COCOM C2BMC Initial GIFC @ PACOM 14 Aegis BMD DDG 3 Aegis BMD CG SBIRS Inc 1* 21 SM-3 Missiles 826 GEM/GEM Interceptors* 54 AN/MPQ-65 Radars* 12 MPQ-53 Radars* 549 PAC-3 Interceptors* | GBIs 1-24 Cobra Dane SBX Radar UEWR (Beale) AN/TPY-2 #2 C2BMC Development C2BMC Site Activation & Fielding 14 Aegis BMD DDG 3 Aegis BMD CG | C2BMC Development C2BMC Site Activation & Fielding 21 SM-3 Missiles | UEWR (Fylingdales) C2BMC Development C2BMC Site Activation & Fielding |
| * - Funding not provided by MDA, therefore not included as part of Block Baseline | | | |
| ** - Moved to Block 5.0 | | | |

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(U) Table 10 – Block 2008 Crosswalk

| BLOCK 2008 TO BLOCKS 1.0-3.0 CROSSWALK | | | |
|--|---|---|--|
| BLOCK 2008 | BLOCK 1.0 | BLOCK 2.0 | BLOCK 3.0 |
| Block 2006 Inventory + GBIs 25-30 UEWR (Thule) AN/TPY-2 #5 AN/TPY-2 #6** 1 Aegis BMD DDG 1 COCOM C2BMC (EUCOM) 2 Full GIFC @ Pacific THAAD Fire Unit #1 265 GEM/GEM Interceptors* 33 SM-3 Missiles 100 SM-2 Blk 4 Missiles 212 PAC-3 Interceptors* | GBIs 25-30 1 Aegis BMD DDG C2BMC Development C2BMC Site Activation & Fielding | AN/TPY-2 #5 C2BMC Development C2BMC Site Activation & Fielding THAAD Fire Unit #1 33 SM-3 Missiles Near-Term SBT(SM-2s) | UEWR (Thule) C2BMC Development C2BMC Site Activation & Fielding |
| * - Funding not provided by MDA, therefore not included as part of Block Baseline | | | |
| ** - Moved to Block 4.0 | | | |

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(U) Table 11 contains Assets being added to each Block being baselined that are needed to address particular threats but were not part of either Block 2006 or Block 2008. They represent a discrete program of work that contributes to the block capability.

(U) Table 11 – New Block Structure Assets

| Items Not Part of Blocks 2006 or 2008 Added to Blocks 1.0 – 3.0 | | | |
|--|--|---|--|
| BLOCK 2006/2008 | BLOCK 1.0 | BLOCK 2.0 | BLOCK 3.0 |
| | VAFB Missile Field DFW Development GMD SE&I Pgm Mgt GMD T&E Gnd Sys C2BMC Pgm Mgt C2BMC Spirals 6.0/6.2 GMD Elem Tgts BMDS Sys Elem Test Sys Test & Assess | THAAD Fire Unit #2 C2BMC Spiral 6.4 Aegis Elem Tgts Sys Test & Assess 17 SM-3 Missiles SM-3 Missile Devment Aegis Wpn Sys Dev Aegis Sys T&E Aegis SE&I/BMDS Integration THAAD Elem Tgts THAAD Fire Unit 1&2 Development | GBIs 31-44 DFW Development GMD SE&I Pgm Mgt GMD T&E Gnd Sys C2BMC Pgm Mgt C2BMC Spiral 8.0/10.0 GMD Elem Tgts Sys Test & Assess FGA Msl Field & Expansion Near Term Discrimin Improved Discrim & System Track C2BMC Integration |

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(U) Tables 12 and 13 highlight how the GBI Interceptors and SM-3 Missile ESGs contained within Blocks 2006 and 2008 map into Blocks 1.0 -3.0.

(U) Table 12 - GBI ESG Crosswalk

| GBI ESG Decompositions | | |
|--|--|--|
| BLOCK 2006/2008 Construct ESG | New Block Construct ESGs | New Block Mapping |
| GBI Launch on AN/SPY-1 Mod 2 (SBIRS, AN/TPY-2 (FBM), AN/SPY-1 Mod) (Block 2006) | GBI Launch on AN/SPY-1 Mod 2a (AN/TPY-2 (FBM)) | Block 3 (Unbaselined - 3.3) |
| | GBI Launch on AN/SPY-1 Mod 2b (AN/SPY-1 Mod) | Block 3 (Unbaselined - 3.3) |
| | GBI Launch on AN/SPY-1 Mod 2c (SBIRS) | Capability Development (No clear Block association) |
| GBI Engage on AN/SPY-1 Mod 1 (SBIRS, AN/TPY-2 (FBM), AN/SPY-1 Mod) (Block 2006) | GBI Engage on AN/SPY-1 Mod 1a (AN/TPY-2 (FBM)) | Block 3 (Unbaselined - 3.3) |
| | GBI Engage on AN/SPY-1 Mod 1b (AN/SPY-1 Mod) | Block 3 (Unbaselined - 3.3) |
| | GBI Engage on AN/SPY-1 Mod 1c (SBIRS) | Capability Development (No clear Block association) |
| GBI Launch on AN/TPY-2 (FBM) Mod 1 (Hercules 1) (Block 2006) | GBI Launch on AN/TPY-2 (FBM) Mod 1a (Hercules 1) | Block 3 (Baselined - 3.1) |
| | GBI Launch on AN/TPY-2 (FBM) Mod b (SBIRS) | Capability Development (No clear Block association) |
| GBI Engage on AN/TPY-2 (FBM) Mod 1 (Hercules 1) (Block 2006) | GBI Engage on AN/TPY-2 (FBM) Mod 1a (Hercules 1) | Block 3 (Baselined - 3.1) |
| | GBI Engage on AN/TPY-2 (FBM) Mod b (SBIRS) | Capability Development (No clear Block association) |

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(U) Table 13 - SM-3 ESG Crosswalk

| SM-3 ESG Decompositions | | |
|--|--|--|
| BLOCK 2006/2008 Construct ESG | New Block Construct ESGs | New Block Mapping |
| SM-3 Engage on AN/SPY-1 Mod 1 (AN/SPY-1 Mod, SBIRS, AN/TPY-2 (FBM)) (Block 2006) | SM-3 Engage on AN/SPY-1 Mod 1a (AN/TPY-2 (FBM)) | Block 5 |
| | SM-3 Engage on AN/SPY-1 Mod 1b (AN/SPY-1 Mod) | Block 5 |
| | SM-3 Engage on AN/SPY-1 Mod 1c (SBIRS) | Capability Development (No clear Block association) |
| SM-3 Launch on Remote (AN/SPY-1) Mod 1 (AN/SPY-1 Mod, SBIRS, AN/TPY-2 (FBM)) (Block 2006) | SM-3 Launch on Remote (AN/SPY-1) Mod 1a (AN/TPY-2 (FBM)) | Block 5 |
| | SM-3 Launch on Remote (AN/SPY-1) Mod 1b (AN/SPY-1 Mod) | Block 5 |
| | SM-3 Launch on Remote (AN/SPY-1) Mod 1c (SBIRS) | Capability Development (No clear Block association) |

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Appendix C. ADVERSARY CAPABILITIES (U)

(U) Section 223a(c) of Title 10, United States Code (as added by section 223(a) of the *National Defense Authorization Act for Fiscal Year 2004*) requires that MDA include, with its performance criteria, a description of the intended effectiveness of each planned development phase of the BMDS against adversary capabilities. This appendix expands the description of a threat missile listed in the Baseline Capabilities and Capability Goals (e.g. Long-Range Ballistic Missiles (LRBM)) to include: the postulated ranges (in kilometers) and missile type (e.g. number of stages, propellant type, etc.). The resultant parameters in Table 14 capture the set of adversary systems against which BMDS block performance capabilities have been assessed.

~~(FOUO)~~ The characteristics found in the *Adversary Capability Parameters* section of the following chart represent MDA critical parameters of LRBMs, Intermediate-Range Ballistic Missiles (IRBM), Medium-Range Ballistic Missiles (MRBM), and Short-Range Ballistic Missiles (SRBM). The multicolor bands (MDA Adversary Capability Document (ACD) parameters) represent the parameter space boundaries for the specific category of ballistic missile characteristic listed. The *physical bounds* (blue) represent the accepted theoretical bounds of present scientific principles—the outer limits of what can operate as a ballistic missile. The *engineering bounds* (orange) represent the technology limits for the current known systems—what currently has technical feasibility and military utility in the world arsenal. The *intelligence bounds* (red) represent the existing limits, based on intelligence estimates. The white bars on each parameter indicate the assessed threat space that is relevant for the currently defined BMDS blocks. These represent the values that may be assessed to determine performance capability of the available fielding portion of the blocks. A definition of the Adversary Data Package boundaries is presented in Figure 2:

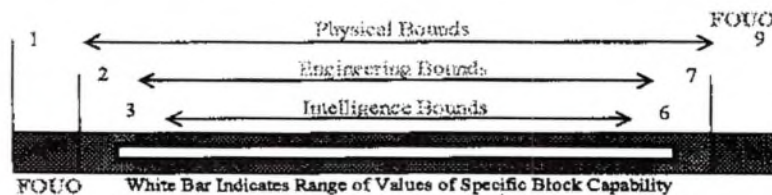


Figure 2: Adversary Data Package Boundary Description (U)

(U) With respect to BMDS capability, representations are not design-to threats or requirements. While the BMDS will be able to address specific threats, the System, as a whole, remains a capabilities-based development program. The information presented on page C-2 is a compilation of feasible threats (within the adversary space) that the BMDS will be able to address at the completion of the baselined blocks. The compilation will be updated annually to incorporate changes as our understanding of the threat expands over time.

Appendix D. BUDGET BREAKDOWN (U)

(U) This appendix provides a summary of Blocks 1.0 through 5.0 and Capability Development funding in the President's Fiscal Year 2009 Budget Submission. Given this document reports against a completely new set of baselines, no comparison to the funding in the block funding to the FY 2008 budget is made. Budget data for fielding, development and integration is provided in the following manner:

- Table 15 provides budget figures for Block 1.0 Baseline Capability
- Table 16 provides budget figures for Block 2.0 Baseline Capability
- Table 17 provides budget figures for Block 3.1 & 3.2 Baseline Capability.
- Table 18 provides budget figures for Block 3.3 Capability Goals
- Table 19 provides budget figures for Block 4.0 Capability Goals
- Table 20 provides budget figures for Block 5.0 Capability Goals
- Table 21 provides budget figures for the Capability Development activities

(U) Several caveats and assumptions apply to the budget breakdown:

- We only include funding ascribed to Capability Development and Blocks 1.0, through 5.0, therefore the total funding in these tables does not add up to the total obligation authority (TOA) of the Agency.
- Block funding – as we have described in the past – is not limited to a two-year “window” – Block development begins several years prior to the block and continues until all available assets are fielded or ESGs have been validated, which ever occurs last.

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Table 15: BMDS Block 1.0 Baseline Capability Budget Breakdown (U)

**BMDS Block 2.0 Baseline Capability:
Defend Allies & Deployed Forces from Short- to Medium-Range
Threats in One Region/Theater (U)
President's Budget FY09 \$M (U)**

| EL | ASSETS | FY08 | FY09 | FY10 | FY11 | FY12 | FY13 | Total FY 08-13 |
|-------------|---|---------------|---------------|--------------|-------------|-------------|-------------|-------------------|
| Fielding | Total Fielding | 415.3 | 384.0 | 251.5 | 84.9 | 7.8 | 0.0 | 1143.3 |
| | AB Aegis BMD Weapon System Deployment | 23.2 | 6.0 | 10.4 | 2.1 | 0.0 | 0.0 | 41.6 |
| | AB Aegis SM-3s (1-45) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | AB Aegis SM-3s (46-71) | 92.4 | 71.7 | 34.2 | 0.0 | 0.0 | 0.0 | 198.3 |
| | BC C2BMC Site Activation/Fielding | 9.5 | 10.9 | 0.0 | 0.0 | 0.0 | 0.0 | 20.4 |
| | SN AN/TPY-2 #5 (FUR #1) | 9.4 | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 12.3 |
| | SN AN/TPY-2 #7 (FUR #2) | 19.5 | 98.9 | 3.0 | 0.0 | 0.0 | 0.0 | 121.3 |
| | TH THAAD Fire Unit Radar #2 (AN/TPY-2 #7) | 56.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 56.0 |
| | TH THAAD Fire Unit s #1 & #2 | 205.5 | 193.6 | 203.8 | 82.8 | 7.8 | 0.0 | 693.4 |
| Development | Development | 957.6 | 871.9 | 240.5 | 14.1 | 12.9 | 12.9 | 2109.9 |
| | TH THAAD Fire Unit #1 and #2 Development | 560.6 | 605.5 | 103.1 | 0.0 | 0.0 | 0.0 | 1269.1 |
| | TC Element Targets (THAAD) | 43.9 | 44.1 | 0.0 | 0.0 | 0.0 | 0.0 | 88.0 |
| | AB SM-3 Missile Development | 3.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.5 |
| | AB Weapon System Development (BMD 3.6.1) | 13.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 13.1 |
| | AB Aegis System Test & Evaluation | 75.5 | 68.9 | 51.0 | 0.0 | 0.0 | 0.0 | 195.5 |
| | AB Aegis SE&I/BMDS Integration/BM-3 | 21.7 | 16.4 | 16.4 | 12.9 | 12.9 | 12.9 | 93.2 |
| | AB Near Term Sea Based Terminal | 59.1 | 19.9 | 3.1 | 1.2 | 0.0 | 0.0 | 83.2 |
| | TC Element Targets (Sea-Based Terminal) | 12.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 12.3 |
| | BC Spiral 6.4/C2BM/Networks/SBIRS | 101.6 | 78.0 | 27.6 | 0.0 | 0.0 | 0.0 | 207.2 |
| | TC Element Targets (Aegis BMD) | 66.3 | 39.2 | 39.3 | 0.0 | 0.0 | 0.0 | 144.8 |
| | Integration | 35.2 | 28.3 | 4.0 | 0.0 | 0.0 | 0.0 | 67.5 |
| | DT System Test & Assessment | 35.2 | 28.3 | 4.0 | 0.0 | 0.0 | 0.0 | 67.5 |
| | | | | | | | | |
| | | | | | | | | |
| | Total Development | 992.9 | 900.2 | 244.5 | 14.1 | 12.9 | 12.9 | 2177.5 |
| | Total Block 2.0 | 1408.2 | 1284.2 | 495.9 | 99.0 | 20.7 | 12.9 | 3320.8 |

Table 16: BMDS Block 2.0 Baseline Capability Budget Breakdowns (U)

SECURITY INFORMATION - CONFIDENTIAL AND UNCLASSIFIED

SECURITY INFORMATION - CONFIDENTIAL AND UNCLASSIFIED

BMDS Block 3.1 & 3.2 Baseline Capability: Expand Defense of the US to Include Limited Iranian Long-Range Threats (U)

President's Budget FY09 \$M (U)

| | EI | Assets | FY08 | FY09 | FY10 | FY11 | FY12 | FY13 | Total FY-8-13 |
|--------------------|------|---------------------------------------|-------|--------|--------|-------|-------|-------|------------------|
| | | | | | | | | | |
| Fielding | | Total Fielding | 487.6 | 343.8 | 219.4 | 40.2 | 24.1 | 0.0 | 1115.2 |
| | SN | Fylingdales | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | GM | GBIs 30-44 & Emplacement | 223.0 | 123.0 | 25.0 | 0.0 | 0.0 | 0.0 | 371.0 |
| | GM | FGA Missile Field & Expansion | 171.8 | 122.0 | 154.9 | 6.8 | 0.0 | 0.0 | 455.5 |
| | BC | C2BMC Site Activation/Fielding | 0.0 | 0.0 | 25.9 | 31.8 | 20.2 | 0.0 | 78.0 |
| | BC | Near-Term Discrimination | 3.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.3 |
| | GM | Near-Term Discrimination | 6.1 | 19.9 | 10.0 | 0.0 | 0.0 | 0.0 | 36.0 |
| | SN | Near-Term Discrimination | 6.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 6.7 |
| | SN | Thule Radar Upgrade | 70.1 | 72.3 | 3.7 | 1.6 | 3.9 | 0.0 | 151.5 |
| | DFW | Thule Radar Site Construction | 3.3 | 4.6 | 0.0 | 0.0 | 0.0 | 0.0 | 7.9 |
| | BC | Thule C2BMC Fielding | 3.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.3 |
| | BC | Thule Radar Comms | 0.0 | 2.1 | 0.0 | 0.0 | 0.0 | 0.0 | 2.1 |
| Development | | Development | 101.6 | 1256.9 | 1082.8 | 192.1 | 150.7 | 102.3 | 2886.4 |
| | SN | Fylingdales | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | TC | Element Targets (GMD) | 0.0 | 104.0 | 108.1 | 0.0 | 0.0 | 0.0 | 212.0 |
| | BC | C2BMC - C2/BN/Networks/SBIRS | 44.9 | 45.6 | 53.4 | 43.3 | 6.1 | 0.0 | 193.4 |
| | BC | C2BMC Program Management | 0.0 | 53.0 | 53.8 | 39.7 | 40.6 | 0.0 | 187.0 |
| | BC | Spiral 8.0/10.0 | 4.1 | 42.7 | 64.1 | 94.5 | 93.5 | 92.2 | 391.0 |
| | DFW | DFW Development | 0.0 | 18.9 | 18.9 | 0.0 | 0.0 | 0.0 | 37.7 |
| | GM | GMD SE&I Program Management | 0.0 | 437.3 | 345.1 | 0.0 | 0.0 | 0.0 | 782.4 |
| | GM | GMD 2 Stage OBV | 42.0 | 70.3 | 67.7 | 14.6 | 10.5 | 10.1 | 215.3 |
| | Core | Infrastructure Support | 0.0 | 15.9 | 0.0 | 0.0 | 0.0 | 0.0 | 15.9 |
| | DFW | Joint Warfighter (Midcourse PE) | 10.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 10.5 |
| | GM | GMD Test & Evaluation, Ground Systems | 0.0 | 469.3 | 371.8 | 0.0 | 0.0 | 0.0 | 841.1 |
| | | Integration | 38.2 | 74.2 | 89.0 | 68.9 | 47.0 | 49.1 | 367.3 |
| | BC | C2BMC Integration | 24.0 | 22.8 | 23.3 | 23.8 | 0.0 | 0.0 | 94.0 |
| | GM | BMDS System Level Test | 0.0 | 12.6 | 12.6 | 0.0 | 0.0 | 0.0 | 25.2 |
| | DT | System Test & Assessment | 14.2 | 38.8 | 53.9 | 45.0 | 47.0 | 49.1 | 248.0 |
| | | Total Development | 139.8 | 1331.1 | 1172.7 | 261.0 | 197.7 | 151.4 | 3253.7 |
| | | Total Block 3.1 & 3.2 | 627.4 | 1674.9 | 1392.1 | 301.2 | 221.8 | 151.4 | 4368.8 |

Table 17: BMDS Block 3.1/3.2 Baseline Capability Budget Breakdowns (U)

SECRET//REL TO US/AF/AC/AS AND OPNAV

SECRET//REL TO US/AF/AC/AS AND OPNAV

**BMDS Block 3.3 Capability Goal:
Expand Defense of the US to Include Limited Iranian Long-Range
Threats (U)**

President's Budget FY09 \$M (U)

| | EL | Assets | FY08 | FY09 | FY10 | FY11 | FY12 | FY13 | Total FY-8-13 |
|--------------------|----|--|------|------|------|------|------|------|------------------|
| | | | 22.6 | 23.5 | 24.2 | 23.3 | 22.3 | 21.4 | 137.4 |
| Fielding | | Total Fielding | | | | | | | |
| | BC | Improved Discrimination & System Track | 5.5 | 6.3 | 6.0 | 6.2 | 6.4 | 6.6 | 36.9 |
| | GM | Improved Discrimination & System Track | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | SN | Improved Discrimination & System Track | 17.1 | 17.3 | 18.2 | 17.1 | 15.9 | 14.9 | 100.4 |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| Development | | Development | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | Integration | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | | | | | | | | |
| | | | | | | | | | |
| | | Total Development | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | Total Block 3.3 | 22.6 | 23.5 | 24.2 | 23.3 | 22.3 | 21.4 | 137.4 |

Table 18: BMDS Block 3.3 Capability Goals Budget Breakdowns (U)

BMDS Block 4.0 Capability Goals: **Defend Allies & Deployed Forces in Europe from Limited Iranian** **Long-Range Threats – Expand Protection of US Homeland(U)**

President's Budget FY09 \$M (U)

| | FI | Assets | FY08 | FY09 | FY10 | FY11 | FY12 | FY13 | Total FY 08-13 |
|--------------------|-----|--|-------|-------|--------|--------|-------|-------|-------------------|
| | | | | | | | | | |
| Fielding | | RDT&E Fielding | 175.7 | 382.6 | 476.3 | 630.5 | 526.7 | 68.1 | 2059.9 |
| | GM | European Site (GM) | 77.1 | 238.2 | 229.8 | 297.6 | 130.9 | 35.2 | 1008.9 |
| | GM | European Site GBIs 45-54 | 0.0 | 19.2 | 40.8 | 199.7 | 153.3 | 23.3 | 436.3 |
| | DOS | European Site Security | 0.0 | 0.0 | 24.6 | 35.5 | 36.7 | 0.0 | 98.8 |
| | BC | European Site Comms/GEM/US Comms | 30.6 | 70.7 | 65.7 | 28.5 | 5.4 | 6.3 | 207.2 |
| | SN | Southern Radar Site (AN/TPY-2 #6) – (Sensors/PE) | 46.8 | 26.3 | 0.0 | 0.0 | 0.0 | 0.0 | 73.1 |
| | SN | Southern Radar Site (AN/TPY-2 #6) – Deploy/Site Activation | 0.0 | 11.0 | 9.1 | 0.0 | 0.0 | 0.0 | 20.1 |
| | BC | Southern Radar Site (AN/TPY-2 #6) - Communications | 21.1 | 17.2 | 25.1 | 9.0 | 0.4 | 3.3 | 76.2 |
| | DFW | Southern Radar Site (AN/TPY-2 #6) – Site Construction | 0.0 | 0.0 | 81.1 | 60.2 | 0.0 | 0.0 | 141.4 |
| | | MILCON | 0.0 | 241.2 | 596.3 | 0.0 | 0.0 | 0.0 | 837.5 |
| | GM | EIS Major MILCON | 0.0 | 132.6 | 528.8 | 0.0 | 0.0 | 0.0 | 661.4 |
| | SN | EMR Major MILCON | 0.0 | 108.6 | 67.5 | 0.0 | 0.0 | 0.0 | 176.1 |
| | | Total Fielding | 175.7 | 623.7 | 1072.6 | 630.5 | 526.7 | 68.1 | 2897.4 |
| Development | | Development | 67.7 | 96.0 | 130.9 | 627.1 | 306.7 | 661.5 | 1884.9 |
| | GM | GMD SE&I, Program Management | 0.0 | 0.0 | 0.0 | 235.0 | 79.2 | 264.7 | 578.9 |
| | GM | GMD Test & Evaluation, Ground Systems | 0.0 | 0.0 | 0.0 | 164.0 | 68.9 | 229.7 | 462.6 |
| | DFW | DFW Development | 0.0 | 0.0 | 0.0 | 18.9 | 18.9 | 18.9 | 56.6 |
| | TC | Element Targets (GMD) | 0.0 | 0.0 | 0.0 | 110.9 | 110.9 | 110.9 | 332.6 |
| | SN | European Midcourse Radar (EMR) | 14.0 | 58.1 | 42.5 | 16.0 | 0.0 | 0.0 | 130.6 |
| | BC | European Midcourse Radar (EMR) – BC Fielding | 14.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 14.3 |
| | BC | European Midcourse Radar (EMR) - Communications | 0.0 | 22.1 | 56.1 | 26.3 | 0.8 | 4.7 | 110.0 |
| | DFW | European Midcourse Radar (EMR) – Site Construction | 14.5 | 15.8 | 25.7 | 26.3 | 0.0 | 0.0 | 82.4 |
| | SN | Program Management | 24.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 24.9 |
| | DT | BMDS System Test – European Site | 0.0 | 0.0 | 6.5 | 24.9 | 28.1 | 32.7 | 92.2 |
| | | Integration | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | GM | BMDS System Level Test | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | Total Development | 67.7 | 96.0 | 130.9 | 627.1 | 306.7 | 661.5 | 1884.9 |
| | | Total Block 4.0 | 243.4 | 719.8 | 1203.5 | 1257.6 | 833.4 | 729.6 | 4782.3 |

Table 19: BMDS Block 4.0 Capability Goals Budget Breakdowns (U)

BMDS Block 5.0 Capability Goals:
Expand Defense of Allies & Deployed Forces from Short-to
Intermediate-Range Threats in Two Regions/Theaters (U)
President's Budget FY09 \$M (U)

| EL | Available Assets | FY08 | FY09 | FY10 | FY11 | FY12 | FY13 | Total FY-08-13 |
|--------------------|---|-------|-------|--------|--------|--------|-------|-------------------|
| Fielding | Total Fielding | 71.1 | 336.3 | 837.6 | 834.4 | 696.1 | 452.7 | 3228.2 |
| | AB Aegis SM-3s (72-94) | 20.0 | 57.1 | 86.7 | 23.8 | 0.0 | 0.0 | 187.6 |
| | AB Additional Aegis SM-3s (96-147) | 0.0 | 52.1 | 145.6 | 156.8 | 88.8 | 18.4 | 461.7 |
| | AB Aegis BMD Weapon System Deployment | 0.0 | 61.7 | 74.3 | 78.2 | 121.0 | 117.2 | 452.4 |
| | AB Other Deployment Costs | 5.0 | 21.3 | 0.0 | 0.0 | 0.0 | 0.0 | 26.3 |
| | BC C2BMC Site Activation/Fielding | 0.0 | 0.0 | 0.0 | 0.0 | 4.2 | 24.8 | 29.0 |
| | BC AN/TPY-2 - C2BMC Fielding | 0.0 | 28.7 | 32.0 | 11.4 | 7.1 | 0.0 | 79.2 |
| | SN AN/TPY-2 #3 - Deployment/Site Activation | 12.8 | 9.8 | 0.0 | 0.0 | 0.0 | 0.0 | 22.6 |
| | BC AN/TPY-2 #3 - C2BMC Fielding | 30.3 | 32.4 | 3.0 | 1.6 | 1.4 | 4.6 | 73.3 |
| | DFW AN/TPY-2 #3 - Site Construction | 0.0 | 10.6 | 8.2 | 0.0 | 0.0 | 0.0 | 18.8 |
| | SN AN/TPY-2 - Radar | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.3 |
| | SN AN/TPY-2 - Deployment/Site Activation | 1.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.8 |
| | SN AN/TPY-2 #8 & #9 (Fire Unit 3 & 4 Radar) | 0.0 | 0.0 | 122.8 | 125.7 | 123.4 | 54.2 | 426.0 |
| | SN Block 5 Fielding | 0.0 | 62.5 | 60.9 | 54.7 | 55.3 | 56.9 | 290.3 |
| | TH THAAD Fire Units #3 & #4 | 0.0 | 0.0 | 304.2 | 382.2 | 294.8 | 176.7 | 1157.9 |
| | MILCON | 0.0 | 29.6 | 0.0 | 0.0 | 0.0 | 0.0 | 29.6 |
| | SN AN/TPY-2 #3 - MILCON | 0.0 | 29.6 | 0.0 | 0.0 | 0.0 | 0.0 | 29.6 |
| | Total Fielding | 71.1 | 369.9 | 837.6 | 834.4 | 696.1 | 452.7 | 3257.8 |
| Development | Development | 573.6 | 451.9 | 393.9 | 434.3 | 398.7 | 471.6 | 2723.4 |
| | AB SM-3 Missile Development | 192.5 | 110.7 | 53.5 | 51.1 | 52.6 | 55.6 | 516.0 |
| | AB Weapon System Development (BMD 4.0, 4.0.1) | 211.9 | 186.1 | 121.3 | 27.4 | 19.3 | 11.3 | 577.3 |
| | AB Weapon System Development (BMD 5.0) | 71.6 | 46.9 | 48.0 | 45.7 | 1.2 | 0.0 | 213.2 |
| | AB Aegis System Test & Evaluation | 0.0 | 8.9 | 0.0 | 51.7 | 51.9 | 70.9 | 183.4 |
| | AB Aegis Program Management | 27.0 | 22.4 | 121.8 | 118.9 | 121.0 | 125.9 | 683.9 |
| | AB Aegis SE&I/BMDS Integration/BM-3 | 0.0 | 0.0 | 0.0 | 3.5 | 3.5 | 3.5 | 10.4 |
| | BC C2BMC Development | 0.0 | 0.0 | 0.0 | 0.0 | 29.6 | 36.7 | 66.4 |
| | BC C2BMC Program Management | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 41.5 | 41.5 |
| | TH THAAD Development | 0.0 | 0.0 | 49.2 | 96.9 | 80.6 | 87.1 | 313.8 |
| | TC Element Targets (Aegis BMD) | 0.0 | 0.0 | 0.0 | 39.1 | 39.1 | 39.1 | 117.4 |
| | Integration | 9.6 | 17.7 | 31.5 | 41.2 | 68.1 | 64.0 | 232.1 |
| | BC C2BMC Integration | 0.0 | 0.0 | 0.0 | 0.0 | 22.8 | 23.1 | 45.9 |
| | DT System Test & Assessment | 9.6 | 17.7 | 31.5 | 41.2 | 45.3 | 40.9 | 186.2 |
| | Total Development | 582.6 | 469.6 | 425.4 | 475.5 | 466.9 | 535.6 | 2955.5 |
| | Total Block 5.0 | 653.7 | 835.6 | 1263.0 | 1309.9 | 1162.9 | 988.3 | 6213.3 |

Table 20: BMDS Block 5.0 Capability Goals Budget Breakdowns (U)

BMDS Capability Development (U)

President's Budget FY09 SM (U)

| Capability Development | FY08 | FY09 | FY10 | FY11 | FY12 | FY13 | FY-8-13 |
|--|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| Airborne Laser | 478 | 409 | 409 | 634 | 777 | 962 | 3669 |
| Kinetic Energy Interceptor | 327 | 376 | 483 | 689 | 792 | 537 | 3203 |
| Space Tracking and Surveillance System | 219 | 235 | 254 | 547 | 714 | 910 | 2880 |
| Space Test Bed | 0 | 10 | 10 | 25 | 100 | 123 | 268 |
| Space Programs | 16 | 19 | 30 | 30 | 30 | 30 | 154 |
| Multiple Kill Vehicles | 228 | 344 | 471 | 631 | 688 | 853 | 3216 |
| Aegis | 102 | 219 | 340 | 404 | 494 | 586 | 2145 |
| Technology | 103 | 113 | 109 | 114 | 121 | 124 | 684 |
| Sensors | 117 | 258 | 221 | 300 | 428 | 254 | 1631 |
| Test | 5 | 16 | 42 | 40 | 45 | 47 | 195 |
| Hercules | 50 | 54 | 53 | 55 | 50 | 51 | 314 |
| Arrow | 118 | 74 | 78 | 79 | 81 | 83 | 513 |
| David's Sling | 37 | 45 | 0 | 0 | 0 | 0 | 81 |
| PAC-3 | 1 | 11 | 0 | 0 | 0 | 0 | 11 |
| Special Programs | 197 | 288 | 304 | 538 | 818 | 786 | 2932 |
| Regarding Trench | 2 | 3 | 5 | 5 | 9 | 9 | 33 |
| Total Capability Development | 2054 | 2474 | 2810 | 4091 | 5147 | 5354 | 21930 |

Table 21: BMDS Capability Development Budget Breakdowns (U)

SECRET//REL TO USA, AUS AND GDN//

SECRET//REL TO USA, AUS AND GDN//

Appendix E. ACRONYMS (U)

A

| | |
|---------------|--|
| (U) ABL | Airborne Laser |
| (U) ACD | Adversary Capabilities Document |
| (U) AFB | Air Force Base |
| (U) AN/MPQ-53 | PATRIOT System Phased Array Radar |
| (U) AN/MPQ-65 | PATRIOT System Phased Array Radar |
| (U) AN/SPY-1 | Aegis Organic Phased Array Radar |
| (U) AN/TPY-2 | Forward-based X-Band Radar-Transportable (FBX-T) |
| (U) AOR | Area of Responsibility |

B

| | |
|----------|----------------------------------|
| (U) BM | Battle Management |
| (U) BMD | Ballistic Missile Defense |
| (U) BMDS | Ballistic Missile Defense System |
| (U) BSP | BMD Signal Processor |
| (U) BV+ | Boost Vehicle Plus |

C

| | |
|-------------|---|
| (U) C2BMC | Command, Control Battle Management & Communications |
| (U) CD | Capability Development |
| (U) CENTCOM | Central Command |
| (U) CG | Guided Missile Cruiser (U.S. Navy) |
| (U) COCOM | Combatant Commander |
| (U) COMSEC | Communication Security |
| (U) CONOPS | Concept of Operations |
| (U) CONUS | Continental United States |

D

| | |
|----------|--------------------------------------|
| (U) DA | Defended Area |
| (U) DAL | Defended Asset List |
| (U) DDG | Guided Missile Destroyer (U.S. Navy) |
| (U) DECC | Defense Enterprise Computing Center |
| (U) DoD | Department of Defense |
| (U) DSP | Defense Support Program |

E

| | |
|-----------|------------------------------|
| (U) ECS | Environmental Control System |
| (U) EKV | Exoatmospheric Kill Vehicle |
| (U) ESG | Engagement Sequence Group |
| (U) EUCOM | European Command |

F

| | |
|----------|-----------------------|
| (U) FC | Fielded Configuration |
| (U) FOUO | For Official Use Only |

G

| | |
|----------|--------------------------------|
| (U) GBI | Ground-Based Interceptor |
| (U) GIFC | Global Integrated Fire Control |
| (U) GEM | Guided Enhanced Missile |

| | |
|----------------------|---|
| (U) GEM+ | Guided Enhanced Missile Plus |
| (U) GFC | GMD Fire Control |
| (U) GFC/C | GMD Fire Control/Communications |
| (U) GMD | Ground-based Midcourse Defense |
| H | |
| (U) HEL | High Energy Laser |
| (U) HEO | Highly Elliptical Orbit |
| (U) H/W | Hardware |
| (U) HWIL | Hardware-in-the-Loop |
| I | |
| (U) IR | Infrared |
| (U) IRBM | Intermediate-Range Ballistic Missile |
| J | |
| K | |
| (U) KEI | Kinetic Energy Interceptor |
| (U) KV | Kill Vehicle |
| L | |
| (U) LAD | Launch Area Denied |
| (U) LDO | Limited Defensive Operations |
| (U) LRBM | Long-Range Ballistic Missile |
| (U) LREP | Lightweight Replica |
| (U) LRS&T | Long-Range Surveillance and Track |
| M | |
| (U) MDA | Missile Defense Agency |
| (U) MDIOC | Missile Defense Integration and Operations Center |
| (U) Mod | Modification (ESG-related) |
| (U) MRBM | Medium-Range Ballistic Missile |
| O | |
| (U) O&S | Operations & Support |
| (U) OBV | Orbital Boost Vehicle |
| (U) OSD | Office of the Secretary of Defense |
| P | |
| (U) PAC-3 | PATRIOT Advanced Capability-3 |
| (U) PACOM | Pacific Command |
| (U) PATRIOT | Phased Array Tracking Radar Intercept on Target |
| (U) P _{ES} | Probability of Engagement Success |
| (U) P _{SSK} | Probability of Single Shot Kill |
| R | |
| (U) RAM | Radar Absorbent Material |
| (U) RF | Radio Frequency |
| (U) RSC | Raid Size Capacity |
| (U) RV | Reentry Vehicle |
| S | |
| (U) S&T | Surveillance and Track |
| (U) SA | Situational Awareness |
| (U) SATCOM | Satellite Communications |
| (U) SBIRS | Space-Based Infrared System |

~~SECRET//REL TO USA, AFG and OBR//~~

| | |
|--------------|--|
| (U) SBX | Sea-Based X-Band Radar |
| (U) SECDEF | Secretary of Defense |
| (U) SM-3 | Standard Missile-3 |
| (U) SOG | Statement of Goals |
| (U) SRBM | Short-Range Ballistic Missile |
| (U) STRATCOM | Strategic Command |
| (U) STSS | Space Tracking and Surveillance System |
| (U) S/W | Software |
| T | |
| (U) TBD | To Be Determined |
| (U) THAAD | Terminal High Altitude Area Defense |
| (U) TOG | Technical Objectives and Goals |
| U | |
| (U) UEWR | Upgraded Early Warning Radar |
| W | |
| (U) WH | White House |

~~SECRET//REL TO USA, AFG and OBR//~~

Appendix F. GLOSSARY (U)

Active Ranging (U)

(U) The process of employing radiated energy to establish target distance. For ABL, Active Ranging involves using a laser to determine the distance.

Adjunct Sensor (U)

(U) A sensor whose primary mission is to compliment/enhance the coverage of existing BMDS forward-based sensors against ballistic missile threats. This program, currently in the requirements definition phase with procurement scheduled to begin in FY2010, implements a layered sensor approach to increase the overall robustness of the BMDS sensor network.

~~Anti-Simulation~~ (U)

(FOUO) Countermeasure technique that alters a threat RV to appear as a non-threat object.

Battle Management (U)

(U) Strategies and the collection of tasks to be performed to successfully implement chosen strategies. Given a set of strategies, resources, and hostile-asset deployment, battle management addresses the problem of choosing a specific strategy or set of strategies and performing the associated tasks that would result in the most desired outcome.

Block (U)

(U) Fielded capabilities that address particular threats and represent a discrete program of work. When a firm commitment can be made to the Congress, blocks will have schedule, budget, and performance baselines

Characterization (U)

(U) The process of describing objects in terms of attributes (i.e., size, shape, etc.) and/or selected features (i.e., dynamics, apparent temperature, etc.). Characterization relies on test data supplemented by analysis to establish confidence in estimates across the threat space.

Command and Control (C2) (U)

(U) The exercise of authority and direction by a properly designated commander over assigned forces in the accomplishment of the mission. Command and control functions are performed through an arrangement of personnel, equipment, communications, facilities, and procedures employed by a commander in planning, directing, coordinating, and controlling forces and operations in the accomplishment of a mission.

Communication Gateways (U)

(U) A node where multiple and disparate communication networks merge and information is processed and distributed in the proper format to the appropriate recipients.

Component (U)

(U) A subsystem of a subsystem, which may consist of sensor(s), weapon(s), and battle management, command and control.

Countermeasures (U)

(U) Actions (tactical or technical) taken to alter the characteristics of a ballistic missile in order to hinder or prevent defenses from identifying or hitting the incoming missiles.

Decoy (U)

~~(FOUO)~~ Non-lethal object having observable characteristics of a reentry vehicle, but substantially lighter and possibly smaller than the reentry vehicles they accompany.

Defended Asset List (U)

(U) A ranked listing that contains the facilities, forces, and national political assets requiring protection from a ballistic missile attack.

Effectiveness (U)

(U) The extent to which the goals of a system are attained, or the degree to which a system can be elected to achieve a set of specific mission requirements.

Element (U)

(U) A complete, integrated and operationally-capable set of subsystems.

Evolutionary Acquisition (U)

(U) An acquisition strategy that defines, develops, produces or acquires, and fields operationally-capable hardware or software increments. At each stage, decisions are made based on the results of demonstrating technologies in relevant environments, demonstrating manufacturing or software deployment capabilities, and time-phased requirements. These capabilities can be provided to the user in a shorter timeframe, followed by subsequent increments of capability that accommodate improved technology, allowing for full and adaptable systems over time. Each increment meets a militarily useful capability

Midcourse Simulation Decoys (U)

~~(FOUO)~~ Objects deployed by a threat reentry vehicle during the midcourse stage of flight that displays measurable characteristics similar to those of the threat reentry vehicle.

Network (U)

(U) The C2BMC Communications Network allows all BMDS Element Command & Control/Battle Managers to exchange data and permits C2 orders to be transmitted. These networks will seamlessly connect BMDS assets and link them with other applicable DoD and non-DoD networks and assets, as required.

Offense-Defense Integration (U)

(U) Coordination and integration of missile defense with attack operations. This includes the means to nominate targets, enhance predictive and developed intelligence, and improve coordination with integrated strategic defense.

Passive Surveillance (U)

(U) Systematic observation of aerospace, surface, areas, places, persons or things by visual, aural, electronic, photographic or other means while emitting no detectable energy.

Quality of Service (QoS) (U)

(U) The capability of a network to provide better service to selected network traffic over various technologies. The primary goal of QoS is to provide priority including dedicated bandwidth, controlled jitter and latency and improved loss characteristics, while ensuring that priority traffic does not make other traffic fail.

Radar Absorbent Material (U)

(U) A thin coating applied to a RV to achieve a significant signature reduction.

Reentry Vehicle (U)

(U) A payload which separates from the missile and then reenters the atmosphere in the terminal portion of the missile trajectory. The reentry vehicle includes the warhead, the warhead's container, warhead-activating devices and internal structures but excludes an attitude control system or post-boost vehicle.

Research, Development, Test and Evaluation (RDT&E) (U)

(U) Development activities of a new system that include basic & applied research, advanced technology development, demonstration & validation, engineering development, developmental & operational testing and the evaluation of test results. RDT&E includes activities to expand the performance of fielded systems.

Signature Reduction (U)

(U) The reduction of observable objects' infrared & radar cross-section signatures.

Situational Awareness (U)

(U) The degree to which perception of the current environment mirrors reality.

Spiral Development (U)

(U) An iterative process for incrementally developing a defined set of capabilities. This process provides the opportunity for active participation of the user, tester and developer. The end-state requirements may not be known at the initiation of a Block, but are refined through continuous feedback in experimentation and risk management. Spiral Development implements evolutionary acquisition and may include a number of spirals.

Technical Objectives & Goals (U)

(U) A high-level MDA acquisition document that guides decision making for BMDS development and communicates desired objectives and goals.

~~SECRET // REL TO NSA, AOS and GDR~~



~~SECRET // REL TO NSA, AOS and GDR~~

N-11 E-2D AHE

~~SECRET~~



Defense Acquisition
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RCS: DD-A&T(Q&A)823-364



E-2D AHE

AS OF DATE: December 31, 2007

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~~Derived from: ID 02B-13 of OPNAVINST C5513.2B~~

~~Downgrade instructions:~~

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AF-C-059011

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E-2D AHE, December 31, 2007

~~(S)~~ Performance

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Performance | Current Estimate | Change Num | Class |
|-------------------------------|--------------------------|------------------------|------------------------|--------------------------|------------------|------------|----------------|
| Operational Availability (Ao) | >= 0.98 | >= 0.98 | >= 0.85 | TBD | >=0.98 | | (U) |
| Detection Range | (b)(1) | | | TBD | (b)(1) | | (S) |
| Tracking | | | | TBD | | | (S) |

(U) Acronyms:

NM Nautical Miles

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~~SECRET~~



Defense Acquisition
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Downgrade instructions: X1, X3

Declassify on: Not Subject to Automatic Downgrade

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~~(S)~~ Performance

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|---------------------------------|--------------------------|------------------------|------------------------|-------------------|------------------|------------|----------------|
| Radar Detection and Tracking | (b)(1) | | | TBD | (b)(1) | | (S) |
| Radar Signature Data Collection | | | | TBD | | | (S) |
| Radar Range Resolution | | | | TBD | | | (S) |

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AS AMENDED
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| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|--|---|---|---|-------------------|---|------------|-------|
| | (b)(1) | | | | (b)(1) | | |
| Propulsion Plant, Sustained and Loiter Speed | Ship Duration = 12,000 NM. The ship shall be capable of traveling 12,000 NM at 20 knots sustained speed | Ship Duration = 12,000 NM. The ship shall be capable of traveling 12,000 NM at 20 knots sustained speed | Ship Duration = 12,000 NM. The ship shall be capable of traveling 12,000 NM at 20 knots sustained speed | TBD | Ship Duration = 12,000 NM. The ship shall be capable of traveling 12,000 NM at 20 knots sustained speed | | (U) |
| Mission Capable Rates and Inherent Availability (Ai) | System Availability = 90%. In order to achieve the FMC Ai requirement, the CJR system must be available at least 90% of the time. FMC for the CJR is defined as both the platform and | System Availability = 90%. In order to achieve the FMC Ai requirement, the CJR system must be available at least 90% of the time. FMC for the CJR is defined as both the platform | System Availability = 90%. In order to achieve the FMC Ai requirement, the CJR system must be available at least 90% of the time. FMC for the CJR is defined as both the platform | TBD | System Availability = 90%. In order to achieve the FMC Ai requirement, the CJR system must be available at least 90% of the time. FMC for the CJR is defined as both the platform | | (U) |

NAVY
IS AMENDED
SECURITY

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~~NOFORN~~

~~SECRET~~

~~NOFORN~~

~~SECRET~~

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| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|---|--|--|--|-------------------|---|------------|-------|
| | mission equipment functioning as required to achieve the operational mission | and mission equipment functioning as required to achieve the operational mission | and mission equipment functioning as required to achieve the operational mission | | and mission equipment functioning as required to achieve the operational mission. | | |
| Interoperability - All top-level Informational Exchange Requirements (IERs) will be satisfied to the standards identified in the threshold and objective values in CJR Top-Level Information Exchange Requirements Matrix | 100% of all Top-Level IERs | 100% of all Top-Level IERs | 100% of Top-Level IERs designated critical (IERs 1-5) | TBD | 100% of all Top-Level IERs | | (U) |
| Receipt of higher authority direction -C2 - Ops guidance, directives, and orders | (b)(1) | | | TBD | (b)(1) | | (S) |
| Receipt of mission guidance - C2 -Guidance, priorities, directives, orders, and plans | | | | TBD | | | (S) |

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IS AWARDED
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~~SECRET~~

Cobra Judy Replacement, December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|---|--------------------------|------------------------|------------------------|-------------------|------------------|------------|----------------|
| Receipt of tip-off - Target Launch Warning and Information | (b)(1) | | | TBD | (b)(1) | | (S) |
| Raw and semi processed mission data - Metrics & Limited Signature | | | | TBD | | | (S) |
| Conduct Maritime Shipping, Distress, Search and Rescue - Voice, Data (Charts/Maps) / Send Node: Mil/Com/Private Ships, Shore and Aircraft / Receive Node: CJR | | | | TBD | | | (S) |
| Conduct Maritime Shipping, Distress, Search and Rescue - Voice, Data (Charts/Maps) / Send Node: CJR / Receive Node: Mil/Com/Private Ships, Shore and Aircraft | | | | TBD | | | (S) |

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~~SECRET~~

~~SECRET~~

Cobra Judy Replacement, December 31, 2007

(U) Acronyms:

Ai - Inherent Availability
C2 -Command and Control
Com -commercial
CJR -COBRA JUDY REPLACEMENT
dB -Decibel
FMC -Full Mission Capability
Hrs -hours
Hz -Hertz
IER -Information Exchange Requirement
km -Kilometer
m -Meter
NM -Nautical Mile
Mil -military
min -Minute
Ops -Operations
Pd -Probability of Detection
PRF -Pulse Repetition Frequency
RCS -Radar Cross Section
Sec -Second
SNR -Signal-to-Noise Ratio
Sq -Square
TBD -To Be Determined

~~(S)~~ The performance data marked "S" above is classified as ~~SECRET/NOFORN~~.

~~SECRET~~



Defense Acquisition
Management Information
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~~(S)~~ Performance

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|---|--------------------------|------------------------|------------------------|-------------------|------------------|------------|--------------|
| Interoperability | (b)(1) | | | TBD | (b)(1) | | S |
| Probability of Kill w/threat shutdown | | | | TBD | | | S |
| Availability (Ao) | | | | TBD | | | S |
| Probability of Correct ID of a Valid Target Emitter | | | | TBD | | | S |
| Frequency Range | | | | TBD | | | S |
| Probability of Emitter Identification | | | | TBD | | | S |
| Probability of Emitter | | | | TBD | | | S |

~~SECRET~~

~~SECRET~~

AGM-88E (AARGM), December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|---------------------------------------|--------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|
| Identification | (b)(1) | | | | (b)(1) | | |
| Probability of Emitter Identification | | | | TBD | | | |

~~SECRET~~

~~SECRET~~

- (U) Acronyms:
- Ao Availability
 - GHz Giga Hertz
 - ID Identification
 - IER Information Exchange Requirements
 - P-kf Probability of Firepower Kill
 - P-kk Probability of Catastrophic Kill
 - TBD To be Determined

~~SECRET~~

A-14 JLENS

~~SECRET~~



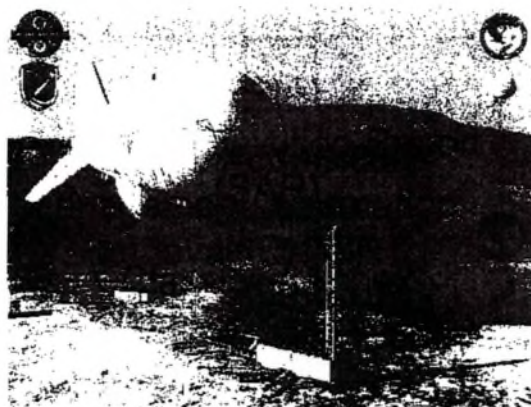
Defense Acquisition
Management Information
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Selected Acquisition Report
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08-C-047011

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~~(S)~~ Performance

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|--------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|
| SIAP KPP | | | | | | | (U) |
| Surveillance coverage (deg) | 360 | 360 | 360 | TBD | 360 | | (U) |

(b)(1)

| | | | | | | | |
|-----------------------------------|-------------------|-------------------|------------------------|-----|------------------------|--|-----|
| Integrated Fire Control (IFC) KPP | Forward Pass (FP) | Forward Pass (FP) | Engage-on-Remote (EOR) | TBD | Engage on Remote (EOR) | | (U) |
| Combat ID KPP | | | | | | | (U) |

(b)(1)

| | | | | | | | |
|------------------------------------|---|---|-----------------------------|-----|---|--|-----|
| Identification Friend or Foe (IFF) | All DoD Validated IFF and Warsaw Pact/Coalition modes | All DoD Validated IFF and Warsaw Pact/Coalition modes | All DoD validated IFF modes | TBD | All DOD Validated IFF and Warsaw Pact/Coalition | | (U) |
|------------------------------------|---|---|-----------------------------|-----|---|--|-----|

JLENS, December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|---|---|---|---|-------------------|---|------------|-------|
| | | | | | modes | | |
| Precise Participant Location Identification (PPLI) | Correlated PPLI messages w/JLENS organic tracks | Correlated PPLI messages w/JLENS organic tracks | Correlated PPLI messages w/JLENS organic tracks | TBD | Correlated PPLI messages with JLENS organic tracks | | (U) |
| C4I Interoperability KPP | | | | | | | (U) |
| Information Exchange Requirements (IERs) | 100% of all top level IERs | 100% of all top level IERs | 100% of all top level critical IERs | TBD | 100% of all top level IERs | | (U) |
| Theater Air and Missile Defense Integrated Architecture | Available behavior models | Available behavior models | Data completeness, data availability, and common processing | TBD | Available behavior models | | (U) |
| Net Ready KPP | Develop Migration Plan to show how we plan to meet NR-KPP | Develop Migration Plan to show how we plan to meet NR-KPP | Develop Migration Plan to show how we plan to meet NR-KPP | TBD | Develop migration plan to show how we plan to meet NR-KPP | | (U) |

(U) Acronyms:

C4I - Command, Control, Communications, Computers and Intelligence

Combat ID - Combat Identification

deg - Degrees

EOR - Engage on Remote

FP - Forward Pass

ft - feet

IER - Information Exchange Requirements

~~SECRET~~

JLENS, December 31, 2007

IFC - Integrated Fire Control
IFF - Identification Friend or Foe
km - Kilometer
KPP - Key Performance Parameter
NR - Net Ready
PPLI - Precise Participant Location Identification (PPLI)
RCS - Radar Cross Section
SIAP - Single Integrated Air Picture
sq M - Square Meter

(U) These KPPs are JLENS ORD Block 1 requirements. The material solution to ORD Block 1 requirements is Increment 1 Spiral 2 (SDD).

*The requirement in the ORD for Classification Type Characterization for Block 1 is an objective value only at the current time. The Program Office is working with the contractor to attain a certain percentage of the objective value, and plans to incorporate that requirement into the SDD Government Performance Specification.

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Defense Acquisition
Management Information
Retrieval (DAMIR)



Selected Acquisition Report
(SAR)

Classified Annex

RCS: DD-A&T(Q&A)823-378



EA-18G

AS OF DATE: December 31, 2007

~~Classified by: ~~(SECRET)~~~~

~~Reason:~~

~~Derived from: Security Classification Guide EA-18G dated May 13, 2005~~

~~Downgrade instructions:~~

~~Declassify on: X3~~

For unclassified information, see the unclassified DAMIR version at DAMIR Link
<https://ebiz.acq.osd.mil/damir>.

(THIS PAGE IS UNCLASSIFIED)

EA-18G, December 31, 2007

~~(S)~~ Performance

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|--|-------------------------|------------------------|------------------------|---------------------|------------------|------------|----------------|
| Radar Signal Receive Frequency Range | (b)(1) | | | TBD | (b)(1) | | (S) |
| Communications Signals Receive Frequency Range | | | | TBD | | | (S) |
| Selective Reactive Jamming Response | | | | NAVY AMEND SECURITY | | | (S) |
| Engagement Radars | | | | TBD | | | (S) |
| Early Warning and/or Acquisition Radars | | | | TBD | | | (S) |
| Other Radars | | | | TBD | | | (S) |
| Receive Azimuth Coverage | Same | Same | 360 deg | TBD | Same | | (U) |
| Operational Availability | >=0.98 | >=0.98 | >=0.85 | TBD | >=0.95 | | (U) |
| Net Ready | (b)(1) | | | TBD | (b)(1) | | (S) |
| | | | | NAVY AMEND SECURITY | | | |

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EA-18G, December 31, 2007

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|-------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|
| | (b)(1) | | | | (b)(1) | | |

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AS AMENDED
SECURITY

~~SECRET~~

~~SECRET~~

EA-18G, December 31, 2007

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|-------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|
| NAVY AS AMENHER SER | (b)(1) | | | | | | |
| | | | | | | | |

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EA-18G, December 31, 2007

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|--------------------------------|-------------------------|------------------------|------------------------|-------------------|------------------|--------------------------------|-------|
| NAVY AS AMENDED SECURITY | (b)(1) | | | | | | |
| | | | | | | NAVY AS AMENDED SECURITY | |

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EA-18G, December 31, 2007

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|--|-------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|
| | | | | | (b)(1) | | |
| Carrier Suitability | | | | | | | (U) |
| Launch Catapult WOD (Max Gross Weight, Tropical Day) | <=25 knots | <=25 knots | <=30 knots | 21 knots | <=25 knots | Ch-1 | (U) |
| Deck Spot Factor | <=1.4 | <=1.4 | <=1.5 | 1.35 | <=1.4 | Ch-2 | (U) |
| Recovery Payload (empty wing and centerline pylons and nacelle ejectors, 47,000 lbs, 14 knots WOD) | >=9,000 lbs | >=9,000 lbs | >=9,000 lbs | 11,037 | >=9,000 lbs | Ch-3 | (U) |
| Additional Internal Fuel Capacity (over F/A-18C/D) | >=3,000 lbs | >=3,000 lbs | >=3,000 lbs | 3,802 | >=3,000 lbs | Ch-4 | (U) |

(U) Acronyms:

GHz Giga Hertz

MHz Mega Hertz

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EA-18G, December 31, 2007

(U) CHANGE EXPLANATIONS:

All KPPs are projected to meet or exceed thresholds.

Ch-1: Initial posting of calculation or projection.

Ch-2: Initial posting of calculation or projection.

Ch-3: Initial posting of calculation or projection.

Ch-4: Initial posting of calculation or projection.

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N-5 CH-53K

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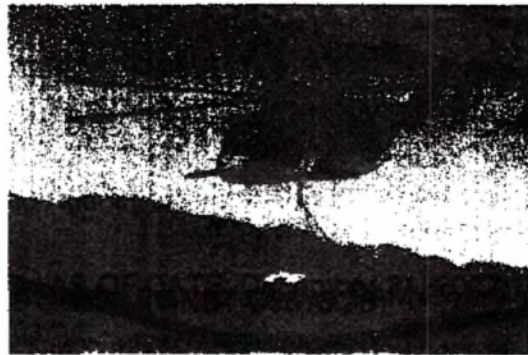
Defense Acquisition
Management Information
Retrieval (DAMIR)



Selected Acquisition Report
(SAR)

Classified Annex

RCS: DD-A&T(Q&A)823-390



CH-53K

AS OF DATE: December 31, 2007

~~Classified by:~~

~~Reason:~~

~~Derived from: ID 02B-96 of OPNAVINST C5513.2B~~

~~Downgrade instructions: Not Subject to Automatic Downgrade~~

~~Declassify on: Originating Agency Determination Required (OADR)~~

No Security Objection
to Open Publication

~~AS AMENDED~~

08-C-0119

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Office of the Chief of
Naval Operations
Dept. of the Navy

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CH-53K, December 31, 2007

~~(S)~~ Performance

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Performance | Current Estimate | Change Num | Class |
|---|---|---|--|--------------------------|--|------------|-------|
| Net Ready (NR) | Satisfy 100% of NR reqts in Joint Integrated Architecture (JIA) | Satisfy 100% of NR reqts in Joint Integrated Architecture (JIA) | Satisfy 100% of NR reqts designated as enterprise-level or critical in JIA | TBD | Satisfy 100% of NR reqts designated as enterprise-level or critical in JIA | 1 | (U) |
| Range and Payload (nm) | 110 w/30,000 lbs external load no refuel | 110 w/30,000 lbs external load no refuel | 110 w/27,000 lbs external load no refuel | TBD | 110 w/27,000 lbs external load no refuel | 1 | (U) |
| Mission Reliability (MR) | 90% | 90% | 89% | TBD | 89% | 1 | (U) |
| Logistics Footprint | 10% reduction from current CH-53E | 10% reduction from current CH-53E | <= current CH-53E | TBD | <= current CH-53E | 1 | (U) |
| Sortie Generation Rate (SGR)/ Average Sortie Duration (ASD) | 2.6 sorties/ 2.25 hrs | 2.6 sorties/ 2.25 hrs | 2.6 sorties/ 2.25 hrs | TBD | 2.6 sorties/ 2.25 hrs | | (U) |
| Survivability | (b)(1) | | | TBD | (b)(1) | | 1 (U) |
| Force Protection | | | | TBD | | | 1 (U) |

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CH-53K, December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Performance | Current Estimate | Change Num | Class |
|-----------------------------|--------------------------|------------------------|------------------------|--------------------------|------------------|------------|-------|
| | (b)(1) | | | | (b)(1) | | |
| | | | | | | | |
| | | | | | | | |

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(U) Acronyms:

hrs Hours
 lbs Pounds
 NM Nautical Mile
 mm Millimeter
 TBD To be determined

(U) Net Ready is all activity interfaces, services, policy-enforcement controls, and data-sharing of the Net-Centric Operations and Warfare Reference Model (NCOW RM) and Global Information Grid (GIG)-Key Interface Profiles (KIPs) will be satisfied to the requirements of the specific JIA products (including data correctness, data availability and data processing), and information assurance accreditation, specified in the threshold (T) and objective (O) values.

Mission Reliability (MR) is the probability that the CH-53K will successfully complete the Operational Requirements Document (ORD) defined mission with an average sortie duration of 2.25 flight hours based on Mean Flight Hours Between Operational Mission Failure (MFHBOMF).

CH-53E Total Logistics Footprint as contained in the HLR ORD.

Sortie Generation Rate (SGR) is the number of sorties required per aircraft per day to accomplish a specific mission given the total sorties required and the number of aircraft on hand.

Average Sortie Duration (ASD) is the average number of flight hours expended for a given mission from take off to landing.

Survivability as contained in the Survivability and Force Protection Appendix located in the HLR ORD.

Force Protection as contained in the Survivability and Force Protection Appendix located in the HLRORD.

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CH-53K, December 31, 2007

(Ch-1) The System Functional Review (SFR) was conducted June 2007 and although the level of design maturity does not allow for high confidence / accurate Key Performance Parameters (KPPs) point estimates, the Program Manager has concluded threshold reporting is a more accurate reflection of program expectations. Threshold values are consistent with the System Design and Development (SDD) contract's Statement of Work and Air Vehicle Specification, and reflect the program's emphasis on contract cost control. Cost-efficient achievement of Objective performance values remain incentivized through the SDD Award Fee Plan.

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Defense Acquisition
Management Information
Retrieval (DAMIR)



Selected Acquisition Report
(SAR)

Classified Annex

RCS: DD-A&T(Q&A)823-391



SM-6

AS OF DATE: December 31, 2007

~~Classified by:~~

~~Reason:~~

~~Derived from: Multiple Sources~~

~~Downgrade Instructions: X3~~

~~Declassify on: OPNAVINST S5513, 3B~~

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SM-6, December 31, 2007

~~(S)~~ Performance

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Performance | Current Estimate | Change Num | Class |
|----------------------------------|--------------------------|------------------------|------------------------|--------------------------|------------------|------------|----------------|
| Maximum Downrange (nmi) | (b)(1) | | | TBD | (b)(1) | | (S) |
| Minimum Threat RCS (sqm) | | | | TBD | | | (S) |
| Single Shot Kill Probability (%) | | | | TBD | | | (S) |
| Launch Availability (%) | | | | TBD | | | (S) |
| Interoperability | | | | TBD | | | (S) |

(U) Acronyms:

nmi nautical miles
 RCS Radar Cross Section
 sqm square meters
 IER Information Exchange Requirement



Defense Acquisition
Management Information
Retrieval (DAMIR)



Selected Acquisition Report
(SAR)

Classified Annex

RCS: DD-A&T(Q&A)823-516



Virginia Class Sub

AS OF DATE: December 31, 2007

~~Classified by:~~

~~Reason:~~

~~Derived from: OPNAVINST 95513.5B ENCL.90~~

~~Downgrade instructions:~~

~~Declassify on: OADR~~

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Virginia Class Sub, December 31, 2007

~~(S)~~ Schedule

| Schedule Milestone | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Current Estimate | Change Num | Class |
|--|--------------------------|------------------------|------------------------|------------------|------------|---------------------|
| NSSN Reactor Plant | (b)(1) | | | | | (U) |
| Reactor Vessel in Yard | | | | | | (S) |
| Start Pre-fill Testing | | | | | | (S) |
| Power Unit Landed | | | | | | (S) |
| Start Alpha Trials | | | | | | (S) |
| MK-48 ADCAP Torpedo Modification Program | | | | | | NAVY AS AMENDED (U) |
| LRIP | (b)(1) | N/A | N/A | (b)(1) | | (S) |
| MS III | | N/A | N/A | | | (S) |
| IOC Block IV | | N/A | N/A | | | (S) |

(U) Acronyms:

C&CS Command and Control System
GFE Government Furnished Equipment
LFT&E Live Fire Test and Evaluation
LBTS Land Based Test Site
PSA Post Shakedown Availability

(U) The VIRGINIA Class Submarine Program is tracking and reports the six year earlier delivery of the MK-48 ADCAP weapon system, for associated weapons system coordination purposes only.

~~(S)~~ Performance

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|--|--|--|--|-------------------|------------------|------------|-------|
| Radiated Noise | | | | | | | (U) |
| Broadband Noise | | | | | | | (U) |
| 5 and 10 knots (prior to installation of hull coating) | Figure A.1 (Except in Port and casualty) | Figure A.1 (Except in Port and casualty) | Figure A.1 (Except in Port and casualty) | TBD | Figure A.1 | | (U) |

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Virginia Class Sub, December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|--|-------------------------------------|-------------------------------------|--------------------------------|-------------------|------------------|------------|---|
| | | | as noted below) | | | | |
| Greater than or equal to 15 knots | Figure A.1 (All horizontal aspects) | Figure A.1 (All horizontal aspects) | Figure A.1 (beam aspect only). | TBD | Figure A.1 | | (U) |
| Narrowband Noise | (b)(1) | | | TBD | (b)(1) | | (C) |
| Transient Noise | | | | TBD | | | (C) |
| Exceptions: | | | | | | | (U) |
| Weapons Launch | | | | TBD | | | (C) |
| Active Target Strength (less than or equal to) | | | | | | | (C) NAVY REMOVED SECURITY |
| High Frequency (15-3 kHz) Stern Aspect (dB) | | | | TBD | | | (C) |
| Mid Frequency (2-15 kHz) Quarter Aspect | | | | TBD | | | (C) |

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Virginia Class Sub, December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|---|--------------------------|------------------------|------------------------|-------------------|------------------|------------|---|
| (dB) | (b)(1) | | | | (b)(1) | | |
| Low Frequency, Bow/Stern (400Hz) (dB) | | | | TBD | | | (S) NAVY AMENDED SECURITY |
| Electromagnetic Quieting (less than or equal to) | | | | | | | (U) |
| DC Electric (amp-meter) | | | | TBD | | | (S) |
| DC Magnetic (gamma ft3) (million) | | | | TBD | | | (S) |
| AC Electric (amp-meter) | | | | TBD | | | (S) |
| Flank Speed (knots) (greater than or equal to) | | | | TBD | | | (S) |
| Torpedo Launch Rate | | | | | | | (U) |
| Torpedoes in one minute | | | | TBD | | | (S) |
| Payload (standard size weapons) (including weapons stored in torpedo tubes and vertical launch tubes) | | | | TBD | | | (S) |
| Vertical Launch Missiles Cells | | | | TBD | | | (S) |
| Test Depth (ft) | | | | TBD | | | (S) NAVY AMENDED SECURITY |
| Endurance (days) (greater than or equal to) | | | | TBD | | | (S) |
| Operational Availability (%) | | | | | | | (U) |
| Covert Strike Warfar | | | | TBD | | | (S) |

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SECURITY

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Virginia Class Sub, December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|---|--------------------------|-------------------------|--|-------------------|-------------------------|------------|-------|
| (STW) | (b)(1) | | | | (b)(1) | | |
| Covert Surveillance Intelligence Collection/Surveillance Covert Indication and Warning (ISW), and Electronic Warfare (EW) | | | | TBD | | | (S) |
| Special Warfare (NSW) | | | | TBD | | | (S) |
| Mine Warfare (MIW) | | | | TBD | | | (S) |
| Anti-Submarine Warfare (ASW) | | | | TBD | | | (S) |
| Anti-Surface Ship Warfare (ASUW) | | | | TBD | | | (S) |
| Battle Group Support | | | | TBD | | | (S) |
| 90-Day Basic Functions | | | | TBD | | | (S) |
| Interoperability | N/A | 100% of top level IERs. | 100% of top level IERs designated critical | TBD | 100% of top level IERs. | | (U) |

(U) Acronyms:

The reference for Figure A.1 is the program's Operational Requirements Document (ORD).

(U) The Operational Requirements Document, Revision A of December 13, 2004 changes "Figure A.1" to "Figure 1" and "Figure A.2" to "Figure 2", and adds the Interoperability Key Performance Parameter (KPP). No other approved objectives or thresholds have changed as a result.

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Defense Acquisition
Management Information
Retrieval (DAMIR)



Selected Acquisition Report
(SAR)

Classified Annex

RCS: DD-A&T(Q&A)823-531



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For Open Publication
AS AMENDED
MAR - 7 2008 14
Office of Security Review
Department of Defense

PATRIOT MEADS CAP

AS OF DATE: December 31, 2007

Classified by: MEADS Security Classification Guide (SCG), February 24, 2006;
PATRIOT SGG, April 23, 2003

Downgrade instructions: Regraded UNCLASS when separated from CLASS sections

Reason:

Derived from:

Declassify on: February 24, 2031 / April 23, 2028

For unclassified information, see the unclassified DAMIR version at DAMIR Link
<https://ebiz.acq.osd.mil/damir>.

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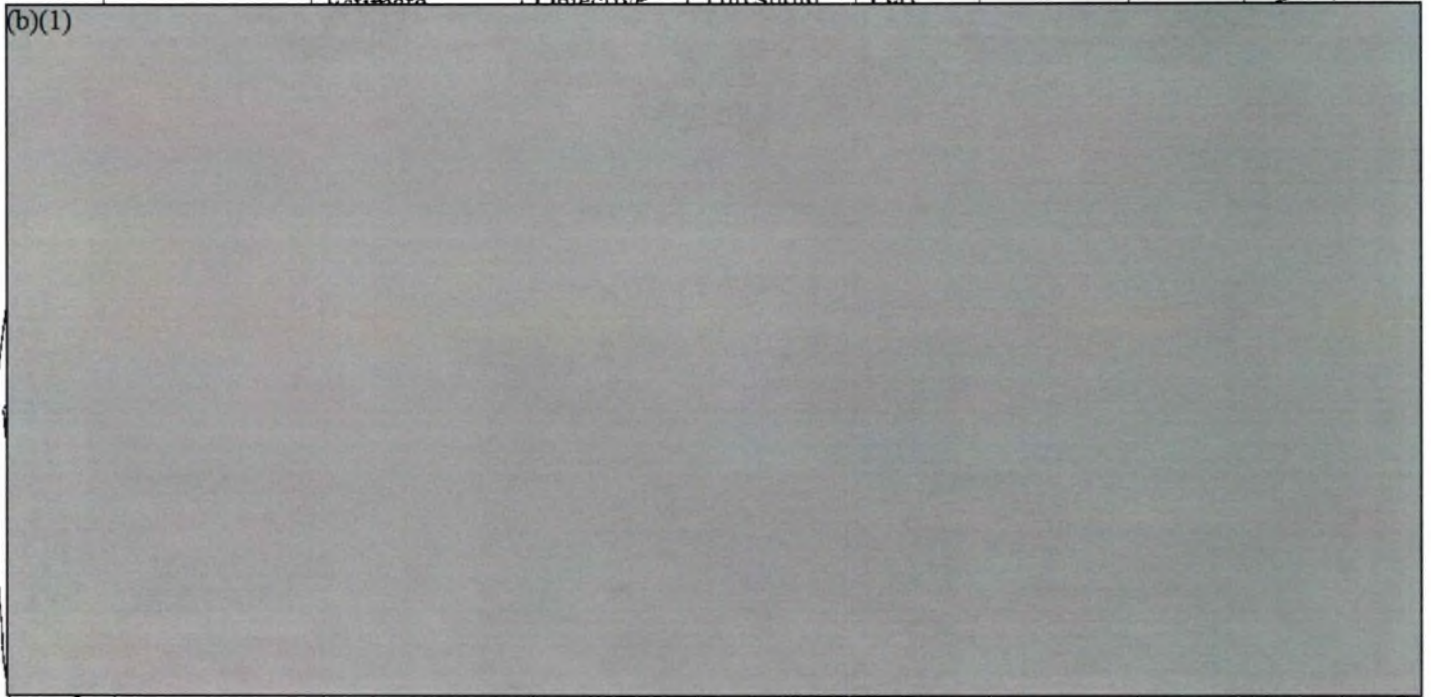
PATRIOT/MEADS CAP, December 31, 2007

~~(S)~~ Performance

FIRE UNIT

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|-----------------------------|--------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|
|-----------------------------|--------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|

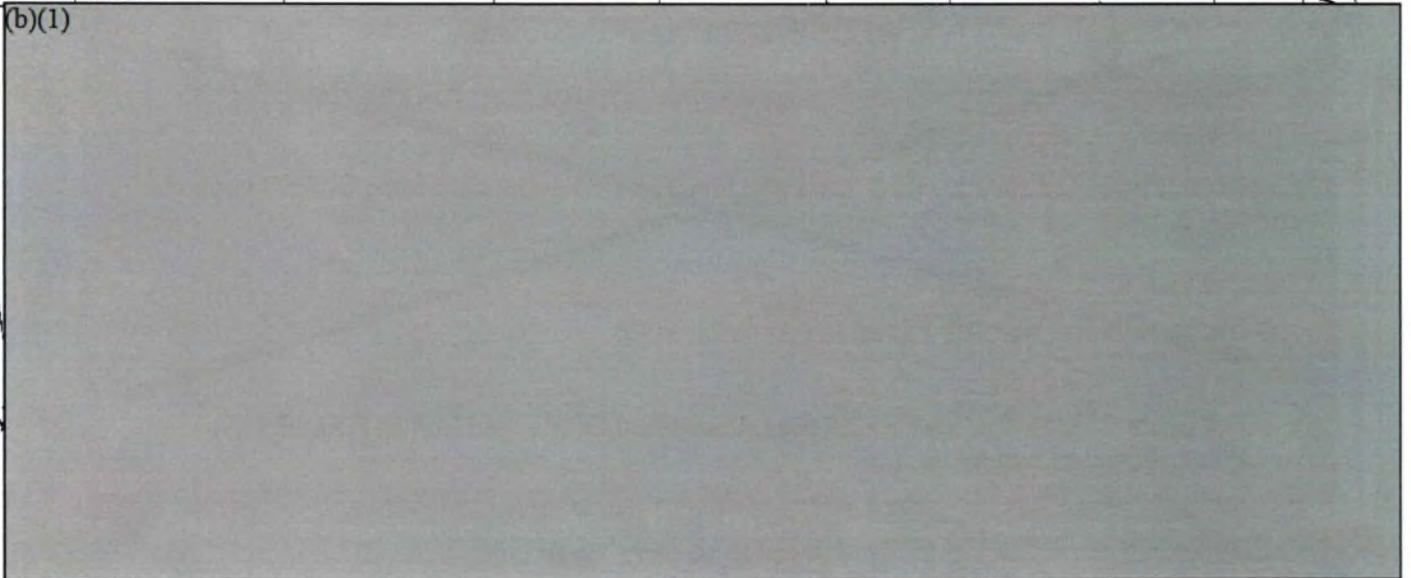
(b)(1)



Battery
Defended
Radius

(U)

(b)(1)



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PATRIOT/MEADS CAP, December 31, 2007

(b)(1)



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(b)(1)



ISAN

~~SECRET~~

~~SECRET~~

PATRIOT/MEADS CAP, December 31, 2007

(b)(1)



AS

~~SECRET~~

~~SECRET~~

PATRIOT/MEADS CAP, December 31, 2007

(b)(1)



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~~SECRET~~

PATRIOT/MEADS CAP, December 31, 2007

(b)(1)



~~SECRET~~

~~SECRET~~

PATRIOT/MEADS CAP, December 31, 2007

(b)(1)



~~SECRET~~

~~SECRET~~

PATRIOT/MEADS CAP, December 31, 2007

(b)(1)



SA

~~SECRET~~

PATRIOT/MEADS CAP, December 31, 2007

(b)(1)

Classification

(U)

(b)(1)

AS AMENDED

SECRET

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AS AMEND

PATRIOT/MEADS CAP, December 31, 2007

(b)(1)

AS AM

Identification -
ABT Targets

Fire unit will
automatically
declare ABT
targets as
friend, foe, or
unknown using
all available
sources of
information

Fire unit
will
automatic-
ally declare
ABT
targets as
friend, foe,
or
unknown
using all
available
sources of
information

Fire unit
will
automatic-
ally declare
ABT
targets as
friend, foe,
or
unknown
using all
available
sources of
information

TBD

Fire unit
will
automa-
tically
declare
ABT
targets as
friend,
foe, or
unknown
using all
available
sources of
informa-
tion

(U)

(b)(1)

AS AMEND

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PATRIOT/MEADS CAP, December 31, 2007

(b)(1)



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PATRIOT/MEADS CAP, December 31, 2007

(b)(1)

| | | | | | | | |
|-------------------------------------|--|--|--|-----|--|--|-----|
| Transportability/Mobility | | | | | | | (U) |
| Drive-on, Drive-off | Drive-on Drive-off loading and unloading: C-5, C-17 | Drive-on Drive-off loading and unloading: C-5, C-17 | Drive-on Drive-off loading and unloading: C-5, C-17 | TBD | Drive-on Drive-off loading and unloading : C-5, C-17 | | (U) |
| Roll-on, Roll-off | Roll-on Roll-offloading and unloading in a transport configuration on A400M, C-130 | Roll-on Roll-offloading and unloading in a transport configuration on A400M, C-130 | Roll-on Roll-offloading and unloading in a transport configuration on A400M, C-130 | TBD | Roll-on Roll-offloading and unloading in a transport configuration on A400M, C-130 | | (U) |
| Corps Maneuver and Support Elements | Provide continuous air defense coverage of corps maneuver and support | Provide continuous air defense coverage of corps maneuver and support | Provide continuous air defense coverage of corps maneuver and support | TBD | Provide continuous air defense coverage of corps maneuver | | (U) |

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PATRIOT/MEADS CAP, December 31, 2007

| | | | | | | | |
|---------------------------|---|---|---|-----|---|--|-----|
| | elements as they advance up to 400 km per day at a rate of 50 kmph off-road/90 kmph on-road | elements as they advance up to 400 km per day at a rate of 50 kmph off-road/90 kmph on-road | elements as they advance up to 250km per day at a rate of 25 kmph | | and support elements as they advance up to 400 km per day at a rate of 50 kmph off-road/90 kmph on-road | | |
| External Transportability | By CH-47 and CH-53 class cargo helicopters up to an ambient temp of 70 deg F, 2000 ft alt MSL, over a 30 nm distance; assembly and disassembly from a march order to a transport configuration with organic equipment in 15 min | By CH-47 and CH-53 class cargo helicopters up to an ambient temp of 70 deg F, 2000 ft alt MSL, over a 30 nm distance; assembly and disassembly from a march order to a transport configuration with organic equipment in 15 min | By CH-47 and CH-53 class cargo helicopters up to an ambient temp of 70 deg F, 2000 ft alt MSL, over a 30 nm distance; assembly and disassembly from a march order to a transport configuration with organic equipment in 30 min | TBD | By CH-47 and CH-53 class cargo helicopters up to an ambient temp of 70 deg F, 2000 ft alt MSL, over a 30 nm distance; assembly and disassembly from a march order to a transport configuration with organic equipment in 15 min | | (U) |
| Interoperability | Will inter-operate with existing and planned National (top- | Will inter-operate with existing and planned | Will inter-operate with existing and planned | TBD | Will inter-operate with existing and planned | | (U) |

~~SECRET~~

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PATRIOT/MEADS CAP, December 31, 2007

| | | | | | | | |
|--------------------------------|--|---|---|-----|--|--|-----|
| | level)/Joint/ Combined Air Defense BMC4I systems of the respective national forces in accordance with each nation's IERs | National (top-level)/ Joint/Com- bined Air Defense BMC4I systems of the respective national forces in accordance with each nation's IERs | National (critical top-level)/ Joint/Com- bined Air Defense BMC4I systems of the respective national forces in accordance with each nation's IERs | | National (top- level)/ Joint/ Combined Air Defense BMC4I systems of the respective national forces in accord- ance with each nation's IERs | | |
| Flexibility | | | | | | | (U) |
| MEADS in all configurations | Capable of netted distributed and site-centered operations | Capable of netted distributed and site- centered operations | Capable of netted distributed and site- centered operations | TBD | Capable of netted distributed and site- centered operations | | (U) |
| MEADS Battalion | Will provide air and missile defense of selected critical assets and organizations located in an operationally equivalent area of 100km by 100km | Will provide air and missile defense of selected critical assets and organiza- tions located in an opera- tionally equivalent area of 100km by 100km | Will provide air and missile defense of selected critical assets and organiza- tions located in an opera- tionally equivalent area of 100km by 100km | TBD | Will provide air and missile defense of selected critical assets and organiza- tions located in an opera- tionally equivalent area of 100km by 100km | | (U) |
| Plug and Fight | Intra/inter- | Intra/inter- | Intra/inter- | TBD | Intra/inter | | (U) |

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PATRIOT/MEADS CAP, December 31, 2007

| | | | | | | | |
|--|--|--|--|--|---|--|--|
| | system plug-and-fight capable by implementing a MEADS network standard to be able to dynamically integrate MEADS and non-MEADS major end items (that comply with MEADS network standard) | system plug-and-fight capable by implementing a MEADS network standard to be able to dynamically integrate MEADS and non-MEADS major end items (that comply with MEADS network standard) | system plug-and-fight capable by implementing a MEADS network standard to be able to dynamically integrate MEADS and non-MEADS major end items (that comply with MEADS network standard) | | -system plug-and-fight capable by implementing a MEADS network standard to be able to dynamically integrate MEADS and non-MEADS major end items (that comply with MEADS network standard) | | |
|--|--|--|--|--|---|--|--|

(U) Acronyms:

ABT Air Breathing Threat
AGL Above Ground Level
alt Altitude
BMC4I Battle Management Command, Control, Communications, Computers and Intelligence
deg Degree
HACM High Altitude Cruise Missile
km Kilometer
kmph Kilometers per hour
min Minutes
m/sec meters/second
MSL Mean Sea Level
nm Nautical Mile
PENAIID Penetration Aid
SR Surveillance Radar
TBM Tactical Ballistic Missile
temp Temperature

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PATRIOT/MEADS CAP, December 31, 2007

(b)(1)



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(U) A MEADS battalion consists of a headquarters and several fire units.

(U) Plug-and-fight is the capability to rapidly and dynamically recognize, incorporate, control, remove, reallocate, and/or reposition system elements (such as sensors, tactical operations centers, and launchers). Plug-and-fight capabilities are required at the intra-system and inter-system levels and therefore require an open, netted-distributed architecture.

(U) The MEADS Key Performance Parameters (KPPs) were validated by the Joint Requirements Oversight Council on June 14, 2004. All KPPs are associated with MEADS objective system requirements for the Fire Unit end item.

MISSILE

(U) All performance parameters for the PATRIOT/MEADS Combined Aggregate Program are associated with the Fire Unit end item.

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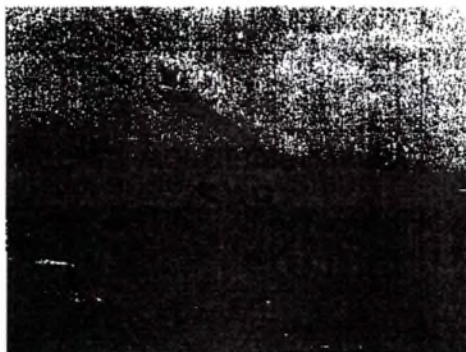
Defense Acquisition
Management Information
Retrieval (DAMIR)



Selected Acquisition Report
(SAR)

Classified Annex

RCS: DD-A&T(Q&A)823-555



JASSM

AS OF DATE: December 31, 2007

~~Classified by: JASSM Security Classification Guide, 31 October 2007~~

~~Reason: Section 1.4~~

~~Declassify on: 31 October 2032~~

For unclassified information, see the unclassified DAMIR version at DAMIR Link
<https://ebiz.acq.osd.mil/damir>.

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JASSM, December 31, 2007

~~(S)~~ Performance

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Performance | Current Estimate | Change Num | Class |
|-----------------------------|--|--|----------------------------|--------------------------|--|------------|-------|
| (b)(1) | | | | | | | |
| Carrier Operability | Yes | Yes | Yes | TBD | Yes | | (U) |
| Interoperability | 100% of top level IERs designated critical | 100% of the top level IERs designated critical | 100% of the top level IERs | TBD | 100% of the top level IERs designated critical | | (U) |

(U) Acronyms:

IER - Information Exchange Requirement
NM - Nautical Mile

(b)(1)

~~(S)~~ Foreign Military Sales

| Country | Date of Sale | Quantity | Total Costs \$M | Memo | Class |
|---------|--------------|----------|-----------------|------|-------|
| (b)(1) | | | | | |

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Defense Acquisition
Management Information
Retrieval (DAMIR)



Selected Acquisition Report
(SAR)

Classified Annex

RCS: DD-A&T(Q&A)823-368



AGM-88E (AARGM)

AS OF DATE: December 31, 2007

Classified by:

Reason:

Derived from: AARGM Security Classification Guide

Downgrade instructions:

Declassify on: X3

No Security Objection
to Open Publication
~~(AS AMENDED)~~

08-C-0116
MAR 20 2008

Office of the Chief of Naval Operations
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AGM-88E (AARGM), December 31, 2007

~~(S)~~ Performance

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|---|--------------------------|------------------------|------------------------|-------------------|------------------|------------|--------------|
| Interoperability | (b)(1) | | | TBD | (b)(1) | | C |
| Probability of Kill w/threat shutdown | | | | TBD | | | C |
| Availability (Ao) | | | | TBD | | | C |
| Probability of Correct ID of a Valid Target Emitter | | | | TBD | | | C |
| Frequency Range | | | | TBD | | | C |
| Probability of Emitter Identification | | | | TBD | | | C |
| Probability of Emitter | | | | TBD | | | C |

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AGM-88E (AARGM), December 31, 2007

| Performance Characteristics | SAR Development Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|---------------------------------------|--------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|
| Identification | (b)(1) | | | | (b)(1) | | |
| Probability of Emitter Identification | | | | TBD | | | |

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- (U) Acronyms:
- Ao Availability
 - GHz Giga Hertz
 - ID Identification
 - IER Information Exchange Requirements
 - P-ki Probability of Firepower Kill
 - P-kk Probability of Catastrophic Kill
 - TBD To be Determined

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N-4 CEC

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Defense Acquisition
Management Information
Retrieval (DAMIR)



Selected Acquisition Report
(SAR)

Classified Annex

RCS: DD-A&T(Q&A)823-582



Signal Data Processor (SDP)



Planar Array Antenna
Assembly (PAAA)

CEC

AS OF DATE: December 31, 2007

Classified by: ~~SECRET~~

Reason:

Derived from:

Downgrade instructions: OPNAVINST S5513.3 ID (03C 119.5) of 1 November 1999

Declassify on: X3

No Security Objection
to Open Publication
~~AS AMENDED~~

OS-C-0118
MAR 20 2008

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CEC, December 31, 2007

~~(S)~~ Performance

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Performance | Current Estimate | Change Num | Class |
|---|---|---|--|--------------------------|---|------------|-------|
| Track Base Size | (b)(1) | | | | | | (U) |
| Track Measurement Update Rate | | | | | | | (U) |
| Local | | | | | | | (U) |
| Remote | | | | | | | (U) |
| Operational Availability | | | | | | | (U) |
| Data Rate (without any Compression Technology Implemented) (Mbps) | (b)(1) | | | | | | (U) |
| Anti-jam Resistance (kW/MHz) | | | | | | | (U) |
| Interoperability | | | | | | | (U) |
| Information Exchange Requirements (IER) | 100% of top-level IERs | 100% of top-level IERs. | 100% of top-level IERs designated critical | PASS | 100% of top-level IERs. | | (U) |
| Track File Consistency | Integration will improve track file consistency in each host system | CEC integration will improve track file consistency as measured in each host system | CEC integration must not degrade track file consistency (0% degradation) as measured in each host system | PASS | CEC integration will improve track file consistency as measured in each host system | | (U) |

(U) Acronyms:

CEC Cooperative Engagement Capability

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CEC, December 31, 2007

| | |
|------|-----------------------------------|
| IER | Information Exchange Requirements |
| KW | Kilowatts |
| Mbps | Mega bytes per second |
| MHz | MegaHertz |

-3-

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N-17 JSOW

~~***Confidential***~~



Defense Acquisition
Management Information
Retrieval (DAMIR)



Selected Acquisition Report
(SAR)

Classified Annex

RCS: DD-A&T(Q&A)823-766



JSOW

AS OF DATE: December 31, 2007

~~Classified by: Program Executive Officer, Unmanned Aviation and Strike Weapons~~

~~Reason: EO 12958, as amended Nov 2005; 1.4(a), 1.4(c), 1.4(g).~~

~~Derived from: MULTIPLE SOURCES~~

~~Downgrade instructions:~~

~~Declassify on: 13 Dec 2019~~

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JSOW, December 31, 2007

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AS AMENDED
SECURITY

~~(C)~~ Performance

Baseline/BLU-108

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Performance | Current Estimate | Change Num | Class |
|--|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|------------|-------|
| Launch Envelope | | | | | | | (U) |
| Airspeed (IMN/KCAS) | .50 to .95/300 to 600 | .50 to .95/300 to 600 | .60 to .95/350 to 550 | .6 to .95 | .50 to .95/300 to 600 | Ch-1 | (U) |
| Off Axis Launch Angle | +/-30 | +/-30 | +/-30 | +/-180 | +/-180 | | (U) |
| Survivability | IAW Sys Spec (SD-901-1) | IAW Sys Spec (SD-901-1) | IAW Sys Spec (SD-901-1) | IAW Sys Spec (SD-901-1) | IAW Sys Spec (SD-901-1) | | (U) |
| Accuracy (CEP) | | | | | | | (U) |
| Weapon (Air Vehicle) (ft) | 70 | 70 | 91 | 50.6 | 50.6 | Ch-2 | (U) |
| Reliability | | | | | | | (U) |
| System Mission | .85 | .95 | .85 | .98 | .98 | Ch-1&2 | (U) |
| Range (nm from launch at specified conditions) | | | | | | | (U) |
| Low Altitude (NM) | >or=15 (200 ft MSL, .8 IMN) | >or=15 (200 ft MSL, .8 IMN) | >or=12 (500 ft MSL, .8 IMN) | >or=12 (500 ft MSL, .8 IMN) | >or=12 (500 ft MSL, .8 IMN) | | (U) |
| High (NM @30K ft MSL, .8 IMN) | >50 | >50 | >40 | 63 | 63 | Ch-1 | (U) |
| BLU-108 System | | | | | | | (U) |
| Weapon Effectiveness (Kill per Weapon) Non-Countermeasures Environment | (b)(1) | | | | | | (U) |
| Reliability | | | | | | | (U) |

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JSOW, December 31, 2007

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Performance | Current Estimate | Change Num | Class |
|-----------------------------|-------------------------|------------------------|------------------------|--------------------------|------------------|------------|-------|
| System Mission | .79 | .89 | .79 | .959 | N/A | Ch-1&3 | (U) |

(U) Acronyms:

AGL = Above Ground Level
CEP = Circular Error Probable
IAW = In Accordance With
IMN = Indicated Mach No.
KCAS = Knots Calibrated Air Speed
LBA = Limits of Basic Airframe
MSL = Mean Sea Level
NM = Nautical Mile

(U) Ch-1: Classification downgraded from ~~Confidential~~ to Unclassified in accordance with latest Security Classification Guide.

(U) Ch-2: Demonstrated performance and current estimate for Weapon (Air Vehicle) Accuracy (CEP) (ft) updated from 35 to 50.6 and System Mission Reliability updated from .88 to .98 to reflect the cumulative results of testing to date.

(U) Ch-3: Current estimate for BLU-108 System Mission reliability changed from .959 to N/A to reflect the historical decision to defer production until the threat evolves (PB03).

Unitary

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|------------------------------------|-------------------------|------------------------|------------------------|-----------------------|-----------------------|------------|-------|
| Launch Envelope | | | | | | | (U) |
| Airspeed (IMN/KCAS) | .50 to .95/300 to 600 | .50 to .95/300 to 600 | .60 to .95/350 to 550 | .81 to .95 | .50 to .95/300 to 600 | Ch-1 | (U) |
| Off Axis Launch Angle (deg) | +/-30 | +/-30 | +/-30 | +/-180 | +/-180 | | (U) |
| Survivability | IAW Sys spec SD-901-1 | IAW Sys spec SD-901-1 | IAW Sys spec SD-901-1 | IAW Sys Spec SD-901-1 | IAW Sys Spec SD-901-1 | | (U) |
| Accuracy (CEP) | | | | | | | (U) |
| Weapon (ft) | 10 | 10 | 10 | 4.5 | 4.5 | Ch-2 | (U) |
| Weapon (Air Vehicle) (ft) | 70 | 70 | 91 | 4.7 | 7.68 | Ch-3&4 | (U) |
| Range (nm from launch at specified | | | | | | | (U) |

-3-
~~***Confidential***~~

~~***Confidential***~~

JSOW, December 31, 2007

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|--------------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------|-----------------------------|------------|-------|
| conditions) | | | | | | | |
| Low Altitude (NM) | >or=15 (200 ft MSL, .8 IMN) | >or=15 (200 ft MSL, .8 IMN) | >or=12 (500 ft MSL, .8 IMN) | >12 | >or=12 (200 ft MSL, .8 IMN) | | (U) |
| High (NM @ 30K ft MSL, .8 IMN) | >50 | >50 | >40 | 63 | 63 | Ch-1&5 | (U) |
| Reliability | | | | | | | (U) |
| System Mission | .95 | .95 | .85 | .913 | .913 | Ch-1&2 | (U) |

(U) Acronyms:

AGL = Above Ground Level
CEP = Circular Error Probable
IAW = In Accordance With
IMN = Indicated Mach No.
KCAS = Knots Calibrated Air Speed
LBA = Limits of Basic Airframe
MSL = Mean Sea Level
NM = Nautical Mile

(U) Ch-1: Classification downgraded from ~~Confidential~~ to Unclassified in accordance with latest Security Classification Guide.

(U) Ch-2: Demonstrated performance and current estimate for Weapon Accuracy (CEP) updated from 4.12 to 4.5 (ft) and System Mission Reliability updated from .917 to .913 to reflect the cumulative results of testing to date.

(U) Ch-3: Demonstrated performance for Weapon (Air Vehicle) Accuracy (CEP) updated from 78 to 4.7 (ft) to reflect the results of Block II testing.

(U) Ch-4: Current estimate of performance for Weapon (Air Vehicle) Accuracy (CEP) updated from 78 to 7.68 (ft) to reflect performance predicted in Six Degrees of Freedom Navigation Simulation Scenarios.

(U) Ch-5: Updated demonstrated performance and current estimate for Range-High (NM@30Kft MSL, .8 IMN) from >60 to 63 to reflect current estimate of Kinematic range demonstrated in flight test.

-4-
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Defense Acquisition
Management Information
Retrieval (DAMIR)



Selected Acquisition Report
(SAR)

Classified Annex

RCS: DD-A&T(Q&A)823-831



Longbow Apache

AS OF DATE: December 31, 2007

~~Classified by:~~

~~Reason:~~

~~Derived from:~~

~~Declassify on: 1 May 2030~~

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Program Name, December 31, 2007

~~(S)~~ Performance

| Performance Characteristics | SAR Production Estimate | Approved APB Objective | Approved APB Threshold | Demonstrated Perf | Current Estimate | Change Num | Class |
|---|-------------------------|------------------------|------------------------|-------------------|------------------|------------|-------|
| Vertical Rate of Climb for AH-64D with FCR Mission Kit (ft/min) | 450 | 450 | 450 | 705 | 450 | | (U) |
| Ordnance Load (primary mission config) | | | | | | | (U) |
| Hellfire (no.) | 16 | 16 | 12 | 8 | 12 | | (U) |
| Target Handover | No degradation | No degradation | 15% degradation | 13% Degradation | No degradation | | (U) |
| (b)(1) | | | | | | | |
| Ao, Operational Availability (%) of AH-64D w/FCR Kit | 79 | 79 | 75 | 91.4 | 79 | | (U) |

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(U) Acronyms:

FCR - Fire Control Radar

RF - Radar Frequency

The objective for Ordnance Load (primary mission configuration) refers to AH-64A goal. The Longbow primary mission configuration is 8 Longbow Hellfire missiles, and 320 30mm rounds.