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Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 6: RDT&E Management Support</i>					R-1 Program Element (Number/Name) PE 0604258N / <i>Target Systems Development</i>							
COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
Total Program Element	0.000	66.251	71.152	36.662	-	36.662	1.296	1.326	1.356	1.389	Continuing	Continuing
0609: <i>Aerial Target System Dev</i>	0.000	60.039	38.098	11.310	-	11.310	0.000	0.000	0.000	0.000	0.000	109.447
0610: <i>Wpn Sys T&E Trng Dev/ Proc</i>	0.000	0.000	31.818	24.094	-	24.094	0.000	0.000	0.000	0.000	0.000	55.912
0612: <i>Surface Targets Development</i>	0.000	1.262	1.236	1.258	-	1.258	1.296	1.326	1.356	1.389	Continuing	Continuing
2159: <i>ASW TARGET</i>	0.000	4.950	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	4.950

A. Mission Description and Budget Item Justification

This program element funds the development and procurement of Aerial Target Systems, Sea/Sub Surface Target Systems, Target Control systems, and associated Target Threat Simulation Program and Target Augmentation and Auxiliary Systems required to replicate real world threats. These capabilities are required to execute developmental/operational test and evaluation of naval combat weapon systems and to satisfy advanced fleet training requirements.

JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under RESEARCH, DEVELOPMENT, TEST AND EVALUATION MANAGEMENT SUPPORT because it supports efforts directed toward sustaining or modernizing installations or operations required for general research, development, test and evaluation.

B. Program Change Summary (\$ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Previous President's Budget	66.718	112.606	102.984	-	102.984
Current President's Budget	66.251	71.152	36.662	-	36.662
Total Adjustments	-0.467	-41.454	-66.322	-	-66.322
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-41.454			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.862	0.000			
• SBIR/STTR Transfer	-1.329	0.000			
• Program Adjustments	0.000	0.000	-64.406	-	-64.406
• Rate/Misc Adjustments	0.000	0.000	-1.916	-	-1.916

Change Summary Explanation

Decrease in Target Systems Development by \$1.500M as required for the Department of the Navy to comply with the Bipartisan Budget Act of 2015.

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<p>FY15 was increased by a \$0.862 million to GQM-173A Multi-Stage Supersonic Target (MSST) as additional funds were required to support the GQM-173A RDTEN range extension activities for integration of a new booster intended to significantly reduce technical and schedule risk in Development Testing efforts.</p> <p>In FY16, Aerial Target System Development was decreased by \$37.4M for termination of the MSST program and ASW Target was reduced by \$4.054M for Parrotfish program termination. All associated MSST investment funding has been removed from Aerial Target System Development in FY 2017 (\$56.025M) and future years for the program termination by the Department of the Navy.</p> <p>In FY17 Wpn Sys T&E Trng Dev/Proc (Full-Scale Aerial Target (FSAT) QF-16 and FSAT/QF-4 programs) was reduced by \$6.4 million for underexecution & ASW Target was reduced by \$1.505 million to cancel the program.</p>		

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy										Date: February 2016		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0604258N / <i>Target Systems Development</i>				Project (Number/Name) 0609 / <i>Aerial Target System Dev</i>			
COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
0609: <i>Aerial Target System Dev</i>	0.000	60.039	38.098	11.310	-	11.310	0.000	0.000	0.000	0.000	0.000	109.447
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The mission of the Aerial Target Systems Development program is the design and development of threat representative subsonic and supersonic aerial targets that simulate threat weapon systems. In addition to representative air vehicles, this includes development of Target Control (TC) systems, and associated Target Augmentation and Auxiliary Systems (TA/AS) which are used to replicate specific threats. Targets are developed to support test and evaluation of combat systems required to defend fleet surface and air units in a hostile environment. As to specific hardware development, this project includes:

- Supersonic Targets: GQM-163A Supersonic Sea-Skimming Target (SSST) and GQM-173A Multi-Stage Supersonic Target (MSST) . Supersonic targets represent supersonic anti-ship cruise missile threats. The design and development of GQM-163A SSST capabilities provide threat representative targets that are used in direct support of Developmental Test and Evaluation, Operational Test and Evaluation, and Live Fire Test and Evaluation of major combat weapons programs and, to a lesser degree, support fleet training. GQM-163A is a non-recoverable supersonic sea skimming aerial target, capable of speeds in excess of Mach 2.5 and cruise altitudes from 15 to 66 ft. The GQM-163A has also demonstrated a capability to perform a higher altitude diving threat profile. Funding is also provided for closing out the GQM-173A MSST development effort.
- Subsonic Targets: BQM-177A Subsonic Aerial Target (SSAT) development primarily represents subsonic anti-ship cruise missile threats, replacing legacy BQM-34 and BQM-74 targets with a modernized subsonic target with increased capabilities. The BQM-177A SSAT provides threat representation for developmental and operational Test & Evaluation events of major combat weapons systems programs and in support of fleet training events. Specifically, the BQM-177A provides critical live-fire Test and Evaluation events for AEGIS, SM-6, SM-2, RAM, and ESSM.
- TTSP and TC and TA/AS development: The Target Threat Simulation Program (TTSP) provides the payload equipment required to electronically enhance aerial/ surface targets to provide threat representative Radio Frequency signatures, specifically the Electronic Attack and Threat Radar Emissions (Active Emitters). TC provides command and control of targets to enable the execution of threat-representative mission profiles. The mission also includes the design, development and qualification of various Target Mission Support Systems including but not limited to: Scalar Scorers, Scoring Ground Station, Telemetry Antennas, Radar and Locator Beacons, Identification, Friend or Foe, and associated Test Sets. TA/AS enables each target to be uniquely configured for specific mission profiles and provide high fidelity simulation of foreign threats. TA/AS-configured targets are used for radar acquisition test, electronic countermeasures (jamming) evaluation, infrared measurement and testing, radar cross section evaluation, decoy-effectiveness testing, maneuver analysis, electronic warfare evaluation, warhead-effectiveness testing and evaluation of fleet tactics. TA/AS scoring capabilities include both surface and airborne scalar and vector scoring systems.

In addition to the design and development of target hardware and software, funding supports studies performed by a University Affiliated Research Center (UARC) to specify and verify needed target performance for future target development. For the design and validation of targets under development, the UARC will provide

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Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0604258N / <i>Target Systems Development</i>	Project (Number/Name) 0609 / <i>Aerial Target System Dev</i>
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engineering studies in areas such as structures, controls, guidance, and propulsion. For those hardware and software items presently under development by commercial vendors, the UARC will provide oversight and validation of vendor design and development approach.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
<p>Title: Supersonic Targets</p> <p align="right">Articles:</p> <p>Description: Provides funding for the development of GQM-163A upgrades/evolutionary development to keep pace with evolving threat characteristics. Efforts include continued development of performance envelope characteristics to include flight termination performance and quad launch capability. Funding will also support closeout of the GQM-173 development effort.</p> <p>FY 2015 Accomplishments: Completed GQM-173 Captive Carry Phase II and III testing and performed a subsystem level vehicle flight test. Continued ground testing and began validation of the models and simulations. Conducted Program Management Reviews (PMR), System Functional Review, and technical design meetings. Commenced improvements to the GQM-163 quad launch capability infrastructure to accommodate an increased number of targets from two to four.</p> <p>FY 2016 Plans: Commencement of shutdown activities in support of pending GQM-173A Multi-Stage Supersonic Target program termination, which includes closeout of ground and captive carry testing, Sprint Vehicle subsystem level flight tests, and validation of the models and simulations utilizing the Hardware In the Loop test bed. Continue the GQM-163A Supersonic Sea Skimming Targets Quad Launch effort, which will provide the required improvements in the current infrastructure of the launch capability to accommodate the increased number of targets from two to four. Commence Radome and Radar Altimeter design and development efforts and Orbital Front End System space allocation studies for SSST.</p> <p>FY 2017 Base Plans: N/A</p> <p>FY 2017 OCO Plans: N/A</p>	47.805	21.653	0.000	0.000	0.000
Articles:	1	-	-	-	-
<p>Title: Subsonic Targets</p> <p align="right">Articles:</p>	7.984	9.464	5.571	0.000	5.571
Articles:	-	-	-	-	-

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
<p>Description: The BQM-177A Subsonic Aerial Target represents subsonic anti-ship cruise missile threat in direct support of the Test & Evaluation of major combat weapons systems programs and fleet training. It is the follow-on to the BQM-74 and BQM-34 targets, featuring increased speed, longer range, lower cruise altitudes and greater maneuverability.</p> <p>FY 2015 Accomplishments: Continued testing for qualification of software functionality and Rocket Assisted Take Off (RATO)/structures. Conducted design reviews and flight tests to validate integrity of target. Provided government program management, engineering and logistics support and contract support services towards accomplishment of developmental efforts.</p> <p>FY 2016 Plans: Complete testing for qualification of RATO/structures. Continue to conduct design reviews and complete flight tests to validate integrity of target and address deficiencies when discovered. Provide government program management, engineering and logistics support and contract support services towards accomplishment of developmental efforts.</p> <p>FY 2017 Base Plans: Complete Navy led flight testing to support a Milestone C/procurement decision and award the Low Rate Initial Production (LRIP) 1 contract. Continue to review final design documents and perform required target characteristic testing to support key performance parameters and attributes. Provide government program management, engineering and logistics support and contract support services towards the completion of the engineering, manufacturing and developmental efforts of the BQM-177A Subsonic Aerial Target for transition to LRIP2 and Full Rate Production efforts in FY18.</p> <p>FY 2017 OCO Plans: N/A</p>					
<p>Title: Target Threat Simulation Program (TTSP), Target Control (TC) and Target Augmentation and Auxiliary Systems (TA/AS)</p> <p align="right">Articles:</p> <p>Description: Continue to support the development of TC and TA/AS capable of supporting Test and Evaluation (T&E) and fleet training activities. TC involves the improved command and control systems capable of</p>	4.250 -	6.981 -	5.739 -	0.000 -	5.739 -

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Continue development, prototype and integration of threat electronic attack & active emitter simulators. Gather and exploit threat intelligence. Support the development and qualification of TMSS. <i>FY 2017 OCO Plans:</i> N/A					
Accomplishments/Planned Programs Subtotals	60.039	38.098	11.310	0.000	11.310

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017 Base</u>	<u>FY 2017 OCO</u>	<u>FY 2017 Total</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• WPN 228000: <i>Aerial Targets</i>	45.683	40.792	137.484	-	137.484	140.770	142.854	145.253	148.068	Continuing	Continuing
• WPN 612020: <i>Initial Spares</i>	1.094	1.116	1.316	-	1.316	2.225	1.496	1.513	1.544	Continuing	Continuing

Remarks

D. Acquisition Strategy

Supersonics: The GQM-163A Supersonic Sea-Skimming Target (SSST) will continue and complete development of the Quad Launch capability. The SSST program will also commence the development and design efforts for a new Radome and Radar Altimeter required to emulate emerging threat systems and begin Orbital Front End System space allocation studies. Commencing in FY 2016, MSST development and testing activities and associated follow-on procurement have been terminated by the Department of the Navy.

Subsonics: The BQM-177A Subsonic Aerial Target program is an Acquisition Category IVM. The program is currently undergoing extensive developmental testing with Critical Design Review to be completed 1st Quarter FY16. The Test Readiness Review / Flight Readiness Review is scheduled to be completed in 3rd Quarter FY16 with Milestone C achievement in 1st Quarter FY17. IOC is scheduled for 4th Quarter FY18 and acquisition requirements are in-work for a sole-source Firm Fixed Price follow-on Full Rate Production contract with anticipated award in 1st Quarter FY19.

Target Threat Simulation Program (TTSP), Target Control, and Target Augmentation and Auxiliary Systems: TTSP will continue to award contracts to support the development of electronic attack & threat simulations. Additional contracts will be awarded to support the development and design of Target Mission Support Systems upgrades.

E. Performance Metrics

EFFORT	PERFORMANCE REQUIREMENT	OBJECTIVE	THRESHOLD	TEST RESULT
BQM-177	Maximum Speed at Low Altitude	0.95 M @ 6.6 ft @	0.90 M @10.0 ft @	TBD

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EMD program	[Mach (M) at feet (ft) above wave crest at WMO Sea State conditions]	Sea State 5	Sea State 3

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Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0604258N / <i>Target Systems Development</i>				Project (Number/Name) 0610 / <i>Wpn Sys T&E Trng Dev/Proc</i>			
COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
0610: <i>Wpn Sys T&E Trng Dev/Proc</i>	0.000	0.000	31.818	24.094	-	24.094	0.000	0.000	0.000	0.000	0.000	55.912
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides for the development and procurement of aerial targets and associated systems used exclusively for test and evaluation of naval weapons systems which closely represent current and projected threats to fleet units in the joint strike and the littoral warfare environments. These representations must include characteristics related to size, performance envelope, and electromagnetic and infrared signatures. As threats change, changes must be made to keep the targets threat representative in response to changes in the test requirements of the developers of naval weapons systems.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Title: QF-16 Full-Scale Aerial Target (FSAT)	0.000	31.000	24.094	0.000	24.094
Articles:	-	5	4	-	4
<p>Description: The QF-16 FSAT is being developed as a 4th generation full scale threat representative target providing a replacement to the existing FSAT/QF-4 which are maintained and operated by the Air Force. The QF-16 is a converted F-16 aircraft that provides a supersonic, high altitude, remote-controlled aerial target. This target will have full command and control capability through normal flight maneuvers. The FSAT target presentations will support aircraft and weapons systems testing and development, including that of the Joint Strike Fighter, AIM-9X Sidewinder missile, AIM-120 Advanced Medium Range Air-to-Air Missile, and Standard Missile-6.</p> <p>FY 2015 Accomplishments: N/A</p> <p>FY 2016 Plans: Procure five (5) QF-16 FSAT test assets; Conduct regeneration and conversion of QF-16 aircraft retrieved from Davis Monthan AFB storage. Conduct FY16 missions and standup the QF-16 at Tyndall, AFB and Hollman, AFB.</p> <p>FY 2017 Base Plans:</p>					

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Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0604258N / <i>Target Systems Development</i>	Project (Number/Name) 0610 / <i>Wpn Sys T&E Trng Dev/Proc</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Procure four (4) QF-16 FSAT test assets; Conduct regeneration and conversion of QF-16 aircraft retrieved from Davis Monthan AFB storage. FY 2017 OCO Plans: N/A					
Title: QF-4 Full-Scale Aerial Target (FSAT) Description: The QF-4 FSAT is a supersonic, high altitude, remote-controlled aerial target. This target has full command and control capability through normal flight maneuvers. The program will include engineering and logistics support for the FSAT, including aviation depot level repairables and procurement of kit material. The QF-4 target presentations support aircraft and weapons systems testing and development, including that of the Joint Strike Fighter, AIM-9X Sidewinder missile, Advanced Medium Range Air-to Air Missile and Standard Missile 6. FY 2015 Accomplishments: N/A FY 2016 Plans: Conduct FY16 missions with Air Force QF-4's at Hollman, AFB. FY 2017 Base Plans: N/A FY 2017 OCO Plans: N/A	0.000	0.818	0.000	0.000	0.000
Articles:	-	-	-	-	-
Accomplishments/Planned Programs Subtotals	0.000	31.818	24.094	0.000	24.094

C. Other Program Funding Summary (\$ in Millions) N/A
Remarks
D. Acquisition Strategy A Memorandum of Agreement was signed between the United States Navy (USN) and The United States Air Force (USAF) for QF-16 Full-Scale Aerial Target Program. Milestone C was achieved in 1st Quarter FY14. IOC is planned for 3rd Quarter FY16.

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The Navy is using RDT&E funding to procure the QF-16s because they are used/expended to satisfy RDT&E requirements.

E. Performance Metrics

EFFORT	PERFORMANCE REQUIREMENT	OBJECTIVE	THRESHOLD	TEST RESULT
QF-4 Full Scale Aerial Target	Flight Termination Sys.- Reliable & effective auto & manual failsafe fast destruct, orbit destruct, & destruct receiver capability	Achieve requirement	Threshold=objective	Satisfactory
QF-16 FSAT Superiority Target	Drone Mission Performance Payload Integration carry, operation & monitoring TEMS, ALE-47, AIM-9, ALQ-188, ALQ-167 ALE-56 & 300 Gallon Fuel Tank	Achieve requirement Achieve requirement	Threshold=objective Threshold=objective	TBD TBD

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Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0604258N / <i>Target Systems Development</i>				Project (Number/Name) 0612 / <i>Surface Targets Development</i>			
COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
0612: <i>Surface Targets Development</i>	0.000	1.262	1.236	1.258	-	1.258	1.296	1.326	1.356	1.389	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project develops seaborne targets and their related target augmentation systems in support of air-to-surface and surface-to-surface weapons test and evaluation and fleet training.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Title: Surface Targets Development	1.262	1.236	1.258	0.000	1.258
Articles:	-	-	-	-	-
FY 2015 Accomplishments: Researched target modifications and operational changes to reduce Explosive Ordnance Disposal (EOD) involvement during exercises involving High Explosive (HE) or tracer rounds. Developed electronic steering remote control interface for powered seaborne targets. Supported software development and continued testing of single hardware platform for Portable Command and Control Unit (PCCU) and System for Naval Target Control (SNTC). Tested PCCU ground station enhancements to allow remote control of more than 15 independent seaborne targets. Reviewed existing capabilities of program of record (POR) seaborne targets inventory with regard to threats, weapons test schedules and evolving fleet training requirements. Continued refining design and fabrication of passive radio frequency (RF) reflectors across varied aperture lengths to reduce unit cost and ease fabrication. Researched additional lower cost manufacturing and fielding methods for POR targets.					
FY 2016 Plans: Develop predictive models for response of Low Cost Modular Target (LCMT) and Polyethylene Tow Target (PETT) behind weaving tow vessels. Develop stability-in-sea-state analysis tool to customize configurations of LCMT. Conduct test and evaluation of basic formation algorithms with High Speed Maneuverable Surface Target (HSMST). Develop advanced target swarm formations with real-time group reassignments. Develop enhanced precision for real-time scoring banner on seaborne targets. Develop real-time display of weapon system lethality utilizing human target system (Humannequin). Integrate SeaCAN on-board remote control system with new platform and systems for Fast Attack Craft Target (FACT). Test new FACT platform performance and measure					

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
radar cross section and infrared signatures. Develop improved target navigation control tools for Portable Command and Control Unit (PCCU).					
<i>FY 2017 Base Plans:</i> Develop graphical user interface (GUI) for target formation control during swarm training and test and evaluation exercises. Implement advanced control modes. Integrate and test target collision avoidance hardware and software algorithms. Develop and implement additional on-screen graphics to support complex target presentations. Measure and populate data in stability software tool to include additional target platforms. Research development of predictive algorithms for stability of dynamic towed targets at higher speeds. Develop advanced radar and infrared signature enhancement for powered targets. Monitor developments in Command and Control and support developments for System for Naval Target Control (SNTC) applicable to seaborne targets.					
<i>FY 2017 OCO Plans:</i> N/A					
Accomplishments/Planned Programs Subtotals	1.262	1.236	1.258	0.000	1.258

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017 Base</u>	<u>FY 2017 OCO</u>	<u>FY 2017 Total</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• OPN/5429: ASW SE	0.000	14.593	12.319	-	12.319	10.501	10.733	10.962	11.189	0.000	70.297

Remarks

D. Acquisition Strategy

Not applicable.

E. Performance Metrics

Review capability of inventory with respect to threat, weapons test schedules and fleet training requirements. OBJECTIVE: Available inventory of seaborne targets to meet fleet requirements.

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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
2159: <i>ASW TARGET</i>	0.000	4.950	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	4.950
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Provide performance improvements to MK39 Mod 2 Expendable Mobile ASW Training Targets (EMATT) and MK30 Mod 1 Targets programs to address identified performance shortfalls in the current Fleet of ASW Targets and to provide technology development for the next-generation ASW Target programs to stimulate higher fidelity active sonar systems and torpedo sonar systems which have expanded frequency coverage than current systems. These sonar and torpedo systems are being fielded on the P-8, SH-60R, and AN/SQQ-89 capable surface ships and the MK54 Mod 0 and MK48 Mod 7 Torpedoes. Dynamically the target needs to emulate both low and high speed ends of threat submarines performance envelope to provide required training realism.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Title: ASW Target Development	4.950	0.000	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2015 Accomplishments: FY2015 funded efforts addressed MK39 EMATT performance shortfalls which included upgrading the MK39 EMATT Graphical Unit Interface (GUI) to work with Windows 7 or later operating system; perform an analysis to identify a more robust hardware interface solution; and identify the scope of effort required to make the Portable Target Programmer (PTP) Information Assurance (IA) compliant. Funding was also provided to integrate the results of the ASW Trade Study Analysis Report into the MK39 EMATT program and upgrade MK39 EMATT Acoustic Response to integrate with MK54 Mod 1 Torpedo and Sonar Active/Passive frequencies.					
FY 2016 Plans: N/A					
FY 2017 Base Plans: N/A					
FY 2017 OCO Plans: N/A					
Accomplishments/Planned Programs Subtotals	4.950	0.000	0.000	0.000	0.000

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Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0604258N / <i>Target Systems Development</i>	Project (Number/Name) 2159 / <i>ASW TARGET</i>

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u> <u>Base</u>	<u>FY 2017</u> <u>OCO</u>	<u>FY 2017</u> <u>Total</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 3141: <i>ASW Targets</i>	2.515	3.353	9.302	-	9.302	10.812	11.018	11.243	11.472	0.000	7,194.715

Remarks

D. Acquisition Strategy

Not applicable

E. Performance Metrics

- Frequent IPT meetings with contract and government technical program personnel.
- Rigorous acoustic, environmental and in-water dynamic test program.
- Complete DMEA LMS MK39 EMATT Acoustic Response Contract Delivery Order.
- Integrate the results of the ASW Trade Study Analysis Report into the MK39 EMATT Acoustic Response Effort.
- Complete MK39 EMATT Graphical Unit Interface (GUI) efforts with Windows 7 efforts.

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