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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Navy	Date: May 2017
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Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 6: RDT&E Management Support</i>					R-1 Program Element (Number/Name) PE 0605873M / <i>Marine Corps Program Wide Supt</i>							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	0.000	14.129	22.247	21.751	-	21.751	21.994	22.439	22.867	23.299	Continuing	Continuing
0030: <i>Studies & Analysis/MC</i>	0.000	1.214	7.876	6.133	-	6.133	5.012	5.116	5.226	5.329	Continuing	Continuing
0033: <i>OT&E Support</i>	0.000	12.584	12.281	13.643	-	13.643	15.377	15.696	15.982	16.277	Continuing	Continuing
2330: <i>Chem Bio Consequence Mgmt</i>	0.000	0.331	2.090	1.975	-	1.975	1.605	1.627	1.659	1.693	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element (PE) provides the analytical foundation for the Marine Corps Studies System (MCSS), including mandated Mission Area Analyses and Cost and Operational Effectiveness Analyses. The MCSS is the front end of the Marine Corps' acquisition system. This PE also supports the material acquisition process as follows: managing the Marine Corps Operational Test and Evaluations (OT&E); providing Chem Bio Consequence Management of capabilities for Weapons of Mass Destruction (WMD) incident response forces; and conducting Phase A activities to investigate potential material solutions that validate needs, program costs, business decisions, and prevent undue delays in pursuing priority requirements.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	13.627	22.247	17.875	-	17.875
Current President's Budget	14.129	22.247	21.751	-	21.751
Total Adjustments	0.502	0.000	3.876	-	3.876
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.555	0.000			
• SBIR/STTR Transfer	-0.053	0.000			
• Program Adjustments	0.000	0.000	3.750	-	3.750
• Rate/Misc Adjustments	0.000	0.000	0.126	-	0.126

Change Summary Explanation

The decrease from FY17 to FY18 of \$.495M reflects an adjustment of funding back to normal operational levels. FY17 funding supported an increase in studies, operations research and analyses, and modeling and simulation to support the Commandant's Planning Guidance (CPG), Defense Planning Guidance, Quadrennial Defense Review (QDR), Chairman's Joint Force Assessment, Chairman's Strategic Seminar Series Wargames, Annual Joint Staff Force Sufficiency Assessments, and POTUS.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy										Date: May 2017		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605873M / Marine Corps Program Wide Supt				Project (Number/Name) 0030 / Studies & Analysis/MC			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
0030: Studies & Analysis/MC	0.000	1.214	7.876	6.133	-	6.133	5.012	5.116	5.226	5.329	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Marine Corps Requirements Oversight Council (MROC), has established Operations Analysis Directorate (OAD), as the sole operations research, analytic support, and studies management program for the Marine Corps Study System (MCSS). OAD provides Senior Military Leadership with a comprehensive understanding of operations and advanced analytic and statistical support. In compliance with Executive Order #13589 OAD's major focus is achieving greater efficiency, productivity, and innovation through operations research methodologies such as: statistical analysis, multi-objective decision methods, optimization, cost analysis, and a wide range of computer-based models and combat simulations. Division analysts are credited with innovations in analysis of amphibious operations and Irregular Warfare (IW) that have expanded state-of-the-art operations research methods across DOD. OAD quantifies resource allocation decisions pertaining to weapon systems, strategic personnel, training management, and equipment acquisition. Efforts are guided by the Commandant's Strategic Plan and Planning Guidance.

Future studies support Marine Air-Ground Task Forces (MAGTF's) and Marine Expeditionary Units (MEU's) with research analysis and modeling and simulation focused on aviation, amphibious, and ground operations enhancing the ability of the Marine Corps to increase operational, logistical and equipment efficiencies and capabilities and provide a unique, well trained, equipped and educated force.

This program element has been revised into two specialized analytical divisions: (1) External Analysis Division (EAD) - responsible for providing joint external analysis is the Marine Corps' sole representative in the joint modeling arenas. Provides deployed on site professional operations analysis support to Special Purpose MAGTFs in CENTCOM and AFRICOM. (2) Combat Development Analysis Division responsible for executing a select portfolio of studies for senior leadership, Capabilities Based Assessment (CAB) and Marine Corps Enterprise Integration Plan (MCEIP).

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

	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: Studies & Analysis/MC	1.214	7.876	6.133	0.000	6.133
Articles:	-	-	-	-	-
Description: The Marine Corps Studies System (MCSS), the sole responsibility of the Operations Analysis Directorate (OAD), Combat Development and Integration (CD&I), Marine Corps Combat Development Command (MCCDC) provides research and analysis to ensure a greater understanding of issues and alternatives concerning organizations, tactics, doctrine, policies, force plans, strategies, procedures, intelligence, weapon selection, systems' programs and resource allocation. Through the MCSS, the Marine Corps nominates, approves, commences, manages and distributes the resultant analytical products. Efforts are evaluated and selected by the Studies Requirements Review Board (SRRB) and approved by the CG, Combat Development					

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
and Integration (CD&I)and is targeted to a particular audience that understands current and future USMC mission requirements and the need for comprehensive analyses that meets the Commandant's Strategic Goals, supports and protects forces in theater, and utilizes funds efficiently. Research conducted produces comprehensive and integrated analyses aligned to Senior Leadership's requirements and decision timelines. The decrease from FY17 to FY18 of \$1.743M reflects an adjustment of funding back to normal operational levels. FY17 funding supported a significant increase in studies, operations research and analyses, and modeling and simulation to support the Commandant's Planning Guidance (CPG), Defense Planning Guidance, Quadrennial Defense Review (QDR), Chairman's Joint Force Assessment, Chairman's Strategic Seminar Series Wargames, Annual Joint Staff Force Sufficiency Assessments, and POTUS. FY 2016 Accomplishments: - Continued all efforts initiated in FY15 and FY16 unless noted as completed below. - Completed: Phase I MCFIP efforts; Amphibious Ship risk assessments Phase I; MAGTF-CR Phase I - Initiated: The Marine Corps Studies System (MCSS) funded study initiatives to implement the Assistant Secretary of Defense for Research and Engineering (ASD(R&E)) strategic plan for defense basic research. This plan defines specific and quantifiable actions to help create conditions for defense basic research investments capable of creating high-payoff, transformative breakthroughs for DoD though research, analysis, and modeling and simulation. Areas of concentration included: Ground Based Simulation Training; Wartime Medical Requirements; GBAD Weapons Systems Phase II, Cyber and Manpower Allocations. FY 2017 Plans: - Continue all efforts not completed in FY16. - Complete: Modeling Simulation and Analytical Support Toolkit (MSAT) Phase III. - Initiate: FY17 funding supports 55+ new studies to include follow on Phase II and Phase III prior year efforts and areas of concentrated Manpower/Personnel; Intelligence, Information and Networks; Plans, Policy, and Operations; Infrastructure and Readiness; Resources, Programs, and Assessments; Capability Integration; Research, Development and Acquisition; General Concept Development; and Weapons Systems studies.						

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)						
		FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
<p>The funding will increase studies, operations research and analyses, and modeling and simulation to support the Commandant's Strategic Plan (CPG), Defense Planning Guidance, Quadrennial Defense Review (QDR), Chairman's Joint Force Assessment, Chairman's Strategic Seminar Series Wargames, Annual Joint Staff Force Sufficiency Assessments, and POTUS within the Marine Corps Studies System (MCSS) specialized fields.</p> <p>FY 2018 Base Plans:</p> <ul style="list-style-type: none"> - Continue all efforts not completed in FY17. - Initiate: Phase III and Phase IV prior year efforts and new studies in areas of concentrated Manpower/ Personnel; Intelligence, Information and Networks; Plans, Policy, and Operations; Infrastructure and Readiness; Resources, Programs, and Assessments; Capability Integration; Research, Development and Acquisition; General Concept Development; and Weapons Systems studies. <p>FY 2018 OCO Plans:</p> <p>N/A</p>						
Accomplishments/Planned Programs Subtotals		1.214	7.876	6.133	0.000	6.133
C. Other Program Funding Summary (\$ in Millions)						
N/A						
Remarks						
D. Acquisition Strategy						
N/A						
E. Performance Metrics						
<p>Provide analytical documentation and support to decision makers for resolution of current and future operational and logistical issues identified by operating forces. Utilize OAD Subject Matter Experts (SME), Marine Corps University, and Naval Post Graduate School to conduct studies and analysis projects in basic and applied research and advanced technology development. Develop and maintain a current operations analysis reachback network with other government and Coalition agencies such as Center for Army Analysis, Joint Capabilities Integration and Development System (JCIDS), JIEDDO J9, Joint Trauma Analysis and Prevention of Injury in Combat (JTAPIC) program, The Technical Cooperation Program (TTCP), NATO Systems Analysis & Studies (SAS), etc.</p> <p>Analysis results are employed to assist the Commandant, Assistant Commandants, Unit Commanders and the Commanding General (CG), Combat Integration Division, Marine Corps Combat Development Command (CD&I,MCCDC), Crisis Response (CR) Special Purpose Marine Air-Ground Task Forces (SPMAGTFs; CENTCOM,</p>						

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<p>AFRICOM and SOUTHCOM), in addition to the Marine Expeditionary Units that are deployed around the globe and provide a continuous program of mission area analyses, formal studies, rapid response analytic efforts, and the supervision of research projects to fulfill mission. OAD provides combat analyst assessment teams for national emergencies and contingencies; is responsible for initiating, conducting or supervising all official Marine Corps studies; maintaining official Marine Corps scenarios; and participating in and reviewing the efforts of external activities such as the Office of Secretary of Defense and the Joint Staff. Baseline analysis supports Mission Capability Packages (MCPs), Investment Strategy, Joint Capability Areas (JCAs), and the Naval Strategic Plan providing the DoN assessments for future force development. Operations data and analysis support provided to USMC organizations: MCCDC, Marine Corps Intelligence Activity (MCIA), Marine Corps Warfighting Lab (MCWL), Marine Corps Central Command (MARCENT), Systems Command, Training and Education Command (TECOM). The Modeling and Simulation Analytical Toolkit (MSAT) supports analysis involving irregular warfare missions executed in a future Defense Planning Guidance scenario. These missions include information operations, offensive tactical and operational CYBER operations, foreign internal defense, special direct action arising from intelligence gathered from HUMINT and technical (SIGINT,CYBER) means.</p>		

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Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605873M / Marine Corps Program Wide Supt				Project (Number/Name) 0033 / OT&E Support			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
0033: OT&E Support	0.000	12.584	12.281	13.643	-	13.643	15.377	15.696	15.982	16.277	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Marine Corps Operational Test and Evaluation Activity (MCOTEA) supports the material acquisition process by managing the Marine Corps Operational Test (OT) programs for Acquisition Categories (ACAT) I through ACAT IV (less OT of manned aircraft) and performs other functions that may be directed by the Commandant of the Marine Corps. The primary purpose of Operational Test and Evaluation (OT&E) is to provide information to the Milestone Decision Authority (MDA) regarding the Operational Effectiveness (OE) and Operational Suitability (OS) of the system addressed at a decision point. MCOTEA must ensure that the Marines in the Operating Forces receive the very best possible equipment and support. MCOTEA must also ensure each system proposed for acquisition is tested adequately, evaluated objectively and reported independently.

Marine Corps Operational Test and Evaluation Activity (MCOTEA) is the only unit that provides the Marine Corps with required operational test and evaluation (OT&E) capability, ensuring the Marine Corps is compliant with laws and regulations, and ensuring that training and equipment are operationally effective, relevant, and suitable. Additionally, MCOTEA's early involvement, coordination, and oversight in developmental testing and evaluation of new combat and combat support systems ensures that our Marines are the best trained, and have the best equipment, with the lowest test costs for taxpayers. Finally, MCOTEA's support of rapid acquisitions ensures that Marines in the fight are supported with the newest and most advanced equipment and that the Marine Corps is compliant with regulations.

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

	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: MCOTEA	12.584	12.281	12.549	0.000	12.549
Articles:	-	-	-	-	-
FY 2016 Accomplishments:					
Continued with evaluating, quantifying and reporting on 15 Programs for the operational effectiveness, suitability and survivability of planned acquisitions to meet warfighting capabilities and will be providing Milestone Decision Authority (MDAs) to programs that are inherently governmental and a comprehensive understanding of operational risk associated with ACAT programs.					
FY 2017 Plans:					
Continue with evaluating, quantifying and reporting on programs for the operational effectiveness, suitability and survivability of planned acquisitions to meet warfighting capabilities and will be providing Milestone Decision					

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)					
	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Authority (MDAs) to programs that are inherently governmental and a comprehensive understanding of operational risk associated with ACAT programs.					
FY 2018 Base Plans: Continue with evaluating, quantifying and reporting on programs for the operational effectiveness, suitability and survivability of planned acquisitions to meet warfighting capabilities and will be providing Milestone Decision Authority (MDAs) to programs that are inherently governmental and a comprehensive understanding of operational risk associated with ACAT programs.					
FY 2018 OCO Plans: N/A					
Title: Cyber Awareness Red Team Support <div align="right">Articles:</div>	0.000	0.000	1.094	0.000	1.094
Description: This effort supports NDAA S. 1647 requirements. FY 2016 Accomplishments: N/A FY 2017 Plans: N/A FY 2018 Base Plans: Initiate Vulnerability Assessments and Adversarial Assessments in support of the Marine Corps Cyber Awareness Red Team. Initiate efforts to train and equip the Cyber Threat Assessment Team (CTE) to meet all DoD Red Team established standards. FY 2018 OCO Plans: N/A	-	-	-	-	-
Accomplishments/Planned Programs Subtotals	12.584	12.281	13.643	0.000	13.643
C. Other Program Funding Summary (\$ in Millions)					
N/A					
Remarks					

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D. Acquisition Strategy N/A		
E. Performance Metrics N/A		

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Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605873M / Marine Corps Program Wide Supt				Project (Number/Name) 2330 / Chem Bio Consequence Mgmt			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
2330: Chem Bio Consequence Mgmt	0.000	0.331	2.090	1.975	-	1.975	1.605	1.627	1.659	1.693	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Family of Incident Response Systems (FIRS) consists of equipment, systems, and services designed to provide Weapons of Mass Destruction (WMD) incident response forces the capabilities needed to effectively respond to a terrorist attack using Chemical, Biological, Radiological, Nuclear, and High-Yield Explosives (CBRNE). FIRS meets the mission requirements for the detection; mass casualty decontamination; force protection; responder inter-agency interoperability; Command, Control, Communications, Computers & Intelligence (C4I); urban search and rescue; medical and general support requirements needed by these forces to mitigate the effects of a CBRNE terrorist attack. FIRS relies primarily on Commercial Off-The-Shelf/Non-Developmental Items (COTS/NDI) equipment and systems that meet the particular mission requirements of Consequence Management (CM). Nuclear, Biological, and Chemical (NBC) systems are adopted if they meet the CM mission requirements. FIRS Research & Development effort allows the program to keep abreast of emerging technologies in the commercial sector and address operational capability gaps that cannot be met by commercial items.

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

	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: FIRS: Reconnaissance Mission Area.	0.007	0.830	0.985	0.000	0.985
Articles:	-	-	-	-	-
FY 2016 Accomplishments: - Continued verification and validation testing for personal protective, detection, identification, and decontamination material solutions.					
FY 2017 Plans: - Continue verification and validation testing for personal protective, detection, identification, and decontamination material solutions. - Continue chemical contamination standoff and early warning research efforts in support of SCAD replacement material solution. - Initiate Unified Command Suite Block II (UCSb2) naval system integration.					
FY 2018 Base Plans: - Continue verification and validation testing for personal protective, detection, identification, and decontamination material solutions.					

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)											
	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total						
- Continue chemical contamination standoff and early warning research in support of SCAD replacement material solution. - Initiate Common Analytical Laboratory System-Field Confirmatory Integrated System (CALS FC-IS) naval system integration. FY 2018 OCO Plans: N/A											
Title: FIRS: Force Protection Mission Area FY 2016 Accomplishments: - Continued verification and validation testing of the positive/negative pressure adaptable mask (XM55). FY 2017 Plans: - Complete verification and validation testing of the positive/negative pressure adaptable mask (XM55). - Initiate verification and validation testing for new decontamination systems relevant to the Marine Air Ground Task Force (MAGTF) and Chemical-Biological Incident Response Force (CBIRF). FY 2018 Base Plans: - Continue verification and validation testing for decontamination systems relevant to the MAGTF and CBIRF to include efforts to refresh new area air monitoring devices. FY 2018 OCO Plans: N/A	Articles: 0.324 -	1.260 -	0.990 -	0.000 -	0.990 -						
Accomplishments/Planned Programs Subtotals	0.331	2.090	1.975	0.000	1.975						
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• PMC/2220: Wpns & Cmbt Vehs under \$5 million	0.000	0.689	0.806	-	0.806	0.476	0.540	0.556	0.000	Continuing	Continuing
Remarks											
PMC in FY18 through FY21 supports Unified Command Suite Block 2 (UCSb2) and the Common Analytical Laboratory System - Field Confirmatory Integrated System (CALS FC-IS).											

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D. Acquisition Strategy N/A		
E. Performance Metrics N/A		