Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy

**DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

1319: Research, Development, Test & Evaluation, Navy

PE 0605873M: Marine Corps Program Wide Supt

BA 6: RDT&E Management Support

| COST (\$ in Millions)              | FY 2009<br>Actual | FY 2010<br>Estimate | FY 2011<br>Base<br>Estimate | FY 2011<br>OCO<br>Estimate | FY 2011<br>Total<br>Estimate | FY 2012<br>Estimate | FY 2013<br>Estimate | FY 2014<br>Estimate | FY 2015<br>Estimate | Cost To<br>Complete | Total<br>Cost |
|------------------------------------|-------------------|---------------------|-----------------------------|----------------------------|------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------|
| Total Program Element              | 27.123            | 19.650              | 17.721                      | 0.000                      | 17.721                       | 21.836              | 22.192              | 22.757              | 24.647              | Continuing          | Continuing    |
| 0030: Studies & Analysis/MC        | 6.761             | 6.504               | 6.555                       | 0.000                      | 6.555                        | 6.689               | 6.865               | 7.021               | 7.165               | Continuing          | Continuing    |
| 0033: OT&E Support                 | 0.075             | 3.939               | 3.681                       | 0.000                      | 3.681                        | 4.000               | 4.628               | 4.737               | 4.838               | Continuing          | Continuing    |
| 2330: Chem Bio Consequence<br>Mgmt | 4.007             | 4.232               | 3.139                       | 0.000                      | 3.139                        | 6.708               | 6.068               | 6.262               | 7.809               | Continuing          | Continuing    |
| 2930: Phase 0 Activities           | 10.695            | 4.178               | 4.346                       | 0.000                      | 4.346                        | 4.439               | 4.631               | 4.737               | 4.835               | Continuing          | Continuing    |
| 9999: Congressional Adds           | 5.585             | 0.797               | 0.000                       | 0.000                      | 0.000                        | 0.000               | 0.000               | 0.000               | 0.000               | 0.000               | 27.295        |

### 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 program is funded under RDT&E MANAGEMENT SUPPORT because it supports the operations and installation required for general research and development use.

## **B. Program Change Summary (\$ in Millions)**

|                                                       | FY 2009 | FY 2010 | <b>FY 2011 Base</b> | FY 2011 OCO | FY 2011 Total |
|-------------------------------------------------------|---------|---------|---------------------|-------------|---------------|
| Previous President's Budget                           | 30.167  | 19.004  | 0.000               | 0.000       | 0.000         |
| Current President's Budget                            | 27.123  | 19.650  | 17.721              | 0.000       | 17.721        |
| Total Adjustments                                     | -3.044  | 0.646   | 17.721              | 0.000       | 17.721        |
| <ul> <li>Congressional General Reductions</li> </ul>  |         | -0.082  |                     |             |               |
| <ul> <li>Congressional Directed Reductions</li> </ul> |         | 0.000   |                     |             |               |
| <ul> <li>Congressional Rescissions</li> </ul>         | 0.000   | -0.072  |                     |             |               |
| <ul> <li>Congressional Adds</li> </ul>                |         | 0.800   |                     |             |               |
| <ul> <li>Congressional Directed Transfers</li> </ul>  |         | 0.000   |                     |             |               |
| Reprogrammings                                        | -2.511  | 0.000   |                     |             |               |
| SBIR/STTR Transfer                                    | -0.533  | 0.000   |                     |             |               |
| Program Adjustments                                   | 0.000   | 0.000   | 17.721              | 0.000       | 17.721        |

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

1319: Research, Development, Test & Evaluation, Navy

PE 0605873M: Marine Corps Program Wide Supt

BA 6: RDT&E Management Support

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: 9999: Congressional Adds

Congressional Add: USMC LOGISTICS ANALYSIS & OPTIMIZATION

Congressional Add: Logistics Technology Improvements

Congressional Add: Global Supply Chain Management

 1.596
 0.000

 1.596
 0.797

 Congressional Add Subtotals for Project: 9999
 5.585
 0.797

 Congressional Add Totals for all Projects
 5.585
 0.797

FY 2009

2.393

**FY 2010** 

0.000

**Change Summary Explanation** 

Technical: Not applicable.

Schedule: Not applicable.

FY11 from previous President's Budget is shown as zero because no FY11-15 data was presented in President's Budget 2010.

**DATE:** February 2010

0

| APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 6: RDT&E Management Support |                   |                     | R-1 ITEM NOMENCLATURE PE 0605873M: Marine Corps Program Wide Supt |                            |                              |                     | PROJECT 0030: Studies & Analysis/MC |                     |                     |                     |               |
|-------------------------------------------------------------------------------------------------------------------|-------------------|---------------------|-------------------------------------------------------------------|----------------------------|------------------------------|---------------------|-------------------------------------|---------------------|---------------------|---------------------|---------------|
| COST (\$ in Millions)                                                                                             | FY 2009<br>Actual | FY 2010<br>Estimate | FY 2011<br>Base<br>Estimate                                       | FY 2011<br>OCO<br>Estimate | FY 2011<br>Total<br>Estimate | FY 2012<br>Estimate | FY 2013<br>Estimate                 | FY 2014<br>Estimate | FY 2015<br>Estimate | Cost To<br>Complete | Total<br>Cost |
| 0030: Studies & Analysis/MC                                                                                       | 6.761             | 6.504               | 6.555                                                             | 0.000                      | 6.555                        | 6.689               | 6.865                               | 7.021               | 7.165               | Continuing          | Continuing    |

0

0

0

0

0

### A. Mission Description and Budget Item Justification

Quantity of RDT&E Articles

0

0

0

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy

Project funds the general studies and analysis portion of the Marine Corps Studies System (MCSS). Supports studies and analyses approved for execution in the annual Marine Corps Studies System Master Plan (MCSSMP) including mandated Mission Area Analyses (MAAs), Milestone A, and Pre-Milestone A (Conceptual) Analysis of Alternatives (AoAs), technology

assessments, force structure analysis, weapons systems analysis, concept development and analysis, logistics analysis, cost benefit analysis, training assessments, feasibility analysis, and scenario development. MCSS supports the Marine Corps Logistics, the Expeditionary Force Development System (EFDS), and the Combat Development Process (CDP). The Mission Area Analyses (MAA) process provides quantitative and qualitative information utilized by decision makers to initiate improvements in operational concepts, doctrine, force structure, education, training, and procurement.

Provide analytical documentation and support to decision makers for resolution of current and future issues identified by operating forces. Utilize Marine Corps Research University to conduct studies and analysis projects in basic and applied research and advanced technology development. Provide funds to the Naval Sea Systems Command (NAVSEA) for direct

support, technical analyses, and liaison services to assure a sound bridge between the Marine Corps' role in defining Expeditionary Warfare Specialist (EXW)/
Seabasing requirements and the SEA 05 role for Future Concepts and Ships Designs for amphibious ships/aircraft, Maritime Prepositioning Force (Future), (MPF
(F)), High Speed Connectors, and related systems. Space and Naval Warefare Systems Center (SPAWAR) funded to support Naval Assessment Program to modify and upgrade all DoN war fighting, crisis response and support capabilities and vulnerabilities and provide baseline of future capabilities. 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.

## B. Accomplishments/Planned Program (\$ in Millions)

|      | FY 2009 | FY 2010 | FY 2011<br>Base | FY 2011<br>OCO | FY 2011<br>Total |  |
|------|---------|---------|-----------------|----------------|------------------|--|
| s/MC | 6.761   | 6.504   | 6.555           | 0.000          | 6.555            |  |

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy

APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy
BA 6: RDT&E Management Support

R-1 ITEM NOMENCLATURE
PE 0605873M: Marine Corps Program Wide
Supt

PROJECT
0030: Studies & Analysis/MC

EV 2044 EV 2044 EV 2044

## B. Accomplishments/Planned Program (\$ in Millions)

|                                                                                                            | FY 2009 | FY 2010 | FY 2011<br>Base | FY 2011<br>OCO | FY 201<br>Total |
|------------------------------------------------------------------------------------------------------------|---------|---------|-----------------|----------------|-----------------|
| FY 2009 Accomplishments:                                                                                   |         |         |                 |                |                 |
| Initiate following efforts: Maritime Prepositioned Forces Maritime Prepositioning Force Future (MPF(F))    |         |         |                 |                |                 |
| Excursion Study: support the FY09 Quandrennial Defense Review (QDR) assess current and future              |         |         |                 |                |                 |
| requirements, identify programmatic and warfighting risks and benefits, recommend alternatives/            |         |         |                 |                |                 |
| adjustments to current geographic prepositioning, legacy MPF, and MPF(F) programs of record.               |         |         |                 |                |                 |
| Marine Air Ground Task Force (MAGTF) Command and Control (C2) Systems and Emergency                        |         |         |                 |                |                 |
| Situations Study: analyze training and education on C2 systems and Marine Corps capabilities to            |         |         |                 |                |                 |
| provide responding Joint Task Force (JTF) headquarters in emergency situations. Explosive Hazard           |         |         |                 |                |                 |
| Capability Study: determine effective way of supporting explosive hazard reduction requirements for        |         |         |                 |                |                 |
| mobility operations within the MAGTF identify the most appropriate placement of explosive ordnance         |         |         |                 |                |                 |
| disposal (EOD) assets within Marine Corps Forces.                                                          |         |         |                 |                |                 |
| Force Mobility Analytical Support (FMAST) III - Follow-on study to FMASTII: capture Marine Corps           |         |         |                 |                |                 |
| Type 1 equipment in FMAST vice all vehicles and rolling stock and generate the Measures of                 |         |         |                 |                |                 |
| Effectiveness (MOE) for various MAGTFs. Combine information gathered in Tasks 1 and 2 Strategic            |         |         |                 |                |                 |
| Mobility, aggregate footprint (weight, area, and volume) relative to available strategic lift and Tactical |         |         |                 |                |                 |
| Mobility.                                                                                                  |         |         |                 |                |                 |
| Time Domain Analysis for Airspace Command and Control (C2): define Marine Aviation C2 Time                 |         |         |                 |                |                 |
| Domain (TD) in quantifiable and measurable terms for the following: Real-Time (RT), Near-Real-             |         |         |                 |                |                 |
| Time (NRT), and Non-Real-Time (Non-RT), define Marine Aviation C2 Data Fusion (DF) requirements            |         |         |                 |                |                 |
| in quantifiable and measurable terms. Future Plans, Policy and Operations(PP&O), Maritime                  |         |         |                 |                |                 |
| Preposition Shipping (MPS) Load out Study (II Marine Expeditionary Force (MEF) and MAGTF Core              |         |         |                 |                |                 |
| Competencies (II MEF) Naval Expeditionary Warfare (NEXW) Assessment: assess amphibious                     |         |         |                 |                |                 |
| warfare capabilities and proficiency; enabling capabilities to support smaller scale MAGTF operations.     |         |         |                 |                |                 |
| Marine Corps Training and Advisory Group(MCTAG) Deployment Analysis Study: examine operational             |         |         |                 |                |                 |
| drivers affecting deployments and implications for MCTAG in coordinating, forming, training and            |         |         |                 |                |                 |
| equipping conventional advisor and training teams.                                                         |         |         |                 |                |                 |

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy

APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy
BA 6: RDT&E Management Support

PB 2011 Navy

R-1 ITEM NOMENCLATURE
PE 0605873M: Marine Corps Program Wide
Supt

PROJECT

0030: Studies & Analysis/MC

FY 2011

Base

**FY 2009** 

**FY 2010** 

FY 2011

OCO

FY 2011

Total

### B. Accomplishments/Planned Program (\$ in Millions)

Anti-Armor Study: identify the overall anti-armor requirements for a Marine Air-Ground Task Force (MAGTF), develop and evaluate weapons systems (force) mixes for the MAGTF, document the range of densities and distributions on current or alternative organizational locations. Marksmanship Instruction: study trends in marksmanship instruction since the Vietnam era comparing other marksmanship instruction in anticipation of the M16/M4 rifle use in the near future. Family of Optics: provide life cycle cost estimates for selected optical equipment (e.g. rifle scopes, night vision equipment) to determine effective requirements emerging from combat in Iraq and Afghanistan. Initiate the high priority studies and analyses projects approved in the FY2009 - FY2010 Marine Corps Studies System Master Plan (MCSSMP). FY 2010 Plans: Initiate following efforts: Maritime Prepositioned Forces Maritime Prepositioning Force Future (MPF(F)) Excursion Study: support the FY09 Quandrennial Defense Review (QDR) assess current and future requirements, identify programmatic and warfighting risks and benefits, recommend alternatives/ adjustments to current geographic prepositioning, legacy MPF, and MPF(F) programs of record. Marine Air Ground Task Force (MAGTF) Command and Control (C2) Systems and Emergency Situations Study: analyze training and education on C2 systems and Marine Corps capabilities to provide responding Joint Task Force (JTF) headquarters in emergency situations. Explosive Hazard Capability Study: determine effective way of supporting explosive hazard reduction requirements for mobility operations within the MAGTF identify the most appropriate placement of explosive ordnance disposal (EOD) assets within Marine Corps Forces. Force Mobility Analytical Support (FMAST) III - Follow-on study to FMASTII: capture Marine Corps Type 1 equipment in FMAST vice all vehicles and rolling stock and generate the Measures of Effectiveness (MOE) for various MAGTFs. Combine information gathered in Tasks 1 and 2 Strategic Mobility, aggregate footprint (weight, area, and volume) relative to available strategic lift and Tactical Mobility. Time Domain Analysis for Airspace Command and Control (C2): define Marine Aviation C2 Time

## **UNCLASSIFIED**

Domain (TD) in quantifiable and measurable terms for the following: Real-Time (RT), Near-Real-

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy

APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy
BA 6: RDT&E Management Support

R-1 ITEM NOMENCLATURE
PE 0605873M: Marine Corps Program Wide
Supt

PROJECT
0030: Studies & Analysis/MC

FY 2011

Total

FY 2011

Base

FY 2009

FY 2010

FY 2011

OCO

## B. Accomplishments/Planned Program (\$ in Millions)

| Time (NRT), and Non-Real-Time (Non-RT), define Marine Aviation C2 Data Fusion (DF) requirements in quantifiable and measurable terms. Future Plans, Policy and Operations (PP&O), Maritime Preposition Shipping (MPS) Load out Study (II Marine Expeditionary Force (MEF) and MAGTF Core Competencies (II MEF) Naval Expeditionary Warfare (NEXW) Assessment: assess amphibious warfare capabilities and proficiency; enabling capabilities to support smaller scale MAGTF operations. Marine Corps Training and Advisory Group(MCTAG) Deployment Analysis Study: examine operational drivers affecting deployments and implications for MCTAG in coordinating, forming, training and equipping conventional advisor and training teams.  Anti-Armor Study: identify the overall anti-armor requirements for a Marine Air-Ground Task Force (MAGTF), develop and evaluate weapons systems (force) mixes for the MAGTF, document the range of densities and distributions on current or alternative organizational locations. Marksmanship Instruction: study trends in marksmanship instruction since the Vietnam era comparing other marksmanship instruction in anticipation of the M16/M4 rifle use in the near future. Family of Optics: provide life cycle cost estimates for selected optical equipment (e.g. rifle scopes, night vision equipment) to determine effective requirements emerging from combat in Iraq and Afghanistan. Initiate the high priority studies and analyses projects approved in the FY2009 - FY2010 Marine Corps Studies System Master Plan (MCSSMP).  FY 2011 Base Plans: Initiate following efforts: Maritime Prepositioned Forces Maritime Prepositioning Force Future (MPF(F)) Excursion Study: support the FY09 Quandrennial Defense Review (QDR) assess current and future requirements, identify programmatic and warfighting risks and benefits, recommend alternatives/ adjustments to current geographic prepositioning, legacy MPF, and MPF(F) programs of record. Marine Air Ground Task Force (MAGTF) Command and Control (C2) Systems and Emergency Situations Study: analyze t |  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Situations Study: analyze training and education on C2 systems and Marine Corps capabilities to provide responding Joint Task Force (JTF) headquarters in emergency situations. Explosive Hazard Capability Study: determine effective way of supporting explosive hazard reduction requirements for                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy

APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy
BA 6: RDT&E Management Support

PROJECT

0030: Studies & Analysis/MC

Supt

## B. Accomplishments/Planned Program (\$ in Millions)

|                                                                                                                      | FY 2009 | FY 2010 | FY 2011<br>Base | FY 2011<br>OCO | FY 2011<br>Total |
|----------------------------------------------------------------------------------------------------------------------|---------|---------|-----------------|----------------|------------------|
| mobility operations within the MAGTF identify the most appropriate placement of explosive ordnance                   |         |         |                 |                |                  |
| disposal (EOD) assets within Marine Corps Forces.                                                                    |         |         |                 |                |                  |
| Force Mobility Analytical Support (FMAST) III - Follow-on study to FMASTII: capture Marine Corps                     |         |         |                 |                |                  |
| Type 1 equipment in FMAST vice all vehicles and rolling stock and generate the Measures of                           |         |         |                 |                |                  |
| Effectiveness (MOE) for various MAGTFs. Combine information gathered in Tasks 1 and 2 Strategic                      |         |         |                 |                |                  |
| Mobility, aggregate footprint (weight, area, and volume) relative to available strategic lift and Tactical Mobility. |         |         |                 |                |                  |
| Time Domain Analysis for Airspace Command and Control (C2): define Marine Aviation C2 Time                           |         |         |                 |                |                  |
| Domain (TD) in quantifiable and measurable terms for the following: Real-Time (RT), Near-Real-                       |         |         |                 |                |                  |
| Time (NRT), and Non-Real-Time (Non-RT), define Marine Aviation C2 Data Fusion (DF) requirements                      |         |         |                 |                |                  |
| in quantifiable and measurable terms. Future Plans, Policy and Operations(PP&O), Maritime                            |         |         |                 |                |                  |
| Preposition Shipping (MPS) Load out Study (II Marine Expeditionary Force (MEF) and MAGTF Core                        |         |         |                 |                |                  |
| Competencies (II MEF) Naval Expeditionary Warfare (NEXW) Assessment: assess amphibious                               |         |         |                 |                |                  |
| warfare capabilities and proficiency; enabling capabilities to support smaller scale MAGTF operations.               |         |         |                 |                |                  |
| Marine Corps Training and Advisory Group(MCTAG) Deployment Analysis Study: examine operational                       |         |         |                 |                |                  |
| drivers affecting deployments and implications for MCTAG in coordinating, forming, training and                      |         |         |                 |                |                  |
| equipping conventional advisor and training teams.                                                                   |         |         |                 |                |                  |
| Anti-Armor Study: identify the overall anti-armor requirements for a Marine Air-Ground Task Force                    |         |         |                 |                |                  |
| (MAGTF), develop and evaluate weapons systems (force) mixes for the MAGTF, document the                              |         |         |                 |                |                  |
| range of densities and distributions on current or alternative organizational locations. Marksmanship                |         |         |                 |                |                  |
| Instruction: study trends in marksmanship instruction since the Vietnam era comparing other                          |         |         |                 |                |                  |
| marksmanship instruction in anticipation of the M16/M4 rifle use in the near future. Family of Optics:               |         |         |                 |                |                  |
| provide life cycle cost estimates for selected optical equipment (e.g. rifle scopes, night vision                    |         |         |                 |                |                  |
| equipment) to determine effective requirements emerging from combat in Iraq and Afghanistan.                         |         |         |                 |                |                  |
| Initiate the high priority studies and analyses projects approved in the FY2009 - FY2010 Marine Corps                |         |         |                 |                |                  |
| Studies System Master Plan (MCSSMP).                                                                                 |         |         |                 |                |                  |
| Accomplishments/Planned Programs Subtotals                                                                           | 6.761   | 6.504   | 6.555           | 0.000          | 6.55             |

## **UNCLASSIFIED**

R-1 Line Item #155 Page 7 of 23

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy

APPROPRIATION/BUDGET ACTIVITY

TY R-1 ITEM NOMENCLATURE PROJECT

1319: Research, Development, Test & Evaluation, Navy BA 6: RDT&E Management Support

PE 0605873M: Marine Corps Program Wide 0030: Studies & Analysis/MC

Supt

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

FY 2011 FY 2011 FY 2011 **Cost To** FY 2010 FY 2012 FY 2013 FY 2014 FY 2015 Complete Total Cost Line Item FY 2009 Base oco Total • 0605154N/C0031: Center for 7.423 7.458 7.742 0.000 7.742 7.903 8.110 8.293 8.463 0.000 55.392

Naval Analysis (CNA)

D. Acquisition Strategy

N/A

**E. Performance Metrics** 

N/A

**DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy
BA 6: RDT&E Management Support

FY 2011

| COST (\$ in Millions)      | FY 2009<br>Actual | FY 2010<br>Estimate | FY 2011<br>Base<br>Estimate | FY 2011<br>OCO<br>Estimate | FY 2011<br>Total<br>Estimate | FY 2012<br>Estimate | FY 2013<br>Estimate | FY 2014<br>Estimate | FY 2015<br>Estimate | Cost To<br>Complete | Total<br>Cost |
|----------------------------|-------------------|---------------------|-----------------------------|----------------------------|------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------|
| 0033: OT&E Support         | 0.075             | 3.939               | 3.681                       | 0.000                      | 3.681                        | 4.000               | 4.628               | 4.737               | 4.838               | Continuing          | Continuing    |
| Quantity of RDT&E Articles | 0                 | 0                   | 0                           | 0                          | 0                            | 0                   | 0                   | 0                   | 0                   |                     |               |

### A. Mission Description and Budget Item Justification

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy

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. This funding supported salaries of MCOTEA mission employees and physical overhead.

## B. Accomplishments/Planned Program (\$ in Millions)

|                                       |                                            | FY 2009 | FY 2010 | FY 2011<br>Base | FY 2011<br>OCO | FY 2011<br>Total |
|---------------------------------------|--------------------------------------------|---------|---------|-----------------|----------------|------------------|
| MCOTEA                                |                                            | 0.075   | 3.939   | 3.681           | 0.000          | 3.681            |
| FY 2009 Accomplishments: OT&E Support |                                            |         |         |                 |                |                  |
| FY 2010 Plans:<br>OT&E Support        |                                            |         |         |                 |                |                  |
| FY 2011 Base Plans:<br>OT&E Support   |                                            |         |         |                 |                |                  |
|                                       | Accomplishments/Planned Programs Subtotals | 0.075   | 3.939   | 3.681           | 0.000          | 3.681            |

|                                                                                                                   | UNCLASSIFIED                                                      |                                      |                     |
|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|--------------------------------------|---------------------|
| Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy                                                           |                                                                   |                                      | DATE: February 2010 |
| APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 6: RDT&E Management Support | R-1 ITEM NOMENCLATURE PE 0605873M: Marine Corps Program Wide Supt | <b>PROJECT</b> 0033: <i>OT&amp;l</i> | ≣ Support           |
| C. Other Program Funding Summary (\$ in Millions) N/A                                                             |                                                                   |                                      |                     |
| D. Acquisition Strategy N/A                                                                                       |                                                                   |                                      |                     |
| E. Performance Metrics N/A                                                                                        |                                                                   |                                      |                     |
|                                                                                                                   |                                                                   |                                      |                     |
|                                                                                                                   |                                                                   |                                      |                     |
|                                                                                                                   |                                                                   |                                      |                     |
|                                                                                                                   |                                                                   |                                      |                     |

| Exhibit R-2A, RDT&E Project Jus                                                                                   | tification: P     | 3 2011 Navy         | /                                                                 |                            |                              |                     |                                         |                     | DATE: February 2010 |                     |               |
|-------------------------------------------------------------------------------------------------------------------|-------------------|---------------------|-------------------------------------------------------------------|----------------------------|------------------------------|---------------------|-----------------------------------------|---------------------|---------------------|---------------------|---------------|
| APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 6: RDT&E Management Support |                   |                     | R-1 ITEM NOMENCLATURE PE 0605873M: Marine Corps Program Wide Supt |                            |                              |                     | PROJECT 2330: Chem Bio Consequence Mgmt |                     |                     |                     |               |
| COST (\$ in Millions)                                                                                             | FY 2009<br>Actual | FY 2010<br>Estimate | FY 2011<br>Base<br>Estimate                                       | FY 2011<br>OCO<br>Estimate | FY 2011<br>Total<br>Estimate | FY 2012<br>Estimate | FY 2013<br>Estimate                     | FY 2014<br>Estimate | FY 2015<br>Estimate | Cost To<br>Complete | Total<br>Cost |
| 2330: Chem Bio Consequence<br>Mgmt                                                                                | 4.007             | 4.232               | 3.139                                                             | 0.000                      | 3.139                        | 6.708               | 6.068                                   | 6.262               | 7.809               | Continuing          | Continuing    |
| Quantity of RDT&E Articles                                                                                        | 0                 | 0                   | 0                                                                 | 0                          | 0                            | 0                   | 0                                       | 0                   | 0                   |                     |               |

### 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). The Family of Incident Response Systems meets the mission requirements for the detection; mass casualty decontamination; force protection; responder inter-agency interoperability; C4I; urban search and rescue; medical and general support requirements needed by these forces to mitigate the effects of a CBRNE terrorist attack. The Family of Incident Response Systems 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. The Family of Incident Response Systems (FIRS) R&D 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 Program (\$ in Millions)

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | FY 2009 | FY 2010 | FY 2011<br>Base | FY 2011<br>OCO | FY 2011<br>Total |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|-----------------|----------------|------------------|
| *FIRS: Reconnaissance Mission Area.                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 2.095   | 1.984   | 1.435           | 0.000          | 1.435            |
| FY 2009 Accomplishments:  'FIRS: Reconnaissance Mission Area included: 1) began the assessment of Hand-Held Biological Detection Systems 2) continued the transition of a Field Chemical Analytical Tool (GC/MS) 3) continued the testing and evaluation of a portable bio-aerosol sampler 4) completed the evaluation and testing of an arsenic detector 5) continued the development and testing of the Chemical Biological Incident Response Force (CBIRF) Standoff Chemical Agent Detector. |         |         |                 |                |                  |

| Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                 |         |                       | DATE: Febr                   | uary 2010      |                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-----------------------|------------------------------|----------------|------------------|
| APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 6: RDT&E Management Support                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | R-1 ITEM NOMENCLATURE PE 0605873M: Marine Corps Progran Supt                                                                                                                                                                                                                                                                                    | n Wide  | PROJECT<br>2330: Cher | T<br>em Bio Consequence Mgmt |                |                  |
| B. Accomplishments/Planned Program (\$ in Millions)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                 |         | 1                     |                              |                |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                 | FY 2009 | FY 2010               | FY 2011<br>Base              | FY 2011<br>OCO | FY 2011<br>Total |
| FY 2010 Plans:  'FIRS: Reconnaissance Mission Area includes: 1) begin the Toxic Industrial Chemical detection and identification in conju Security and the Technical Support Working Group (TSWG) Held Biological Detection Systems 3) continue the transition (GC/MS) 4) complete the testing and evaluation of a portable development and testing of the Chemical Biological Incident Chemical Agent Detector.  FY 2011 Base Plans:  'FIRS: Reconnaissance Mission Area includes: 1) complete for Toxic Industrial Chemical detection and identification in continued the Model and Security and the Technical Support Working Group a Field Chemical Analytical Tool (GC/MS) 3) continue the definitional Incident Response Force (CBIRF) Standoff Chemical | unction with the Department of Homeland 2) complete the assessment of Hand- of a Field Chemical Analytical Tool e bio-aerosol sampler 5) continue the Response Force (CBIRF) Standoff  the assessment of emerging technologies onjunction with the Department of up (TSWG) 2) continue the transition of evelopment and testing of the Chemical |         |                       |                              |                |                  |
| *FIRS: Search and Rescue (SAR) Mission Area.  FY 2009 Accomplishments:  FIRS: Search and Rescue (SAR) Mission Area included 1) to boots that can be decontaminated 2) continued evaluation of emerging SAR tools.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                 | 0.150   | 0.300                 | 0.150                        | 0.000          | 0.150            |
| FY 2010 Plans: FIRS: Search and Rescue (SAR) Mission Area includes 1) of boots that can be decontaminated 2) continue evaluation of emerging SAR tools.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                 |         |                       |                              |                |                  |

**UNCLASSIFIED** 

R-1 Line Item #155 Page 12 of 23

| Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy                                                                                                                                                                                                            |                                                                            | <b>DATE</b> : February 2010               |         |                 |                |                  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|-------------------------------------------|---------|-----------------|----------------|------------------|--|
| APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 6: RDT&E Management Support                                                                                                                                                  | R-1 ITEM NOMENCLATURE PE 0605873M: Marine Corps Programmeter Supt          | PE 0605873M: Marine Corps Program Wide 23 |         |                 | quence Mgm     | nce Mgmt         |  |
| B. Accomplishments/Planned Program (\$ in Millions)                                                                                                                                                                                                                | -                                                                          |                                           | 1       |                 |                |                  |  |
|                                                                                                                                                                                                                                                                    |                                                                            | FY 2009                                   | FY 2010 | FY 2011<br>Base | FY 2011<br>OCO | FY 2011<br>Total |  |
| FY 2011 Base Plans: FIRS: Search and Rescue (SAR) Mission Area includes 1) technologies to locate viable casualties through debris of a structures, such as walls and doors 2) complete the evaluation decontaminated 3) continue evaluation of Commercial Off the | collapsed building or through standing ion of SAR HazMat boots that can be |                                           |         |                 |                |                  |  |
| *FIRS: Decontamination Mission Area                                                                                                                                                                                                                                |                                                                            | 0.350                                     | 0.300   | 0.200           | 0.000          | 0.200            |  |
| FY 2009 Accomplishments:  FIRS: Decontamination Mission Area included 1) completed packetized liquid decon solutions in civilian mass casualty e evaluation of improved mass casualty decon equipment (flatery 2010 Plans:                                         | vents 2)began the development and                                          |                                           |         |                 |                |                  |  |
| FIRS: Decontamination Mission Area includes 1) continue t<br>improved mass casualty decon equipment (flash heaters) are                                                                                                                                            |                                                                            |                                           |         |                 |                |                  |  |
| FY 2011 Base Plans: FIRS: Decontamination Mission Area includes 1) complete improved mass casualty decon equipment (flash heaters) are                                                                                                                             |                                                                            |                                           |         |                 |                |                  |  |
| *FIRS: C4I Mission Area.                                                                                                                                                                                                                                           |                                                                            | 0.150                                     | 0.150   | 0.150           | 0.000          | 0.150            |  |
| FY 2009 Accomplishments: FIRS: C4I Mission Area included 1) continued technology as evaluations 3) continued development of prototypes.                                                                                                                            | ssessments 2) continued field user                                         |                                           |         |                 |                |                  |  |
| FY 2010 Plans: FIRS: C4I Mission Area includes 1) continue technology ass evaluations 3) continue development of prototypes.                                                                                                                                       | sessments 2) continue field user                                           |                                           |         |                 |                |                  |  |

# **UNCLASSIFIED**

R-1 Line Item #155 Page 13 of 23

| Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                        |        |                       | DATE: Febr      | uary 2010      |                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-----------------------|-----------------|----------------|------------------|
| APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 6: RDT&E Management Support                                                                                                                                                                                                                                                                                                                                       | R-1 ITEM NOMENCLATURE PE 0605873M: Marine Corps Program I Supt                                                                                         | Wide   | PROJECT<br>2330: Chen | quence Mgm      | t              |                  |
| B. Accomplishments/Planned Program (\$ in Millions)                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                        |        |                       |                 |                |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                         | F                                                                                                                                                      | Y 2009 | FY 2010               | FY 2011<br>Base | FY 2011<br>OCO | FY 2011<br>Total |
| FY 2011 Base Plans: FIRS: C4I Mission Area includes 1) continue technology asset evaluations 3) continue development of prototypes.                                                                                                                                                                                                                                                                                                                     | essments 2) continue field user                                                                                                                        |        |                       |                 |                |                  |
| *FIRS: Force Protection Mission Area                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                        | 0.762  | 0.698                 | 0.604           | 0.000          | 0.604            |
| FY 2009 Accomplishments:  FIRS: Force Protection Mission Area includes 1) continued the A Protective Ensemble developed in concert with Technical Scontinued the radiation hardness survey and assessment of development and validation of an electronic filter matrix from 4) continued the testing and evaluation of a hydration system the testing and evaluation of the M-53 mask as a system with Apparatus and Powered Air Purifying Respirators. | Support Working Group (TSWG) 2) COTS CM equipment 3) continued the military and commercial filter testing data n in conjunction with the Army 5) began |        |                       |                 |                |                  |
| FY 2010 Plans: FIRS: Force Protection Mission Area includes 1) continue the Protective Ensemble developed in concert with Technical Su the radiation hardness survey and assessment of COTS CM and validation of an electronic filter matrix from military and the testing and evaluation of a hydration system in conjunction and evaluation of the M-53 mask as a system with Commerciand Powered Air Purifying Respirators.                          | equipment 3) continue the development commercial filter testing data 4) continue on with the Army 5) continue the testing                              |        |                       |                 |                |                  |
| FY 2011 Base Plans: FIRS: Force Protection Mission Area includes 1) complete the Protective Ensemble developed in concert with Technical Suthe radiation hardness survey and assessment of COTS CM and validation of an electronic filter matrix from military and contents.                                                                                                                                                                            | equipment 3) continue the development                                                                                                                  |        |                       |                 |                |                  |

**UNCLASSIFIED** 

R-1 Line Item #155 Page 14 of 23

| Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy                                                                                                                                              |                                                                   |                       | DATE: Feb                                  | ruary 2010     |                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|-----------------------|--------------------------------------------|----------------|------------------|
| APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 6: RDT&E Management Support                                                                                    | R-1 ITEM NOMENCLATURE PE 0605873M: Marine Corps Program Wide Supt | PROJECT<br>2330: Cher | PROJECT<br>2330: Chem Bio Consequence Mgmt |                |                  |
| B. Accomplishments/Planned Program (\$ in Millions)                                                                                                                                                  |                                                                   |                       |                                            |                |                  |
|                                                                                                                                                                                                      | FY 2009                                                           | FY 2010               | FY 2011<br>Base                            | FY 2011<br>OCO | FY 2011<br>Total |
| the testing and evaluation of a hydration system in conjunctio and evaluation of the M-53 mask as a system with Commerci and Powered Air Purifying Respirators.                                      |                                                                   |                       |                                            |                |                  |
| *FIRS: Medical Mission Area                                                                                                                                                                          | 0.10                                                              | 0.300                 | 0.200                                      | 0.000          | 0.200            |
| FY 2009 Accomplishments:  FIRS: Medical Mission Area included 1) completed evaluation the development of a Standoff patient triage tool 3) continued with increased dexterity.                       |                                                                   |                       |                                            |                |                  |
| FY 2010 Plans: FIRS: Medical Mission Area includes 1) continue development complete the development and testing of gloves with increase                                                              | . ,                                                               |                       |                                            |                |                  |
| FY 2011 Base Plans: FIRS: Medical Mission Area includes 1) begin development a dose dosimeter 2) complete the development of a Standoff pa                                                           | •                                                                 |                       |                                            |                |                  |
| *FIRS: General Support Mission Area                                                                                                                                                                  | 0.40                                                              | 0.500                 | 0.400                                      | 0.000          | 0.400            |
| FY 2009 Accomplishments:  FIRS: General Support Mission Area included 1) continued the COTS and Government Off-the-Shelf (GOTS) vehicles for the equipment (Explosive Ordnance Disposal (EOD), SAR). |                                                                   |                       |                                            |                |                  |
| FY 2010 Plans: FIRS: General Support Mission Area includes 1) continue the COTS and Government Off-the-Shelf (GOTS) vehicles for the equipment (Explosive Ordnance Disposal (EOD), SAR).             |                                                                   |                       |                                            |                |                  |

**UNCLASSIFIED** 

R-1 Line Item #155 Page 15 of 23

| Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy |                                        |            | DATE: February 2010    |
|---------------------------------------------------------|----------------------------------------|------------|------------------------|
| APPROPRIATION/BUDGET ACTIVITY                           | R-1 ITEM NOMENCLATURE                  | PROJECT    |                        |
| 1319: Research, Development, Test & Evaluation, Navy    | PE 0605873M: Marine Corps Program Wide | 2330: Chen | n Bio Consequence Mgmt |

BA 6: RDT&E Management Support

PE 0605873M: Marine Corps Program Wide Supt

2330: Chem Bio Consequence Mgmt

# B. Accomplishments/Planned Program (\$ in Millions)

|                                                                                                                                                                                                                                                                   | FY 2009 | FY 2010 | FY 2011<br>Base | FY 2011<br>OCO | FY 2011<br>Total |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|-----------------|----------------|------------------|
| FY 2011 Base Plans: FIRS: General Support Mission Area includes 1) continue the prototyping and testing of modified COTS and Government Off-the-Shelf (GOTS) vehicles for the deployment of incident response equipment (Explosive Ordnance Disposal (EOD), SAR). |         |         |                 |                |                  |
| Accomplishments/Planned Programs Subtotals                                                                                                                                                                                                                        | 4.007   | 4.232   | 3.139           | 0.000          | 3.139            |

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

|                                 |         |         | FY 2011     | FY 2011 | FY 2011      |         |         |         |         | Cost To         |            |
|---------------------------------|---------|---------|-------------|---------|--------------|---------|---------|---------|---------|-----------------|------------|
| <u>Line Item</u>                | FY 2009 | FY 2010 | <u>Base</u> | OCO     | <u>Total</u> | FY 2012 | FY 2013 | FY 2014 | FY 2015 | <b>Complete</b> | Total Cost |
| 652200: Field Medical Equipment | 21.980  | 3.384   | 3.432       | 0.000   | 3.432        | 3.501   | 3.586   | 3.684   | 3.784   | 0.000           | 177.051    |

# **D. Acquisition Strategy**

N/A

### **E. Performance Metrics**

N/A

DATE: Echruary 2010

| Exhibit K-2A, RDT & Project Justification. PB 2011 Navy                                                           |                   |                     |                             |                            |                                 |                      |                     |                                  |                     | DATE. Febluary 2010 |               |  |  |
|-------------------------------------------------------------------------------------------------------------------|-------------------|---------------------|-----------------------------|----------------------------|---------------------------------|----------------------|---------------------|----------------------------------|---------------------|---------------------|---------------|--|--|
| APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 6: RDT&E Management Support |                   |                     |                             |                            | IOMENCLA<br>3M: <i>Marine</i> ( | TURE<br>Corps Progra | am Wide             | PROJECT 2930: Phase 0 Activities |                     |                     |               |  |  |
| COST (\$ in Millions)                                                                                             | FY 2009<br>Actual | FY 2010<br>Estimate | FY 2011<br>Base<br>Estimate | FY 2011<br>OCO<br>Estimate | FY 2011<br>Total<br>Estimate    | FY 2012<br>Estimate  | FY 2013<br>Estimate | FY 2014<br>Estimate              | FY 2015<br>Estimate | Cost To<br>Complete | Total<br>Cost |  |  |
| 2930: Phase 0 Activities                                                                                          | 10.695            | 4.178               | 4.346                       | 0.000                      | 4.346                           | 4.439                | 4.631               | 4.737                            | 4.835               | Continuing          | Continuing    |  |  |
| Quantity of RDT&E Articles                                                                                        | 0                 | 0                   | 0                           | 0                          | 0                               | 0                    | 0                   | 0                                | 0                   |                     |               |  |  |

### A. Mission Description and Budget Item Justification

Exhibit P 24 PDT8 E Project Justification: DR 2011 Navy

Pre-Phase A Activities include assessments, surveys, and planning activities in support of the requirements generation system to mature, limit, clarify and define requirements before competition for resources in the POM process and transition to acquisition management. This effort will complement the currently funded Marine Corps Systems Command (MCSC) Phase A Activities line to pursue a limited range of items on a priority basis, examining critical issues and alternatives. Examples of activities include but are not limited to (1) development of Operational Mode Summaries, Mission Profiles, Concepts of Employment and Acquisition Objectives, (2) mapping between legacy systems and replacements. (3) examining integration and family of systems architectural issues. (4) performing Doctrine, Organization. Training, Equipment, Support, Facilities (DOTESF) assessments and providing other key support for the Universal Needs Statement (UNS) process, (5) baselining POM initiatives, (6) planning requirements support of evolutionary acquisition, (7) facilitating user/advocate interaction to better understand what is needed and how it will be used, and (8) supporting the Marine Requirements Oversight Council (MROC)-directed tailoring Authorized Acquisition Objective process. Marine Corps Combat Development Command (MCCDC) averages approximately 62 Urgent Needs Statements (UNS) requests per year addressing new requirements. of which approximately 20% require expedited processing. Quick reaction assessment and planning is likely to support requirements emerging from current real world operations. Clear Facilities, a Command Element (CE) Army Research Laboratory (ARL) item (supported by the Marine Corps Ground Combat Element (GCE)) requiring a continuum of materiel solutions (family of systems) to enable lethal clearing of a broad range of man-made structures in multiple environments/ tactical situations typifies a requirement needing pre-Phase A support. Supporting activities have centered around decomposition of the mission into 460 specific tasks accompanied by development of an operational concept, objectives and key performance parameters, and warfighter prioritization. The end product will be a requirements road map. The end state will be a process and product to guide both POM and acquisition activities. These activities do not overlap/conflict with Mission Area Analysis and Analysis of Alternatives funded within the MCCDC Studies and Analysis (S&A) program, MCSC Phase A Activities, Marine Corps Warfighting Lab (MCWL) warfighting experimentation or Science and Technology (S&T) activities. Pre-phase A Activities allow high priority requirements to move ahead in advance of funding decisions for specific programs, provide a better capability to react to emerging requirements and improve the quality of initiatives brought to the Program Objective Memoramdum (POM) process. Through front-end assessment, relatively modest funding can be leveraged into significant cost and schedule savings, bringing needed capabilities to the operating forces sooner and cheaper. Each POM cycle provides examples of initiatives that are unfunded or delayed by an immature requirement or understanding of alternatives. In other cases the initiative is funded but the acquisition cycle stretches out until the requirement is better understood. Pre Phase A facilitates a timely and more efficient process. Phase A Activities consist of a series of interrelated activities in Phase A (previously known as Phase 0) of the acquisition process designed to investigate potential material solutions to validate needs, estimate program costs, support sound business decisions. correct inherent disconnects between the Programming, Planning, Budgeting and Execution (PPBE) cycle, the Combat Development and Acquisition Management

### **UNCLASSIFIED**

R-1 Line Item #155 Page 17 of 23

| Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy |                                        | <b>DATE:</b> February 2010 |
|---------------------------------------------------------|----------------------------------------|----------------------------|
| APPROPRIATION/BUDGET ACTIVITY                           | R-1 ITEM NOMENCLATURE                  | PROJECT                    |
| 1319: Research, Development, Test & Evaluation, Navy    | PE 0605873M: Marine Corps Program Wide | 2930: Phase 0 Activities   |
| BA 6: RDT&E Management Support                          | Supt                                   |                            |

Systems, and prevent undue delays in pursuing priority requirements. The process supports Commanding General (CG), MCCDC and Commander, Marine Corps Systems Command (COMMARCORSYSCOM) by providing funding to priority programs, thus allowing for the examination of concepts and alternatives to support an orderly transition from requirements to initiatives and initiatives to funded programs. This will permit the POM process to focus on activities of evaluating, prioritizing and integrating rather than defining and resolving raw, immature requirements. Phase A activities literally "jump start" high priority programs of the acquisition process. Furthermore, since 70% of a program's life cycle cost is determined during Phase A, this initiative will put resources to work where the return on investment (payoff) is the greatest. Typical studies conducted Phase A activities include, but are not limited to Market Surveys, Business Case Analysis (BCA), Cost as an Independent Variable (CAIV) analysis, Life Cycle Cost Estimates, Cost Comparison Analysis, Acquisition Strategies, Trade-off Analysis in lieu of an Analysis of Alternatives. To satisfy the emerging requirements, the Deputy Commandant for Combat Development is leading the Marine Expeditionary Force Future Vehicle (MEFFV) effort to conduct Joint Capability Integration and Development System analysis to establish a capabilities framework specifically tailored to assess technologies for transition to the Marine Air Ground Task Force (MAGTF). MEFFV efforts are directed at capability refinement and integration, analysis of multiple concepts, determining technology objectives, and continued development of Initial Capabilities Documents (ICDs) and Capabilities Development Documents supporting 'spin-out' technology transitions. This budget item supports combat development activities supporting the three Marine Requirements Oversight Council (MROC) priorities in compliance with JROC and USD AT&L guidance to participate in a Joint Program with the Army's Future Combat Systems

### B. Accomplishments/Planned Program (\$ in Millions)

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | FY 2009 | FY 2010 | FY 2011<br>Base | FY 2011<br>OCO | FY 2011<br>Total |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|-----------------|----------------|------------------|
| *Phase A Activities                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 4.947   | 4.178   | 4.346           | 0.000          | 4.346            |
| FY 2009 Accomplishments:  Phase A Activities - Initiate, assist and complete Phase A activities of high priority programs during their concept refinement and in some cases their technology development phases in the areas of Business Case Analysis, Trade Studies, Economic Analysis, Life Cycle Cost Estimates and Market Research Studies in support of the following efforts: Electronic Records Management, Net Enabled Command Capability, Target Processing, Ground Based Air Defense, Ground Based Operational Surveillance, Optical Systems, Route Reconnaissance and Clearance, Mortar Fire Control and Indirect Fire, Ground Radio and Maintenance and the Squad Immersive Training Environment. |         |         |                 |                |                  |
| FY 2010 Plans: Phase A Activities - Initiate, assist and complete Phase A activities of high priority programs during their concept refinement and in some cases their technology development phases in the areas of                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |         |                 |                |                  |

| Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                            |                       |                | DATE: Febr      | uary 2010      |                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------|-----------------|----------------|------------------|
| APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 6: RDT&E Management Support                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | R-1 ITEM NOMENCLATURE PE 0605873M: Marine Corps Progra Supt                                                                                                                                                                                                                                                                                                | PROJECT<br>2930: Phas | e 0 Activities | ;               |                |                  |
| B. Accomplishments/Planned Program (\$ in Millions)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ·                                                                                                                                                                                                                                                                                                                                                          |                       |                |                 |                |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                            | FY 2009               | FY 2010        | FY 2011<br>Base | FY 2011<br>OCO | FY 2011<br>Total |
| Business Case Analysis, Trade Studies, Economic Analysis, Li Research Studies in support of the following efforts: Electronic Command Capability, Target Processing, Ground Based Air De Surveillance, Optical Systems, Route Reconnaissance and Cle Fire, Ground Radio and Maintenance and the Squad Immersive FY 2011 Base Plans:  Phase A Activities - Initiate, assist and complete Phase A activities concept refinement and in some cases their technology de Business Case Analysis, Trade Studies, Economic Analysis, Li Research Studies in support of the following efforts: Electronic Command Capability, Target Processing, Ground Based Air De Surveillance, Optical Systems, Route Reconnaissance and Cle Fire, Ground Radio and Maintenance and the Squad Immersive | Records Management, Net Enabled efense, Ground Based Operational earance, Mortar Fire Control and Indirect e Training Environment.  Ities of high priority programs during evelopment phases in the areas of fe Cycle Cost Estimates and Market Records Management, Net Enabled efense, Ground Based Operational earance, Mortar Fire Control and Indirect |                       |                |                 |                |                  |
| *Pre-Phase A Activities  FY 2009 Accomplishments:  Pre-Phase A Activities - Provides for the conduct of high priority Reconnaissance Surveillance Target Acquisition, Joint Tactical Vehicle, Follow-On Shoulder Launcher Weapon System (Analy Mission Profile) War Reserve Materiel Requirement Developme (UAV) concept of employment & Initial Capabilities Document, requirements assessments, establish alternatives for the Joint findings for seabasing capabilities of the future, provide for inte command and control arena, and examine engineering initial capacity.                                                                                                                                                                                                     | Radio System, Assault Breacher risis of Alternative/Op Mode Summary/ent, Tier II Unmanned Aerial Vehicle Force Protection concepts and and Light Tactical Vehicle, traceability gration of concepts for the Joint                                                                                                                                          | 3.904                 | 0.000          | 0.000           | 0.000          | 0.000            |

# **UNCLASSIFIED**

1.844

0.000

0.000

0.000

0.000

R-1 Line Item #155 Page 19 of 23

\*Pre-Phase A - Future Combat Vehicle

FY 2011

FY 2011

FY 2011

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy **DATE:** February 2010

#### APPROPRIATION/BUDGET ACTIVITY

**PROJECT** R-1 ITEM NOMENCLATURE

1319: Research, Development, Test & Evaluation, Navy PE 0605873M: Marine Corps Program Wide 2930: Phase 0 Activities Supt

BA 6: RDT&E Management Support

## B. Accomplishments/Planned Program (\$ in Millions)

### **FY 2009 FY 2010** Base OCO Total FY 2009 Accomplishments: Pre-Phase A - Future Combat Vehicle - Force Design Trades: Employ the Joint Capability Integration and Development System to derive roles, capability needs and attributes of MAGTF armor units performing in future service and joint operational concepts. Complete Functional Solution Analysis (FSA) and Concept Decision for MAGTF needs potentially addressed by FCS systems, components or Spin Out products. Develop Expeditionary Armored Forces (EAF) mission profiles and operational mode summary. Develop an Operations and Organization documents for FCS Spin Out products potentially meeting MAGTF needs. Conduct an EAF Evaluation Strategy, providing metrics or the needed capabilities. Provide personnel and travel necessary to participate in FCS and Unit of Action IPTs and planning for FCS Spin Out products. Technology Assessments: To support MCCDC JCIDS assessments of Army FCS capabilities. Technology assessments will be conducted to define technology maturity/readiness and issues for potential USMC adoption. Technology assessments, technology development strategy and consideration of technology issues shall be used to evaulate FCS technologies, including Spin Outs, and platforms (combat vehicles, UAVs, Unmanned Ground Vehicles, unattended sensors, and unattended munitions) of interest, based on developing MCCDC Inital Capabilities Documents (ICD) and Capability Development Documents (CDD). This shall include market research to determine alternate sources of technology. In support of MROC directed C4I integration (now called Systems Engineering, Interoperability Architectures and Technology (SIAT)) with FCS, assess architecture commonality, and assess/resolve technology barriers to C4I interoperability/integration (SIAT). Such technology assessment activities shall be coordinated with the Office of Naval Research, including monitoring Functional Naval Capabilities (FNC) developments for component commonality opportunities and participating in joint ONR/FCS technology initiatives. In support of FCS assessment, explore survivability initiatives through service and joint wargames and experiments and initiate risk studies. Systems Integration Plan: Develop the architecture based Systems Engineering Plan to support development and integration in preparation for Systems Development and Demonstration tasks. Establish a database compatible with both the Expeditionary Force Development System for DOTMLPF Integration and the Army's FCS Systems Integration

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy **DATE:** February 2010 **PROJECT** APPROPRIATION/BUDGET ACTIVITY **R-1 ITEM NOMENCLATURE** 1319: Research, Development, Test & Evaluation, Navy PE 0605873M: Marine Corps Program Wide

BA 6: RDT&E Management Support

Supt

2930: Phase 0 Activities

EV 2011 EV 2011 EV 2011

## B. Accomplishments/Planned Program (\$ in Millions)

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | FY 2009 | FY 2010 | Base  | OCO   | Total |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|-------|-------|-------|
| methodologies for current and future MAGTF systems design integration. Develop modeling and simulation approach and determine feasibility of FCS components on MAGTF systems. Populate EFDC system integration databases, based on capability options for meeting Expeditionary Maneuver Warfare (EMW) capability needs. Evaluate design excursions. Examine risk mitigation methodologies. Build business technology evaluation plan and strategy for measuring progress. Office and Acquisition Analysis: Fund capabilities, acquisition and technology team documentation development and coordinate successive integration of activities. Administrative support, (Systems Engineering and Technical Assistance (SETA))/contractor support. Project office travel, training and office materials. |         |         |       |       |       |
| Accomplishments/Planned Programs Subtotals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 10.695  | 4.178   | 4.346 | 0.000 | 4.346 |

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

N/A

# **D. Acquisition Strategy**

N/A

## **E. Performance Metrics**

N/A

| Exhibit R-2A, RDT&E Project Ju                                                             | stification: P    | B 2011 Navy         | 1                           |                            |                              |                     |                                     |                     | DATE: Feb           | ruary 2010          |               |
|--------------------------------------------------------------------------------------------|-------------------|---------------------|-----------------------------|----------------------------|------------------------------|---------------------|-------------------------------------|---------------------|---------------------|---------------------|---------------|
| APPROPRIATION/BUDGET ACT<br>1319: Research, Development, To<br>BA 6: RDT&E Management Supp | st & Evaluatio    | n, Navy             |                             |                            |                              |                     | PROJECT<br>9999: Congressional Adds |                     |                     |                     |               |
| COST (\$ in Millions)                                                                      | FY 2009<br>Actual | FY 2010<br>Estimate | FY 2011<br>Base<br>Estimate | FY 2011<br>OCO<br>Estimate | FY 2011<br>Total<br>Estimate | FY 2012<br>Estimate | FY 2013<br>Estimate                 | FY 2014<br>Estimate | FY 2015<br>Estimate | Cost To<br>Complete | Total<br>Cost |
| 9999: Congressional Adds                                                                   | 5.585             | 0.797               | 0.000                       | 0.000                      | 0.000                        | 0.000               | 0.000                               | 0.000               | 0.000               | 0.000               | 27.295        |
| Quantity of RDT&E Articles                                                                 | 0                 | 0                   | 0                           | 0                          | 0                            | 0                   | 0                                   | 0                   | 0                   |                     |               |

### A. Mission Description and Budget Item Justification

USMC Logistics Analysis & Optimization; Logistics Technology Improvements; Global Supply Chain Management

## B. Accomplishments/Planned Program (\$ in Millions)

|                                                                                                                                                                                                                                                                                                                                                 | FY 2009 | FY 2010 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|
| Congressional Add: USMC LOGISTICS ANALYSIS & OPTIMIZATION                                                                                                                                                                                                                                                                                       | 2.393   | 0.000   |
| FY 2009 Accomplishments: C9C46A - USMC Logistics Analysis & Optimization - Design and Prototype of IT enablers, for capabilities enhancement and to test solutions prior to infusing technology or replacing USMC logistics tools.                                                                                                              |         |         |
| Congressional Add: Logistics Technology Improvements                                                                                                                                                                                                                                                                                            | 1.596   | 0.000   |
| FY 2009 Accomplishments: C9E06A - Logistics Technology Improvements - funding will be used to update technology that allows for hands free update of inventory files via various automatic identification (AIT) Active Radio Frequency Identification (AFRID), providing Logistics Command with similar warehousing efforts found commercially. |         |         |
| Congressional Add: Global Supply Chain Management                                                                                                                                                                                                                                                                                               | 1.596   | 0.797   |

| Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy |                                        | <b>DATE:</b> February 2010 |                |  |
|---------------------------------------------------------|----------------------------------------|----------------------------|----------------|--|
| APPROPRIATION/BUDGET ACTIVITY                           | R-1 ITEM NOMENCLATURE                  | PROJECT                    |                |  |
| 1319: Research, Development, Test & Evaluation, Navy    | PE 0605873M: Marine Corps Program Wide | 9999: Cong                 | ressional Adds |  |
| BA 6: RDT&E Management Support                          | Supt                                   |                            |                |  |

EV 2009 EV 2010

# B. Accomplishments/Planned Program (\$ in Millions)

|                                                                                                                                                                                                                                                                                                                                                                                             | F1 2009 | F1 2010 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|
| FY 2009 Accomplishments:  C9E07A - Global Supply Chain Management - funding is intended to establish a Center for Advanced Logistics Management in Albany, Georgia to facilitate collaboration and assist in fulfilling the needs of military logistical organizations, providing real world knowledge of managing supply chains and logistics in a highly competitive, global environment. |         |         |
| FY 2010 Plans: C9E07A - Global Supply Chain Management - funding is intended to establish a Center for Advanced Logistics Management in Albany, Georgia to facilitate collaboration and assist in fulfilling the needs of military logistical organizations, providing real world knowledge of managing supply chains and logistics in a highly competitive, global environment.            |         |         |
| Congressional Adds Subtotals                                                                                                                                                                                                                                                                                                                                                                | 5.585   | 0.797   |

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

N/A

# **D. Acquisition Strategy**

N/A

# **E. Performance Metrics**

N/A