### A. Mission Description and Budget Item Justification

(U) This project is the only R&D program for mine systems, and is the sole support for the capability to maintain the effectiveness of mines facing new threat targets and increasing emphasis on major regional conflicts and littoral warfare in shallow water. Project tasks are grouped into several areas: (1a) Threat Modeling/Analysis, which collects, analyzes, and develops digital models of data on current priority threat target characteristics to support computer simulations; (1b) Target Detection and Response, which uses target models to develop optimal mine designs, settings, and firing algorithms; (2a) Components/Subsystems, which develops upgrades of mine components to maintain effectiveness against current threat targets using proven state-of-the-art technology including a remote controlled mine capability (RECO); (2b) Advanced Power sources, which develops improved batteries without hazardous heavy metals, and (3) New mines, which designs and develops new mines, including an Improved Submarine-Launched Mobile Mine (ISLMM). These efforts under (1) and (2) are currently Non-ACAT; the Improved Submarine-Launched Mobile Mine is an ACAT III, International Cooperative R&D program with the RAN. The Mission Need Statement (MNS M044-85-93) for an Improved Submarine-Launched Mobile Mine (ISLMM) was approved on 13 December 1993. The MNS shows a Fleet need to have a covert mining capability and to eliminate reliability problems associated with the existing MK 67 SLMM. The ISLMM will be used to sustain and improve the USN covert mining capability by converting existing MK48 Torpedoes into dual warhead mines. It will feature dual mine sections and utilize the advanced Target Detection Device (TDD) MK71. The ISLMM program was terminated in FY 00 by POM 02.
### PROGRAM ACCOMPLISHMENTS AND PLANS:

1. **(U) FY 2000 ACCOMPLISHMENTS:**
   - **Product Development**
     - **($0.908)** Primary Hardware - Began design and development of RECO capability and ISLMM EDMs.
     - **($1.057)** Systems Engineering - Began system engineering and requirements breakdown for ISLMM.
     - **Development Support Equipment**
     - **($0.347)** Software Development - Began tactical software development for ISLMM and RECO.
     - **($0.200)** Integrated Logistics Support - Began ILS tasks for ISLMM related to reliability, maintainability, and sustainability.
     - **Test and Evaluation**
     - **($0.327)** Development Test and Evaluation - Began development of ISLMM and RECO test program.
     - **Support**
     - **($0.437)** Program Management Support

2. **(U) FY 2001 PLAN:**
   - **Product Development**
     - **($0.853)** Primary Hardware - Complete design and development of one-way RECO capability; fabricate EDMs.
     - **Development Support Equipment**
     - **($0.237)** Software Development - Complete tactical software development for RECO.
     - **($0.037)** Integrated Logistics Support - Complete ILS tasks for RECO related to reliability, maintainability, and sustainability.
     - **Test and Evaluation**
     - **($0.120)** Development Test and Evaluation - Complete development of RECO test program.
     - **Support**
     - **($0.437)** Program Management Support
     - **($0.009)** Portion of extramural program reserved for Small Business Innovation Research assessment in accordance with 15 USC 638.

3. **(U) FY 2002 PLAN:** N/A
B. Program Change Summary:

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Funding: FY2000: General reduction of $-0.039K; FY 2001: Removal of additional RECO funding $-0.315K and General reduction of $-0.014K, Gov’t rescission $-0.004K; and FY2002 and FY 2003 decrease is a result of POM 02 SPP decision to terminate ISLMM program due to lack of RAN participation.

C. Other Program Funding Summary : ($ in Millions) To Total

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D. Acquisition Strategy:

The USN and RAN were cooperatively designing ISLMM. The US Navy was contracted with qualified contractors to manufacture the components for the kits to make the EDMs. NUWC Keyport, the USN depot for the MK48, assembled the ISLMMs/EDMs for All up Round (AUR) testing.

Using existing hardware to the greatest extent possible, NSWC CSS Panama City FL is teamed with other Navy laboratories and hardware contractors to design and develop the RECO. When ISLMM was added in POM 00, N85 was directed that existing funds be used, therefore other Mine Improvement efforts were placed on hold. With the termination of ISLMM, those Mine Improvement efforts have been resumed in FY 01.
### RECO PROGRAM SCHEDULE

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R-1 SHOPPING LIST - Item No. 128

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Remarks:

Development Support Equipment
- Software Development: WR, NSWC, CSS-Panama City, FL
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  - FY 01 Award Date: 12/00
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- Training Development: WR
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  - FY 01 Cost: 0.000
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  - Cost to Complete: N/A

Remarks:
### Exhibit R-3 Cost Analysis (page 2)

**APPROPRIATION/BUDGET ACTIVITY**: RDT&E, N/BA-5  
**PROGRAM ELEMENT**: MINE DEVELOPMENT/0604601N  
**PROJECT NAME AND NUMBER**: MINE DEVELOPMENT/00267

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**Remarks:**

**Total Cost**

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**Remarks:**