

**NAVY TRAINING SYSTEM PLAN**

**FOR THE**

**MH-60S**

**AIRBORNE MINE NEUTRALIZATION SYSTEM**

**N75-NTSP-P-30-0301/I**

**SEPTEMBER 2003**

## MH-60S AIRBORNE MINE NEUTRALIZATION SYSTEM

### EXECUTIVE SUMMARY

This Initial Navy Training System Plan (NTSP) for the MH-60S Airborne Mine Neutralization System (AMNS) was developed using the Training Planning Process Methodology. This document provides an early estimate of manpower, personnel, and training requirements to support the employment concepts currently being considered. It also contains appropriate data required to make accurate decisions and assessments concerning manpower and training alternatives for the AMNS.

The AMNS, is a Navy Airborne Mine Countermeasures (AMCM) mine neutralization weapon system that will be employed from the MH-60S Multi Mission Helicopter. The system will relocate, neutralize, and destroy bottom, close-tethered, and in-volume sea mine threats that have been previously detected, classified, and localized by other mine hunting systems. The system uses a self-powered remote controlled vehicle known as an Expendable Neutralizer, which is equipped with sonar, light, camera, and warhead to neutralize sea mines. The neutralization/destruction of mines is achieved by a shaped charge, which is integrated into the Expendable Neutralizer. Neutralization is defined as the ability to render a mine inoperable by mine case rupture and flooding, shock damage to mine components, or by sympathetic detonation. Sympathetic detonation of the mine charge is the preferred method. There are two types of Neutralizers, the Expendable Neutralizer and the Training Neutralizer. The Expendable Neutralizer is conventional, non-nuclear, live ordnance, which neutralizes or destroys mine threats in place. The Training Neutralizer is practice, inert ordnance, which is reusable for training and mine identification missions. The AMNS will provide an organic mine neutralization capability to the Carrier Battle Group and Amphibious Ready Group. This capability will be of critical importance in littoral zones, confined straits, choke points, and the Amphibious Operating Area. An AMNS, unique to the MH-53E Sea Dragon Helicopter, is currently being procured for the Helicopter Mine Countermeasures (HM) community and will provide a neutralization capability to the dedicated AMCM Forces. This NTSP addresses AMNS program, manpower, and training information related to the MH-60S only. For AMNS information as it relates to the MH-53E refer to the AMNS NTSP, N75-NTSP-P-30-0101/A October 2001. The AMNS is currently in Milestone B, authority to enter System Development and Demonstration Phase of the Defense Acquisition System. The Acquisition Category (ACAT) assigned is ACAT II. The Milestone C Decision Point is planned for first quarter Fiscal Year (FY) 06. Initial Operational Capability (IOC) is currently planned for the first quarter of FY08.

The AMNS maintenance concept is based upon the overall objective to ensure components and Support Equipment (SE) are available to fulfill commitments of operational activities and provide the means to restore unserviceable units and SE to serviceable condition with minimal downtime. Maintenance functions, excluding the Training and Expendable Neutralizers, will be based on the three levels of maintenance, Organizational Level (O-Level) Intermediate Level (I-Level), and Depot Level (D-Level) as defined in the Naval Aviation Maintenance Program, Office of the Chief of Naval Operations Instruction (OPNAVINST) 4790.2H. It is expected that Aviation Electronics Technicians (AT) Navy Enlisted Classification

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(NEC) code 83XX assigned to Helicopter Combat Support (HC) and HM squadrons, as MH-60S AMCM Systems Maintenance Technicians Organizational and Intermediate Level, will perform O-Level maintenance. These billets do not currently exist in the HC squadrons and may have to be established. AT O-Level and I-Level MH-53E AMCM systems maintenance billets currently exist in the HM squadrons, it is expected that these will convert to MH-60S AMCM systems maintenance billets to support the HM community's transition to the MH-60S. A new NEC code 83XX will be required to identify MH-60S AMCM systems maintenance personnel. Aviation Ordnanceman (AO) NEC code 8378 that will be assigned to the HC squadrons will perform aircraft mission configuration, mission certification, and O-Level maintenance on the AMNS when installed and while in their custody. AO maintenance billets do not currently exist in the HC deployable squadrons and may have to be established. AOs NEC code 8378 that will be assigned to the HM squadrons Aircraft Maintenance Department Work Center (W/C) 230 will perform aircraft mission configuration, mission certification, and O-Level maintenance on the AMNS when installed and while in their custody. Additionally ATs NEC code 83XX, MH-60S AMCM Systems Maintenance Technicians Organizational and Intermediate Level will be assigned to the HM squadrons W/C 230 to provide maintenance support for the AMNS. Maintenance functions for the Training and Expendable Neutralizers will be based on the three levels of maintenance, O-Level, I-Level, and D-Level as defined in the Naval Ordnance Maintenance Management Program, OPNAVINST 8000.16. O-Level maintenance will be performed by those personnel in the departments and work centers identified above. Naval Air Station Weapons Department and shipboard aviation ordnance personnel AOs NEC code 6801 will perform I-Level maintenance. The Original Equipment Manufacture or approved repair facility will perform D-Level maintenance.

Operations Specialists (OS) that are assigned to the HM squadrons conduct AMCM Mission Planning, Post Mission Analysis, and operate AMCM Command, Control, Communications, Computers, and Intelligence (C4I) systems. It is expected that this manning concept will not change. Currently these OSs receive no AMCM specific follow-on training or NEC. A Stand-Alone course titled Airborne Mine Countermeasures MCM Planning, Post Mission Analysis, MCM Evaluation Course is currently proposed in the AN/AQS-20A Initial NTSP. Additionally, an On The Job Training awardable NEC code that will identify their AMCM specific qualifications is planned. Personnel requirements for conducting Mission Planning, Post Mission Analysis, and the operation of AMCM C4I systems for the HC squadrons are currently being evaluated.

The AMNS mission will require an operator manning of four: AMCM qualified pilot, co-pilot, and two enlisted aircrewmen. It is expected that the AMNS will require no additional operator billets above those identified in current HC and HM Activity Manpower Documents. It is anticipated additional O-Level and I-Level maintenance billets within the HC squadrons may be required to support the AMNS and additional MH-60S AMCM systems. Additional instructor billets may be required to support AMNS follow-on training requirements. A Manpower Estimate Report (MER) is currently under development by Commander Naval Air Systems Command (Code AIR 3.2.6) Patuxent River, Maryland. Results of the MER will be identified in future updates of this NTSP.

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Follow-on maintenance training for mission configuration personnel will be conducted at the Maintenance Training Unit (MTU) -1044, Naval Station (NS) Norfolk, Virginia and MTU-1022, Naval Air Station (NAS) North Island, California. Follow-on AMNS maintenance training for the AMCM systems technicians will be conducted at MTU-1044, NS Norfolk and MTU-1022, NAS North Island. It is anticipated operator training will be conducted at the Fleet Replacement Squadrons located at HC-3, NAS North Island and HC-2, NS Norfolk. Follow-on training for squadron tactics (Mission Planning/Post Mission Analysis) personnel is under review and will be included in future updates to this NTSP. Follow-on training for Naval Air Station Weapons Department and shipboard aviation ordnance personnel will be conducted at MTU-4032, NS Norfolk, MTU-4030, NS Mayport, Florida, MTU-4035, NAS Whidbey Island, Washington, and MTU-4033, NAS North Island.

The AMNS is one of five AMCM sensor/weapon systems being developed for deployment aboard the MH-60S aircraft. The additional sensor/weapon systems are the Airborne Laser Mine Detection System (ALMDS), AN/AQS-20A Sonar Mine Detecting Set, Organic Airborne and Surface Influence Sweep (OASIS), and the Rapid Airborne Mine Clearance System (RAMICS). Individual NTSPs are in development for each of these systems.

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**LIST OF ACRONYMS**

ACAT	Acquisition Category
AE	Aviation Electrician's Mate
AIMD	Aircraft Intermediate Maintenance Department
AMCM	Airborne Mine Countermeasures
AMTCS	Aviation Maintenance Training Continuum System
AOA	Amphibious Operating Area
AO	Aviation Ordnanceman
APO	Aviation Petty Officer
AT	Aviation Electronics Technician
BIT	Built-In-Test
C4I	Command, Control, Communications, Computers, and Intelligence
CBT	Computer Based Training
CC	Common Console
CNO	Chief of Naval Operations
CSE	Common Support Equipment
CSTRS	Carriage, Stream, Tow, and Recovery System
CVBG	Carrier Battle Group
D-Level	Depot Level
FRS	Fleet Replacement Squadrons
HC	Helicopter Combat Support
HM	Helicopter Mine Countermeasures
ICW	Interactive Courseware
IETM	Interactive Electronic Technical Manual
I-Level	Intermediate Level
IOC	Initial Operational Capability
LHA	Launch and Handling System
LORA	Level of Repair Analysis
MCM	Mine Countermeasures
MEDAL	Mine Warfare Environmental Decision Aid Library
MER	Manpower Estimate Report

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**LIST OF ACRONYMS**

MTU	Maintenance Training Unit
NAMP	Naval Aviation Maintenance Program
NAMTRAU	Naval Air Maintenance Training Unit
NAS	Naval Air Station
NEC	Navy Enlisted Classification
NOMMP	Naval Ordnance Maintenance Management Program
NS	Naval Station
NTSP	Navy Training System Plan
OJT	On-the-Job Training
O-Level	Organizational Level
OPEVAL	Operational Evaluation
OPNAV	Office of the Chief of Naval Operations
OPNAVINST	Office of the Chief of Naval Operations Instruction
OPO	OPNAV Principal Official
OS	Operations Specialist
PEO LMW	Program Executive Officer Littoral and Mine Warfare
PMA	Program Manager, Air
PMS	Program Manager, Surface
PSE	Pequiar Support Equipment
RFOU	Ready For Operational Use
RFT	Ready For Training
SD&D	System Development and Demonstration
SRA	Shop Replaceable Assemblies
TBD	To Be Determined
TD	Training Devices
TECHEVAL	Technical Evaluation
TEMP	Test and Evaluation Master Plan
TTE	Technical Training Equipment
W/C	Work Center
WRA	Weapon Replaceable Assembly

**MH-60S AIRBORNE MINE NEUTRALIZATION SYSTEM**

**PREFACE**

This Initial Navy Training System Plan (NTSP) is an early look at the MH-60S Airborne Mine Neutralization System (AMNS) program. This is the first iteration of the Initial NTSP for the MH-60S AMNS program. The data contained in this iteration does not represent the official Manpower Personnel and Training requirements of the program. This document explores the various employment and support alternatives currently under consideration. Since it is relatively early in the acquisition process, some definitive data was unavailable for inclusion in this version. This NTSP is a product of the Training Planning Process Methodology, as outlined in Office of the Chief of Naval Operations (OPNAV) publication P-751-3-9-97.

**PART I - TECHNICAL PROGRAM DATA**

**A. NOMENCLATURE-TITLE- PROGRAM**

**1. Nomenclature-Title-Acronym.** MH-60S Airborne Mine Neutralization System, (AMNS).

**2. Program Element.** 0604373N

**B. SECURITY CLASSIFICATION.**

**1. System Characteristics** ..... Unclassified

**2. Capabilities** ..... Confidential

**3. Functions**..... Unclassified

**C. MANPOWER, PERSONNEL, AND TRAINING PRINCIPALS**

OPNAV Principal Official (OPO) Program Sponsor: .....CNO (N752)

OPO Resource Sponsor.....CNO (N759)

Developing Agency ..... PEO LMW (PMS210)

Training Agency .....COMLANTFLT  
COMPACFLT  
NETC

Training Support Agency.....NAVAIR (PMA205)

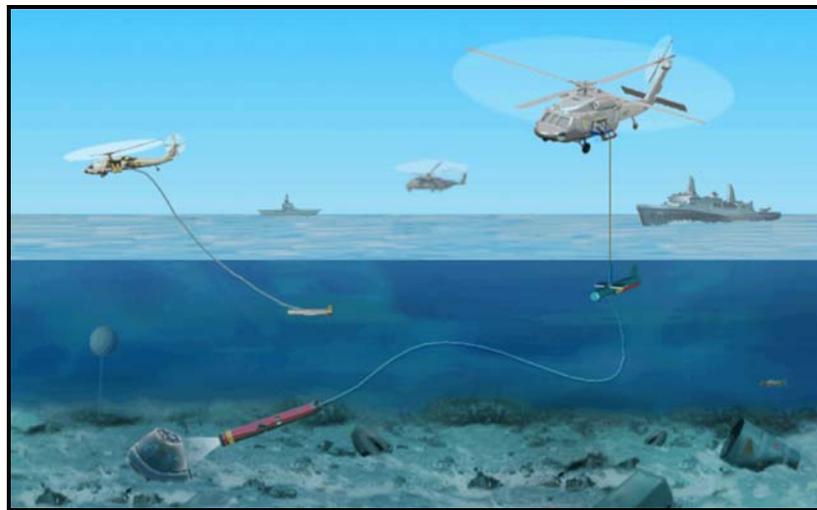
Manpower and Personnel Mission Sponsor.....CNO (N12)  
NAVPERSCOM (PERS-4, PERS-404)

Director of Naval Training: ..... CNO (N00T)

**D. SYSTEM DESCRIPTION**

**1. Operational Uses.** The AMNS (Figure I-1), is a Navy Airborne Mine Countermeasures (AMCM) mine neutralization weapon system that will be employed from the MH-60S Multi Mission Helicopter. The system will relocate and neutralize bottom, close-tethered, and in-volume sea mine threats that have been previously detected, classified, and localized by other mine hunting systems. The system uses a self-powered remote controlled

vehicle known as an Expendable Neutralizer equipped with sonar, light, camera, and warhead. The neutralization/destruction of mines is achieved by a shaped charge, which is integrated into the Expendable Neutralizer. Neutralization is defined as the ability to render a mine inoperable by mine case rupture and flooding, shock damage to the mine components or preferably by sympathetic detonation of the mine charge. Sympathetic detonation of the mine charge is the preferred method. There are two types of Neutralizers, the Expendable Neutralizer and the Training Neutralizer. The Expendable Neutralizer is conventional, non-nuclear, live ordnance, which neutralizes or destroys mine threats in place. The Training Neutralizer is practice, inert ordnance, which is reusable for training and mine identification missions. The AMNS will provide an organic mine neutralization capability to the Carrier Battle Group (CVBG) and Amphibious Ready Group and provide a neutralization capability to the dedicated AMCM Forces. This capability will be of critical importance in littoral zones, confined straits, choke points, and the Amphibious Operating Area (AOA).



**Figure I-1**

The AMNS is one of five AMCM sensor/weapon systems being developed for deployment aboard the MH-60S aircraft. The additional sensor/weapon systems are the Airborne Laser Mine Detection System (ALMDS), AN/AQS-20A Sonar Mine Detecting Set, Organic Airborne and Surface Influence Sweep (OASIS), and the Rapid Airborne Mine Clearance System (RAMICS). Individual NTSPs are in development for each of these systems.

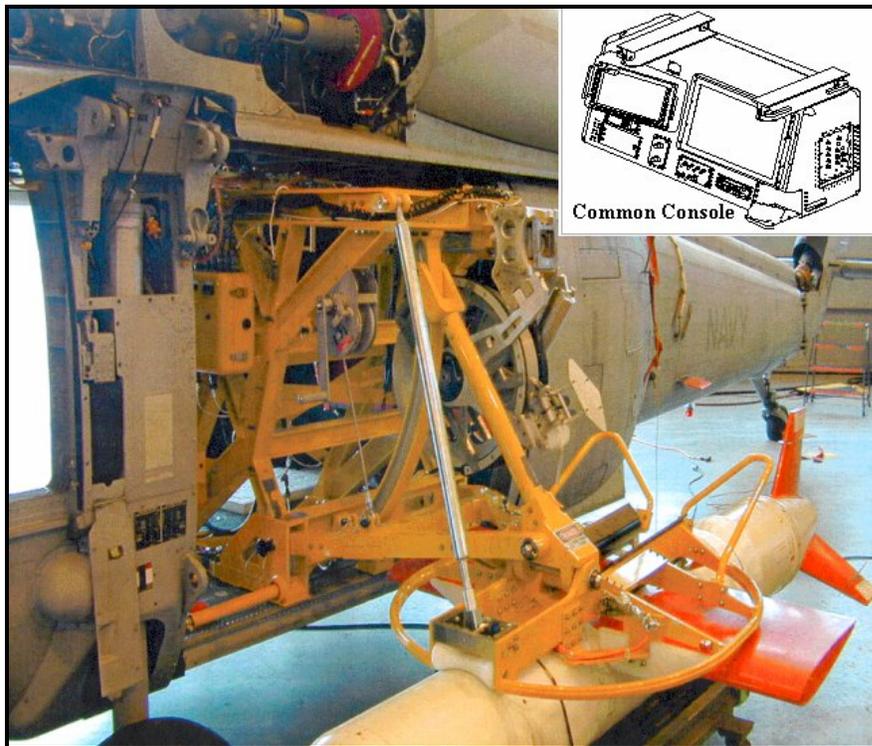
**2. Foreign Military Sales.** No Foreign Military Sales are planned at this time.

**E. DEVELOPMENTAL TEST AND OPERATIONAL TEST.** The Draft Test and Evaluation Master Plan (TEMP) for the MH-60S AMNS, is currently in development. Required TEMP information will be identified in future updates of this NTSP.

**F. AIRCRAFT AND/OR EQUIPMENT/SYSTEM/SUBSYSTEM REPLACED.** The AMNS will not replace any other system in the Mine Countermeasures (MCM) inventory.

## G. DESCRIPTION OF NEW DEVELOPMENT

**1. Functional Description.** The AMNS will be sub-divided into five major components: the Neutralizer, Navigation and Guidance Subsystem, Launch and Handling System (LHS), a Communications Link, and AMNS Software. The AMNS will be integrated into the MH-60S through the use of the aircraft AMCM mission kit (Figure I-2), consisting of the Common Console (CC), and the Carriage, Stream, Tow, and Recovery System (CSTRS). All the AMNS equipment will have the versatility for “roll-on/roll-off” use on the MH-60S. The characteristics of each of the AMNS conceptual components are discussed below. Refer to the MH-60S NTSP for the aircraft AMCM Mission Kit information.



**Figure I-2**

**a. Neutralizer.** There will be two versions of Neutralizer. One version will be used as an inert training device and is hereafter referred to as the Training Neutralizer. The second version will be an explosive device and is hereafter referred to as the Expendable Neutralizer. The term Neutralizer used by itself shall apply to both the Training and Expendable Neutralizers. The Neutralizer (Figure I-3) will provide communications between itself and the CC and provides and distributes its own power during operation. The Neutralizer contains a sonar and video system to assist in target reacquisition, identification, and prosecution. Additionally, the Neutralizer will have the capability to monitor depth and distance from bottom, and the capability to avoid “bottom plowing”. The Neutralizer will have the capability to move forward or reverse, up and down, or hover, and to be operated in either automatic or manual mode. The Neutralizer will provide the following to the CC via communication link: position of the Neutralizer (azimuth, range, and depth), sonar and video data, arming sequence status, and mission data. The Expendable Neutralizer will neutralize targets via non-nuclear explosive

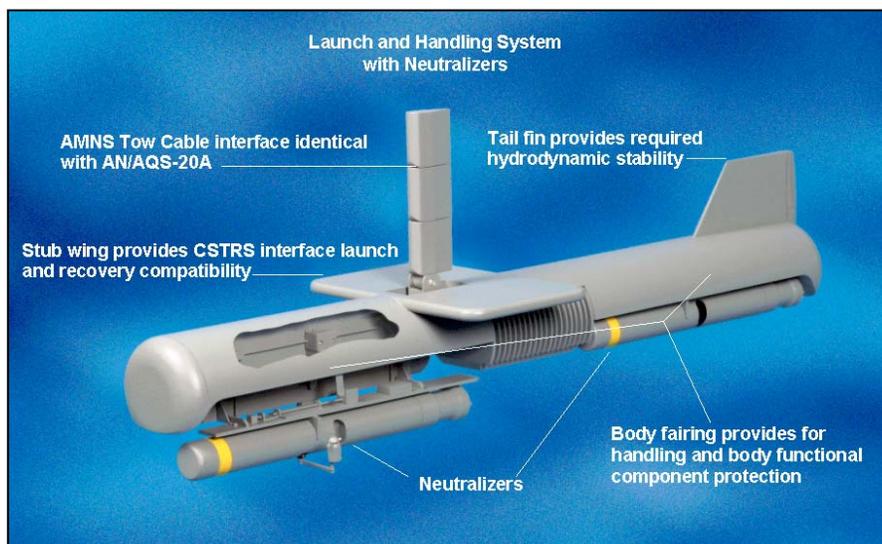
means, self-scuttle or sterilize in unsafe conditions, and meet program safety requirements. The Training Neutralizer will simulate the arming sequence of the Expendable Neutralizer and provide this information for display to the operator. The Training Neutralizer will be capable of multiple uses and contain a rechargeable power source.



**Figure I-3**

**b. Navigation and Guidance Subsystem.** The Navigation and Guidance Subsystem will consist of all the hardware and software contained within the Neutralizer and LHS that is responsible for determining, maintaining, and processing the navigation data. The Navigation and Guidance Subsystem sends the navigation data to and is displayed on the CC for use by the Sensor Operator. The Navigation and Guidance Subsystem provides the navigation data necessary for the Neutralizer to reacquire, identify, and neutralize targets previously located. The Navigation and Guidance Subsystem is capable of both automatic and manual guidance modes of operation.

**c. Launch and Handling System.** The LHS (Figure I-4) will consist of all hardware and software necessary for data processing during an AMNS mission. The LHS manages the Neutralizers during helicopter transition phases, launch of the Neutralizers and provides a communications interface between the Neutralizer and CC (via CSTRS). The LHS also houses the acoustic tracking system hydrophone. The LHS interfaces with the CSTRS and can mount up to four Neutralizers. The LHS has the capability to jettison the Neutralizers should that be operationally required.



**Figure I-4**

**d. Communications Link.** The AMNS Communications Link will consist of all the circuit cards, discrete electrical components, enclosures, actuators, sensors, and fiber optic cables, and wiring that are responsible for maintaining a communications path between the Neutralizer and the CC.

**e. AMNS Software.** The AMNS Software will consist of the firmware and software resident in the Neutralizer, LHS, and CC control and display software that is required for the AMNS to fulfill its performance requirements. The software allows the Sensor Operator to initiate Built-In Test (BIT) of the AMNS hardware, and provides data to enable display of the test results on the CC. In addition, the software provides data to enable the display of status and control of the Neutralizer, LHS, and Communications Link on the CC. When not performing any other tasks, the software automatically performs a self-test on the CC. In the event of non-critical hardware failure, the software is able to perform dynamic reconfiguration to continue the mission whenever practical.

**f. AMNS Display.** The AMNS display will reside on the CC and will be capable of displaying the navigation and sonar, or Neutralizer nose video and sonar information simultaneously while maintaining the display of specific Neutralizer and mission status data. Additionally, a sector of the display will be available for input of commands or response to system prompts.

**2. Physical Description.** The table below identifies the physical dimensions of the LHS and Neutralizer. Refer to the MH-60S NTSP for the aircraft AMCM mission kit information.

PHYSICAL DIMENSIONS OF THE AMNS SPECIFIC EQUIPMENT					
COMPONENTS	LENGTH	WIDTH	HEIGHT	DIAMETER	WEIGHT
Launch and Handling System	126 in.	38 in. (wingspan)	19.74 in.	15.5 in.	365.8 lbs.
Neutralizer	41.3 in.	---	---	5.3 in	36.3 lbs.

**3. New Development Introduction.** The AMNS will be introduced as new production.

**4. Significant Interfaces.** The AMNS and its computer resources interface electrically and are compatible with the following:

- a. MH-60S Helicopter
- b. Aircraft AMCM Mission Kit

**5. New Features, Configurations, or Material.** The AMNS is the first remotely controlled vehicle designed to neutralize mine threats from the MH-60S helicopter in support of AMCM.

## H. CONCEPTS

**1. Operational Concept.** The AMNS operational concept is to neutralize bottom, close-tethered, and in-volume sea mine threats by using remote controlled expendable vehicles (Neutralizers) launched from a MH-60S helicopter, operating from various helicopter capable surface ships and shore-based sites. This capability will be of critical importance in littoral zones, confined straits, choke points, and the AOA. The normal operating crew will consist of an MH-60S AMCM Pilot, Co-pilot, and two enlisted aircrewmen. As with all AMCM systems, the AMNS is modular in design and can be readily installed in or removed from the helicopter as mission requirements dictate. MCM Planning will be conducted utilizing Mine Warfare Environmental Decision Aid Library (MEDAL) and Mission Planning will be conducted on the Navy H-60 Mission Planning Station. Post Mission Analysis will be conducted on the AMCM Common Post Mission Analysis Station. MCM Evaluation will also be conducted on MEDAL.

**2. Maintenance Concept.** The AMNS maintenance concept is based upon the overall objective to ensure components and Support Equipment (SE) are available to fulfill commitments of operational activities and provide the means to restore unserviceable units and SE to serviceable condition with minimal downtime. Maintenance functions, excluding the Training and Expendable Neutralizers, will be based on the three levels of maintenance, Organizational Level (O-Level), Intermediate Level (I-Level), and Depot Level (D-Level) as defined in the Naval Aviation Maintenance Program (NAMP), Office of the Chief of Naval Operations Instruction (OPNAVINST) 4790.2H. It is expected that Aviation Electronics Technicians (AT) Navy Enlisted Classification (NEC) code 83XX assigned to Helicopter Combat Support (HC) and Helicopter Mine Countermeasures (HM) squadrons, as MH-60S AMCM Systems Maintenance Technicians Organizational and Intermediate Level, will perform O-Level maintenance. These billets do not currently exist in the HC squadrons and may have to be established. AT O-Level and I-Level MH-53E AMCM systems maintenance billets currently exist in the HM squadrons, it is expected that these will convert to MH-60S AMCM systems maintenance billets to support the HM community's transition to the MH-60S. A new NEC code 83XX will be required to identify MH-60S AMCM systems maintenance personnel. Aviation Ordnanceman (AO) NEC code 8378 that will be assigned to the HC squadrons will perform aircraft mission configuration, mission certification, and O-Level maintenance on the AMNS system when installed and while in their custody. AO maintenance billets do not currently exist in the HC deployable squadrons and may have to be established. AOs NEC code 8378 that will be assigned to the HM squadrons Aircraft Maintenance Department Work Center (W/C) 230 will perform aircraft mission configuration, mission certification, and O-Level maintenance on the AMNS when installed and while in their custody. Additionally ATs NEC code 83XX, MH-60S AMCM Systems Maintenance Technicians Organizational and Intermediate Level will be assigned to the HM squadrons W/C 230 to provide maintenance support for the AMNS. Maintenance functions for the Training and Expendable Neutralizers will be based on the three levels of maintenance, O-Level, I-Level, and D-Level as defined in the Naval Ordnance Maintenance Management Program (NOMMP), OPNAVINST 8000.16. O-Level maintenance will be performed by those personnel in the departments and work centers identified above. Naval Air Station Weapons Department and shipboard aviation ordnance personnel AOs NEC code 6801 will perform I-Level maintenance. The Original Equipment Manufacture or approved repair facility will perform D-Level maintenance.

**a. Organizational.**

**(1) AMNS (excluding Training and Expendable Neutralizers).** O-Level maintenance will be limited to pre-flight preparation; post-flight downloading; performing inspections; system corrosion control (includes cleaning and wash down of all components subjected to saltwater contact); pre-flight and post-flight self-tests; and removal and replacement of faulty Weapons Replaceable Assemblies (WRA). It is expected that ATs NEC code 83XX that will be assigned to HC and HM squadrons, as MH-60S Airborne Mine Countermeasures Systems Maintenance Technicians Organizational and Intermediate Level will perform O-Level maintenance on the AMNS. Additionally they will be trained to perform O-Level and I-Level maintenance as required on all the MH-60S AMCM systems. These billets do not currently exist in the HC squadrons and may have to be established. A new NEC code will be required to identify these technicians. AOs NEC code 8378 will perform aircraft mission configuration and mission certification. AO maintenance billets do not currently exist in the HC squadrons and may have to be established. AOs NEC code 8378 that will be assigned to the HM squadrons Aircraft Maintenance Department W/C 230 will perform aircraft mission configuration, mission certification, and O-Level maintenance on the AMNS when installed and while in their custody. Additionally ATs NEC code 83XX, MH-60S AMCM Systems Maintenance Technicians Organizational and Intermediate Level will be assigned to W/C 230 to provide maintenance support for the AMNS when installed and while in their custody. This plan is supported by the AMCM mission systems maintenance concept outlined in the NAMP, OPNAVINST 4790.2H.

**(a) Preventative Maintenance.** Preventative Maintenance at the O-Level will occur between missions and include limited scheduled maintenance consisting of pre- and post-flight inspections, operational readiness testing, and corrosion control.

**(b) Corrective Maintenance.** Corrective maintenance actions at the O-Level will include fault isolation to the WRA level, using Power-Up BIT, Operator Initiated BIT, or manual troubleshooting methods, removal and replacement of faulty WRAs, and verification of satisfactory corrective maintenance actions, and adjustment or alignment as required and authorized at the O-Level.

**(2) Training Neutralizer.** It is anticipated that ATs with NEC code 83XX assigned to the HC squadrons and ATs with NEC code 83XX assigned to the HM squadrons AMCM Systems Maintenance Department W/C 16B will perform O-Level maintenance. AOs NEC 8378 that will be assigned to W/C 230 will perform O-Level maintenance on the Training Neutralizer when in their custody. O-Level maintenance includes the following:

- Remove and install protective devices
- Visual inspection for damage and corrosion
- Cleaning of external surfaces and corrosion control
- Uploading and downloading on aircraft, (W/C 230)
- Neutralizer BIT
- Battery removal and replacement (Training Neutralizer only)

**(3) Expendable Neutralizer.** AOs NEC 8378 assigned to W/C 230 will perform O-Level maintenance on the Expendable Neutralizer when in their custody. O-Level maintenance includes the following:

- Remove and install protective devices
- Visual inspection for damage and corrosion
- Cleaning of external surfaces and corrosion control
- Uploading and downloading on aircraft
- Neutralizer BIT

**b. Intermediate.** I-Level maintenance (excluding the Training and Expendable Neutralizers) will be performed on WRAs and Shop Replaceable Assemblies (SRA) beyond the O-Level maintenance capability. I-Level maintenance consists of fault isolation of defective WRAs and SRA by using Common Support Equipment (CSE) and Peculiar Support Equipment (PSE), replacing faulty SRA and components, and verifying corrective action via the appropriate CSE and PSE. I-Level maintenance for the Training and Expendable Neutralizer as identified in the NOMMP includes requisition, receipt, storage, assembly, delivery, and issuance of ordnance to using units; breakout, strikeup, and strikedown from and to magazines; visual inspection of ordnance and containers (special, conditional, and breakout); corrosion control treatment and repainting, and compliance with Notices of Ammunition Reclassifications and Technical Directives. Detailed information on Aircraft Intermediate Maintenance Department (AIMD) locations, CSE, and PSE will be identified in future updates to this NTSP.

**(1) Training Neutralizer.** Detailed I-Level maintenance requirements for the Training Neutralizer will be identified during the development of the Level of Repair Analysis (LORA).

**(2) Expendable Neutralizer.** Detailed I-Level maintenance requirements for the Expendable Neutralizer will be identified during the development of the LORA. They are expected to encompass the requirements outlined in the NOMMP for an All Up Round.

**c. Depot.** It is expected the Original Equipment Manufacture or an approved D-Level repair facility will perform D-Level maintenance. System components will be returned to the D-Level for repairs in accordance with the AMNS Maintenance Plan.

**d. Interim Maintenance.** It is expected Contractor Engineering and Technical Services will be employed during the interim support phase.

**e. Life-Cycle Maintenance Plan.** The AMNS reusable equipment will be designed to have a minimum operational life cycle of 20 years with reasonable servicing such as replacing fasteners, connectors, hinges, and other consumables. Life Cycle Maintenance Plan data will be developed as testing and evaluation of the initial systems is conducted and additional systems and support data are developed.

**3. Manning Concept.** Based on a cursory analysis of the operator, maintenance, and tactics related tasks associated with the AMNS and its supporting equipment, it has been determined these tasks will be within the capabilities of the Navy's existing enlisted rating and Navy Officer Billet Classification structures. Based on current program information it is anticipated introduction of the AMNS will require no additional operator billets above those identified in current HC and HM Activity Manpower Documents. Based on the results of a base line comparison conducted during the development of this NTSP utilizing current AMCM systems maintenance support information, it is expected that additional O-Level and I-Level maintenance billets may be required within the HC squadrons and AIMDs to support the maintenance requirements of the AMNS and additional MH-60S AMCM systems. It is expected that existing AT NEC 8391 maintenance billets will convert to MH-60S AMCM systems maintenance support billets when the HM squadrons transition to the MH-60S and its associated AMCM systems. Additional instructor billets may be required to support AMNS training requirements. This will not be determined until detailed training and student throughput information becomes available. Actual manpower requirements will not be available until a Manpower Estimate Report (MER) for the MH-60S squadrons supporting AMCM becomes available.

Note: A MER for the MH-60S squadrons supporting AMCM is currently under development by Commander Naval Air Systems Command (Code AIR 3.2.6) Patuxent River, Maryland. Results of the MER will be identified in future updates of this NTSP.

**a. Estimated Maintenance Man-Hours per Operating Hour.** Estimated Maintenance Man-Hours per Operating Hour for each affected Work Center will be identified with the development of the MER. Once complete, the results will be identified in an update to this NTSP.

**b. Proposed Utilization.** Average sortie length is expected to be approximately two hours and 30 minutes. System utilization has currently not been identified.

**c. Recommended Qualitative and Quantitative Manpower Requirements.** Based on the MH-60S NTSP N78-NTSP-A-50-9902A/A, current AMNS program information, and baseline comparisons conducted, it is expected the AMNS will not require additional operator billets. New O-Level AO, NEC code 8378 and O-Level and I-Level AT, NEC code 83XX maintenance billets may be required.

**(1) Operator.** Refer to the MH-60S NTSP N78-NTSP-A-50-9902A/A.

**(2) Maintenance.** It is expected that new maintenance billets may be required to support O-Level and I-Level maintenance requirements for the AMNS. These O-Level and I-Level ATs will be assigned to the squadrons and supporting AIMDs specifically trained to support both the O-Level and I-Level maintenance requirements for all the MH-60S AMCM systems. It is anticipated that they will be identified as MH-60S AMCM Systems Maintenance Technician Organizational and Intermediate Level, NEC code 83XX. Additionally, AOs NEC code 8378 will perform aircraft mission configuration, certification, and ordnance related maintenance functions. AO maintenance billets currently do not exist in the deployable HC squadrons. These billets may have to be established. This maintenance-manning concept is supported by the NAMP, OPNAVINST 4790.2H. Detailed maintenance manpower information

is currently not available. The tables below detail current and proposed qualitative manning information.

Note: The O-Level AOs may be assigned to the HC MH-60S squadrons as a result of the Combat Search and Rescue (Armed Helo) requirement. Refer to the H-60 Armed Helicopter NTSP N88-NTSP-A-50-9805/A, March 2002.

<b>HM AMCM SYSTEMS MAINTENANCE SUPPORT</b>					
<b>CURRENT MH-53E</b>			<b>PROPOSED MH-60S</b>		
<b>RATE</b>	<b>NEC</b>	<b>W/C</b>	<b>RATE</b>	<b>NEC</b>	<b>W/C</b>
AD	8391	16A	AO	8378	230
AE	8391	16B	AT	83XX	230/16B
AM	8391	230/16A	-	-	-
AO	0000	230	-	-	-
AT	8391	16B	-	-	-

<b>HC AMCM SYSTEMS MAINTENANCE SUPPORT</b>					
<b>CURRENT H-46</b>			<b>PROPOSED MH-60S</b>		
<b>RATE</b>	<b>NEC</b>	<b>W/C</b>	<b>RATE</b>	<b>NEC</b>	<b>W/C</b>
None	-	-	AO	8378	230
None	-	-	AT	83XX	210

Note: With the current and future development of MH-60S deployable AMCM systems, the need for a specific NEC code identifying those personnel trained and qualified to maintain these systems will be required. Currently the HM community utilizes NEC code 8391; AMCM Systems Maintenance Technician Organizational and Intermediate Level to identify personnel trained to maintain AMCM systems and mission equipment. These personnel support both O-Level and I-Level maintenance requirements.

**(3) Tactics.** Operations Specialists (OS) conduct AMCM Mission Planning and Post Mission Analysis, and operate AMCM Command, Control, Communications, Computers, and Intelligence (C4I) systems for the HM squadrons. It is expected that this

manning concept will not change. Currently these OSs receive no AMCM specific follow-on training or NEC. A Stand-Alone course titled Airborne Mine Countermeasures MCM Planning, Post Mission Analysis, MCM Evaluation Course is currently proposed in the AN/AQS-20A Initial NTSP. Additionally, an On-the-Job Training (OJT) awardable NEC code 03XX, AMCM Operations Specialist that will identify their AMCM specific qualifications is planned. This Stand-Alone course along with the OJT will ensure these personnel receive the training and skills necessary to meet the commands operational commitments. Personnel requirements for conducting Mission Planning, Post Mission Analysis, and the operation of AMCM C4I systems for the HC squadrons are currently being evaluated. HC and HM operators (pilots and aircrewmembers) will receive AMCM mission tactics training from a segment course within the operator track.

**4. Training Concept.** The AMNS training program will consist of initial and follow-on training for Technical Evaluation (TECHEVAL) and Operational Evaluation (OPEVAL) personnel, instructors, Fleet operators, maintenance technicians, and tactics personnel. Initial training for TECHEVAL and OPEVAL personnel, instructors, Fleet operators, and maintenance technicians will be accomplished by both government and contractor support. Follow-on training for operators (pilots and aircrewmembers) will be conducted at the MH-60S Fleet Replacement Squadrons (FRS), HC-3 Naval Air Station (NAS) North Island, California and HC-2 Naval Station (NS) Norfolk, Virginia. Follow-on maintenance training for mission configuration personnel will be conducted at Maintenance Training Unit (MTU) -1044, NS Norfolk and MTU-1022, NAS North Island. Follow-on AMNS maintenance training for the AMCM systems technicians will be conducted at MTU-1044, NS Norfolk and MTU-1022, NAS North Island. Follow-on training for NAS Weapons Department and shipboard aviation ordnance personnel will be conducted at MTU-4032, NS Norfolk, MTU-4030, NS Mayport, Florida, MTU-4035, NAS Whidbey Island, Washington, and MTU-4033, NAS North Island. Training for HM tactics (Mission Planning/Post Mission Analysis) personnel will be provided through a Stand-Alone course, the training activity has not been identified. Tactics training requirements for HC squadrons are currently being evaluated. AMNS initial and follow-on training requirements for Explosive Ordnance Disposal personnel is currently under review. The follow-on training system that will be delivered to the training activities will be developed under contract as Computer Based Training (CBT) in the format required by the training activities.

Note: Navy and civilian personnel handling Expendable and Training Neutralizers will require qualification; meeting such requirements as testing, formal classes, licenses, documented On-the-Job Training and task proficiency, and physical examination; and certification by assigned command or organization unit under local Explosives Handling Personnel Qualification and Certification (QUAL/CERT) Program, as outlined in OPNAVINST 8020.14. The command or organization unit QUAL/CERT board recommends approval based on the individual's training record, an examination of individual's technical knowledge, and observation of satisfactorily demonstrated skills. QUAL/CERT Program Records are maintained locally.

**a. Initial Training.** The Contractor will develop and conduct operator and maintenance initial training for Navy Test and Evaluation personnel in support of TECHEVAL and OPEVAL. In order to meet Fleet introduction requirements, the Contractor will also develop and conduct operator and maintenance initial training for the FRS and Naval Air Maintenance Training Unit (NAMTRAU) instructors, and an initial cadre of Fleet operator, maintenance, and

tactics (Mission Planning/Post Mission Analysis) personnel. It is expected that the following courses will be required.

Note: Initial training requirements for tactics personnel are currently under review.

Note: Initial I-Level training requirements for AOs are currently under review.

**(1) Pre-TECHEVAL and OPEVAL.**

<b>Title.....</b>	<b>AMNS Pre-TECHEVAL and OPEVAL Training Courses</b>
<b>Description.....</b>	Provides familiarization training to selected personnel to sufficiently prepare for and support TECHEVAL and OPEVAL. This will include controls and indications, aircraft rigging/de-rigging, certification procedures, aircrew launch and recovery procedures, console operating procedures, ordnance safety, and system tactics.
<b>Location.....</b>	TBD
<b>Length.....</b>	TECHEVAL: 20 Days OPEVAL: 41 Days
<b>RFT date.....</b>	TECHEVAL: April 05 OPEVAL: June 05
<b>TTE/TD.....</b>	AMNS, Training Neutralizer, CSTRS, CC, MH-60S
<b>Prerequisite.....</b>	Government technicians and Navy personnel in support of TECHEVAL and OPEVAL

**(2) Operator.** Instructors and initial cadre fleet personnel.

<b>Title.....</b>	<b>Airborne Mine Neutralization System Operation and Tactics Initial Training (Pilot)</b>
<b>Description.....</b>	Provides instructors and an initial cadre of fleet pilots the basic skills, tactics and techniques necessary to employ the AMNS. Ordnance familiarization training as it relates to the Neutralizer.
<b>Location.....</b>	TBD
<b>Length.....</b>	TBD
<b>RFT date.....</b>	December 06
<b>TTE/TD.....</b>	AMNS, Training Neutralizer, CSTRS, CC, MH-60S
<b>Prerequisite.....</b>	Pilot qualified in the MH-60S Helicopter

**Title..... Airborne Mine Neutralization System Operator Initial Training**

Description..... Provides instructors and an initial cadre of fleet aircrewmen the basic skills necessary to stream, operate, and recover the AMNS. Ordnance training as it relates to handling of the Neutralizer.

Location..... TBD

Length..... TBD

RFT date..... December 06

TTE/TD..... AMNS, Training Neutralizer, CSTRS, CC, MH-60S

Prerequisites..... Aircrewman qualified in the MH-60S Helicopter, NEC 8205

**(3) Tactics.** Instructors and initial cadre Fleet personnel.

**Title..... Airborne Mine Neutralization System Mission Tactics Initial Training**

Description..... Provides instructors and an initial cadre of fleet tactics personnel the training necessary to properly plan mission requirements and conduct Post Mission Analysis for the AMNS.

Location..... TBD

Length..... TBD

RFT date..... December 06

TTE/TD..... TBD

Prerequisites..... Fleet AMCM Tactics personnel

**(4) Maintenance.** Instructors and initial cadre fleet personnel.

**Title..... Airborne Mine Neutralization System Electronic Systems Organizational Level Maintenance Initial Training**

Description..... Provides instructors and an initial cadre of fleet personnel with the skills, knowledge, and techniques required to perform Organizational level maintenance and test procedures on electronic/electrical components for the AMNS. Ordnance training as it relates to handling of the Neutralizer.

Location..... TBD

Length..... TBD

RFT date..... December 06

TTE/TD..... AMNS, Training Neutralizer

Prerequisites..... AT 83XX

**Title..... Airborne Mine Neutralization System, Aircraft Configuration Initial Training**

Description..... Provides instructors and an initial cadre of fleet maintenance personnel with the skills, knowledge, and techniques required to properly configure/de-configure the aircraft, operate BIT Equipment, and safely handle the Neutralizer. Ordnance training as it relates to the Neutralizer.

Location..... TBD

Length..... TBD

RFT date..... December 06

TTE/TD..... AMNS, Training Neutralizer, CSTRS, CC, MH-60S

Prerequisites..... AO 8378, AT 83XX

<b>Title.....</b>	<b>Airborne Mine Neutralization System, Expendable Neutralizer Inspection, Safety, Handling, and Storage</b>
Description.....	Provides instructors and an initial cadre of shore and shipboard Weapons Department aviation ordnance personnel with the skills, knowledge, and techniques required to safely handle, inspect, and store the Expendable Neutralizer.
Location.....	TBD
Length.....	TBD
RFT date.....	December 06
TTE/TD.....	AMNS, Training Neutralizer
Prerequisites.....	Instructors, Weapons Department Aviation Ordnance personnel

**b. Follow-on Training.** Follow-on training for operators (pilots and aircrewmembers) will be conducted at the MH-60S FRS, HC-3 NAS North Island and HC-2 NS Norfolk. Follow-on training for mission configuration personnel will be conducted at MTU-1044, NS Norfolk and MTU-1022, NAS North Island. Follow-on AMNS maintenance training will be conducted at MTU-1044, NS Norfolk and MTU-1022, NAS North Island. Follow-on training for NAS Weapons Department and shipboard aviation ordnance personnel will be conducted at MTU-4032, NS Norfolk, MTU-4030, NS Mayport, MTU-4035, NAS Whidbey Island, and MTU-1022, NAS North Island. Training for HM tactics (Mission Planning/Post Mission Analysis) personnel will be provided through a Stand-Alone course as identified in the AN/AQS-20A Initial NTSP at a location To Be Determined (TBD). Tactics training and locations for HC squadron (Mission Planning/Post Mission Analysis) personnel are currently under review. The following are proposed courses:

**(1) Operator.**

<b>Title.....</b>	<b>MH-60S Airborne Mine Neutralization System Operator</b>
CIN.....	C-050-XXX1 (Pipeline E-050-3100, E-050-3102)
Model Manager....	HC-3, NAS North Island, California
Description.....	This course provides MH-60S aircrewmembers ordnance/weapon safety, and the basic skills necessary to operate the AMNS.
Location.....	HC-2, NS Norfolk, Virginia HC-3, NAS North Island, California
Length.....	TBD Days

RFT date..... HC-2 - TBD  
 HC-3 – April 07

Skill identifier..... APO NEC 8205

TTE/TD..... TBD

Prerequisites..... Q-050-1500, Naval Aircrew Candidate School  
 Q-050-0600, Aviation Rescue Swimmer School  
 E-050-3101, MH-60S Category I MMH Aircrewman  
 D/E-2D-0039, Survival, Evasion, Resistance, and Escape

**(2) Maintenance.**

**Title..... MH-60S Airborne Mine Neutralization System  
 Electronics Systems Organizational and Intermediate  
 Level Maintenance**

CIN..... C-102-XXX2 (Pipeline D/E-102-XXX1, Currently  
 proposed in the AN/AQS-20A Initial NTSP)

Model Manager.... TBD

Description..... Provides ATs with the skills, knowledge, and techniques  
 required to perform aircraft configuration, O-Level and I-  
 Level maintenance, and test procedures on the AMNS.  
 Ordnance safety training as it relates to the Neutralizer.  
  
 Upon completion, the technician will be capable of  
 configuring the aircraft, performing O-Level and I-Level  
 maintenance, and operate BIT for the AMNS under limited  
 supervision.

Location..... MTU-1022, NAS North Island, California  
 MTU-1044, NS Norfolk, Virginia

Length..... TBD

RFT date..... MTU-1022 - April 07  
 MTU-1044 - TBD

Skill identifier..... AT 83XX

TTE/TD..... TBD

Prerequisite..... C-100-2020, Avionics Common Core Class A1  
 C-100-2018, Avionics Technician O-Level Class A1 or  
 C-100-2017, Avionics Technician I-Level Class A1

**c. Student Profiles.**

<b>SKILL IDENTIFIER</b>	<b>PREREQUISITE SKILL AND KNOWLEDGE REQUIREMENTS</b>
1311	Q-2A-0001, Primary Flight Training Q-2A-0010, Joint T-34C/T-6A Joint Primary Aircraft Training System (JPATS) Intermediate Flight Training Q-2A-0015, Undergraduate Helicopter Pilot Training D/E-2D-0039, Survival, Evasion, Resistance, and Escape Training J-495-0413, Shipboard Aircraft Firefighting.
AO 6801	C-646-2011, Aviation Ordnanceman Common Core Class A1 C-646-2013, Aviation Ordnanceman Course Weapons Department Strand Class A1
AO 8378	C-646-2011, Aviation Ordnanceman Common Core Class A1 C-646-2012, Aviation Ordnanceman Airwing Strand Class A1
AT 83XX	C-100-2020, Avionics Common Core Class A1 C-100-2018, Avionics Technician O-Level Class A1, or C-100-2017, Avionics Technician I Level Class A1
APO 8205	Q-050-1500, Naval Aircrewman Candidate School Q-050-0600, Aviation Rescue Swimmer School D/E-2D-0039, Survival, Evasion, Resistance, and Escape
OS 03XX	J-221-0011, Operations Specialist Class A1

**d. Training Pipelines.** The following identifies the tracks and courses expected to be impacted as a result of the addition of AMNS operator, maintenance, and tactics training. Due to this being new development training, the extent of impact to existing and planned training tracks is unknown at this time. Details of the individual training tracks, courses, and revisions to the existing training tracks are listed in Appendix B.

- (1) **E-2C-3100**, MH-60S Fleet Replacement Pilot Category I Pipeline.
- (2) **E-2C-3102**, MH-60S Fleet Replacement Pilot Category II Pipeline.
- (3) **E-050-3100**, MH-60S Fleet Replacement Aircrew Category I Pipeline.

- (4) **E-050-3102**, Fleet Replacement Aircrewman Category II Pipeline.
- (5) **D/E-646-0840**, H-60 Armament and Related Systems Organizational Maintenance Track.
- (6) **D/E-102-XXX1**, MH-60S AMCM Systems Organizational and Intermediate Maintenance. Proposed in the AN/AQS-20A Initial NTSP.
- (7) **C-102-XXX3**, Airborne Mine Countermeasures MCM Planning, Post Mission Analysis, MCM Evaluation. Stand-Alone. Proposed in the AN/AQS-20A Initial NTSP.

## **I. ONBOARD (IN-SERVICE) TRAINING.**

### **1. Proficiency or Other Training Organic to the New Development.**

**a. Maintenance Training Improvement Program.** Current planning is to adopt the Aviation Maintenance Training Continuum System (AMTCS) concepts to replace the Maintenance Training Improvement Program (MTIP). AMTCS is scheduled to begin full implementation for fleet deployment in November 2003.

**b. Aviation Maintenance Training Continuum System.** Aviation Maintenance Training Continuum System (AMTCS) will provide career path training to the Sailor or Marine from their initial service entry to the end of their military career. AMTCS is planned to be an integrated system that will satisfy the training and administrative requirements of both the individual and the organization. The benefits will be manifested in the increased effectiveness of the technicians and the increased efficiencies of the management of the training business process. By capitalizing on technological advances and integrating systems and processes where appropriate, the right amount of training can be provided at the right time, thus meeting the Chief of Naval Operations (CNO) mandated "just-in-time" training approach.

Technology investments enable the development of several state-of-the-art training and administrative tools: Computer-Based Training for the technicians in the Fleet in the form of Interactive Courseware (ICW) with Computer Managed Instruction and Computer Aided Instruction for the schoolhouse.

Included in the AMTCS development effort is the AMTCS - Software Module which provides testing [Test and Evaluation], recording [Electronic Training Jacket], and a Feedback system. The core functionality of these AMTCS tools are based and designed around the actual maintenance-related tasks the technicians perform, and the tasks are stored and maintained in a Master Task List data bank. These tools are procured and fielded with appropriate Commercial off-the-Shelf hardware and software, i.e., Fleet Training Devices Laptops, PCs, Electronic Classrooms, Learning Resource Centers, operating software, and network software and hardware.

Upon receipt of direction from OPNAV (N789H), AMTCS is to be implemented and the new tools integrated into the daily training environment of all participating aviation activities and supporting elements. AMTCS will serve as the standard training system for

aviation maintenance training within the Navy and Marine Corps, and is planned to supersede the existing programs, Maintenance Training Improvement Program and Maintenance Training Management and Evaluation Program programs.

AMNS training is expected to encompass the requirements of AMTCS. The QUAL/CERT Program requires periodic, local QUAL/CERT events to be documented in a QUAL/CERT Record. These QUAL/CERT Records will be maintained physically at the local activity, but will be entered electronically into the ETJ for tracking purposes.

**2. Personnel Qualification Standards.** Currently, there are no plans to develop a formal AMNS Personal Qualification Standard.

**3. Other Onboard or In-Service Training Packages.** On-Board training in the form of portable CBT/ICW will be developed to provide operators a mission skill development capability and a means to maintain proficiency operating the AMNS system. This is an invaluable tool for those aircrews whom may experience extended periods between mission flights. Similar proficiency support training will also be developed for maintenance and tactics (Mission Planning/Post Mission Analysis) personnel. On-the-Job Training will be available at the Fleet level.

Note: It is anticipated that AMNS specific Job Qualification Requirements will be needed to support the requirements of the Explosives Handling Qualification and Certification Program.

## J. LOGISTICS SUPPORT

### 1. Manufacturer and Contract Numbers.

CONTRACT NUMBER	MANUFACTURER	ADDRESS
N00024-03-C-6310	Raytheon Company Naval & Maritime Integrated Systems	1847 West Main Road Portsmouth, RI 02871

**2. Program Documentation.** The AMNS Prime Item Development Specification is currently available. The Draft TEMP is currently in development.

**3. Technical Data Plan.** The technical publications for the AMNS will be produced, distributed, and supported in an Interactive Electronic Technical Manual (IETM) format, including software and hardware support. The AMNS publications will support operation, training, maintenance, and Depot repair of the system, or subsystems. The IETMs will be developed in accordance with the AMNS Technical Manual Contract Requirements.

**4. Test Sets, Tools, and Test Equipment.** Requirements for special test sets, tools, equipment, and general-purpose test equipment will be identified during the System Development and Demonstration (SD&D) phase. The required equipment will be available to support Initial Operational Capability (IOC).

**5. Repair Parts.** Requirements for repair parts will be identified during the SD&D phase. Initially provisioned repair parts will be available to support IOC.

**6. Human Systems Integration.** Human Systems Integration information will be developed concurrent with system development.

## **K. SCHEDULES**

**1. Installation and Delivery Schedules.** Currently delivery schedule information is not available and will be identified in future updates of this NTSP.

**2. Ready for Operational Use Schedules.** The AMNS is Ready for Operational Use (RFOU) upon delivery to the receiving activity.

**3. Time Required to Install at Operational Sites.** The AMNS is delivered RFOU, but is not permanently installed in the aircraft. The AMNS is loaded as modularized, removable components. Installation/removal threshold is four hours with an objective of two hours.

**4. Foreign Military Sales and Other Source Delivery Schedule.** NA

**5. Training Device and Technical Training Equipment Delivery Schedule.** Although detailed information on Training Devices (TD) and Technical Training Equipment (TTE) is currently under development, it is expected the following TD and TTE will be required.

### **(a) Operator:**

<b>DEVICE</b>	<b>DATE REQUIRED</b>
CC .....	April FY07
Training Neutralizer.....	April FY07
CSTRS .....	April FY07
Stream/Recovery Trainer .....	April FY07

### **(b) Maintenance:**

<b>DEVICE</b>	<b>DATE REQUIRED</b>
CC .....	April FY07
AMNS Electronics (Task Trainer).....	April FY07
I-Level Test Equipment .....	April FY07
Training Neutralizer.....	April FY07
Aircraft Configuration Trainer.....	April FY07

**(c) Tactics:**

<b>DEVICE</b>	<b>DATE REQUIRED</b>
MEDAL .....	April FY07
Navy H60 Mission Planning Station.....	April FY07
Post Mission Analysis Station .....	April FY07

**L. GOVERNMENT-FURNISHED EQUIPMENT AND CONTRACTOR FURNISHED EQUIPMENT TRAINING REQUIREMENTS. NA**

**M. RELATED NTSPs AND OTHER APPLICABLE DOCUMENTS.**

<b>DOCUMENT OR NTSP TITLE</b>	<b>DOCUMENT OR NTSP NUMBER</b>	<b>PDA CODE</b>	<b>STATUS</b>
AMNS NTSP (MH-53E)	N75-NTSP-P-30-0101/A	PMS210	Approved Oct 2001
H-60 Armed Helicopter Program NTSP	N88-NTSP-A-50-9850/A	PMA299	Approved Mar 2002
Operational Requirements Document for an AMCM Multi- Mission HC Helicopter	Annex B (Revision 1)	CNO N752E	Approved Aug 2002
MH-60S NTSP	N88-NTSP-A-50- 9902A/A	PMA299	Approved Jan 2003
AN/AQS-20A Initial NTSP	N75-NTSP-P-30-0305/I	PMS210	Initial Sep 2003

## APPENDIX A - POINTS OF CONTACT

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## APPENDIX A - POINTS OF CONTACT

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NAME / FUNCTION / ACTIVITY, CODE / INTERNET EMAIL	TELEPHONE NUMBERS
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## APPENDIX A - POINTS OF CONTACT

### NAME / FUNCTION / ACTIVITY, CODE / INTERNET EMAIL

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## APPENDIX B - TRAINING PIPELINES

Appendix B to the AMNS NTSP identifies the proposed establishment of new training tracks, training courses, and revisions to existing tracks. Due to this being new development training the extent of impact to existing and planned training tracks is unknown at this time. Ready For Training (RFT) dates below have been estimated based on current program information.

Note: Dual site training for the AMCM systems maintenance technicians, as identified in this NTSP, is anticipated. Currently, training site throughput has not been determined. It is expected, the MER, once complete, will provide the information needed for developing the throughput numbers used to determine if dual site training is required.

**1. E-2C-3100, MH-60S Fleet Replacement Pilot Category I Pipeline.** The course identified below is currently proposed in the AN/AQS-20A Initial NTSP. Proposed revision:

(a) Revise **D/E-2C-XXX1**, MH-60S Pilot Airborne Mine Countermeasures Systems Familiarization and Operational Flight Trainer/Weapons Tactical Trainer. Add AMNS training information. Change to course length is TBD. Course currently proposed with a planned establishment at the FRS at HC-3, NAS North Island and HC-2, NS Norfolk. HC-3 RFT date is April 2007. HC-2 RFT date is TBD.

(b) Change to Category I track lengths is TBD.

**2. E-2C-3102, MH-60S Fleet Replacement Pilot Category II Pipeline.** The course identified below is currently proposed in the AN/AQS-20A Initial NTSP. Proposed revision:

(a) Revise **D/E-2C-XXX1**, MH-60S Pilot Airborne Mine Countermeasures Systems Familiarization and Operational Flight Trainer/Weapons Tactical Trainer. Add AMNS training information. Change to course length is TBD. Course currently proposed with a planned establishment at the FRS at HC-3, NAS North Island and HC-2, NS Norfolk. HC-3 RFT date is April 2007. HC-2 RFT date is TBD.

(b) Change to Category II track length is TBD.

**3. E-050-3100, MH-60S Fleet Replacement Aircrew Category I Pipeline.** Proposed revision:

(a) Add **C-050-XXX1**, Airborne Mine Neutralization System Operator. Course length is TBD. Establish this course at the FRS at HC-3, NAS North Island and HC-2, NS Norfolk. HC-3 RFT date is April 2007. HC-2 RFT date is TBD.

(b) Change to Category I track length is TBD.

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### **4. E-050-3102, MH-60S Fleet Replacement Aircrewman Category II Pipeline.** Proposed revision:

(a) Add **C-050-XXX1**, Airborne Mine Neutralization System Operator. Course length is TBD. Establish this course at the FRS at HC-3, NAS North Island and HC-2, NS Norfolk. HC-3 RFT date is April 2007. HC-2 RFT date is TBD.

(b) Change to Category II track length is TBD.

### **5. D/E-102-XXX1, MH-60S AMCM Systems Organizational and Intermediate Maintenance.** This track is currently proposed in the AN/AQS-20A Initial NTSP. Proposed revision:

(a) Add **C-102-XXX2**, AMNS Electronic Systems Organizational and Intermediate Level Maintenance. Course length is TBD. Establish this course at MTU-1022, NAS North Island and MTU-1044, NS Norfolk. MTU-1022 RFT date is April 2007. MTU-1044 RFT date is TBD.

(b) Change to track length is TBD.

### **6. C-102-XXX3, Airborne Mine Countermeasures MCM Planning, Post Mission Analysis, MCM Evaluation Course.** This course is currently proposed in the AN/AQS-20A Initial NTSP. Training for squadron tactics personnel will be resident in a Stand-Alone course. A new OJT awardable NEC code 03XX, AMCM Operations Specialist will be established. This NEC will be awarded after successful completion of the Stand-Alone course and approximately six months of OJT at the squadron. No training track required. Proposed revision:

(a) Revise, **C-102-XXX3**, Airborne Mine Countermeasures MCM Planning, Post Mission Analysis, MCM Evaluation. Add AMNS training information. Change to course length is TBD. Training location TBD. RFT date is April 2007.

### **7. D/E-646-0840, H-60 Armament and Related Systems Organizational Maintenance Track.** The course below is currently proposed in the AN/AQS-20A Initial NTSP. Proposed revision:

(a) Revise **C-646-XXX4** MH-60S AMCM Weapon Systems Mission Configuration. Add AMNS training information. Change to course length is TBD. Course currently proposed with a planned establishment at MTU-1022, NAS North Island, and MTU-1044, NS Norfolk. MTU-1022 RFT date is April 2007. MTU-1044 RFT date is TBD.

(b) Change to track length is TBD.

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### **8. D/E-646-7007, General Shipboard/NAS Weapons Department AVORD Maintenance.** Proposed revision:

(a) Revise **C-646-4108** Air Launched Weapons Ordnance Supervisor. Add AMNS training information. Change to course length is TBD. Course currently available at MTU-4032, NS Norfolk, MTU-4030, NS Mayport, Florida, MTU-4035, NAS Whidbey Island, Washington, and MTU-4033, NAS North Island, California. RFT date is April 2007.

(b) Change to track length is TBD.