NAVY TRAINING SYSTEM PLAN

FOR THE

AN/AQS-14A

SONAR DETECTING SET

N75-NTSP-P-30-9903/A

APRIL 2001

AN/AQS-14A SONAR DETECTING SET

EXECUTIVE SUMMARY

The AN/AQS-14A SONAR Detecting Set is a high resolution, side-looking helicopter towed mine hunting system used to detect, localize, classify, mark, and permanently record locations of unburied bottom and moored sea mines and other objects of interest. It is a modification to the existing AN/AQS-14 system. The AN/AQS-14A is designed to be operationally employed by Helicopter Mine Countermeasure Squadrons operating the MH-53E Helicopter in support of Airborne Mine Countermeasures (AMCM) operations. The AMCM community is a worldwide rapid deployment force operating from shore bases and helicopter capable ships. The AN/AQS-14A system has completed all major acquisition milestones and is in Phase III (Production, Fielding/Deployment, and Operational Support) of the Weapon System Acquisition Process.

The AN/AQS-14A replaces selected components of the AN/AQS-14 to modernize airborne hardware, reduce the system's volume, and improve operability and processing. The port and starboard SONAR scan video monitors are replaced by a single 19-inch color monitor which displays port and starboard SONAR scan data. The Scan Converter is eliminated, with its function incorporated into a Control Processor that uses a joystick to allow the console operator to accurately mark and record the position of a mine-like object or other object of interest. A Power Distribution Unit replaces the System Power and Test Unit and features a redesigned front panel with simplified controls.

The manpower required for operational and maintenance support of the AN/AQS-14A is governed by operational requirements combined with preventive and corrective maintenance requirements. Existing AN/AQS-14 billets at the organizational and intermediate levels are sufficient to support the AN/AQS-14A.

The AN/AQS-14A system utilizes the three level maintenance concept per OPNAVINST 4790.2G. Since parts of the system either operate directly in salt water or are exposed to the salt-water environment, vigorous corrosion control inspection and correction procedures are essential maintenance actions for both organizational and intermediate levels of maintenance. Navy Aviation Technicians with Navy Enlisted Classification 8391 perform organizational and intermediate level maintenance. Northrop-Grumman Oceanic Division personnel perform depot level maintenance and perform on-site services as required.

Follow-on maintenance training for the AN/AQS-14A is conducted at Maintenance Training Unit 1031, Naval Air Maintenance Training Unit, Naval Station (NS) Norfolk, Virginia. Pilot and Aircrew follow-on training is conducted at AMCM Weapon Systems Training School, NS Norfolk, Virginia.

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LIST OF ACRONYMS

AE	Aviation Electrician's Mate
AIMD	Aircraft Intermediate Maintenance Department
AMCM	Airborne Mine Countermeasures
AMTCS	Aviation Maintenance Training Continuum System
AT	Aviation Electronics Technician
AWSTS	Airborne Mine Countermeasures Weapon Systems Training School
BITE	Built-In Test Equipment
CBT	Computer-Based Training
CETS	Contractor Engineering Technical Services
CNO	Chief of Naval Operations
CSS	Coastal Systems Station
FY	Fiscal Year
HM	Helicopter Mine Countermeasures
IETM	Interactive Electronic Technical Manual
ILSP	Integrated Logistics Support Plan
ILTE	Intermediate Level Test Equipment
ISSP	Interim Supply Support Plan
MIR	Mission Interface Removables
MP	Maintenance Plan
MRC	Maintenance Requirements Card
MSD	Material Support Date
MSU	Material Support Unit
MTIP	Maintenance Training Improvement Program
MTU	Maintenance Training Unit
MUW	Mine and Undersea Warfare
NA	Not Applicable
NAMTRAU	Naval Air Maintenance Training Unit
NAS	Naval Air Station
NAVPERSCOM	Naval Personnel Command
NEC	Navy Enlisted Classification

AN/AQS-14A SONAR DETECTING SET

LIST OF ACRONYMS

NS	Naval Station
NTSP	Navy Training System Plan
OI	Objects of Interest
OPEVAL	Operational Evaluation
PEO	Program Executive Office
PMS	Program Manager, Surface
PSS	Performance Support System
RFT	Ready For Training
SRA	Shop Replaceable Assembly
TECHEVAL	Technical Evaluation
TTE	Technical Training Equipment
TD	Training Device
WRA	Weapon Replaceable Assembly

AN/AQS-14A SONAR DETECTING SET

PREFACE

This Approved Navy Training Systems Plan (NTSP) for the AN/AQS-14A SONAR Detecting Set is an update of the Draft NTSP, N85-NTSP-P-30-9903/D, dated September 1999, and complies with guidelines set forth in the Navy Training Requirements Documentation Manual OPNAV Publication P-751-1-9-97. Changes from the Draft NTSP to the Approved NTSP primarily include updated program information, points of contact, and the removal of operator training information that is currently identified in the MH-53E NTSP, N88-NTSP-A-50-8417D/A. It incorporates comments received on the September 1999 Draft version.

PART I - TECHNICAL PROGRAM DATA

A. NOMENCLATURE-TITLE-PROGRAM

1. **Nomenclature-Title-Acronym.** AN/AQS-14A SONAR Detecting Set

2. **Program Element.** 0204302N

B. SECURITY CLASSIFICATION. Information in specific detail that performance and/or tactical information is revealed or implied may be classified. Information of this nature may be obtained by contacting the Program Executive Officer Mine and Undersea Warfare (PEO [MUW]), Program Manager Surface, Airborne Mine Defense (PMS210).

1. **System Characteristics** ..... Unclassified
2. **Capabilities** ..... Unclassified
3. **Functions**..... Unclassified

C. MANPOWER, PERSONNEL, AND TRAINING PRINCIPALS

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

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

Functional Mission Sponsor (if applicable)..... CNO (N752)

Developing Agency..... PEO (MUW) PMS210

Training Agency ..... CINCLANTFLT
CNET

Training Support Agency..... PEO (MUW) PMS210

Manpower and Personnel Mission Sponsor..... CNO (N132)
NAVPERSCOM (PERS-4, PERS-404)

Director of Naval Training..... CNO (N7)

D. SYSTEM DESCRIPTION

1. Operational Uses. The AN/AQS-14A SONAR Detecting Set, from here on referred to as the AN/AQS-14A, is a helicopter-towed reconnaissance and minehunting system used to detect, localize, and classify unburied bottom and moored sea mines and other Objects of Interest (OI). It is deployed by Helicopter Mine Countermeasures (HM) Squadrons in support of Airborne Mine Countermeasures (AMCM) operations.

2. Foreign Military Sales. Not Applicable (NA)

E. DEVELOPMENTAL TEST AND OPERATIONAL TEST. Original testing and Technical Evaluation (TECHEVAL) of the AN/AQS-14 system was conducted in June 1979 by Coastal Systems Station (CSS), Panama City, Florida. The Operational Evaluation (OPEVAL) was completed in September 1979 by the Commander, Operational Evaluation Force. Since this is an upgrade to an existing system, TECHEVAL and OPEVAL on the AN/AQS-14A system components was not required. First unit testing was performed by CSS and Northrop Grumman, Oceanic Systems during second quarter Fiscal Year (FY) 95 aboard the research vessel Athena. Airborne testing was performed immediately afterward.

F. AIRCRAFT AND/OR EQUIPMENT/SYSTEM/SUBSYSTEM REPLACED. The AN/AQS-14A upgrades and replaces selected Weapon Replaceable Assemblies (WRAs) of the AN/AQS-14 Detecting Set. The upgrade results in the modernization of airborne hardware, reduction of the system's total volume, and improvements in operability and processing.

G. DESCRIPTION OF NEW DEVELOPMENT

1. Functional Description. The AN/AQS-14A is a high resolution, side-looking SONAR detecting system that is streamed, towed, and recovered from the MH-53E Helicopter. Its mission is to locate, identify, and record types and locations of mines and other OI. The AN/AQS-14A is divided into three major groups of components, the SONAR Towed Body, the Tow Cable Assembly, and the Airborne Electronics Assembly. The system also utilizes Mission Interface Removeables (MIR) to interface the AN/AQS-14A with the helicopter. The AN/AQS-14A also features an optional Inversion Kit, which, when installed, allows the SONAR Towed Body to operate in the inverted mode to detect moored mines.

a. SONAR Towed Body (Unit 7). The SONAR Towed Body carries side-looking, multi-beam SONAR. It can maintain an operator-selected altitude above the bottom or depth below the surface by means of an active control system and sensors. It contains the electronics necessary to pre-process and multiplex the scan, environment, and control data, and process various control commands. The SONAR Towed Body is considered to be one WRA.

b. Tow Cable Assembly (Unit 6). The Tow Cable Assembly is an armored, non-magnetic cable that provides the mechanical and electrical signal link between the SONAR Towed Body and the helicopter. Signal multiplexing through the coaxial conductor makes possible a small cable diameter and low drag. The Tow Cable Assembly is considered one WRA and is dispensed and retrieved by a pallet-mounted hydraulic winch.

c. Airborne Electronics Assembly. The Airborne Electronics Assembly is pallet-mounted and installed forward in the MH-53E Helicopter and manned by two aircrew AMCM system operators. The Airborne Electronics Assembly includes the following WRAs:

(1) Video Monitor (Unit 1). The IP-1428A/AQS-14 Video Monitor is a 19-inch, high-resolution, 256-color monitor that displays port and starboard SONAR data and annotation data. It also displays target logs and SONAR coverage plots. It operates in conjunction with the Control-Processor (unit 2), and displays menu icons for operator control of the SONAR Towed Body (unit 7) and the Recorder-Reproducer (unit 4).

(2) Control-Processor (Unit 2). The CD-107/AQS-14A Control-Processor combines the AN/AQS-14 Control-Processor and Signal Data Converter into a single state-of-the-art Control Processor capable of advanced processing. The Control-Processor's major functions include:

- Interface with the Power Distribution Unit by sending SONAR Towed Body sensor control data and receiving image data over the multiplexing-demultiplexing link
- Interface with the Video Monitor for processing and displaying port and starboard SONAR image data, SONAR Towed Body status, and proper menu selected screens
- Interface with the joystick for controlling the screen menu and data field on the Video Monitor
- Interface with the Recorder-Reproducer for recording SONAR image data and for downloading mission planning information
- Interface with the MH-53E navigational system for latitude and longitude information; compute SONAR Towed Body trail distance and track offset and compensate target positioning of SONAR Towed Body heading for target location calculations
- Support of operator classification of marked targets and logs targets onto the Recorder-Reproducer tape periodically; providing operator interface menus for control of the processor functions

(3) Recorder-Reproducer (Unit 4). The RD-507A/AQS-14A Recorder-Reproducer replaces the previous analog tape recorder unit with a digital recorder-reproducer. This unit has been upgraded even further by replacing the initially developed Super VHS format tape drive with an 8-mm Exabyte format model. The unit records and reproduces digital SONAR image data, navigational data, and SONAR Towed Body status data.

(4) Power Distribution Unit (Unit 5). The redesigned PP-7835A/AQS-14 Power Distribution Unit distributes and monitors the power input to the Video Monitor, Control-Processor, Recorder-Reproducer, and the SONAR Towed Body. It also provides the multiplex link between the Tow Cable Assembly and the Control-Processor.

d. Interconnecting Cables. Each interconnecting cable (labeled W1 through W7 and W10 through 13) is considered to be a WRA. These cables provide the necessary signal and power connections to interface the airborne console components.

e. Mission Interface Removables. In addition to the AN/AQS-14A system components, the helicopter must be configured with certain MIR. The MIR is palletized for ease of installation and transport and is identical to that used by the AN/ALQ-141 Airborne Mine Countermeasures Set. The MIR major assemblies are described below:

(1) Console, Pallet, and Seat Assembly. This assembly is pallet-mounted and consists of two operator seats and a console that is capable of receiving the airborne electronics components of the AN/AQS-14A or the AN/ALQ-141.

(2) Single Winch II Pallet Assembly. Also pallet-mounted, this assembly consists of a single drum with level wind that is used to deploy and recover the towed vehicles of the AN/AQS-14A or the AN/ALQ-141.

(3) Davit Assembly. Attached to the floor of the aircraft by two quick release pins and two vertical bolts, this assembly is used to lift and deploy the SONAR Towed Body. The davit frame is driven fore and aft by a rotary hydraulic motor through a power hinge and gear reduction.

(4) Transport Cradle Assembly. This assembly is used to transport the SONAR Towed Body to and from the helicopter and to secure it to the helicopter ramp during flight.

f. Inversion Kit. The Inversion Kit is an optional feature that allows field conversions of the SONAR Towed Body for operation in an inverted mode to search for near-surface objects vice bottom search.

2. Physical Description

AN/AQS-14A SONAR DETECTING SET SYSTEM COMPONENTS		
COMPONENT	**WEIGHT (POUNDS)**	**SIZE (INCHES) (HEIGHT x WIDTH x DEPTH)**
Video Monitor	75.0	16.37 x 20.25 x 19.59
Control-Processor	100.0	16.08 x 20.25 x 22.50

AN/AQS-14A SONAR DETECTING SET SYSTEM COMPONENTS		
COMPONENT	**WEIGHT (POUNDS)**	**SIZE (INCHES) (HEIGHT x WIDTH x DEPTH)**
Recorder-Reproducer	61.5	10.5 x 20.25 x 22.00
Power Distribution Unit	125.0	16.08 x 20.25 x 22.50
Tow Cable Assembly	440.0	950 feet x 0.58 400 feet x 0.58
SONAR Towed Body	554.0	66.50 x 128.00 x 40.00

MISSION INTERFACE REMOVABLE		
COMPONENT	**WEIGHT (POUNDS)**	**SIZE (INCHES) (HEIGHT x WIDTH x DEPTH)**
Davit Assembly	400	22.0 x 90.0 x 108.0 (See note.)
Single Winch II	482	37.5 x 50.0 x 41.0
Console, Pallet, and Seat Assembly	242	56.5 x 47.0 x 68.0
Transport Cradle Assembly	145	28.0 x 47.0 x 65.0

Note: Dimensions of the highest part of the Davit when lying flat.

3. New Development Introduction. The AN/AQS-14A is a modification to the existing AN/AQS-14 SONAR Detecting Set. Modifications were done by Northrop Grumman representatives on-site at HM-14 and HM-15.

4. Significant Interfaces. NA

5. New Features, Configurations, or Material. The AN/AQS-14A incorporates the following changes to the AN/AQS-14 system.

- The port and starboard SONAR scan video monitors are replaced by a single 19-inch color monitor which displays port and starboard SONAR scan data, the main menu, and a control bar annotation display.

- The Scan Converter (Unit 3) is eliminated. Its functions are incorporated into the Control-Processor.

- The Control-Processor has been redesigned to include the Scan Converter and incorporates a joystick to allow the console operator to accurately mark and record the position of a mine-like OI.

- The Power Distribution Unit replaces the system Power and Test Unit. It features a redesigned front panel with simplified power distribution controls.

H. CONCEPTS

1. Operational Concept. As part of the minehunting system, the AN/AQS-14A is used in conjunction with moored and influence mine sweeping in support of amphibious operations, clearance of ports, clearance of lines of communications, and riverine operations. The system is capable of detecting, classifying, and marking mines and other underwater objects, and can be used independently to provide mine reconnaissance, mine surveillance, and to provide data on bottom characteristics. The normal operating crew consists of a Pilot, Co-pilot, First Crewman, two certified Operators, and two AMCM aircrew used as launch and recovery personnel.

2. Maintenance Concept

a. Organizational. Organizational level maintenance is performed either on the flightline or while airborne. Organizational level maintenance is limited to pre-flight and post-flight inspection, minor flightline repairs, and troubleshooting using Built-In Test Equipment (BITE) to the faulty WRA level. The system is designed to minimize the frequency and complexity of maintenance at the organizational level. The AN/AQS-14A system is directly exposed to salt water and requires a vigilant corrosion control program. Organizational level maintenance is performed by Aviation Electronics Technicians (AT) with Navy Enlisted Classification (NEC) 8391 assigned to Work Center 16B. In-flight maintenance is limited to only fuse and/or bulb replacement etc., and is performed by AMCM aircrew personnel of various aviation ratings with NEC 8226.

Note: Aircraft AMCM configuration changes (entire system swap out, which includes the AN/AQS-14A) is accomplished by all organizational level rates working out of Work Center 230. This is not considered a corrective maintenance action.

(1) Preventive Maintenance. Preventive Maintenance normally occurs between missions and includes limited scheduled maintenance using Maintenance Requirements Cards (MRCs). Post-operation system corrosion control includes the cleaning and freshwater washdown of Units Six and Seven and cleaning of all Airborne Electronics Assembly WRAs and MIRs.

(2) Corrective Maintenance. Organizational level Corrective Maintenance is limited to replacement of bulbs and fuses, minor front panel adjustments, and

cleaning and reseating loose or dirty connectors. Faulty WRAs identified using BITE are replaced and sent to the Aircraft Intermediate Maintenance Department (AIMD) for repair.

b. Intermediate. Intermediate level maintenance is performed aboard ship or designated AIMDs ashore. Intermediate level maintenance consists of WRA repair through Shop Replaceable Assembly (SRA) replacement and selected SRA repair within the scope of repair capability. Intermediate level personnel also perform preventive and corrective corrosion inspections, treatment, and repair, and the lubrication of components as required. When deployed, intermediate level maintenance is performed by intermediate level trained squadron personnel using the AN/USM-668 SONAR Detecting Test Set commonly referred to as the Intermediate Level Test Equipment (ILTE). This test set contains nine WRAs located in a cabinet subdivided into three bays. The ILTE is housed in a transportable shelter called a Material Support Unit (MSU). The MSU contains all the equipment necessary to repair the AN/AQS-14A and document intermediate level maintenance actions. Intermediate level maintenance is performed by Aviation Electrician's Mates (AE) and ATs assigned to Work Center 74C who have completed training by a Northrop Grumman representative using the Northrop Grumman developed intermediate level course. No NEC is associated with this course and the intermediate level technician may or may not have been through the NEC 8391 track. Further information on this course is in the Training Concept below.

c. Depot. Northrop Grumman, Oceanic Systems, Annapolis, Maryland, performs depot level maintenance. Systems and components are returned to the depot level under the Return Material for Repair program. All WRAs, SRAs, and repairable Sub-SRAs where the repair is deemed beyond the capability of the intermediate level are shipped through normal supply channels. Depot level maintenance also includes system calibration beyond normal adjustments. The SONAR Towed Body is planned for depot level overhaul every five years.

d. Interim Maintenance. Contractor Engineering Technical Services (CETS) is provided by Northrop-Grumman Oceanic Systems personnel. A CETS field representative is currently based out of Naval Station (NS) Norfolk, Virginia. This representative supports the AMCM squadrons based at NS Norfolk and Naval Air Station (NAS) Corpus Christi, Texas, and their supporting AIMDs with technical support and training on an on-going and as-needed basis. The CETS field representative deploys with the squadrons. An Interim Supply Support Plan (ISSP) has been promulgated until the Material Support Date (MSD) can be achieved. MSD is currently planned for August 30, 2001.

e. Life-Cycle Maintenance Plan. The SONAR Towed Body is planned to be completely overhauled as part of the Standard Depot Level Maintenance (SDLM) program. All fleet units that have been in service for five years are sent to the depot level for restoration to a like-new condition. High wear items are replaced, electronics are tested, aligned, and calibrated, and cosmetic repairs are made to the outer shell and windows. No other units of the system are included in a scheduled life-cycle maintenance plan.

3. Manning Concept. The upgrade of the AN/AQS-14 and redesignation to the AN/AQS-14A does not require any change to current quantitative and qualitative manpower or

watch station requirements. Refer to Part II of this NTSP for specific activities' manpower requirements.

4. Training Concept. Formal training is required to support the operational and maintenance aspects of the AN/AQS-14A. Pilots and aircrew receive operational training in aircraft and all AMCM systems, including the AN/AQS-14A, at Airborne Mine Countermeasures Weapon Systems Training School (AWSTS), NS Norfolk, Virginia as delineated in the MH-53E Navy Training System Plan, N88-NTSP-A-50-8417D/A. AMCM training flights are conducted at the fleet squadron where the pilots and aircrew are assigned. Organizational level maintenance personnel receive training at Maintenance Training Unit (MTU) 1031, Naval Air Maintenance Training Unit (NAMTRAU) NS Norfolk. Currently intermediate level maintenance training is conducted at the supporting AIMD utilizing a Northrop Grumman CETS representative and the Northrop Grumman developed intermediate level course.

CNO tasking has directed MTU 1031, NAMTRAU Norfolk to develop intermediate level training. Incorporating the newly released Northrop Grumman intermediate level course into the existing training pipeline and the support of a dedicated ILTE will satisfy the requirement. This course is currently awaiting preliminary approval with a proposed Ready For Training (RFT) date of November 2000.

Additionally CNO tasking directed MTU 1031, NAMTRAU Norfolk to develop stand-alone "type F" training for the aircraft configurations branch, (Work Center 230) to include BITE operation for the AN/AQS-14A system. Currently, there is no available formal training for the maintenance personnel responsible for installation and pre-operational checks of the AN/AQS-14A after it is configured into the helicopter. Information on this course will be included in future updates to this NTSP after the curriculum has been developed by MTU 1031, NAMTRAU Norfolk.

The Performance Support System (PSS) (Figure I-1) maintenance and training concept has been incorporated for the AN/AQS-14A transition. AMCM squadrons and AIMDs are equipped with stand-alone computer systems housing both Interactive Electronic Technical Manuals (IETMs) and Computer-Based Training (CBT). Each AMCM squadron is outfitted with four PSSs, and each AIMD with three. The AN/AQS-14A transition software was installed into these existing systems upon site activation. The IETMs include appropriate technical information and supply support data to complete maintenance actions. Instructional material for the organizational and intermediate level CBT has been delivered with all associated instructional material to HM-14, HM-15, AIMD Norfolk, AIMD Corpus Christi, and the USS Inchon, with final delivery completed in July 1999. All CBT training is currently on-line. Materials include the CBT lessons, instructor guides, and student guides. These materials, in conjunction with an operational AN/AQS-14A and required support equipment, are used to provide fleet In-Service Training. There are two maintenance related CBT courses for the AN/AQS-14A. They are:

- Organizational level (contains 16 lessons)
- Intermediate level (contains 18 lessons)

Figure I-1. Performance Support System

a. Initial Training. Initial maintenance and operator training courses were developed by Northrop Grumman. Northrop Grumman personnel conducted the initial intermediate level maintenance training, while personnel from CSS, Panama City, conducted both the initial operator and organizational level maintenance training. All initial training is complete.

b. Follow-on Training. Follow-on training for maintenance and aircrew operator personnel is conducted at MTU 1031, NAMTRAU Norfolk and AWSTS, Norfolk, respectively.

The AN/AQS-14A has a minor impact and causes no change in student throughput or chargeable student billets for the MH-53E Fleet Replacement Aircrew AMCM Operator course. Refer to the MH-53E NTSP for specific training requirements for AMCM Operators.

COURSE NUMBER	COURSE TITLE	TRACK NUMBER	RFT DATE
D-050-2720	AN/AQS-14 Side Looking SONAR Operator	D-050-2793	Currently available

Maintenance training for the AN/AQS-14A is currently accomplished utilizing course C-102-9728. This course currently teaches only organizational level maintenance. Incorporation of intermediate level maintenance training into C-102-9728 will change the content and course length of this course. The source rating will also be updated to include AE for this training. Following course approval, this information will be included in future updates to this NTSP. The following maintenance training table illustrates the training currently available.

Title ..... AMCM Electronic/Electrical Systems Organizational / Intermediate Maintenance

CIN D-102-2727

Model Manager .. MTU 1031

Description	This track provides students with sufficient knowledge of the AN/AQS-14A system including operation, repair, corrosion control and prevention, and emergency and scheduled maintenance procedures. Upon completion the student will be able to perform organizational and intermediate maintenance on the AN/AQS-14A system under limited supervision.
Location	MTU 1031, NAMTRAU NS Norfolk, Virginia
Length	Currently 61 days (82 days with intermediate level included)
RFT date	Currently available (FY01 with intermediate level included)
Skill identifier	AT 8391 (AE 8391 included in FY01)
TTE/TD	Training Device: AN/AQS-14A Console and complete system classroom "hot mock-up" Computer student stations for viewing IETMs
Prerequisites	AT: C-100-2018, Avionics Technician O Level Class A1 AE: C-602-2039, Aviation Electrician's Mate Strand Class A1

c. Student Profiles

SKILL IDENTIFIER	PREREQUISITE SKILL AND KNOWLEDGE REQUIREMENTS
AE 8391	° C-100-2020, Avionics Common Core Class A1 ° C-602-2039, Aviation Electrician's Mate Strand Class A1
AT 8391	° C-100-2020, Avionics Common Core Class A1 ° C-100-2018, Avionics Technician O Level Class A1

d. Training Pipelines. The pipeline training track, D-102-2727, AMCM Electronic/Electrical Systems Organization/Intermediate Maintenance will be impacted by the revision of C-102-9728. The revisions will include:

- Addition of AE as a source rating
- Incorporation of intermediate level maintenance training
- New course length is projected to be 82 days as outlined in the Naval Air Maintenance Training Group Training Project Plan dated July 1999

I. ONBOARD (IN-SERVICE) TRAINING

1. Proficiency or Other Training Organic to the New Development

a. Maintenance Training Improvement Program. The Maintenance Training Improvement Program (MTIP) is used to establish an effective and efficient training system responsive to fleet training requirements. MTIP is a training management tool that, through diagnostic testing, identifies individual training deficiencies at the organizational and intermediate levels of maintenance. MTIP is the comprehensive testing of one's knowledge. It consists of a bank of test questions managed through automated data processing. The Deputy Chief of Staff for Training assisted in development of MTIP by providing those question banks (software) already developed by the Navy. MTIP was implemented per OPNAVINST 4790.2 series. MTIP allows increased effectiveness in the application of training resources through identification of skills and knowledge deficiencies at the activity, work center, or individual technician level. Refresher training is concentrated where needed to improve identified skill and knowledge shortfalls. MTIP will be replaced by the Aviation Maintenance Training Continuum System (AMTCS). Current planning is for AMTCS to begin initial implementation in third quarter FY00.

Commander Naval Air Pacific (COMNAVAIRPAC) has discontinued using MTIP. They are currently using maintenance data products as a source to determine maintenance training deficiencies until AMTCS is implemented.

b. 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 CNO's mandated "just-in-time" training approach.

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

Included in the AMTCS development effort is the Aviation Maintenance Training Continuum System - Software Module (ASM) which provides testing [Test and Evaluation (TEV)], recording [Electronic Training Jacket (ETJ)], 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 (MTL) data bank. These tools are procured and fielded with appropriate COTS hardware and software, i.e., Fleet Training Devices (FTD) - Laptops, PCs, Electronic Classrooms (ECR), Learning Resource Centers (LRC), 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 MTIP and Maintenance Training Management and Evaluation Program (MATMEP) programs.

2. Personnel Qualification Standards. There are no Personnel Qualification Standards requirements developed for this system.

3. Other Onboard or In-Service Training Packages. NA

J. LOGISTICS SUPPORT

1. Manufacturer and Contract Numbers

CONTRACT NUMBER	MANUFACTURER	ADDRESS
N00024-93-G-6336	Northrop-Grumman Oceanic Systems	895 Oceanic Drive Annapolis, MD 21401

2. Program Documentation. An Integrated Logistics Support Plan (ILSP), Maintenance Plan (MP), and Draft Training Set (AN/AQS-14A-T1) MP have been developed and distributed by PMS210. The next review and revision is expected during FY00.

3. Technical Data Plan. Technical publications necessary to support training and maintenance for the AN/AQS-14A are itemized in Part IV.B.3 of this document. MRCs have been developed and distributed in support of the system's Planned Maintenance System requirements. Naval Surface Warfare Center, CSS, Panama City (Code A22) ensures all required approved publications have been delivered and newly developed documents are distributed.

4. Test Sets, Tools, and Test Equipment. Refer to Part IV.A.1 of this NTSP for Test Sets, Tools, and Test Equipment requirements.

5. Repair Parts. An ISSP has been prepared by Technical Systems Integration, Inc. under the direction of PMS210. The ISSP defines the organization, responsibilities, and operating policies to be used during the Interim Supply Support period, which currently exists until MSD, now planned for 30 August 2001. Squadrons and AIMDs procure parts using standard supply procedures for part numbered requisitions. The NAS Supply Department fills locally or passes the requisition to Navy Inventory Control Point for forwarding to Northrop Grumman. Northrop Grumman satisfies the requirement from stock or through a vendor.

6. Human Systems Integration. NA

K. SCHEDULES. All AN/AQS-14 SONAR Detecting Sets have been transitioned to the AN/AQS-14A and are currently in use at HM-14 and HM-15 with complete intermediate level support at AIMD Corpus Christi and AIMD Norfolk. Shipboard AIMD support exists on MCS 12, USS Inchon. All technical documentation is on hand and training devices and courses are in place and on-line.

1. Installation and Delivery Schedules. Installation is complete. The upgrade of the AN/AQS-14 to the AN/AQS-14A on the MH-53E helicopter has been completed.

2. Ready For Operational Use Schedule. The AN/AQS-14A system was delivered to the fleet ready for operational use and is currently in operation.

3. Time Required to Install at Operational Sites. NA

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

5. Training Device and Technical Training Equipment Delivery Schedule. The primary maintenance training equipment used is a complete system "hot mock-up" and is currently set up and in use at MTU 1031, NAMTRAU NS Norfolk. Additionally 8 Student Computer Stations support viewing of IETMs.

Note: With the development of CNO directed intermediate level training, the support of an ILTE will be required. Funding for the ILTE has not been approved at this time.

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

M. RELATED NTSPs AND OTHER APPLICABLE DOCUMENTS

DOCUMENT OR NTSP TITLE	DOCUMENT OR NTSP NUMBER	PDA CODE	STATUS
AN/AQS-14A Integrated Logistics Support Plan	ILSP AM-049	PMS210	Approved Jun 98
AN/AQS-14A Maintenance Plan	MP AM-049	PMS210	Approved Jun 98
AN/AQS-14A Interim Supply Support Plan	ISSP AM-049	PMS210	Approved Aug 98
MH-53E NTSP	N88-NTSP-A-50-8417D/A	PMA261	Approved Feb 01

PART II - BILLET AND PERSONNEL REQUIREMENTS

The following elements are not affected by the AN/AQS-14A Sonar Detecting Set and, therefore, are not included in Part II of this NTSP:

II.A. Billet Requirements

II.A.2.a. Operational and Fleet Support Activity Deactivation Schedule

II.A.2.b. Billets to be Deleted in Operational and Fleet Support Activities

II.A.2.c. Total Billets to be Deleted in Operational and Fleet Support Activities

Note: Information for Billets and Personnel Requirements is the current utilization for the AN/AQS-14A. This information will be updated following the incorporation of intermediate level maintenance training into the course, the addition of AEs to this training, and the increase in course length following the curriculum development by MTU 1031 NAMTRAU Norfolk.

PART II - BILLET AND PERSONNEL REQUIREMENTS

II.A. BILLET REQUIREMENTS

II.A.1.a. OPERATIONAL AND FLEET SUPPORT ACTIVITY ACTIVATION SCHEDULE

SOURCE: Total Force Manpower Management System **DATE:** 4/1/99

ACTIVITY, UIC		**PFYs**	**CFY00**	**FY01**	**FY02**	**FY03**	**FY04**
OPERATIONAL ACTIVITIES - NAVY							
Helicopter Mine Countermeasures, HM-14	53827	1	0	0	0	0	0
Helicopter Mine Countermeasures, HM-15	55201	1	0	0	0	0	0
TOTAL:		2	0	0	0	0	0
FLEET SUPPORT ACTIVITIES - NAVY							
AIMD NAS Oceana Air Det, Norfolk	44325	1	0	0	0	0	0
COMHELTACWINGLANT, Norfolk	44890	1	0	0	0	0	0
AIMD MCS 12, USS Inchon	20009	1	0	0	0	0	0
AIMD Truax Field, NAS Corpus Christi	30244	1	0	0	0	0	0
TOTAL:		4	0	0	0	0	0

II.A.1.b. BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

ACTIVITY, UIC, PHASING INCREMENT	BILLETS OFF	BILLETS ENL	DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
OPERATIONAL ACTIVITIES - NAVY					
Helicopter Mine Countermeasures Squadron, HM-14, 53827					
ACDU	0	2	AT1	8391	
	0	3	AT2	8391	
	0	2	AT2	8391	9526
TAR	0	2	AT1	8391	
	0	2	AT2	8391	
ACTIVITY TOTAL:	0	11			
Helicopter Mine Countermeasures Squadron, HM-15, 55201					
ACDU	0	2	AT1	8391	
	0	3	AT2	8391	
	0	2	AT2	8391	9526
TAR	0	2	AT1	8391	
	0	2	AT2	8391	
ACTIVITY TOTAL:	0	11			
FLEET SUPPORT ACTIVITIES - NAVY					
AIMD NAS Oceana Air Det Norfolk, 44325					
ACDU	0	4	AT2	8391	
	0	1	AT2	8391	9527
ACTIVITY TOTAL:	0	5			
COMHELTACWINGLANT, NS Norfolk, 44890					
ACDU	0	1	ATC	8391	
ACTIVITY TOTAL:	0	1			
AIMD MCS 12, USS Inchon, 20009					
ACDU	0	2	AT1	8391	
ACTIVITY TOTAL:	0	2			
AIMD Truax Field, NAS Corpus Christi, 30244					
ACDU	0	1	AT1	8391	
ACTIVITY TOTAL:	0	1			

II.A.1.c. TOTAL BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

DESIG/ RATING	PNEC/SNEC PMOS/SMOS	PFYs OFF	PFYs ENL	CFY00 OFF	CFY00 ENL	FY01 OFF	FY01 ENL	FY02 OFF	FY02 ENL	FY03 OFF	FY03 ENL	FY04 OFF	FY04 ENL
NAVY OPERATIONAL ACTIVITIES - ACDU													
AT1	8391		4		0		0		0		0		0
AT2	8391		6		0		0		0		0		0
AT2	8391 9526		4		0		0		0		0		0
NAVY OPERATIONAL ACTIVITIES - TAR													
AT1	8391		4		0		0		0		0		0
AT2	8391		4		0		0		0		0		0
NAVY FLEET SUPPORT ACTIVITIES - ACDU													
ATC	8391		1		0		0		0		0		0
AT1	8391		3		0		0		0		0		0
AT2	8391		4		0		0		0		0		0
AT2	8391 9527		1		0		0		0		0		0
SUMMARY TOTALS:													
NAVY OPERATIONAL ACTIVITIES - ACDU			14		0		0		0		0		0
NAVY OPERATIONAL ACTIVITIES - TAR			8		0		0		0		0		0
NAVY FLEET SUPPORT ACTIVITIES - ACDU			9		0		0		0		0		0
GRAND TOTALS:													
NAVY - ACDU			22		0		0		0		0		0
NAVY - TAR			8		0		0		0		0		0

II.A.3. TRAINING ACTIVITIES INSTRUCTOR AND SUPPORT BILLET REQUIREMENTS

DESIG RATING	PNEC/SNEC PMOS/SMOS		PFYs OFF	PFYs ENL	CFY00 OFF	CFY00 ENL	FY01 OFF	FY01 ENL	FY02 OFF	FY02 ENL	FY03 OFF	FY03 ENL	FY04 OFF	FY04 ENL
TRAINING ACTIVITY, LOCATION, UIC: MTU 1031, NAMTRAU, Norfolk, 66046														
INSTRUCTOR BILLETS														
ACDU														
ATC	8391	9502	0	1	0	1	0	1	0	1	0	1	0	1
AT2	8391	9502	0	1	0	1	0	1	0	1	0	1	0	1
TOTAL:			0	2	0	2	0	2	0	2	0	2	0	2

II.A.4. CHARGEABLE STUDENT BILLET REQUIREMENTS

ACTIVITY, LOCATION, UIC	USN/ USMC	PFYs OFF	PFYs ENL	CFY00 OFF	CFY00 ENL	FY01 OFF	FY01 ENL	FY02 OFF	FY02 ENL	FY03 OFF	FY03 ENL	FY04 OFF	FY04 ENL
MTU 1031, NAMTRAU, Norfolk, 66046													
	NAVY		1.8		2.4		2.4		2.4		2.4		2.4
GRAND TOTALS:													
			1.8		2.4		2.4		2.4		2.4		2.4

II.A.5. ANNUAL INCREMENTAL AND CUMULATIVE BILLETS

DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS	BILLET BASE	CFY00 +/-	CFY00 CUM	FY01 +/-	FY01 CUM	FY02 +/-	FY02 CUM	FY03 +/-	FY03 CUM	FY04 +/-	FY04 CUM
a. OFFICER – USN Not Applicable													
b. ENLISTED – USN													
Operational Billets ACDU and TAR													
AT1	8391		8	0	8	0	8	0	8	0	8	0	8
AT2	8391		10	0	10	0	10	0	10	0	10	0	10
AT2	8391	9526	4	0	4	0	4	0	4	0	4	0	4
Fleet Support Billets ACDU and TAR													
ATC	8391		1	0	1	0	1	0	1	0	1	0	1
AT1	8391		3	0	3	0	3	0	3	0	3	0	3
AT2	8391		4	0	4	0	4	0	4	0	4	0	4
AT2	8391	9527	1	0	1	0	1	0	1	0	1	0	1
Staff Billets ACDU and TAR													
ATC	8391	9502	1	0	1	0	1	0	1	0	1	0	1
AT2	8391	9502	1	0	1	0	1	0	1	0	1	0	1
Chargeable Student Billets ACDU and TAR													
			2	0	2	0	2	0	2	0	2	0	2
TOTAL USN ENLISTED BILLETS:													
Operational			22	0	22	0	22	0	22	0	22	0	22
Fleet Support			9	0	9	0	9	0	9	0	9	0	9
Staff			2	0	2	0	2	0	2	0	2	0	2

c. OFFICER - USMC Not Applicable

d. ENLISTED - USMC Not Applicable

II.B. PERSONNEL REQUIREMENTS

II.B.1. ANNUAL TRAINING INPUT REQUIREMENTS

CIN, COURSE TITLE: D-102-2727, AMCM Electronic/Eletrical Systems Organizational/Intermediate Maintenance
COURSE LENGTH: FY00: 9.0 Weeks, FY01: 12.0 weeks **TOUR LENGTH:** 36 Months
ATTRITION FACTOR: Navy: 10% **BACKOUT FACTOR:** 0.18

TRAINING ACTIVITY	SOURCE	ACDU/TAR SELRES	CFY00 OFF	CFY00 ENL	FY01 OFF	FY01 ENL	FY02 OFF	FY02 ENL	FY03 OFF	FY03 ENL	FY04 OFF	FY04 ENL
MTU 1031 NAMTRAU												
	NAVY	ACDU		8		8		8		8		8
		TAR		3		3		3		3		3
		TOTAL:		11		11		11		11		11

PART III - TRAINING REQUIREMENTS

The following elements are not affected by the AN/AQS-14A Sonar Detecting Set and, therefore, are not included in Part III of this NTSP:

III.A.1. Initial Training Requirements

III.A.2. Follow-on Training

III.A.2.c. Unique Courses

III.A.2.b. Planned Courses

III.A.3. Existing Training Phased Out

III.A.2. FOLLOW-ON TRAINING

III.A.2.a. EXISTING COURSES

CIN, COURSE TITLE: D-102-2727, AMCM Electronic/Electrical Systems Organizational/Intermediate Maintenance
TRAINING ACTIVITY: MTU 1031 NAMTRAU
LOCATION, UIC: NS Norfolk, 66046

SOURCE: NAVY **STUDENT CATEGORY:** ACDU - TAR

CFY00		FY01		FY02		FY03		FY04		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
	11		11		11		11		11	ATIR
	10		10		10		10		10	Output
	1.8		2.4		2.4		2.4		2.4	AOB
	1.8		2.4		2.4		2.4		2.4	Chargeable

Note: This track is currently 61 days. The track length is estimated to increase to 82 days in FY01 when the intermediate maintenance training is added.

PART IV - TRAINING LOGISTICS SUPPORT REQUIREMENTS

The following elements are not affected by the AN/AQS-14A Sonar Detecting Set and, therefore, are not included in Part IV of this NTSP:

IV.B. Courseware Requirements

IV.B.1. Training Services

IV.C. Facility Requirements

IV.C.1. Facility Requirements Summary (Space/Support) by Activity

IV.C.2. Facility Requirements Detailed by Activity and Course

IV.C.3. Facility Project Summary by Program

PART IV - TRAINING LOGISTICS SUPPORT REQUIREMENTS

IV.A. TRAINING HARDWARE

IV.A.1. TTE / GPTE / SPTE / ST / GPETE / SPETE

CIN, COURSE TITLE: C-102-9728, AN/AQS-14 and AN/ALQ-141 Mine Detecting Sets Organizational Maintenance, (Track D-102-2727)

TRAINING ACTIVITY: MTU 1031 NAMTRAU
LOCATION, UIC: NS Norfolk, 66046

ITEM NO.	EQUIPMENT / TYPE OR RANGE OF REPAIR PARTS	QTY REQD	DATE REQD	GFE CFE	STATUS
TTE					
43	Cable W8 Interconnecting	1	Apr 99	GFE	Onboard
19	Cable Assembly, Special P/N: 9754D12G06	1	Apr 99	GFE	Onboard
20	Cable Assembly, Special P/N: 9754D12G07	1	Apr 99	GFE	Onboard
21	Cable Assembly, Special P/N: E754D12G08	1	Apr 99	GFE	Onboard
30	Monitor Assembly	1	Apr 99	GFE	Onboard
1	Tow Cable Assembly	1	Apr 99	GFE	Onboard
10	Sonar Filter Assembly F-1496	1	Apr 99	GFE	Onboard
11	Tow Cable Assembly	1	Apr 99	GFE	Onboard
12	Cable Assembly, Special P/N: 5324C04H15	1	Apr 99	GFE	Onboard
13	Cable Assembly, Special P/N: 5324C04H13	1	Apr 99	GFE	Onboard
14	Cable Assembly, Special P/N: 9754D12G01	1	Apr 99	GFE	Onboard
15	Cable Assembly, Special P/N: 9754D12G02	1	Apr 99	GFE	Onboard
16	Cable Assembly, Special P/N: 9754D12G03	1	Apr 99	GFE	Onboard
17	Cable Assembly, Special P/N: 9754D12G04	1	Apr 99	GFE	Onboard
18	Cable Assembly, Special P/N: 9754D12G05	1	Apr 99	GFE	Onboard
2	Towed Body, Sonar	1	Apr 99	GFE	Onboard
22	Cable Assembly, Special P/N: 9754D12G09	1	Apr 99	GFE	Onboard
23	Cable Assembly, Special P/N: 9754D12G10	1	Apr 99	GFE	Onboard
24	Cable Assembly, Special P/N: 9754D12G11	1	Apr 99	GFE	Onboard
25	Cable Assembly, Special P/N: 9754D12G12	1	Apr 99	GFE	Onboard
26	Cable Assembly, Special P/N: 9754D12G13	1	Apr 99	GFE	Onboard
27	Cable Assembly, Special P/N: 9754D12G14	1	Apr 99	GFE	Onboard

IV.A.1. TTE / GPTE / SPTE / ST / GPETE / SPETE

28	Tow Cable, Shop Test	1	Apr 99	GFE	Onboard
29	Console Assembly	2	Apr 99	GFE	Onboard
3	Wired Drawer Assembly	1	Apr 99	GFE	Onboard
31	Control Processor	1	Apr 99	GFE	Onboard
32	Recorder Reproducer	1	Apr 99	GFE	Onboard
33	Power Distribution Unit	1	Apr 99	GFE	Onboard
34	Towed Vehicle	1	Apr 99	GFE	Onboard
35	Cable W1	1	Apr 99	GFE	Onboard
36	Cable W2	1	Apr 99	GFE	Onboard
37	Cable W3	1	Apr 99	GFE	Onboard
38	Cable W4	1	Apr 99	GFE	Onboard
39	Cable W5	1	Apr 99	GFE	Onboard
4	Receiver Indicator	1	Apr 99	GFE	Onboard
40	Cable W6	1	Apr 99	GFE	Onboard
41	Cable W7	1	Apr 99	GFE	Onboard
42	Cradle Assembly AQS14	2	Apr 99	GFE	Onboard
44	Cable W9 Interconnecting	3	Apr 99	GFE	Onboard
5	Control C-10753	1	Apr 99	GFE	Onboard
6	Sonar Data Computer	1	Apr 99	GFE	Onboard
7	Digital Data Printer	1	Apr 99	GFE	Onboard
8	Drawer Electrical	1	Apr 99	GFE	Onboard
9	Control Indicator Power Supply C-10754	1	Apr 99	GFE	Onboard
GPTE					
1	Multimeter	1	Apr 99	GFE	Onboard
2	Power Supply AC To DC	1	Apr 99	GFE	Onboard
3	Power Frequency Converter	2	Apr 99	GFE	Onboard
ST					
1	Tool Joint Ring	1	Apr 99	GFE	Onboard
2	Shop Power Connector	2	Apr 99	GFE	Onboard

IV.A.2. TRAINING DEVICES

DEVICE: AN/AQS-14 Mine Detecting Set
DESCRIPTION: Complete operating set, "Hot Mockup" of the AN/AQS-14 Mine Detecting Set
MANUFACTURER: Northrop Grumman
CONTRACT NUMBER: N00024-93-G-6336
TEE STATUS: Onboard

TRAINING ACTIVITY: MTU-1031, NAMTRAU
LOCATION, UIC: NS Norfolk, 66046

QTY REQD	DATE REQD	RFT DATE	STATUS	COURSES SUPPORTED
1	Jun 99	Jun 99	Onboard	C-102-9728, (Track D-102-2727)

IV.B. COURSEWARE REQUIREMENTS

IV.B.2. CURRICULA MATERIALS AND TRAINING AIDS

CIN, COURSE TITLE: C-102-9728, AN/AQS-14 and AN/ALQ-141 Mine Detecting SetsOrganizational Maintenance (Track D-102-2727)

TRAINING ACTIVITY: MTU 1031 NAMTRAU
LOCATION, UIC: NS Norfolk, 66046

TYPES OF MATERIAL OR AID	QTY REQD	DATE REQD	STATUS
Trainee Guide, NAMTG-N4627 (s)	10	Apr 99	Onboard
Student Computer Stations	8	Apr 99	Onboard

IV.B.3. TECHNICAL MANUALS

CIN, COURSE TITLE: C-102-9728, AN/AQS-14 and AN/ALQ-141 Mine Detecting Sets Organizational Maintenance, (Track D-102-2727)
TRAINING ACTIVITY: MTU 1031 NAMTRAU
LOCATION, UIC: NS Norfolk, 66046

TECHNICAL MANUAL NUMBER / TITLE	MEDIUM	QTY REQD	DATE REQD	STATUS
AW-565CD-MCM-010 Technical Manual, Organizational and Intermediate Maintenance with Illustrated Parts Breakdown, Interconnecting Cable with transit case (U)	CD	1	Apr 99	Onboard
AW-565BD-MMO-000/ (S) Technical Manual, Organizational Maintenance with Illustrated Parts Breakdown, Mine Countermeasures Set AN/ALQ-141 (S)	CD	10	Apr 99	Onboard
AW-565CD-MCM-010 Technical Manual, Organizational Maintenance Instructions with Illustrated Parts Breakdown, Sonar Detecting Set AN/AQS-14 and AN/AQS-14A (U)	CD	10	Apr 99	Onboard
AW-565CD-MCM-010 Technical Manual, Periodic Maintenance Requirements, Mine Countermeasures Set AN/ALQ-141 (U)	CD	10	Apr 99	Onboard
AW-565CD-MCM-010 Technical Manual, Organizational Level Special/Preservation/ Conditional Maintenance Requirements AN/AQS-14A Sonar Detecting Set (U)	CD	10	Apr 99	Onboard

PART V - MPT MILESTONES

COG CODE	MPT MILESTONES	DATE	STATUS
DA	Promulgated update Draft NTP for review	Feb 95	Completed
PDA	Submitted Proposed NTP to OPNAV	Jun 95	Completed
DCNO (MPT)	Approved and promulgated NTP	Jul 95	Completed
PDA	Promulgated ILS Master Plan	Dec 95	Completed
TSA	Delivered curricula material	Sep 96	Completed
PDA	Promulgated revised ILS Master Plan	Feb 97	Completed
TSA	Began Initial Training	Dec 97	Completed
DCNO (MPT)	Approved and promulgated revised NTP	Jun 98	Completed
TA	Began follow-on training	Aug 98	Completed
PDA	Fleet Introduction	Oct 98	Completed
PDA	Achieved IOC	Oct 98	Completed
TSA	Developed Draft NTSP	Sep 99	Completed
TSA	Submitted Proposed NTSP	Mar 00	Completed
OPO	Approve NTSP	Apr 01	Completed
PDA	Achieve MSD	Aug 01	Pending

PART VI - DECISION ITEMS/ACTION REQUIRED

DECISION ITEM OR ACTION REQUIRED	COMMAND ACTION	DUE DATE	STATUS
None			

PART VII - POINTS OF CONTACT

NAME / FUNCTION / ACTIVITY, CODE / INTERNET EMAIL	TELEPHONE NUMBERS
CAPT Owen Fletcher Head, Plans, Policy, and Fleet Maintenance Support CNO, N781B fletcher.owen@hq.navy.mil	**COMM:** (703) 604-7747 **DSN:** 664-7747 **FAX:** (703) 604-6972
CAPT Dan Bell Helicopter Coordinator, Naval Air Reserve CNO, N78R2 bell.d@hq.navy.mil	**COMM:** (703) 604-7728 **DSN:** 664-7726 **FAX:** (703) 604-6969
CAPT Terry Merritt Head, Aviation Technical Training Section CNO, N789H Merritt.terry@hq.navy.mil	**COMM:** (703) 604-7730 **DSN:** 664-7730 **FAX:** (703) 604-6969
LCDR Scott Stroble Training Requirements Officer CNO, N789F3 stroble.scott@hq.navy.mil	**COMM:** (703) 604-7721 **DSN:** 664-7721 **FAX:** (703) 604-6939
MAJ Victor Wigfall Helicopter Training Requirements CNO, N789H2 wigfall.victor@hq.navy.mil	**COMM:** (703) 604-7762 **DSN:** 664-7762 **FAX:** (703) 604-6969
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CDR Kevin Neary Aviation Manpower CNO, N122C1 n122c1@bupers.navy.mil	**COMM:** (703) 695-3247 **DSN:** 225-3247 **FAX:** (703) 614-5308
Mr. Robert Zweibel Training Policy CNO, N795K zweibel.robert@hq.navy.mil	**COMM:** (703) 614-1344 **DSN:** 224-1344 **FAX:** (703) 693-4978
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PART VII - POINTS OF CONTACT

NAME / FUNCTION / ACTIVITY, CODE / INTERNET EMAIL	TELEPHONE NUMBERS
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CAPT Vito Jimenez Program Manager NAVSEASYSCOM, PMS210 jimenezvw@navsea.navy.mil	**COMM:** (202) 781-4376 **DSN:** 781-4376 **FAX:** (202) 781-4696
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PART VII - POINTS OF CONTACT

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