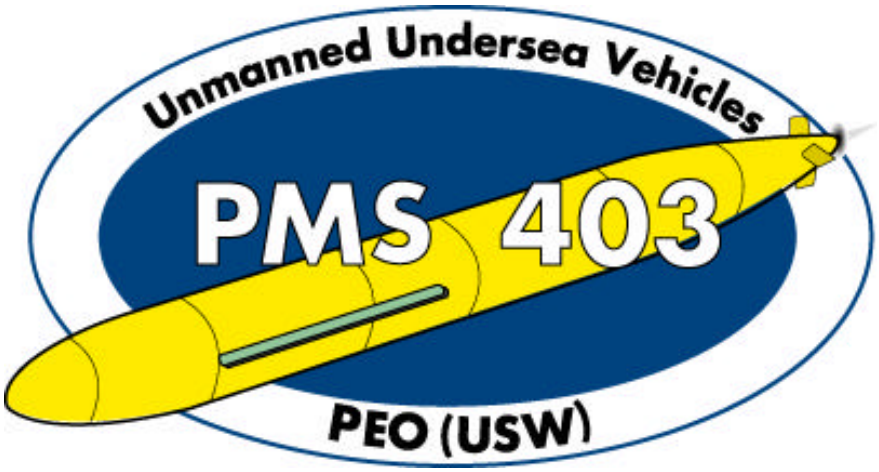
N88-NTSP-A-50-99-05/D
April 1999

Navy Training System Plan (NTSP)
For The
Mk 30 Mod 2 ASW Training Target System



Department of the Navy
Program Executive Officer
Undersea Warfare

Each transmittal outside the Department of Defense must have prior approval of the Program Executive Officer for Undersea Warfare (PMS 403)

Executive Summary

The Mk 30 Mod 2 ASW Training Target System (ATS) is a new production system that will replace the Mk 30 Mod 1 Mobile ASW Target. The MK 30 Mod 2 ATS Target Undersea Vehicle provides increased reliability over the MK 30 Mod 1 Mobile ASW Target. This increase in reliability coupled with more advanced Built-In-Test and ATS Test Equipment capability provides for a significant decrease in Operational Site (O-site) manpower requirements.

The Mk 30 Mod 2 is an ACAT IV-M program approved for Engineering and Manufacturing Development phase in 1996. Key schedule thresholds include establishing Initial Operational Capability (IOC) in March 2002 and Full Operational Capability (FOC) in 2008. The purpose of the program is to provide the Fleet with a highly reliable, maintainable, and affordable target system. The Mk 30 Mod 2 ATS Program Manager, PMS403, is responsible for the accomplishment of the training requirements identified in this NTSP. The training identified in this NTSP will be conducted at the Operational Sites (O-Sites) using operational systems. Chief of Naval Education and Training (CNET) facilities and billets will not be required. This training will enable non-military personnel to plan and execute target missions, perform target turnaround servicing, and Mk 30 Mod 2 ATS preventive and corrective maintenance.

The Mk 30 Mod 2 ATS is designed to use existing Mk 30 Mod 1 support infrastructure including operation and maintenance activity personnel. Civil service/contractor personnel man these support activities located as tenant activities at five US Navy range sites. Mk 30 Mod 2 ATS will not require manning or skill levels greater than the current level for the Mk 30 Mod 1. Surface craft and helicopter launch and recovery services provided by Navy range personnel would be the same for the Mk 30 Mod 2 ATS as it exists for the current Mk 30 Mod 1.

Training will consist of three components that include Engineering and Manufacturing Development (E&MD) phase training, initial training and proficiency training. On-the-job (OJT) training will also supplement the learning process of all site technicians. E&MD training is the first training course offered and will be conducted during the E&MD phase of the Mk30 Mod 2 contract. The prime contractor (Raytheon Systems Corporation) plans to develop a computer-based training curriculum that will provide the knowledge and skills necessary to operate and maintain the Mk 30 Mod 2 ATS. Training resources also include the Mk 30 Mod 2 Interactive Electronic Technical Manual (IETM) hosted in the systems test equipment. The training will be conducted at existing Mk 30 Mod 1 Intermediate Maintenance Activities (IMA) using computers provided as Government Furnished Equipment (GFE). There are no anticipated requirements for training devices or physical training aids.

Table of Contents

List of Figures

List of Acronyms

ACLSBC	Acoustic Command Link Shore Based Controller
AFWTF	Atlantic Fleet Weapons Test Facility
ASW	Antisubmarine Warfare
ATE	ATS Test Equipment
ATS	ASW Training Target System
AUTEC	Atlantic Undersea Test and Evaluation Center
BCS	Battery Charging System
CFE	Contractor Furnished Equipment
CNE	Casualty Network Electronics
CNET	Chief of Naval Education and Training
COTS	Commercial off-the-shelf
D&V	Demonstration and Validation
DT	Developmental Test
E&MD	Engineering and Manufacturing Development
ECE	External Control Equipment
ECP	Engineering Change Proposal
EOR	End-of-Run
ESS	Emergency Shutdown System
FMECA	Failure Modes and Effects Criticality Analysis
FOC	Full Operational Capability
F-Sites	Forward Sites
G&C	Guidance and Control
GFE	Government Furnished Equipment
GPS	Global Positioning System
HSI	Human Systems Integration
IETM	Interactive Electronic Technical Manual
INU	Inertial Navigation Unit
IOC	Initial Operating Capability
LCS	Launch Control System
LRU	Lowest Replaceable Unit
MAD	Magnetic Anomaly Detector
MPAS	Mission Preparation and Analysis System
MPI	Mission Performance Information
ODR	Optional Data Recorder
NDI	Non Developmental Items
NUWC	Naval Undersea Warfare Center
OJT	On-the-job Training
O-Sites	Operational Sites
OT	Operational Test
PC	Personal Computer
PM	Performance Monitoring
PSA	Power Switching Assembly
PURT	Power-Up Readiness Test
RCM	Reliability Centered Maintenance
RFI	Ready-For-Issue
ROB	Range Operational Boundary
S&TE	Support and Test Equipment
SHE	Support and Handling Equipment
SLP	Surface Launch Platform
SOCAL	Southern California Range Facility
SSE	Special Support Equipment
TAS	Target Alignment System
TUV	Target Undersea Vehicle
UTR	Underwater Tracking Range
VCAP	Vehicle Control/Acoustic Processor
VME	Versa Module Europa

Part I - Technical Program Data

I.A. Program Title and Element Number. Mk30 Mod 2 ASW Training Target System (ATS), Program Element # 068342

I.B. Security Classification. Security Classification Guidelines for the Mk 30 Mod 2 ATS have been incorporated into OPNAVINST S5513.5 series.

Information, which can be discerned from operation of the target system, is classified to the level of that information and may be as high as SECRET/WNINTEL depending on the mission. Types of potential discernible information include operational capabilities, vulnerabilities, tactics, techniques, and tactical doctrine of simulated target or US submarines, surface ships or aircraft using the target for training.

Hardware Security Classification:

a) All Mk30 Mod 2 hardware (without classified mission software or data) unless classified by other guidelines is UNCLASSIFIED. Note: Even if the Mk30 Mod 2 is not classified (i.e., mission programming package is not installed), it must be properly protected through physical and operational security measures.
b) External view of the Mk30 Mod 2 system and subsystems is UNCLASSIFIED

Acoustic Performance and Function Security Classification:

a) General description of acoustic suite, to include a description of key components and their physical characteristics (e.g., size, weight) is UNCLASSIFIED.
b) Spectrum of transmission frequencies is classified CONFIDENTIAL.
c) Spectrum of reception frequencies is classified CONFIDENTIAL.
d) Receiving bandwidth(s) of system is classified CONFIDENTIAL

I.C. NTSP Principals.

Principal	Organizational Code
OPNAV Principle Official (OPO) Program Manager	CNO (N88)
OPO Resource Sponsor	CNO (N889F2)
Developing Agency (DA)	PEO(USW)/PMS403
Training Support Agency (TSA)	PEO(USW)/PMS403
Manpower and Personnel (M&P) Mission Sponsor	CNO (N1)
Director of Training	CNO (N7)

I.D. System Description

1. Operational Uses. Mobile Anti-Submarine Warfare (ASW) targets are used in conjunction with instrumented Underwater Tracking Ranges (UTR) in the training of Aviation, Submarine, and Surface Ship ASW Teams. The Mobile ASW targets provide adjustable, realistic simulations of the capabilities and attributes of nearly the full spectrum of submarine types that the

teams might be expected to encounter during the course of their ASW missions. The use of Mobile ASW targets on the instrumented UTR allows for the easy reconstruction and evaluation of the performance of ASW teams and their systems being tested. This includes individual teams and their ASW systems during unit exercises and ASW battle groups during coordinated exercises. The use of the Mk 30 Mod 2 ATS in conjunction with the UTR provides cost effective training services in support of the Fleet employing sensors and weapon systems in realistic, operational situations.

A Mission Needs Statement was not developed for the Mk 30 Mod 2 ATS and is not required. Navy Decision Coordination Paper S0968-AS documented the need and requirement for the Mk 30 Mod 2 ATS and an Operational Requirements Document has been developed and approved for the Mk 30 Mod 2 ATS.

2. Other Procurement. No other procurement is planned for the Mk 30 Mod 2 ATS.

I.E. Developmental Test (DT) and Operational Test (OT). The Mk 30 Mod 2 ATS Test and Evaluation Master Plan (TEIN 1419) documents the DT and OT requirements of the program.

I.F. Equipment /System/Subsystem Being Replaced. The Mk 30 Mod 2 ATS will replace the Mk 30 Mod 1 Mobile ASW Target that was introduced to the Fleet in 1975. The Mk 30 Mod 2 ATS will retain/modify as much Mk 30 Mod 1 Mobile ASW Target support equipment as possible. Special Support Equipment (SSE) and other unique Mk 30 Mod 1 Mobile ASW Target equipment not required to support the Mk 30 Mod 2ATS will be retired.

I.G. Description of Mk30 Mod 2 ATS: The following paragraphs provide a functional and physical description of the Mk 30 Mod 2 ATS.

1. Functional Description: The following is a functional description of the ATS that includes the Target Undersea Vehicle, External Control Equipment, and Support and Test Equipment.

a. Target Undersea Vehicle (TUV). The TUV is a reusable Unmanned Undersea Vehicle (UUV), which contains all of the propulsion, guidance, payload, and other functions necessary to acoustically, dynamically, and magnetically simulate a submarine to the degree of fidelity required for the ASW training mission. The TUV is required to maneuver within a given boundary at speeds ranging from 5 to 20 knots. Dive/climb and turn rates are commensurate with submarine performance. The TUV can be programmed to emit tonals, broadband noise, and/or active emissions. The TUV has the capability to evade interrogating sonar. The TUV can receive commands from an acoustic link to change speed, depth, bearing, sound pressure level, terminate the mission, or change the mission profile to an alternate mission. The TUV can simulate the magnetic anomalies of a submarine using a high current wire for Magnetic Anomaly Detection (MAD) training.

b. External Control Equipment (ECE). The ECE is comprised of the Launch Control System (LCS), Acoustic Command Link Shore Based Controller (ACLSBC), and Emergency Shutdown System (ESS).

(1) Launch Control System (LCS). The LCS provides the means for conducting the following pre-launch functions aboard the Launch Platform, initiating TUV power, performing functional testing, monitoring TUV functions, and uploading mission program data into the TUV. The LCS also provides the means for downloading the Mission Performance Information (MPI) and Optional Data Recorder (ODR) data upon completion of the mission.

(2) Acoustic Command Link Shore Based Controller (ACLSBC). The ACLSBC provides the means to issue commands to the TUV during a training mission through the range underwater communications system.

(3) Emergency Shutdown System (ESS). The ESS is deployed from a surface craft or helicopter to command the TUV to proceed to an End of Run (EOR) state.

c. Support and Test Equipment (S&TE). S&TE is comprised of the Mission Preparation and Analysis System (MPAS), ATS Test Equipment (ATE), and Support and Handling Equipment (SHE).

(1) Mission Preparation and Analysis System (MPAS). The MPAS is used to develop the TUV acoustic profile and run dynamics. The mission planning function will be performed at each Operational Site (O-Site). Definition of mission requirements including the mission profile, range to be used and assets to be trained will be performed in advance with operational Fleet units. The mission scenario will be developed to support these pre-defined requirements. MPAS will also include libraries of pre-defined validated missions and mission parameters. MPAS is used to perform subsequent analysis of the mission data collected by the MPI recorder or the ODR.

(2) ATS Test Equipment (ATE). The ATE directly interfaces to the TUV, via the umbilical cable, to conduct system functional testing and fault isolation testing. The ATE functions as the O-Site repair line tester to prepare and turnaround all vehicles in a structured and controlled environment.

(3) Support and Handling Equipment (SHE). Provides protection during transportation, and equipment necessary for handling, assembly, and disassembly of the TUV and ECE for maintenance.

2. Physical Description.

a. Target Undersea Vehicle. The TUV is a torpedo like UUV approximately 53 centimeters in diameter and 625 centimeters in length (without towed array). The TUV consists of six sections (see Figure 1): Nose, Battery, Guidance & Control (G&C), Acoustics, Motor, and Fin. Furthermore, to fully support the training mission Auxiliary equipment is often added to the TUV.

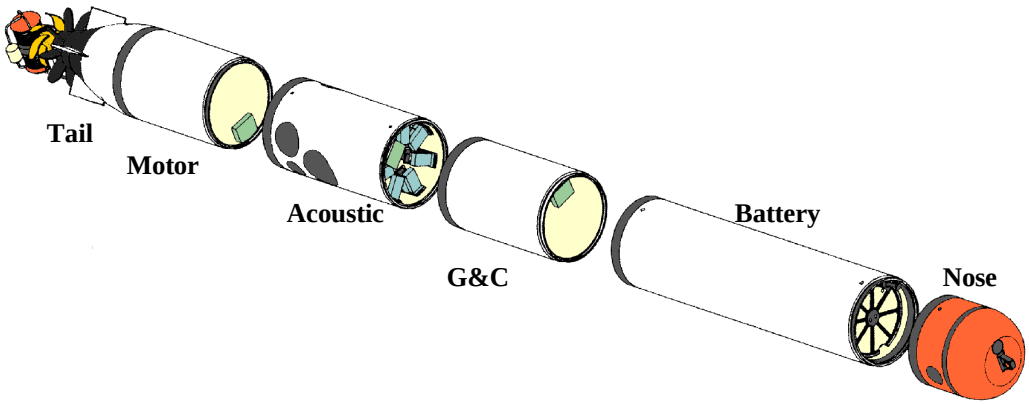


Figure 1. Target Undersea Vehicle

(1) Nose Section. The Nose Section is a pressurized hull that houses the left and right hydrophones, retrieval beacon, and an emergency pinger. The nose section is attached to the battery section by a joint band clamp. A nose ring is formed onto the front of the nose section hull to facilitate retrieval operations.

(2) Battery Section. The battery section is the vehicle energy source. The baseline energy source is a MR-200 silver zinc (Ag-Zn) battery that has 39 kWh endurance. The section's Power Switching Assembly (PSA) includes hermetically sealed relays for the Vehicle Control/Acoustic Processor (VCAP), MAD power supply, power amplifiers, and motor. Housed on both ends of the battery section is the vehicle's Trim Adjustment System (TAS). TAS is constructed of a fluid reservoir, pressure and fluid sense switch, pump, and manifold to transfer fluid from the forward end of the battery section to a receiving bladder aft. TAS enables the TUV to float to within 30 degrees of vertical for TUV recovery.

(3) Guidance & Control Section. This section houses the power distribution and conditioning subsystem, VCAP, Casualty Network Electronics (CNE), MAD power supply, Inertial Navigation Unit (INU), MPI recorder, and the ODR. The ODR is only included in the vehicle during testing, troubleshooting and special pre-determined run scenarios. The VCAP consists of a Central Processor Unit, Random Access Memory/Erasable Programmable Memory module, 4 Digital Signal processors, Serial I/O, Parallel I/O, Input Signal Conditioner, Output Signal Conditioner, Interface/Signal Filter module, 1553 communication module and a temperature sensor. The CNE monitors various parameters within the vehicle and reports status to the VCAP. CNE initiates End-of-run (EOR) in response to VCAP command or as a backup to VCAP. The VCAP modules are installed in a rail mounted Versa Module Europa (VME) baseplate. This complete rail mounted assembly can be slid from the TUV to facilitate removal and replacement activities and troubleshooting. Electrical connections are made via quick disconnect fittings. The VCAP assembly is passively cooled and mounted directly to the VCAP chassis. The vehicle power converter assemblies are mounted similar to the VCAP on the slide rails mating to quick disconnect connectors. The INU is mounted to the G&C hull in a position that does not obstruct the access to or removal of the VCAP. The ODR may be mounted in the

VCAP and will use an Ethernet interface for data transfer and troubleshooting. The G&C section also includes leak detectors and an additional gas pressure bulkhead to its forward end to protect the G&C, acoustic and tail sections dry nitrogen atmosphere during battery replacement.

(4) Acoustic Section. The acoustic section includes the 3-D range pinger transducer and electronics, high; medium and low frequency projectors with associated power amplifiers and tuning networks.

(5) Motor Section. The motor section houses the motor, motor mounts and motor controller. Also, included in this section are the Cooling Pump/Accumulator Assembly and the Isolation Coupling Assembly.

(6) Fin Section. This section houses the propulsor, propulsor shaft and bearings, four fin controllers, four fins and a stator. The umbilical connector is mounted to the hull. A lanyard to prevent accidental activation of the propeller. A skeg provides support and alignment for the Towed Array cable connection to the TUV.

(a) Towed Array/Magnetic Anomaly Detection Wire. The towed array incorporates a projector to provide the torpedo and acoustic functions, a hydrophone to detect interrogations and a high current carrying Magnetic Anomaly Detection (MAD) wire to emulate a submarine's magnetic signature. The Mk30 Mod 2 ATS Towed Array is the product of the PMS403 Common Towed Array project. The components used to produce the Mk 30 Mod 2 array will be as consistent as possible with those used to produce the Mk30 Mod 1 array. The towed array and MAD wire are wrapped around a canister for uniform deployment during TUV launch.

b. External Control Equipment. The ECE (Figure 2) of the Mk30 Mod 2 ATS is comprised of the LCS, ACLSBC and ESS.

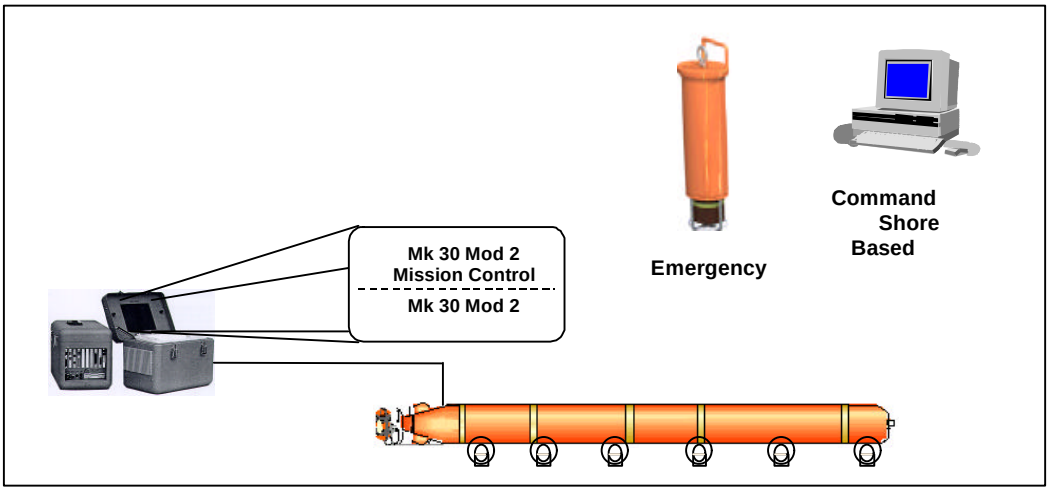


Figure 2. External Control Equipment

(1) Launch Control System. The LCS is a Ruggedized, commercial, portable computer packaged to survive the harsh environments on helicopters and surface launch platforms. The LCS will be primarily powered by the launch platform services and will also have a battery back up. LCS is configured with 166MHz MMX CPU, 64 Mbytes RAM, 9.4" sunlight readable monitor, 1 Gbyte removable hard drive, 1Gbyte internal hard drive, Ethernet support, Electro Magnetic Interference/ Radio Frequency Interference (EMI/RFI) shielding, 56K baud modem, LYNX operating system, Mk 30 Mod 2 Mission Support software.

(2) Acoustic Command Link Shore Base Controller. The ACLSBC is a personal computer (PC) based unit. Configured with Pentium 200 MHz CPU with MMX, 64 Mbyte SDRAM, 17" color monitor, 2 Gbyte hard drive, Command Signal Generator Module, LYNX operating system, and Mk 30 Mod 2 Range Control software. The unit is located in the range tracking station in a controlled environment.

(3) Emergency Shutdown System. The ESS is a portable self-contained submersible battery operated acoustic transmitter. The ESS Operates at 185 dB re 1 uPa at 1 meter for up to three hours. Effective range is 5000 meters. The ESS design was taken from an earlier target program, reference NAVSEA Drawing Number 6579832.

c. Support and Test Equipment. The S&TE element (Figure 3) of the Mk30 Mod 2 ATS is comprised of Mk 30 Mod 2 ATS Test Equipment, MPAS, and SHE.

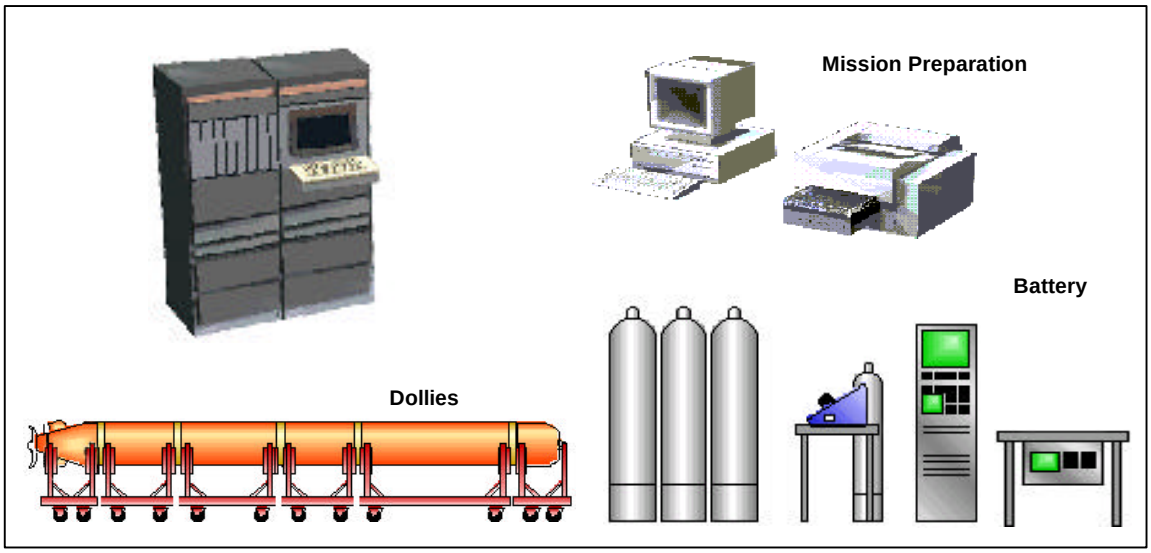


Figure 3. Support and Test Equipment

(1) ATS Test Equipment. The ATE is a rack mounted PC based system. The ATE is configured with a Pentium II 233 MHz CPU, 64 Mbyte SDRAM, 17" color monitor, 4 Gbyte hard drive, Ethernet support, 56K baud modem, COTS system log and IETM software, Windows NT operating system, and LABVIEW software with Macros for a barcode reader. The ATS is located in the O-site maintenance area.

(2) Mission Planning and Analysis System. The MPAS is a desktop PC based system. The MPAS is configured with a Pentium 200 MHz CPU, 64 Mbyte DRAM, 17" color monitor, 4 Gbyte hard drive, 56k baud modem, LYNX operating system, Ethernet support, Mk 30 Mod 2 Mission Support Software for mission planning, and MATLAB software for post mission data analysis. The MPAS is located at the O-site in an environmentally controlled office area.

(3) Support and Handling Equipment. The SHE includes the Battery Charging System (BCS), purge and fill equipment, solar shield, ODR, and TUV support tools, dollies, General Purpose Electronic Test Equipment (GPETE), handling equipment and shipping containers. The BCS is a stand-alone component of SHE. BCS consists of a rack mounted computer console assembly (general purpose PC, printer, bar code reader, voltage calibrator), rack mounted power console assembly, battery interface assembly, battery cart assembly, and ventilation equipment.

3. New Development Introduction. The Mk 30 Mod 2 ATS is a new production system that will fit into the existing infrastructure of the Mk 30 Mod 1 Mobile ASW Target program. Key schedule thresholds include establishing IOC in March 2002 and FOC in 2008 with planned full rate production quantities of 72 TUVs and five sets of ECE and S&TE. The system will be installed at five O-sites with a system service life specified to be at least 20 years.

4. Significant Interfaces. The Mk 30 Mod 2 ATS will continue to interface with existing range launch and recovery craft equipment, range underwater communication systems, tracking pingers, and handling equipment. The TUV will also interface with the Global Positioning System (GPS) via the LCS.

5. New Features, Configurations, or Material. The Mk 30 Mod 2 ATS program emphasis has been on reliability, availability, maintainability, and testability engineering to provide the Fleet an affordable target that satisfies training requirements. The design utilizes technology that has been guided by a systems approach that maximizes efficiency by focusing on the total operational and support mission. Some of the key new features include ATE testability and IETMs. The TUV incorporates a single propeller and stator design that reduces the number of mechanical parts from that used in the Mk 30 Mod 1 design. The Trim Adjustment System described in paragraph I.G.2.a.(2). In addition a retrieval beacon and a position locator have been added to aid in vehicle recovery.

I.H. Concepts. The Mk 30 Mod 2 ATS Concept of Operations defines the activities that occur in each of the six operational states and four maintenance states. Figure 4 is an overview of the states.

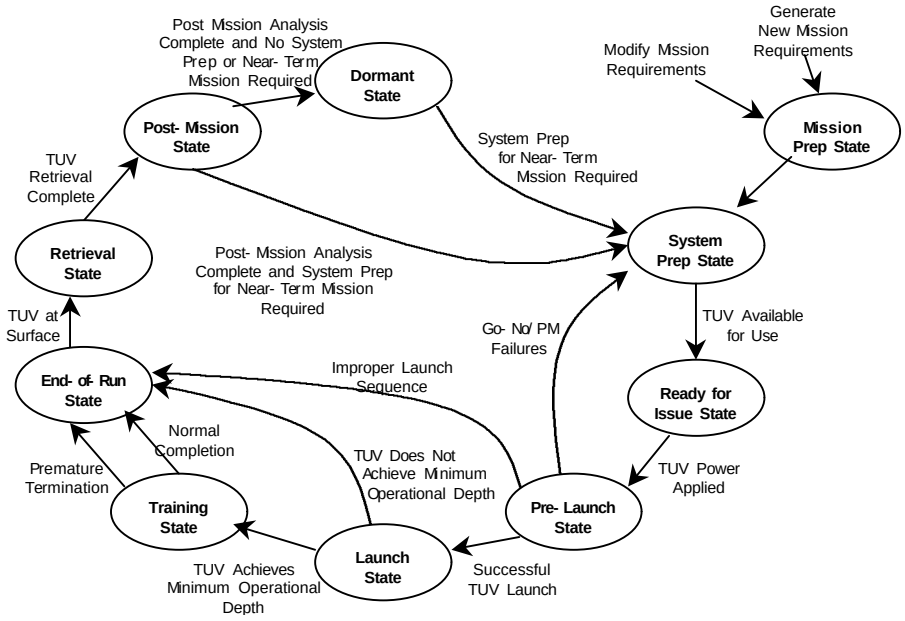


Figure 4. Mk 30 Mod 2 ATS System States.

The following concepts are compiled in relation to the states.

1. **Operational Concept.** System states requiring specific operational tasks are described below.

a. Mission Preparation. A mission requirement conference between the mission planning O-site personnel and fleet training representative is conducted in advance of the training exercise. The mission planner will develop a mission plan to meet the unique requirements of the defined mission by creating a new mission(s), modifying an existing mission(s) from the library, or use a library mission as is. Mission preparation is performed at the O-site using the MPAS as described in section I.G.2.c. (2). After creation or modification of the mission plan, MPAS software will validate that any mission TUV track changes are within the Range Operating Boundary (ROB) and that the mission requirements have been met. Mission plans will be stored on magnetic media and uploaded to the LCS. New mission plans will be added to the library.

b. Pre-Launch. Pre-launch begins with the TUV and LCS on the launch platform or for helicopter operations, when the TUV is in the launcher on the tarmac and power is applied. The TUV will be directly connected to the LCS via the umbilical cable, on surface craft. The TUV/LCS umbilical cable will be connected to a launcher interfacing cable for helicopter launches. The launch master will power the TUV via the LCS to perform the Power-Up Readiness Test (PURT) go/no-go test, select the appropriate UTR, select the launch platform, initialize the range tracking pinger, and initialize the INU. If GPS is not available, position data will be manually entered. INU will be established on the tarmac for helicopter launches. The mission plan is then uploaded from the LCS to the TUV and confirmation is registered on the LCS when complete. The LCS will continue to interrogate the TUV status until the TUV is

launched. With the TUV in a successful pre-launch status, intent to launch message will be sent to the TUV upon direction of the Range Officer. External cooling may be necessary when the TUV remains in the powered-up pre-launch state. An internal thermal sensor will register on the LCS should this condition occur.

c. Launch. The launch master will initiate the launch by pressing the LCS fire button. The TUV lanyard must be removed and a wet probe indication received prior to power being applied to the propulsion system and starting the training mission. The launch master/launch platform crew will observe the TUV in-water progress, power to propulsion, towed array deployment, and signal a successful launch. Surface launch platforms may retrieve the towed array canister if possible.

d. Training. Upon reaching minimum operating depth and speed, the TUV transits to its first way-point and begins the programmed mission. Range Control may change the mission to one of the three pre-programmed missions, command the TUV to loiter, or end the mission via the ACLSBC.

e. End of Run. The EOR State is normally entered after the TUV has completed its programmed mission. EOR can also be commanded by Range Control via the ACLSBC or by surface craft or helicopter via ESS as described in section I.G.2.b. (3).

f. Retrieval. Retrieval by surface platform will be accomplished by hoisting the TUV onto the retrieval platform. Retrieval by helicopter will be accomplished with a retrieval cage.

g. Post Mission. Post Mission commences when the TUV is on the retrieval platform or has been returned to an O-site or F-site by helicopter. A fresh water wash will be performed on the TUV. The deployed towed array and MAD wire will be removed. Umbilical cable will be attached to the TUV and LCS. Onboard range pinger will be shut off upon attachment of umbilical cable to the TUV. MPI data will be extracted via LCS. MPI data will be sent to the O-site and analyzed using the MPAS to aid in the determination of training objective achievement, assessment of TUV performance, failure analysis, and assessment of operational configuration changes. If an ODR is installed, ODR data will be extracted via the LCS to an external storage device. The ODR may contain classified data and will be properly handled.

2. Maintenance Concept. Mk 30 Mod 2 ATS will consist of preventive/planned maintenance and corrective maintenance tasks performed at the organizational and depot maintenance levels. Intermediate level maintenance will not be required.

a. Organizational Level Maintenance. O-level maintenance will be performed at the O-site, F-site, or Surface Launch Platform (SLP) during System Preparation and Post Mission states.

(1) Preventive/Planned Maintenance. Preventive/planned maintenance actions include routine system preparation/post mission tasks described below. Each TUV will undergo annual preventive maintenance to the Lowest Replaceable Unit (LRU) level. Planned maintenance will also be performed for each ECE and S&TE.

(a) O-Site. O-site tasks will include maintaining the TUV, ESS, and LCS hardware in a Ready of Issue (RFI) condition as well as ATE and SHE scheduled maintenance. The TUV having been returned to the O-site (post mission) with no fault detected by the LCS or ATE will have consumables replenished and hardware refurbished. Replenishment/refurbishment includes replacement of the towed array and replacement of the forward TUV section, or only the battery section. The depleted battery section will be sent to the battery shop for recharge or replacement of the battery. The deployed towed array is moved to an off-line maintenance area for visual inspection and testing. A new MAD wire will be added to the array and wrapped together onto a deployment canister. The refurbished array will be mated to a TUV or sent to the SLP or F-site for future TUV re-ranging. When this replenishment and hardware is complete, Performance Monitoring (PM) tests will be performed and the TUV designated as RFI.

(b) F-Site. Post mission TUV turnaround at the F-site will include PM test, download of MPI data, and if another mission is scheduled with the same TUV, replacement of the towed array/MAD wire. If the battery has not been depleted the TUV can be re-ranged after replacement of the towed array. The F-site will be capable of replacing the forward TUV section if the battery has been depleted and the TUV is scheduled for a subsequent mission. Only replacement of external hardware and consumables is required at the F-site.

(c) SLP. Post mission TUV turnaround onboard the SLP will include PM test, download of MPI data and if and another mission is scheduled with the same TUV, replacement of the towed array/MAD wire. If the battery has not been depleted the TUV can be re-ranged after replacement of the towed array.

(2) Corrective Maintenance. Corrective maintenance will be performed at the O-site using procedures documented in the IETM. The ATE will be used in conjunction with the TUV's PURT/PM capabilities for fault isolation. When a fault is identified the ATE provides a message to the operator indicating that fault condition has occurred. Using fault localization capabilities, the faulted LRU will be identified, replaced, and re-tested. For instances where faults can not be isolated to the failed LRU, additional troubleshooting actions are required. The ATE will be capable of independent section level testing. Failed LRUs will be forwarded to their designated depot for repair. Non-repairable LRU disposal will be according to each item's recoverability/condemnation code.

b. Intermediate Level Maintenance. Intermediate level maintenance will not be required.

c. Depot Level Maintenance. Depot repair will only be performed at the LRU level. Level of Repair Analysis results will be provided to the Mk 30 Mod 2 Depot Planning Group. This group has been established to assess government and industry depot capabilities and costs for applicability to the Mk 30 Mod 2 ATS.

d. Interim Maintenance. Interim maintenance support will be established with the systems design agent, Raytheon Systems Company, until a permanent depot capability is established. Interim support will be available starting with system IOC.

e. Life Cycle Maintenance Plan. A life cycle maintenance plan is planned for development during the Production/Deployment acquisition phase.

3. Manning Concept. The Mk30 Mod 2 ATS is designed such that manpower requirements for operation, maintenance, and turnaround is minimized to an extent which is consistent with program affordability goals without jeopardizing effectiveness and mission requirements. Civil service/contractor personnel will be employed at the O-site. F-site manning will draw on existing O-site personnel. Operation and maintenance of the ATS will not require manning or skill levels greater than the current level for the Mk30 Mod 1 ASW target. Surface ship and helicopter launch and recovery services provided by Navy personnel would be the same for the ATS as it exists for the current Mk 30 Mod 1 ASW target system. The determination of the need and the extent of training requirements that would address any differences in launch and recovery of the two target systems have not been determined at this time.

Operational Site Manpower Quantity and Quality

Civilian	Designator Rating	PNEC/SNEC PP/OCC/GD
1	Administrator/Manager	GS/03/07-09
1	Engineer	GS/08/11-12
6	Technician	GS/08/07-09

4. Training Concept. Training will consist of four components including E&MD Training, Initial Training, Proficiency Training, and Upgrade Training. Constant On-the-Job Training (OJT) will also supplement the learning process. Deployment of the MK 30 Mod 2 ATS is limited to five UTRs and will not require any Total Ship or Reserve Component Training Billets or Aviation and Crew Scheduling and Phasing Plan.

a. E&MD Training. E&MD Training will be conducted during E&MD phase of the Mk30 Mod 2 ATS development. Raytheon is developing a computer-based training curriculum that will teach Mk30 Mod 1 familiar personnel how to operate and maintain the Mod 2 ATS. Two Raytheon instructors will conduct the training at the Keyport O-site in January of 2001 using computers provided as Government Furnished Equipment (GFE). The Government will videotape all or parts of the training course and archive the tapes for the purpose of assisting future instructors prepare for initial and proficiency training.

The primary document to be used during E&MD training is the IETM. The IETM will be hosted in the ATE and will use the same screen and keyboard as the ATE; however, the IETM will not run on the same software used to perform system diagnostics. The ATE will perform tests and fault localization. The IETM will provide the procedures to perform tests and maintenance. IETM will contain the following:

(1) Organizational level maintenance manual
  (a) Procedures for corrective & preventive maintenance
  (b) Remove and replace procedures for every LRU
(2) Operational procedures

E&MD students will include Naval Undersea Warfare Center (NUWC) Division Newport, Technical Design Agent (TDA) personnel, and NUWC Keyport O-site personnel. If an activity other than the Raytheon is designated as the training agent for Initial Training, then this agent will also attend the E&MD training. The effectiveness of E&MD Training will be during the Mk 30 Mod 2 ATS Maintainability Demonstration planned for March 2001.

b. Initial Training. Initial Training will be provided when the Mk 30 Mod 2 ATS is installed at an O-site. The first O-site to receive initial training will be Atlantic Fleet Weapons Test Facility (AFWTF) Roosevelt Roads, Puerto Rico in March 2002. Four courses of instruction will be provided.

Helicopter Launch and Recovery
Surface Launch Platform Operation and Maintenance
Mk 30 Mod 2 ATS Familiarization
MK 30 Mod 2 ATS Operations and Maintenance

(1) Helicopter Launch and Recovery. The helicopter flight crew will require classroom training that addresses the differences between Mk30 Mod1 Mobile ASW Target and Mk30 Mod2 ATS launch and recovery operations. It is estimated that four hours of classroom training at each O-site would be sufficient. Furthermore, it is estimated that ten Navy personnel at each O-Site will require training (five officers and five air-crewman). One of the primary differences between target systems affecting Helicopter launch is the operation of the new LCS. The IETM will be the primary training document describing operation of the LCS. Previously trained personnel will conduct follow-on training of new Navy personnel as OJT. Existing MK 30 Mod 1 Mobile ASW Target procedures will be followed for removal of target from retrieval cage.

(2) Surface Launch Platform Operations and Maintenance Training. The Mk 30 Mod 2 ATS will employ the same launchers used to support the Mk 30 Mod 1 Mobile ASW Target. The introduction of the Mk 30 Mod 2 ATS will require SLP personnel to be trained on the operation of the LCS and familiarization with the differences between MK 30 Mod 1 Mobile ASW Target and Mk 30 Mod 2 ATS requirements. Launcher operation and maintenance training is currently conducted as OJT and will continue. Each O-Site has a team that performs launcher training in accordance with the Launcher Operation and Maintenance manual - at some sites a Launcher Operational Control Directive manual is used. AFWTF and Kauai launchers are operated and maintained by contractor personnel. At SOCAL, contractors conduct launcher operations while Navy personnel conduct maintenance using Maintenance Requirements Cards.

(3) MK 30 Mod 2 ATS Familiarization Training. Familiarization training will be provided to all Range Operations personnel. This training will include an overview of MK 30 Mod 2 ATS capabilities and operation of the ACLSBC.

(4) Mk 30 Mod 2 ATS Operation and Maintenance. The curriculum for Initial training will require a relatively small expansion of the E&MD training course content (currently

estimated at 20 percent). This expansion is necessary to support a requirement that the only prerequisite necessary for this course is to be a Level 1 Electronics Technician. Mk 30 Mod 1 Mobile ASW Target familiarity will not be a pre-requisite to this training as it was for E&MD training. It is estimated that six days (48 hours) will be required to conduct the Initial training course at each O-site. One instructor will be required to conduct the training and that instructor may be a representative of Raytheon, NUWC Newport, NUWC Keyport, or a contracted training agent. Also, it may be possible for a NUWC Keyport technician who has attended the E&MD training and has had continual hands-on experience with handling the Engineering Development Model (EDM) vehicles to instruct the course.

To reduce the number of training iterations, an attempt will be made to conduct training with all O-site personnel in attendance. The projected cadre is small enough to accommodate all technicians on one course. The training should be planned for a time when no or minimal Mk 30 Mod 2 ATS training runs are scheduled. The instructor observing and verifying the ability of trainees to perform all the required operation and maintenance routines required by the training will establish competency of trained personnel.

c. Proficiency Training. Site personnel who have not operated or maintained the Mk 30 Mod 2 ATS for an extended period of time must be accommodated with Proficiency training that refreshes their skills. Included in this category are personnel who have been on extended sick leave, temporary reassignment to non-Mk 30 Mod 2 ATS tasks, or removed from daily contact with the Mk 30 Mod 2 ATS due to other circumstances. Proficiency training is also designed for technicians performing infrequent maintenance tasks. It re-familiarizes them with tasks that are performed on rare occasions. Because proficiency training will be structured in modules, it can take place during normal daily operations or during down time and can be stretched over a reasonable period of time. It is estimated that the duration for an average Proficiency training module will be one-man hour. Approximately 80 hours of Proficiency Training will be conducted annually at each of the five O-sites. An instructor observing and verifying the abilities of trainees to perform all the operation and maintenance routines required by the training will ascertain competency of trained personnel.

d. Upgrade Training. Changes to the Mk 30 Mod 2 ATS resulting from Engineering Change Proposals (ECPs), etc. could require additional training sessions for O-Sites over the 20-year life cycle. This training most likely will require a one-day training session with one instructor using the Proficiency Training course curriculum that has been updated to reflect the current state of the Mk 30 Mod 2 ATS. It is estimated that the curriculum update will require change to 10 percent of the material and that training will be required once every three years.

e. Student Profile for Mk30 Mod 2 ATS Training.

(1) Helicopter Launch and Recovery: Navy or Civilian Helicopter Pilot or Crewmember.

(2) Surface Launch Platform Operation and Maintenance: Navy or Civilian personnel.

(3) Mk 30 Mod 2 ATS Familiarization: Experienced Range Operations personnel.

(4) MK 30 Mod 2 ATS Operations and Maintenance: Electronics Technician able to;

comprehend and execute computer generated instructions pertaining to operational and maintenance procedures
work from system drawings, procedures, checklists and specifications
perform soldering tasks as required
operate standard shop tools and test equipment.
awareness of safety hazards associated with handling undersea vehicles and electrical and chemical safety

I.I. On Board (In-service) Training. With the use of IETMs, previously trained site personnel using available computer assets will be able to conduct proficiency training. Certification of trained personnel will be accomplished by designated, previously certified site personnel signing off on the ability of trainees to perform all the operation and maintenance routines required by training. A Personnel Qualification Standards (PQS) like program will be used to document satisfactory completion of training modules.

I.J. Integrated Logistics Support (ILS). During The D&V phase of the Mk30 Mod 2 ATS program, ILS planning data was developed coincident with the system design. Standardization requirements were defined and identification of standardized hardware was established. Addressed at that time was the ability of the new design to incorporate emerging technologies. This effort also defined the use and support of Commercial-Off-The-Shelf/Non-Developmental Items (COTS/NDI). Furthermore, supportability characteristics, objectives, and constraints were identified. Also, Failure Modes and Effects Criticality Analysis (FMECA) and Reliability Centered Maintenance (RCM) data were documented throughout the Demonstration and Validation (D&V) phase. Support alternatives were considered throughout the D&V design phase. This planning methodology will continue throughout the E&MD phase and is being used as the foundation for development of ILS resources.

1. Manufacturer/Contractor Numbers. Raytheon Systems Company Portsmouth, Rhode Island is the prime Development Contractor for the Mk 30 Mod 2 ATS under contract number N00024-93-C-6106. The Mk 30 Mod 2 ATS production contract will be awarded in FY02.

2. Program Documentation.

Item	Approval Date	Revision Date
ORD 334-1	7/22/96	2/25/97
ILSP	4/17/97	N/A
CONOP	6/11/96	N/A
HSI Program Plan	6/1/94	N/A
Program Plan	in-process	N/A

3. Integrated Logistics Support Plan. Mk 30 Mod 2 ILSP provides data concerning Technical Data Plan, Test Sets, Tools, and Test Equipment, and Repair Parts. Additional data is also available in the MK 30 Mod 2 Maintenance Plan.

4. Human Systems Integration (HSI). A Human Systems Integration (HSI) Program Plan was prepared for the D&V phase and approved in June 1994. The HSI strategy requires that operation, maintenance, and turnaround manpower is minimized to an extent, which is consistent with program affordability goals without jeopardizing effectiveness and mission requirements. Furthermore, the strategy requires that the necessary training for operations and maintenance personnel to perform their required tasks be based on personnel skill requirements and critical training skills. The Mk 30 Mod 2 ATS design will not require personnel workloads, performance accuracy, time constraints, mental processing and communications requirements that exceed operator or maintainer capabilities. Safety and health hazards have been examined and focus on the handling of the TUV and the replenishment of its energy source. Toxic products and formulations such as volatile organic compounds will not be used unless specifically allowed by federal standards or directives, and then only when absolutely necessary. The equipment will not expose personnel to toxic substances in excess of the threshold limit established by law. The IETM will document all handling and disposal processes when any hazardous or toxic substances are used.

I.K. Schedule of Events.

Event	Planned Date
E&MD System Install at Keyport	11/00
Curriculum Development	02/01
E&MD Training Conduct	03/01
Maintenance Demonstration (M-Demo)	04/01
E&MD System Install at AFWTF	07/01
AFWTF Training Conduct	03/02
Initial Operational Capability (IOC)	03/02
System Install at PMRF	05/04
PMRF Training Conduct	06/04
System Install at AUTEC	08/05
AUTEC Training Conduct	09/05
System Install at SOCAL	06/06
SOCAL Training Conduct	07/06
System Install at Keyport	11/07
Keyport Training Conduct	12/07
Full Operational Capability (FOC)	03/08

I.L. Government Furnished Equipment (GFE) and Contractor Furnished Equipment (CFE) Training Requirements. The Government will provide as GFE general-purpose commercial computers and will video tape the initial training course. There is no CFE training requirements. The primary training document is the IETM.

I.M. Related NTSP's and Other Applicable Documents

Item	Approval Date	Revision Date

PART II – BILLET AND PERSONNEL REQUIREMENTS

Section **II.A. BILLET REQUIREMENTS**

Element II.A.1.a. **Operational and Fleet Support Activity Activation Schedule**

SOURCE: MK30 Mod 2 LIFE CYCLE COST MODEL Date: October, 1998

ACTIVITY	UIC	PFYs	CFY	FY00	FY01	FY02	FY03
AFWTF, Roosevelt Roads, PR	32090	0	0	0	0	1	0
TOTALS:		**0**	**0**	**0**	**0**	**1**	**0**

PART II – BILLET AND PERSONNEL REQUIREMENTS

Element II.A.1.b. **Billets required for Operational and Fleet Support Activities**

ACTIVITY	UIC	PHASING INCREMENT	BILLETS ENL	BILLETS OFF	BILLETS CIV	DESIGNATOR RATING	PNEC/SNEC PP/OCC/GD
AFWTF, Roosevelt Roads, PR	0017A				1	ADMIN/MNGR	GS/03/07-09
AFWTF, Roosevelt Roads, PR	0017A				1	ENGINEER	GS/08/11-12
AFWTF, Roosevelt Roads, PR	0017A				6	TECHNICIAN	GS/08/07-09
NUWCDETHI, Waianae, HI	35266				1	ADMIN/MNGR	GS/03/07-09
NUWCDETHI, Waianae, HI	35266				1	ENGINEER	GS/08/11-12
NUWCDETHI, Waianae, HI	35266				6	TECHNICIAN	GS/08/07-09
NUWCDET AUTEC, Andros Is	63821				1	ADMIN/MNGR	GS/03/07-09
NUWCDET AUTEC, Andros Is	63821				1	ENGINEER	GS/08/11-12
NUWCDET AUTEC, Andros Is	63821				6	TECHNICIAN	GS/08/07-09
NUWCDETHI, San Diego, CA	32090				1	ADMIN/MNGR	GS/03/07-09
NUWCDETHI, San Diego, CA	32090				1	ENGINEER	GS/08/11-12
NUWCDETHI, San Diego, CA	32090				6	TECHNICIAN	GS/08/07-09
NUWCDIVKPT, Keyport, WA	00253				1	ADMIN/MNGR	GS/03/07-09
NUWCDIVKPT, Keyport, WA	00253				1	ENGINEER	GS/08/11-12
NUWCDIVKPT, Keyport, WA	00253				6	TECHNICIAN	GS/08/07-09

Note: Billets are a combination of Government Civilian and Contractor. Contractors will be Grade and Occupational Code equivalent to their Civilian counterparts.

Element II.A.1.c. **Total Billets Required for Operational and Fleet Support Activities**

DESIGNATOR RATING	PNEC/SNEC PP/OCC/GD	PFYs ENL	PFYs OFF	PFYs CIV	FY99 ENL	FY99 OFF	FY99 CIV	FY00 ENL	FY00 OFF	FY00 CIV	FY01 ENL	FY01 OFF	FY01 CIV	FY02 ENL	FY02 OFF	FY02 CIV	FY03 ENL	FY03 OFF	FY03 CIV
AFWTF, Roosevelt Roads, PR																			
Civilian ADMIN/MNGR	GS/03/07-09																		1
Civilian ENGINEER	GS/08/11-12															1			
Civilian TECHNICIAN	GS/08/07-09															3			3
NUWCDETHI, Waianae, HI																			
Civilian ADMIN/MNGR	GS/03/07-09																		
Civilian ENGINEER	GS/08/11-12																		
Civilian TECHNICIAN	GS/08/07-09																		
NUWCDET AUTEC, Andros Is																			
Civilian ADMIN/MNGR	GS/03/07-09																		
Civilian ENGINEER	GS/08/11-12																		
Civilian TECHNICIAN	GS/08/07-09																		
NUWCDETHI, San Diego, CA																			
Civilian ADMIN/MNGR	GS/03/07-09																		
Civilian ENGINEER	GS/08/11-12																		
Civilian TECHNICIAN	GS/08/07-09																		
NUWCDIVKPT, Keyport, WA																			
Civilian ADMIN/MNGR	GS/03/07-09																		
Civilian ENGINEER	GS/08/11-12																		
Civilian TECHNICIAN	GS/08/07-09																		

PART II – BILLET AND PERSONNEL REQUIREMENTS

SUMMARY TOTALS:	PFYs			FY99			FY00			FY01			FY02			FY03		
	ENL	OFF	CIV	ENL	OFF	CIV	ENL	OFF	CIV	ENL	OFF	CIV	ENL	OFF	CIV	ENL	OFF	CIV
OPERATIONAL																		
ACDU																		
TAR																		
SELRES																		
Civilian															4			4
FLEET SUPPORT																		
ACDU																		
TAR																		
SELRES																		
Civilian																		
GRAND TOTALS:																		
ACDU																		
TAR																		
SELRES																		
Civilian															4			4

PART II – BILLET AND PERSONNEL REQUIREMENTS

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

SOURCE: DATE:

ACTIVITY	UIC	PFYs	CFY	FY00	FY01	FY02	FY03
AFWTF, Roosevelt Roads, PR	32090						1
TOTALS:							**1**

PART II – BILLET AND PERSONNEL REQUIREMENTS

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

ACTIVITY	UIC	PHASING INCREMENT	BILLETS ENL	BILLETS OFF	BILLETS CIV	DESIGNATOR RATING	PNEC/SNEC PP/OCC/GD
AFWTF, Roosevelt Roads, PR	0017A				1	ADMIN/MNGR	GS/03/07-09
AFWTF, Roosevelt Roads, PR	0017A				2	ENGINEER	GS/08/11-12
AFWTF, Roosevelt Roads, PR	0017A				10	TECHNICIAN	GS/08/07-09
NUWCDETHI, Waianae, HI	35266				1	ADMIN/MNGR	GS/03/07-09
NUWCDETHI, Waianae, HI	35266				2	ENGINEER	GS/08/11-12
NUWCDETHI, Waianae, HI	35266				10	TECHNICIAN	GS/08/07-09
NUWCDET AUTEC, Andros Is	63821				1	ADMIN/MNGR	GS/03/07-09
NUWCDET AUTEC, Andros Is	63821				2	ENGINEER	GS/08/11-12
NUWCDET AUTEC, Andros Is	63821				10	TECHNICIAN	GS/08/07-09
NUWCDETHI, San Diego, CA	32090				1	ADMIN/MNGR	GS/03/07-09
NUWCDETHI, San Diego, CA	32090				2	ENGINEER	GS/08/11-12
NUWCDETHI, San Diego, CA	32090				10	TECHNICIAN	GS/08/07-09
NUWCDIVKPT, Keyport, WA	00253				1	ADMIN/MNGR	GS/03/07-09
NUWCDIVKPT, Keyport, WA	00253				1	ENGINEER	GS/08/11-12
NUWCDIVKPT, Keyport, WA	00253				4	TECHNICIAN	GS/08/07-09

Note: Billets are a combination of Government Civilian and Contractor. Contractors will be Grade and Occupational Code equivalent to their Civilian counterparts.

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

	DESIGNATOR RATING	PNEC/SNEC PP/OCC/GD	PFYs ENL	PFYs OFF	PFYs CIV	FY99 ENL	FY99 OFF	FY99 CIV	FY00 ENL	FY00 OFF	FY00 CIV	FY01 ENL	FY01 OFF	FY01 CIV	FY02 ENL	FY02 OFF	FY02 CIV	FY03 ENL	FY03 OFF	FY03 CIV
AFWTF, Roosevelt Roads, PR																				
Civilian	ADMIN/MNGR	GS/03/07-09																		1
Civilian	ENGINEER	GS/08/11-12															1			1
Civilian	TECHNICIAN	GS/08/07-09															3			7
NUWCDETHI, Waianae, HI																				
Civilian	ADMIN/MNGR	GS/03/07-09																		
Civilian	ENGINEER	GS/08/11-12																		
Civilian	TECHNICIAN	GS/08/07-09																		
NUWCDET AUTEC, Andros Is																				
Civilian	ADMIN/MNGR	GS/03/07-09																		
Civilian	ENGINEER	GS/08/11-12																		
Civilian	TECHNICIAN	GS/08/07-09																		
NUWCDETHI, San Diego, CA																				
Civilian	ADMIN/MNGR	GS/03/07-09																		
Civilian	ENGINEER	GS/08/11-12																		
Civilian	TECHNICIAN	GS/08/07-09																		
NUWCDIVKPT, Keyport, WA																				
Civilian	ADMIN/MNGR	GS/03/07-09																		
Civilian	ENGINEER	GS/08/11-12																		
Civilian	TECHNICIAN	GS/08/07-09																		

PART II – BILLET AND PERSONNEL REQUIREMENTS

SUMMARY TOTALS:	PFYs			CFY			FY00			FY01			FY02			FY03		
	ENL	OFF	CIV	ENL	OFF	CIV	ENL	OFF	CIV	ENL	OFF	CIV	ENL	OFF	CIV	ENL	OFF	CIV
OPERATIONAL																		
ACDU																		
TAR																		
SELRES																		
Civilian															4			9
FLEET SUPPORT																		
ACDU																		
TAR																		
SELRES																		
Civilian																		
GRAND TOTALS:																		
ACDU																		
TAR																		
SELRES																		
Civilian															4			9

Element II.A.3. **Training Activities Instructor and Support Billet Requirements Instructor Billets**

INSTRUCTOR BILLETS

TRAINING ACTIVITY, LOCATION, UIC :

	DESIGNATOR	PNEC/SNEC	PFYs			FY99			FY00			FY01			FY02			FY03		
	RATING	PP/OCC/GD	ENL	OFF	CIV	ENL	OFF	CIV	ENL	OFF	CIV	ENL	OFF	CIV	ENL	OFF	CIV	ENL	OFF	CIV
Civilian		CONTRACTOR												2						
		TOTAL:												**2**			**0**			**0**

SUPPORT BILLETS

TRAINING ACTIVITY, LOCATION, UIC :

	DESIGNATOR	PNEC/SNEC	PFYs			FY99			FY00			FY01			FY02			FY03		
	RATING	PP/OCC/GD	ENL	OFF	CIV	ENL	OFF	CIV	ENL	OFF	CIV	ENL	OFF	CIV	ENL	OFF	CIV	ENL	OFF	CIV

No Support Billets are required for Mk 30 Mod 2 Training

TOTAL:

Element II.A.4. **Chargeable Student Billet Requirements**

ACTIVITY LOCATION	UIC	USN USMC	PFYs ENL	PFYs OFF	PFYs CIV	FY99 ENL	FY99 OFF	FY99 CIV	FY00 ENL	FY00 OFF	FY00 CIV	FY01 ENL	FY01 OFF	FY01 CIV	FY02 ENL	FY02 OFF	FY02 CIV	FY03 ENL	FY03 OFF	FY03 CIV
NUWCDIVKPT, Keyport, WA	00253	USN												10						
AFWTF, Roosevelt Roads, PR	0017A	USN													5	5	8			
SUMMARY TOTALS:																				
		USN												10	5	5	8			
		USMC																		
GRAND TOTAL:														**10**	**5**	**5**	**8**			

Element II.A.5. **Annual Incremental and Cumulative Billets**

a. **OFFICER - USN**

DESIGNATOR	BILLET BASE	FY99 +/-	FY99 CUM	FY00 +/-	FY00 CUM	FY01 +/-	FY01 CUM	FY02 +/-	FY02 CUM	FY03 +/-	FY03 CUM
Operational Billets ACDU and TAR	0	0	0	0	0	0	0	0	0	0	0
Fleet Support Billets ACDU and TAR	0	0	0	0	0	0	0	0	0	0	0
Instructor and Support (Staff) Billets ACDU and TAR	0	0	0	0	0	0	0	0	0	0	0
Chargeable Student Billets ACDU and TAR	0	0	0	0	0	0	0	5	5	0	0
TOTAL USN OFFICER BILLETS:											
Operational	0		0		0		0		0		0
Fleet Support	0		0		0		0		0		0
Staff	0		0		0		0		0		0
Student	0		0		0		0		5		0
SELRES	0		0		0		0		0		0

Element II.A.5. **Annual Incremental and Cumulative Billets (cont)**

b. **ENLISTED/CIVILIAN - USN**

				FY99		FY00		FY01		FY02		FY03	
	RATING	PNEC/SNEC PP/OOC/GD	BILLET BASE	+/-	CUM	+/-	CUM	+/-	CUM	+/-	CUM	+/-	CUM
Operational Billets ACDU and TAR	Civilian		0	0	0	0	0	0	0	4	4	4	8
Fleet Support Billets ACDU and TAR	Civilian		0	0	0	0	0	0	0	0	0	0	0
Instructor and Support (Staff) Billets ACDU and TAR	Civilian		0	0	0	0	0	2	2	0	2	0	2
Chargeable Student Billets ACDU and TAR			0	0	0	0	0	10	10	13	13	0	0
TOTAL USN ENLISTED/CIVILIAN BILLETS:													
Operational			0		0		0		0		4		8
Fleet Support			0		0		0		0		0		0
Staff			0		0		0		2		2		2
Student			0		0		0		10		13		0
SELRES			0		0		0		0		0		0

PART II – BILLET AND PERSONNEL REQUIREMENTS

Element II.B.1 **Annual Training Input Requirements**

CIN, COURSE TITLE: MK30 Mod 2 ATS Operations and Maintenance
COURSE LENGTH: 6 Days SEA TOUR LENGTH: N/A
ATTRITION FACTOR: 0% BACKOUT FACTOR: 0

TRAINING		ACDU-TAR	FY99		FY00		FY01		FY02		FY03	
ACTIVITY	SOURCE	SELRES	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL

No Military personnel will be trained in Mk 30 Mod 2 Operations and Maintenance

TOTALS:

Element II.B.1 **Annual Training Input Requirements (cont)**

CIN, COURSE TITLE: Mk 30 Mod 2 ATS Familiarization
COURSE LENGTH: 1 Day SEA TOUR LENGTH: N/A
ATTRITION FACTOR: 0% BACKOUT FACTOR: 0

TRAINING ACTIVITY	SOURCE	ACDU-TAR SELRES	FY99 OFF	FY99 ENL	FY00 OFF	FY00 ENL	FY01 OFF	FY01 ENL	FY02 OFF	FY02 ENL	FY03 OFF	FY03 ENL

No Military personnel will be trained in Mk 30 Mod 2 Familiarization

TOTALS:

Element II.B.1 **Annual Training Input Requirements (cont)**

CIN, COURSE TITLE: Helicopter Launch and Recovery
COURSE LENGTH: 1 Day SEA TOUR LENGTH: N/A
ATTRITION FACTOR: 0% BACKOUT FACTOR: 0

TRAINING ACTIVITY	SOURCE	ACDU-TAR SELRES	FY99 OFF	FY99 ENL	FY00 OFF	FY00 ENL	FY01 OFF	FY01 ENL	FY02 OFF	FY02 ENL	FY03 OFF	FY03 ENL
AFWTF, Roosevelt Roads, PR	Navy	ACDU	0	0	0	0	0	0	0	0	0	0
		TOTALS:	0	0	0	0	0	0	0	0	0	0

Element II.B.1 **Annual Training Input Requirements (cont)**

CIN, COURSE TITLE: Surface Launch Platform Operation and Maintenance
COURSE LENGTH: 1 Day SEA TOUR LENGTH: N/A
ATTRITION FACTOR: 0% BACKOUT FACTOR: 0

TRAINING ACTIVITY	SOURCE	ACDU-TAR SELRES	FY99 OFF	FY99 ENL	FY00 OFF	FY00 ENL	FY01 OFF	FY01 ENL	FY02 OFF	FY02 ENL	FY03 OFF	FY03 ENL
AFWTF, Roosevelt Roads, PR	Navy	ACDU	0	0	0	0	0	0	0	0	0	0
		TOTALS:	0	0	0	0	0	0	0	0	0	0

PART III - TRAINING REQUIREMENTS

Section III.A. **TRAINING COURSE REQUIREMENTS**

Element III.A.1. **INITIAL TRAINING REQUIREMENTS**

COURSE TITLE : Mk 30 Mod 2 ATS Operations and Maintenance
COURSE DEVELOPER : Raytheon Systems Company
INSTRUCTOR : Contractor Personnel
COURSE LENGTH : 6 Days

LOCATION	UIC	DATE BEGIN	STUDENTS OFF	ENL	CIV		ACITIVITY DESTINATION
NUWCDIV Keyport, WA	00253	January 2001			10		Operational Testing
AFWTF, Roosevelt Roads, PR	0017A	March 2002			8		AFWTF, Roosevelt Roads, PR
NUWCDETHI, Waianae, HI	35266	June 2004			8		NUWCDETHI, Waianae, HI
NUWCDET AUTEC, Andros Is	63821	September 2005			8		NUWCDET AUTEC, Andros Is
NUWCDETHI, San Diego, CA	32090	July 2006			8		NUWCDETHI, San Diego, CA
NUWCDIVKPT, Keyport, WA	00253	December 2007			8		NUWCDIVKPT, Keyport, WA
					50	Input	
						AOB	
					0	Chargeable	

Element III.A.1. **INITIAL TRAINING REQUIREMENTS (cont)**

COURSE TITLE : Mk 30 Mod 2 ATS Familiarization
COURSE DEVELOPER : Raytheon Systems Company
INSTRUCTOR : Contractor Personnel
COURSE LENGTH : 1 Day

LOCATION	UIC	DATE BEGIN	STUDENTS OFF	ENL	CIV		ACITIVITY DESTINATION
NUWCDIV Keyport, WA	00253	January 2001			5		Operational Testing
AFWTF, Roosevelt Roads, PR	0017A	March 2002			5		AFWTF, Roosevelt Roads, PR
NUWCDETHI, Waianae, HI	35266	June 2004			5		NUWCDETHI, Waianae, HI
NUWCDET AUTEC, Andros Is	63821	September 2005			5		NUWCDET AUTEC, Andros Is
NUWCDETHI, San Diego, CA	32090	July 2006			5		NUWCDETHI, San Diego, CA
NUWCDIVKPT, Keyport, WA	00253	December 2007			5		NUWCDIVKPT, Keyport, WA
					30	Input	
						AOB	
					0	Chargeable	

Element III.A.1. **INITIAL TRAINING REQUIREMENTS (cont)**

COURSE TITLE : Helicopter Launch and Recovery
COURSE DEVELOPER : Raytheon Systems Company
INSTRUCTOR : Contractor Personnel
COURSE LENGTH : 1 Day

LOCATION	UIC	DATE BEGIN	STUDENTS OFF	ENL	CIV		ACITIVITY DESTINATION
NUWCDIV Keyport, WA	00253	January 2001	5	5			Operational Testing
AFWTF, Roosevelt Roads, PR	0017A	March 2002	5	5			AFWTF, Roosevelt Roads, PR
NUWCDETHI, Waianae, HI	35266	June 2004	5	5			NUWCDETHI, Waianae, HI
NUWCDET AUTEC, Andros Is	63821	September 2005	5	5			NUWCDET AUTEC, Andros Is
NUWCDETHI, San Diego, CA	32090	July 2006	5	5			NUWCDETHI, San Diego, CA
NUWCDIVKPT, Keyport, WA	00253	December 2007	5	5			NUWCDIVKPT, Keyport, WA
						60 Input	
						AOB	
						0 Chargeable	

Element III.A.1. **INITIAL TRAINING REQUIREMENTS (cont)**

COURSE TITLE : Surface Launch Platform Operation and Maintenance
COURSE DEVELOPER : Raytheon Systems Company
INSTRUCTOR : Contractor Personnel
COURSE LENGTH : 1 Day

LOCATION	UIC	DATE BEGIN	STUDENTS OFF	ENL	CIV		ACITIVITY DESTINATION
NUWCDIV Keyport, WA	00253	January 2001		5			Operational Testing
AFWTF, Roosevelt Roads, PR	0017A	March 2002		5			AFWTF, Roosevelt Roads, PR
NUWCDETHI, Waianae, HI	35266	June 2004		5			NUWCDETHI, Waianae, HI
NUWCDET AUTEC, Andros Is	63821	September 2005		5			NUWCDET AUTEC, Andros Is
NUWCDETHI, San Diego, CA	32090	July 2006		5			NUWCDETHI, San Diego, CA
NUWCDIVKPT, Keyport, WA	00253	December 2007		5			NUWCDIVKPT, Keyport, WA
					30	Input	
						AOB	
					0	Chargeable	

PART III - TRAINING REQUIREMENTS

Element III.A.2. **Follow-on Training**

Element III.A.2.a. **Existing Courses**

TRAINING ACTIVITIY:
LOCATION, UIC:

CIN, COURSE TITLE:

SOURCE: STUDENT CATEGORY:

CFY			FY99			FY00			FY01			FY02		
OFF	ENL	CIV	OFF	ENL	CIV	OFF	ENL	CIV	OFF	ENL	CIV	OFF	ENL	CIV

ATIR
Output
AOB
Chargeable

No CANTRAC Courses are effected by MK 30 Mod 2 Training

Element III.A.2.b. **Planned Courses**

TRAINING ACTIVITIY:
LOCATION, UIC:

CIN, COURSE TITLE:

SOURCE: STUDENT CATEGORY:

CFY			FY99			FY00			FY01			FY02			
OFF	ENL	CIV	OFF	ENL	CIV	OFF	ENL	CIV	OFF	ENL	CIV	OFF	ENL	CIV	
															ATIR
															Output
															AOB
															AOB
															Chargeable

No Planned Courses are effected by MK 30 Mod 2 Training

Element III.A.2.c. **Unique Courses**

TRAINING ACTIVITIY:
LOCATION, UIC:

CIN, COURSE TITLE:

SOURCE:

CFY			FY99			FY00			FY01			FY02		
OFF	ENL	CIV	OFF	ENL	CIV	OFF	ENL	CIV	OFF	ENL	CIV	OFF	ENL	CIV

No Unique Courses are required for MK 30 Mod 2 Training

ATIR
Output
AOB
Chargeable

Element III.A.2.c. **Existing Training Phased Out**

TRAINING ACTIVITIY:
LOCATION, UIC:

CIN, COURSE TITLE:

SOURCE: STUDENT CATEGORY:

CFY			FY99			FY00			FY01			FY02			
OFF	ENL	CIV	OFF	ENL	CIV	OFF	ENL	CIV	OFF	ENL	CIV	OFF	ENL	CIV	ATIR Output AOB Chargeable

No Existing Courses are Phased Out by MK 30 Mod 2 Training

Ship Training Course Summary

Element III.B.1. **OFFICER**

BSC	RANK	DESIGNATOR	NOBC	BILLET TITLE	CODE	CIN	COURSE TITLE	LOCATION/ UIC

Not Applicable for MK 30 Mod 2 Training

Element III.B.2. **ENLISTED**

BSC	RANK	DESIGNATOR	NOBC	BILLET TITLE	CODE	CIN	COURSE TITLE	LOCATION/ UIC

Not Applicable for MK 30 Mod 2 Training

Element III.C. **Inactive Duty Training Travel (IDTT) and Annual Training (AT) Summary**

IDTT

FY 99		FY 00		FY 01		FY 02		FY 03		FY 04	
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL

No Reserve Component Training is required for MK 30 Mod 2

AT

FY 99		FY 00		FY 01		FY 02		FY 03		FY 04	
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL

PART IV - TRAINING LOGISTICS SUPPORT REQUIREMENTS

Section IV.A. **TRAINING HARDWARE**

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

TRAINING ACTIVITY:
LOCATION:

CIN, COURSE TITLE:

ITEM NUMBER	EQUIPMENT	TYPE OR RANGE OF REPAIR PARTS	QUANTITY REQUIRED	DATE REQUIRED	GFE CFE	STATUS

No Training Hardware will be Required to Support MK 30 Mod 2 Training

Element IV.A.2. **Training Devices**

DEVICE:
DESCRIPTION OF DEVICE:
MANUFACTURER:
CONTRACT NUMBER:
TEE STATUS:

TRAINING ACTIVITY LOCATION, UIC	QUANTITY REQUIRED	DATE REQUIRED	RFT DATE	STATUS	COURSES SUPPORTED

No Training Devices will be Required to Support MK 30 Mod 2 Training

Section IV.B. **COURSEWARE REQUIREMENTS**

Element IV.B.1. **Training Services**

COURSE/TYPE OF TRAINING	SCHOOL/ LOCATION	UIC	NO. OF PERSONNEL	MAN WEEKS REQUIRED	BEGIN DATE
MK 30 Mod 2 ATS Operations and Maintenance					
	LOCATION	UIC	1	1	BEGIN
	NUWCDIV Keyport, WA	00253	1	1	January 2001
	AFWTF, Roosevelt Roads, PR	0017A	1	1	March 2002
	NUWCDETHI, Waianae, HI	35266	1	1	June 2004
	NUWCDET AUTEC, Andros Is	63821	1	1	September 2005
	NUWCDETHI, San Diego, CA	32090	1	1	July 2006
MK 30 Mod 2 ATS Familiarization					
	LOCATION	UIC	1	1	BEGIN
	NUWCDIV Keyport, WA	00253	1	1	January 2001
	AFWTF, Roosevelt Roads, PR	0017A	1	1	March 2002
	NUWCDETHI, Waianae, HI	35266	1	1	June 2004
	NUWCDET AUTEC, Andros Is	63821	1	1	September 2005
	NUWCDETHI, San Diego, CA	32090	1	1	July 2006

Section IV.B. **COURSEWARE REQUIREMENTS**

Element IV.B.1. **Training Services**

COURSE/TYPE OF TRAINING	SCHOOL/ LOCATION	UIC	NO. OF PERSONNEL	MAN WEEKS REQUIRED	BEGIN DATE
Helicopter Launch and Recovery					
	LOCATION	UIC	1	1	BEGIN
	NUWCDIV Keyport, WA	00253	1	1	January 2001
	AFWTF, Roosevelt Roads, PR	0017A	1	1	March 2002
	NUWCDETHI, Waianae, HI	35266	1	1	June 2004
	NUWCDET AUTEC, Andros Is	63821	1	1	September 2005
	NUWCDETHI, San Diego, CA	32090	1	1	July 2006
Surface Launch Platform Operation and Maintenance					
	LOCATION	UIC	1	1	BEGIN
	NUWCDIV Keyport, WA	00253	1	1	January 2001
	AFWTF, Roosevelt Roads, PR	0017A	1	1	March 2002
	NUWCDETHI, Waianae, HI	35266	1	1	June 2004
	NUWCDET AUTEC, Andros Is	63821	1	1	September 2005
	NUWCDETHI, San Diego, CA	32090	1	1	July 2006

Element IV.B.2. **Curriculum Materials and Training Aids**

TRAINING ACTIVITY: Raytheon Systems Company
LOCATION, UIC: Operational Sites.

CIN, COURSE TITLE: MK 30 Mod 2 ATS Operations and Maintenance

TYPES OF MATERIAL OR AID	QUANTITY REQUIRED	DATE REQUIRED	STATUS
Interactive Courseware	10	January 2001	Embedded in IETM
Multi-media capable PC	10	January 2001	To be leased
Instructor's Guide	1	January 2001	On Schedule
Trainee's Guide	10	January 2001	On Schedule

Element IV.B.2. **Curriculum Materials and Training Aids**

TRAINING ACTIVITY: Raytheon Systems Company
LOCATION, UIC: Operational Sites.

CIN, COURSE TITLE: MK 30 Mod 2 ATS Familiarization

TYPES OF MATERIAL OR AID	QUANTITY REQUIRED	DATE REQUIRED	STATUS
Interactive Courseware	0	January 2001	Embedded in IETM
Multi-media capable PC	0	January 2001	To be leased
Instructor's Guide	1	January 2001	On Schedule
Trainee's Guide	5	January 2001	On Schedule

Element IV.B.2. **Curriculum Materials and Training Aids**

TRAINING ACTIVITY: Raytheon Systems Company
LOCATION, UIC: Operational Sites.

CIN, COURSE TITLE: Helicopter Launch and Recovery

TYPES OF MATERIAL OR AID	QUANTITY REQUIRED	DATE REQUIRED	STATUS
Interactive Courseware	5	January 2001	Embedded in IETM
Multi-media capable PC	5	January 2001	To be leased
Instructor's Guide	1	January 2001	On Schedule
Trainee's Guide	10	January 2001	On Schedule

Element IV.B.2. **Curriculum Materials and Training Aids**

TRAINING ACTIVITY: Raytheon Systems Company
LOCATION, UIC: Operational Sites.

CIN, COURSE TITLE: Surface Launch Platform Operation and Maintenance

TYPES OF MATERIAL OR AID	QUANTITY REQUIRED	DATE REQUIRED	STATUS
Interactive Courseware	5	January 2001	Embedded in IETM
Multi-media capable PC	5	January 2001	To be leased
Instructor's Guide	1	January 2001	On Schedule
Trainee's Guide	5	January 2001	On Schedule

Element IV.B.3. **Technical Manuals**

TRAINING ACTIVITY: Raytheon Systems Company
LOCATION, UIC: Operational Sites.

CIN, COURSE TITLE: MK 30 Mod 2 ATS Operations and Maintenance

TECHNICAL MANUAL TITLE NUMBER	MEDIUM	QUANTITY REQUIRED	DATE REQUIRED	STATUS
MK 30 Mod 2 Operations and Maintenance	IETM/CD	10	January 2001	On Schedule

Element IV.B.3. **Technical Manuals**

TRAINING ACTIVITY: Raytheon Systems Company
LOCATION, UIC: Operational Sites.

CIN, COURSE TITLE: MK 30 Mod 2 ATS Familiarization

TECHNICAL MANUAL TITLE NUMBER	MEDIUM	QUANTITY REQUIRED	DATE REQUIRED	STATUS
MK 30 Mod 2 Operations and Maintenance	IETM/CD	5	January 2001	On Schedule

Element IV.B.3. **Technical Manuals**

TRAINING ACTIVITY: Raytheon Systems Company
LOCATION, UIC: Operational Sites.

CIN, COURSE TITLE: Helicopter Launch and Recovery

TECHNICAL MANUAL TITLE NUMBER	MEDIUM	QUANTITY REQUIRED	DATE REQUIRED	STATUS
MK 30 Mod 2 Operations and Maintenance	IETM/CD	10	January 2001	On Schedule

Element IV.B.3. **Technical Manuals**

TRAINING ACTIVITY: Raytheon Systems Company
LOCATION, UIC: Operational Sites.

CIN, COURSE TITLE: Surface Launch Platform Operations and Maintenance

TECHNICAL MANUAL TITLE NUMBER	MEDIUM	QUANTITY REQUIRED	DATE REQUIRED	STATUS
MK 30 Mod 2 Operations and Maintenance	IETM/CD	5	January 2001	On Schedule

Section IV.C. **FACILITY REQUIREMENTS**

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

TRAINING ACTIVITY : Raytheon Systems Company
LOCATION, UIC : NUWCDIVKPT, Keyport, WA, UIC 00253

CIN, COURSE TITLE: MK 30 Mod 2 ATS Operations and Maintenance
REQUIRED RFT DATE: January 2001

SQUARE FEET SPACE REQUIREMENTS	MAJOR EFR REQUIREMENTS	SPACE AVAILABLE	FACILITIES SUPPORT AVAILABILITY
Classroom	None	Fully	N/A

CIN, COURSE TITLE: MK 30 Mod 2 ATS Familiarization
REQUIRED RFT DATE: January 2001

SQUARE FEET SPACE REQUIREMENTS	MAJOR EFR REQUIREMENTS	SPACE AVAILABLE	FACILITIES SUPPORT AVAILABILITY
Classroom	None	Fully	N/A

CIN, COURSE TITLE: Helicopter Launch and Recovery
REQUIRED RFT DATE: January 2001

SQUARE FEET SPACE REQUIREMENTS	MAJOR EFR REQUIREMENTS	SPACE AVAILABLE	FACILITIES SUPPORT AVAILABILITY
Classroom	None	Fully	N/A

CIN, COURSE TITLE: Surface Launch Platform Operation and Maintenance
REQUIRED RFT DATE: January 2001

SQUARE FEET SPACE REQUIREMENTS	MAJOR EFR REQUIREMENTS	SPACE AVAILABLE	FACILITIES SUPPORT AVAILABILITY
Classroom	None	Fully	N/A

Section IV.C. **FACILITY REQUIREMENTS**

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

TRAINING ACTIVITY : Raytheon Systems Company
LOCATION, UIC : AFWTF, Roosevelt Roads, PR. UIC 00253

CIN, COURSE TITLE: MK 30 Mod 2 ATS Operations and Maintenance
REQUIRED RFT DATE: March 2002

SQUARE FEET SPACE REQUIREMENTS	MAJOR EFR REQUIREMENTS	SPACE AVAILABLE	FACILITIES SUPPORT AVAILABILITY
Classroom	None	Fully	N/A

CIN, COURSE TITLE: MK 30 Mod 2 ATS Familiarization
REQUIRED RFT DATE: March 2002

SQUARE FEET SPACE REQUIREMENTS	MAJOR EFR REQUIREMENTS	SPACE AVAILABLE	FACILITIES SUPPORT AVAILABILITY
Classroom	None	Fully	N/A

CIN, COURSE TITLE: Helicopter Launch and Recovery
REQUIRED RFT DATE: March 2002

SQUARE FEET SPACE REQUIREMENTS	MAJOR EFR REQUIREMENTS	SPACE AVAILABLE	FACILITIES SUPPORT AVAILABILITY
Classroom	None	Fully	N/A

CIN, COURSE TITLE: Surface Launch Platform Operation and Maintenance
REQUIRED RFT DATE: March 2002

SQUARE FEET SPACE REQUIREMENTS	MAJOR EFR REQUIREMENTS	SPACE AVAILABLE	FACILITIES SUPPORT AVAILABILITY
Classroom	None	Fully	N/A

Section IV.C. **FACILITY REQUIREMENTS**

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

TRAINING ACTIVITY : Raytheon Systems Company
LOCATION, UIC : NUWCDETHI, Waianae, HI. UIC 35266

CIN, COURSE TITLE: MK 30 Mod 2 ATS Operations and Maintenance
REQUIRED RFT DATE: June 2004

SQUARE FEET SPACE REQUIREMENTS	MAJOR EFR REQUIREMENTS	SPACE AVAILABLE	FACILITIES SUPPORT AVAILABILITY
Classroom	None	Fully	N/A

CIN, COURSE TITLE: MK 30 Mod 2 ATS Familiarization
REQUIRED RFT DATE: June 2004

SQUARE FEET SPACE REQUIREMENTS	MAJOR EFR REQUIREMENTS	SPACE AVAILABLE	FACILITIES SUPPORT AVAILABILITY
Classroom	None	Fully	N/A

CIN, COURSE TITLE: Helicopter Launch and Recovery
REQUIRED RFT DATE: June 2004

SQUARE FEET SPACE REQUIREMENTS	MAJOR EFR REQUIREMENTS	SPACE AVAILABLE	FACILITIES SUPPORT AVAILABILITY
Classroom	None	Fully	N/A

CIN, COURSE TITLE: Surface Launch Platform Operation and Maintenance
REQUIRED RFT DATE: June 2004

SQUARE FEET SPACE REQUIREMENTS	MAJOR EFR REQUIREMENTS	SPACE AVAILABLE	FACILITIES SUPPORT AVAILABILITY
Classroom	None	Fully	N/A

Section IV.C. **FACILITY REQUIREMENTS**

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

TRAINING ACTIVITY : Raytheon Systems Company
LOCATION, UIC : NUWCDET AUTEC, Andros Is. UIC 63821

CIN, COURSE TITLE: MK 30 Mod 2 ATS Operations and Maintenance
REQUIRED RFT DATE: September 2005

SQUARE FEET SPACE REQUIREMENTS	MAJOR EFR REQUIREMENTS	SPACE AVAILABLE	FACILITIES SUPPORT AVAILABILITY
Classroom	None	Fully	N/A

CIN, COURSE TITLE: MK 30 Mod 2 ATS Familiarization
REQUIRED RFT DATE: September 2005

SQUARE FEET SPACE REQUIREMENTS	MAJOR EFR REQUIREMENTS	SPACE AVAILABLE	FACILITIES SUPPORT AVAILABILITY
Classroom	None	Fully	N/A

CIN, COURSE TITLE: Helicopter Launch and Recovery
REQUIRED RFT DATE: September 2005

SQUARE FEET SPACE REQUIREMENTS	MAJOR EFR REQUIREMENTS	SPACE AVAILABLE	FACILITIES SUPPORT AVAILABILITY
Classroom	None	Fully	N/A

CIN, COURSE TITLE: Surface Launch Platform Operation and Maintenance
REQUIRED RFT DATE: September 2005

SQUARE FEET SPACE REQUIREMENTS	MAJOR EFR REQUIREMENTS	SPACE AVAILABLE	FACILITIES SUPPORT AVAILABILITY
Classroom	None	Fully	N/A

Section IV.C. **FACILITY REQUIREMENTS**

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

TRAINING ACTIVITY : Raytheon Systems Company
LOCATION, UIC : NUWCDETHI, San Diego, CA. UIC 32090

CIN, COURSE TITLE: MK 30 Mod 2 ATS Operations and Maintenance
REQUIRED RFT DATE: July 2006

SQUARE FEET SPACE REQUIREMENTS	MAJOR EFR REQUIREMENTS	SPACE AVAILABLE	FACILITIES SUPPORT AVAILABILITY
Classroom	None	Fully	N/A

CIN, COURSE TITLE: MK 30 Mod 2 ATS Familiarization
REQUIRED RFT DATE: July 2006

SQUARE FEET SPACE REQUIREMENTS	MAJOR EFR REQUIREMENTS	SPACE AVAILABLE	FACILITIES SUPPORT AVAILABILITY
Classroom	None	Fully	N/A

CIN, COURSE TITLE: Helicopter Launch and Recovery
REQUIRED RFT DATE: July 2006

SQUARE FEET SPACE REQUIREMENTS	MAJOR EFR REQUIREMENTS	SPACE AVAILABLE	FACILITIES SUPPORT AVAILABILITY
Classroom	None	Fully	N/A

CIN, COURSE TITLE: Surface Launch Platform Operation and Maintenance
REQUIRED RFT DATE: July 2006

SQUARE FEET SPACE REQUIREMENTS	MAJOR EFR REQUIREMENTS	SPACE AVAILABLE	FACILITIES SUPPORT AVAILABILITY
Classroom	None	Fully	N/A

Section IV.C. **FACILITY REQUIREMENTS**

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

TRAINING ACTIVITY : Raytheon Systems Company
LOCATION, UIC : NUWCDIVKPT, Keyport, WA, UIC 00253

CIN, COURSE TITLE: MK 30 Mod 2 ATS Operations and Maintenance
REQUIRED RFT DATE: December 2007

SQUARE FEET SPACE REQUIREMENTS	MAJOR EFR REQUIREMENTS	SPACE AVAILABLE	FACILITIES SUPPORT AVAILABILITY
Classroom	None	Fully	N/A

CIN, COURSE TITLE: MK 30 Mod 2 ATS Familiarization
REQUIRED RFT DATE: December 2007

SQUARE FEET SPACE REQUIREMENTS	MAJOR EFR REQUIREMENTS	SPACE AVAILABLE	FACILITIES SUPPORT AVAILABILITY
Classroom	None	Fully	N/A

CIN, COURSE TITLE: Helicopter Launch and Recovery
REQUIRED RFT DATE: December 2007

SQUARE FEET SPACE REQUIREMENTS	MAJOR EFR REQUIREMENTS	SPACE AVAILABLE	FACILITIES SUPPORT AVAILABILITY
Classroom	None	Fully	N/A

CIN, COURSE TITLE: Surface Launch Platform Operation and Maintenance
REQUIRED RFT DATE: December 2007

SQUARE FEET SPACE REQUIREMENTS	MAJOR EFR REQUIREMENTS	SPACE AVAILABLE	FACILITIES SUPPORT AVAILABILITY
Classroom	None	Fully	N/A

Section IV.C. **FACILITY REQUIREMENTS**

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

TRAINING ACTIVITY : Raytheon Systems Company
LOCATION, UIC : NUWCDIVKPT, Keyport, WA, UIC 00253

CIN, COURSE TITLE : MK 30 Mod 2 ATS Operations and Maintenance

BUILDING AND ROOM NUMBER	TYPE OF FACILITY PROJECT	FACILITY PROJECT NUMBER	REQUIRED PROJECT AWARD DATE	REQUIRED UDC
TBD	None	N/A	N/A	January 2001

CIN, COURSE TITLE : MK 30 Mod 2 ATS Familiarization

BUILDING AND ROOM NUMBER	TYPE OF FACILITY PROJECT	FACILITY PROJECT NUMBER	REQUIRED PROJECT AWARD DATE	REQUIRED UDC
TBD	None	N/A	N/A	January 2001

CIN, COURSE TITLE : Helicopter Launch and Recovery

BUILDING AND ROOM NUMBER	TYPE OF FACILITY PROJECT	FACILITY PROJECT NUMBER	REQUIRED PROJECT AWARD DATE	REQUIRED UDC
TBD	None	N/A	N/A	January 2001

CIN, COURSE TITLE : Surface Launch Platform Operation and Maintenance

BUILDING AND ROOM NUMBER	TYPE OF FACILITY PROJECT	FACILITY PROJECT NUMBER	REQUIRED PROJECT AWARD DATE	REQUIRED UDC
TBD	None	N/A	N/A	January 2001

Section IV.C. **FACILITY REQUIREMENTS**

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

TRAINING ACTIVITY : Raytheon Systems Company
LOCATION, UIC : AFWTF, Roosevelt Roads, PR. UIC 0017A

CIN, COURSE TITLE : MK 30 Mod 2 ATS Operations and Maintenance

BUILDING AND ROOM NUMBER	TYPE OF FACILITY PROJECT	FACILITY PROJECT NUMBER	REQUIRED PROJECT AWARD DATE	REQUIRED UDC
TBD	None	N/A	N/A	March 2002

CIN, COURSE TITLE : MK 30 Mod 2 ATS Familiarization

BUILDING AND ROOM NUMBER	TYPE OF FACILITY PROJECT	FACILITY PROJECT NUMBER	REQUIRED PROJECT AWARD DATE	REQUIRED UDC
TBD	None	N/A	N/A	March 2002

CIN, COURSE TITLE : Helicopter Launch and Recovery

BUILDING AND ROOM NUMBER	TYPE OF FACILITY PROJECT	FACILITY PROJECT NUMBER	REQUIRED PROJECT AWARD DATE	REQUIRED UDC
TBD	None	N/A	N/A	March 2002

CIN, COURSE TITLE : Surface Launch Platform Operation and Maintenance

BUILDING AND ROOM NUMBER	TYPE OF FACILITY PROJECT	FACILITY PROJECT NUMBER	REQUIRED PROJECT AWARD DATE	REQUIRED UDC
TBD	None	N/A	N/A	March 2002

Section IV.C. **FACILITY REQUIREMENTS**

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

TRAINING ACTIVITY : Raytheon Systems Company
LOCATION, UIC : NUWCDETHI, Waianae, HI. UIC 35266

CIN, COURSE TITLE : MK 30 Mod 2 ATS Operations and Maintenance

BUILDING AND ROOM NUMBER	TYPE OF FACILITY PROJECT	FACILITY PROJECT NUMBER	REQUIRED PROJECT AWARD DATE	REQUIRED UDC
TBD	None	N/A	N/A	June 2004

CIN, COURSE TITLE : MK 30 Mod 2 ATS Familiarization

BUILDING AND ROOM NUMBER	TYPE OF FACILITY PROJECT	FACILITY PROJECT NUMBER	REQUIRED PROJECT AWARD DATE	REQUIRED UDC
TBD	None	N/A	N/A	June 2004

CIN, COURSE TITLE : Helicopter Launch and Recovery

BUILDING AND ROOM NUMBER	TYPE OF FACILITY PROJECT	FACILITY PROJECT NUMBER	REQUIRED PROJECT AWARD DATE	REQUIRED UDC
TBD	None	N/A	N/A	June 2004

CIN, COURSE TITLE : Surface Launch Platform Operation and Maintenance

BUILDING AND ROOM NUMBER	TYPE OF FACILITY PROJECT	FACILITY PROJECT NUMBER	REQUIRED PROJECT AWARD DATE	REQUIRED UDC
TBD	None	N/A	N/A	June 2004

Section IV.C. **FACILITY REQUIREMENTS**

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

TRAINING ACTIVITY : Raytheon Systems Company
LOCATION, UIC : NUWCDET AUTEC, Andros Is. UIC 63821

CIN, COURSE TITLE : MK 30 Mod 2 ATS Operations and Maintenance

BUILDING AND ROOM NUMBER	TYPE OF FACILITY PROJECT	FACILITY PROJECT NUMBER	REQUIRED PROJECT AWARD DATE	REQUIRED UDC
TBD	None	N/A	N/A	September 2005

CIN, COURSE TITLE : MK 30 Mod 2 ATS Familiarization

BUILDING AND ROOM NUMBER	TYPE OF FACILITY PROJECT	FACILITY PROJECT NUMBER	REQUIRED PROJECT AWARD DATE	REQUIRED UDC
TBD	None	N/A	N/A	September 2005

CIN, COURSE TITLE : Helicopter Launch and Recovery

BUILDING AND ROOM NUMBER	TYPE OF FACILITY PROJECT	FACILITY PROJECT NUMBER	REQUIRED PROJECT AWARD DATE	REQUIRED UDC
TBD	None	N/A	N/A	September 2005

CIN, COURSE TITLE : Surface Launch Platform Operation and Maintenance

BUILDING AND ROOM NUMBER	TYPE OF FACILITY PROJECT	FACILITY PROJECT NUMBER	REQUIRED PROJECT AWARD DATE	REQUIRED UDC
TBD	None	N/A	N/A	September 2005

Section IV.C. **FACILITY REQUIREMENTS**

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

TRAINING ACTIVITY : Raytheon Systems Company
LOCATION, UIC : NUWCDETHI, San Diego, CA. UIC 32090

CIN, COURSE TITLE : MK 30 Mod 2 ATS Operations and Maintenance

BUILDING AND ROOM NUMBER	TYPE OF FACILITY PROJECT	FACILITY PROJECT NUMBER	REQUIRED PROJECT AWARD DATE	REQUIRED UDC
TBD	None	N/A	N/A	July 2006

CIN, COURSE TITLE : MK 30 Mod 2 ATS Familiarization

BUILDING AND ROOM NUMBER	TYPE OF FACILITY PROJECT	FACILITY PROJECT NUMBER	REQUIRED PROJECT AWARD DATE	REQUIRED UDC
TBD	None	N/A	N/A	July 2006

CIN, COURSE TITLE : Helicopter Launch and Recovery

BUILDING AND ROOM NUMBER	TYPE OF FACILITY PROJECT	FACILITY PROJECT NUMBER	REQUIRED PROJECT AWARD DATE	REQUIRED UDC
TBD	None	N/A	N/A	July 2006

CIN, COURSE TITLE : Surface Launch Platform Operation and Maintenance

BUILDING AND ROOM NUMBER	TYPE OF FACILITY PROJECT	FACILITY PROJECT NUMBER	REQUIRED PROJECT AWARD DATE	REQUIRED UDC
TBD	None	N/A	N/A	July 2006

Section IV.C. **FACILITY REQUIREMENTS**

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

TRAINING ACTIVITY : Raytheon Systems Company
LOCATION, UIC : NUWCDIVKPT, Keyport, WA, UIC 00253

CIN, COURSE TITLE : MK 30 Mod 2 ATS Operations and Maintenance

BUILDING AND ROOM NUMBER	TYPE OF FACILITY PROJECT	FACILITY PROJECT NUMBER	REQUIRED PROJECT AWARD DATE	REQUIRED UDC
TBD	None	N/A	N/A	December 2007

CIN, COURSE TITLE : MK 30 Mod 2 ATS Familiarization

BUILDING AND ROOM NUMBER	TYPE OF FACILITY PROJECT	FACILITY PROJECT NUMBER	REQUIRED PROJECT AWARD DATE	REQUIRED UDC
TBD	None	N/A	N/A	December 2007

CIN, COURSE TITLE : Helicopter Launch and Recovery

BUILDING AND ROOM NUMBER	TYPE OF FACILITY PROJECT	FACILITY PROJECT NUMBER	REQUIRED PROJECT AWARD DATE	REQUIRED UDC
TBD	None	N/A	N/A	December 2007

CIN, COURSE TITLE : Surface Launch Platform Operation and Maintenance

BUILDING AND ROOM NUMBER	TYPE OF FACILITY PROJECT	FACILITY PROJECT NUMBER	REQUIRED PROJECT AWARD DATE	REQUIRED UDC
TBD	None	N/A	N/A	December 2007

Element IV.C.3. **Facility Project Summary by Program**

TRAINING ACTIVITY : Raytheon Services Company
LOCATION, UIC : NUWCDIVKPT, Keyport, WA. UIC 00253

PROJECT NUMBER	TOTAL SCOPE	PROJECTED AWARD DATE	PROJECTED UCD	STATUS
N/A	N/A	N/A	N/A	

TRAINING ACTIVITY : Raytheon Services Company
LOCATION, UIC : AFWTF, Roosevelt Roads, PR UIC 0017A

PROJECT NUMBER	TOTAL SCOPE	PROJECTED AWARD DATE	PROJECTED UCD	STATUS
N/A	N/A	N/A	N/A	

TRAINING ACTIVITY : Raytheon Services Company
LOCATION, UIC : NUWCDETHI, Wainanae, HI. UIC 35266

PROJECT NUMBER	TOTAL SCOPE	PROJECTED AWARD DATE	PROJECTED UCD	STATUS
N/A	N/A	N/A	N/A	

PART IV - TRAINING LOGISTICS SUPPORT REQUIREMENTS

TRAINING ACTIVITY : Raytheon Services Company
LOCATION, UIC : NUWCDET AUTEC, Andros Is. UIC 63821

PROJECT NUMBER	TOTAL SCOPE	PROJECTED AWARD DATE	PROJECTED UCD	STATUS
N/A	N/A	N/A	N/A	

TRAINING ACTIVITY : Raytheon Services Company
LOCATION, UIC : NUWCDETHI, San Diego, CA. UIC 32090

PROJECT NUMBER	TOTAL SCOPE	PROJECTED AWARD DATE	PROJECTED UCD	STATUS
N/A	N/A	N/A	N/A	

TRAINING ACTIVITY : Raytheon Services Company
LOCATION, UIC : NUWCDIVKPT, Keyport, WA. UIC 00253

PROJECT NUMBER	TOTAL SCOPE	PROJECTED AWARD DATE	PROJECTED UCD	STATUS
N/A	N/A	N/A	N/A	

PART V - MPT MILESTONES

COG Code	MPT MILESTONES	DATE	STATUS
PEO (USW)/PMS403	Begin Analysis of Manpower, Personnel, and Training Requirements	May 1994	Complete See HSI Plan
CNO (N88)	Program Manpower and Training Resource Requirements	May 1994	Complete
PEO(USW)/PMS403	Distribute NTSP	August 1998	Complete
CNO (N88)	Approve and Promulagate NTSP	September 1998	
PEO(USW)/PMS403	Curriculum Materials Delivered	January 2001	
PEO(USW)/PMS403	E&MD Target Systems Delivered to O-Site.	January 2001	
PEO(USW)/PMS403	Begin E&MD Training - Keyport	January 2001	
PEO(USW)/PMS403	Conduct M Demo - Training Proficiency Evaluation	April 2001	
PEO(USW)/PMS403	Begin Initial Training - AFWTF	March 2002	
PEO(USW)/PMS403	Initial Operational Capability	March 2002	
PEO(USW)/PMS405	Initial Training - PMRF	June 2004	
PEO(USW)/PMS406	Initial Training - AUTEC	September 2005	
PEO(USW)/PMS407	Initial Training - SOCAL	July 2006	
PEO(USW)/PMS408	Initial Training - Keyport	December 2007	
PEO(USW)/PMS403	Full Operational Capability	March 2008	

PART VI - DECISION ITEMS/ACTION REQUIRED

DECISION ITEM OR ACTION REQUIRED	COMMAND ACTION	DUE DATE	STATUS

PART VII - POINTS OF CONTACT

NAME, ACTIVITY, CODE	FUNCTION	PHONE NUMBERS: DSN/COMMERCIAL FAX DSN/COMMERCIAL INTERNET ADDRESS
LCDR Michael Murphy CNO, N889F3	Resource Sponsor	(703) 604-7721 (DSN 664) (703) 604-6939 (DSN 664) Murphy.Michael@hq.navy.mil
Mr. Timothy Douglass PEO(USW)	Milestone Decision Authority	(703) 604-5038 ext. 118 (DSN 664) (703) 604-4755 (DSN 664) DouglassTE@navsea.navy.mil
Mr. Timothy McBride PEO(USW)L	Assistant PEO for Logistics	(703) 604-5038 ext. 132 (DSN 664) (703) 604-4755 (DSN 664) McBrideTL@navsea.navy.mil
CAPT Vic Fiebig PEO(USW), PMS403	Program Manager	(703) 604-6052 ext. 543 (DSN 664) (703) 604-6056 (DSN 664) FiebigVR@navsea.navy.mil
Mr. Michael Alperi PEO(USW), PMS403C	Asst. Program Manager	(703) 604-6052 ext. 543 (DSN 664) (703) 604-6056 (DSN 664) AlperiMJ@navsea.navy.mil
Mr. Jeffrey Din PEO(USW), PMS403L	Logistics Manager	(703) 604-6052 ext. 552 (DSN 664) (703) 604-6056 (DSN 664) DinJW@navsea.navy.mil
Mr. Charles Barns PEO(USW), PMS403C3	Project Manager	(703) 604-6052 ext. 543 (DSN 664) (703) 604-6056 (DSN 664) BarnsGC@navsea.navy.mil
Mr. John Bellisle NUWCDIV Newport, Code 8222	Technical Design Agent	(401) 832-1665 ext. 21665 (DSN 948) (401) 832-4825 (DSN 948) BellisleJR@npt.nuwc.navy.mil
Ms. Deborah Hisayasu NUWCDIV Keyport, Code 63	Integrated Logistics Support Agent	(360) 396-2998 (DSN 744) (360) 396-7121 (DSN 744) DHisayasu@kpt.nuwc.navy.mil
Mr. David Rodriguez NUWCDETHI San Diego, Code 9041	Operational Site Manager	(619) 545-0665 (DSN 553) (619) 545-0669 (DSN 553) DRodrigez@c90gate.lll.nuwc.navy.mil