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SYSTEM PERFORMANCE SPECIFICATION (SPS)

FOR THE

INTEGRATED DEEPWATER SYSTEM

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1.0 Scope. This System Performance Specification (SPS) is provided as a baseline performance specification for the U.S. Coast Guard Integrated Deepwater System (IDS).

1.1 Identification. The SPS describes the IDS.

1.2 System Description. The IDS is the surface, air, and command, control, communications, computers, intelligence, surveillance and reconnaissance (C4ISR) assets and logistics required by the U.S. Coast Guard to perform its statutory mandated missions in the Deepwater environment.

1.3 System Overview. The goal of the Coast Guard's project for the Deepwater Capability Replacement Analysis is to deploy an integrated system that enables the Coast Guard to effectively, safely and efficiently perform its Deepwater statutory mandated missions. Deepwater missions are those missions which generally occur beyond 50 nautical miles from U.S. shores. These missions differ from the typical Coast Guard coastal zone missions by requiring either; extended on scene presence, long transit distance to reach the operating area, forward deployment of forces, or a combination of these factors.

1.4 Mission Requirements. The IDS enables the Coast Guard to perform the following statutory mandated missions with sufficient number of assets to support operational requirements 24 hours a day, 365 days a year.

1.4.1 Alien Migrant Interdiction Operations (AMIO). Proactive patrols are required to counter the normal flow of illegal migrants. These patrols require surveillance of assigned areas where suspected illegal migration may occur, and the capability to dispatch boarding teams to suspect vessels and subsequently escort them to their final disposition. The typical reactive nature of AMIO was demonstrated by the recent mass migration incidents off Haiti and Cuba. When conducting AMIO, both proactive and reactive, assets must be capable of sustained presence, and must have the capability to rescue a large number of people simultaneously in the event that the typical unseaworthy or overloaded migrant craft sinks or capsizes during the attempted voyage.

1.4.2 Port Operations, Security and Defense (POSD). Conduct thorough surveillance of an assigned area of operations, and dispatch appropriate assets to investigate any threat to security. Assets are capable of sustained presence.

1.4.3 Drug Interdiction. The key requirements for successful drug interdiction are surveillance and presence in areas where the possibility of contraband smuggling exists. The capability to respond to intelligence information and known incidents of drug smuggling such as air drops or mother ship rendezvous as they occur is required for this activity. The ability to dispatch boarding teams and maintain a continuous on scene presence, thus providing a visible deterrence to the smuggler, are important mission requirements.

1.4.4 Environmental Defense Operations. The IDS is capable of supporting environmental defense operations, to include the ability to assist in the mitigation of environmental exploitation designed to disrupt defense operations.

1.4.5 Foreign Vessel Inspection. Surveillance of operating areas and the ability to conduct at sea boardings are the basic requirements of this mission.

1.4.6 General Defense Operations. The capability to perform surveillance, visit, board, search and seize, limited unit defense, and provide berthing and logistics support for additional personnel are partial requirements of this activity. Assets must be capable of operating worldwide with sustained presence in the area of responsibility.

1.4.7 General Law Enforcement. The prosecution of this mission requires both proactive patrolling and a reactive response to intelligence information that may be received. The current scope of the operations is minor and the pro-active portion of the mission is conducted frequently as a secondary outcome of a fisheries, AMIO or counter drug patrol. The response to specific intelligence is handled on a case by case basis according to the reliability of the information and availability of an asset.

1.4.8 International Ice Patrol (IIP). The Coast Guard is responsible for providing for ice observation and broadcast of shipping advisories whenever the presence of icebergs threaten the shipping routes. The threat typically exists from February through July, but conditions vary annually and operations commence as conditions require. The Coast Guard is responsible for those ice regions of the North Atlantic Ocean through which the major trans-Atlantic shipping tracks pass, generally an area bounded by 38 degrees North to 52 degrees North latitude, and 39 degrees West to 57 degrees West longitude.

1.4.9 Lightering Zone Enforcement. The basic requirement of the Lightering Zone Enforcement Mission is the capability to survey lightering zones and conduct boardings as necessary. Up to 74 percent of the nation's crude oil imports are received in Gulf of Mexico ports, and up to 29 percent of this is lightered.

1.4.10 Living Marine Resources Enforcement (LMR). To meet the objectives of the Coast Guard fisheries law enforcement program, it is necessary for the Coast Guard to project a sustained presence throughout the U.S. Exclusive Economic Zone (EEZ) and along its boundary, as well as in international areas of interest to the U.S. This presence must have the capability to deter illegal or unauthorized activity by documenting violations through vessel boardings and inspections.

1.4.11 Maritime Intercept Operations (MIO). Assets are required to conduct thorough surveillance of an assigned area of responsibility, detect and intercept all shipping, and dispatch trained boarding or inspection teams, providing for their logistics, support, transportation, and protection. Sustained presence in the operating area is a necessity.

1.4.12 Maritime Pollution (MARPOL) Enforcement and Response. Surveillance operations to detect maritime pollution in violation of MARPOL 73/78 in the U.S. EEZ are required. Operations are limited to verification of type of material in water, evidence gathering and documentation. Mission focus is on ensuring compliance by commercial maritime fleet. In addition, surveillance operations to detect significant discharges (greater than 1000 gals) of oil or hazardous substances for subsequent monitoring, mitigation, and removal actions are required. Operations are limited to determining the type of pollutant, thickness and boundaries; day or night and in moderate weather conditions.

1.4.13 Search and Rescue (SAR). The ability for assets to search for and locate distressed mariners and recover them from positions of peril; provide medical advice, assistance, or evacuation; and when necessary, provide subjects safe transport to shoreside locations are the primary requirements of the mission. As a secondary priority, Coast Guard SAR assets may attempt to recover or control damage to distressed vessels and other property. Such assistance may consist of controlling or terminating flooding, fire fighting, dewatering, providing mechanical assistance, and towing of stricken vessels.

1.4.14 Peacetime Military Engagement (PME). The National Military Strategy defines Peacetime Military Engagement (PME) as "all military activities involving other nations intended to shape the security environment in peacetime." Deployment of Coast Guard forces plays a vital role in shaping the security environment of other nations through forward presence, humanitarian assistance, professional exchanges, combined operations, training exercises, and other military or diplomatic activities. Support includes performance of both traditional and non-traditional Coast Guard missions in conjunction with or in support of a foreign nation.

1.5 Definitions and Acronyms. Definitions and acronyms are located in Section 6.

2.0 Applicable Documents.

U.S. Navy Level I Survivability Standards	
U.S. Navy Damage Stability Criteria	DDS 079
Code of Federal Regulations	29 CFR 1910.120

3.0 Requirements.

3.1 Functional Capabilities. The capabilities in this specification shall be met by the entire IDS (individual asset may not necessarily be capable of meeting all of the requirements).

3.1.1 IDS Demand. The IDS shall meet the demand profiles of Deepwater missions as verified in Section 4.5.

3.1.2 Margins. IDS assets shall have sufficient margins to meet the requirements of this specification for the life-cycle of the asset.

3.2 Information Collection and Recording Capabilities.

3.2.1 Collect and Verify Mission Triggers. The IDS shall collect and verify mission triggers, to include validation to determine if legitimate or hoax.

3.2.1.1 Distress Calls. The IDS shall receive all properly broadcast distress signals.

3.2.1.2 Line of Bearing. The IDS shall establish a position or line of bearing (LOB) on all transmissions on all international distress frequencies.

3.2.1.3 Transponders. The IDS shall receive, plot and analyze for compliance transponders installed on fishing or other vessels and aircraft.

3.2.2 Intelligence. The IDS shall collect, process, analyze, and disseminate intelligence, including Human Intelligence (HUMINT), Signals Intelligence (SIGINT), Imagery Intelligence (IMINT), Measurement & Signatures Intelligence (MASINT)(to include Acoustic Intelligence (ACINT)), and Open Source Intelligence (OSINT).

3.2.3 Mission Event Data. The IDS shall collect and record mission event data.

3.2.4 Unit Status. The IDS shall collect and record unit status.

3.2.5 Surveillance, Detection and Monitoring. The IDS shall be capable of determining what and whom resides, enters, and exits any selected zone(s) within the Deepwater AOR. In addition to material targets, this requirement includes other mission triggers or events such as maritime pollution or national marine sanctuary violations, closed area incursions, collisions, etc.

3.2.5.1 Small Targets. The IDS shall detect and track targets of any material, as verified in Section 4.6.

3.2.5.2 Glacial Ice Targets. The IDS shall detect and track glacial ice targets, as verified in Section 4.7.

3.2.5.3 Oil and Hazardous Materials. The IDS shall detect and determine the size and composition of oil, hazardous materials, and other prohibited discharges in the air or water column.

3.2.6 Classify Targets. The IDS shall classify targets by determining the specific group or category a detected target belongs to (fishing vessel, merchant vessel, etc.). The current activity of the target may help in determining its category.

3.2.7 Identify Targets. The IDS shall identify targets by differentiating an individual target from others in the same classification category (name, registration number, etc.).

3.2.8 Sort. The IDS shall sort targets of interest (TOI) from non TOI; and, where appropriate, prior to compromising covert posture of prosecuting asset.

3.3 Information Exchange Capabilities.

3.3.1 Exchange Information with Other Coast Guard Assets. The IDS shall maintain simultaneous real time voice, video and data communications between all Coast Guard assets.

3.3.2 Embarked Staff. The IDS shall provide command and control support for an embarked staff without negative impact on any unit's independent communication, command and control functions.

3.3.3 Exchange Information with External Organizations. The IDS shall maintain simultaneous real time voice, video and data communications with DOD, other Federal agencies, state and local government, North Atlantic Treaty Organization (NATO), similar coalitions and potential partners, the maritime public, and private sector in accordance with applicable standards.

3.3.4 Dissemination. The IDS shall disseminate processed intelligence to operational units and the general public as required.

3.3.5 Protect Information Exchanges at Appropriate Level of Security. The IDS shall properly safeguard and handle secure and non-secure information exchanges up to a level of security that ensures interoperability with U.S. and allied forces.

3.4 Information Support Capabilities

3.4.1 Access Data Bases and Data. The IDS shall access Coast Guard, multiple agency, and national information and informational data bases needed to accomplish missions.

3.4.1.1 Target Information. The IDS shall access information which provides position, course, speed, and description of the target and specifies the age and accuracy of the information.

3.4.2 Store and Archive Information. The IDS shall store and archive both corporate and locally maintained information.

3.4.3 Preserve Data Integrity. The IDS shall prevent loss, corruption or conflict of stored information.

3.4.4 Preserve Data Security. The IDS shall prevent, detect and counteract network intrusions.

3.4.5 OPSEC. The IDS shall implement Operations Security (OPSEC) measures.

3.4.6 OPDEC. The IDS shall conduct deception operations (OPDEC).

3.5 Decision Support Capabilities.

3.5.1 Determine High Interest Grids and Assess Threats. The IDS shall determine and track activity in High Interest Grids.

3.5.2 Develop Plans. The IDS shall provide decision support capabilities to develop operational and management plans, logistics plans, mission plans, crisis action plans, and unit operational and support plans.

3.5.3 Allocate Resources. The IDS shall provide decision support capabilities to develop plans to prioritize and adjust the use of available assets and those of other organizations to accomplish Coast Guard missions, to include National Emergency Response Operations (NERO).

3.5.4 Direct and Oversee Operations. The IDS shall exercise command and control of multiple Coast Guard surface and air assets, and in U.S. and multi-national operations (DOD, other government agencies, NATO and similar coalitions and potential partners).

3.5.5 Navigate. IDS assets shall determine navigational position as required to prosecute Deepwater missions, as verified in Section 4.8.

3.5.6 Maintain Situation Awareness. The IDS shall maintain awareness of the operating environment, to include fusion of local tactical information with database information in near real time.

3.5.6.1 Ocean Surface Current. The IDS shall determine ocean surface current speed and direction.

3.5.6.2 Oceanographic and Meteorological Observations. The IDS shall determine oceanic bathythermographic profiles and meteorological observations to include wind velocity, wind direction, sea temperature, sea state, visibility, air temperature, etc.

3.5.6.3 Drift Rate Determination. During the response to events involving mariners in distress, the IDS shall continuously sense the wind and ocean currents in designated search areas for the calculation of drift rates of distressed craft and survivors.

3.5.7 Evaluate and Adjust Operations. The IDS shall provide the capability to evaluate and adjust operations to ensure routine operations and crisis taskings are properly executed without mission degradation.

3.5.8 Direct and Oversee Sustainment Actions. The IDS shall provide the necessary planning support to ensure assets are able to accomplish assigned missions.

3.6 Prosecution.

3.6.1 Enforcement. The IDS shall compel compliance of cooperative, uncooperative and evasive targets using the minimum force necessary, including effective non-lethal means.

3.6.2 Response Time (Distress). The IDS shall be capable of arriving on-scene and rendering assistance, as verified in Section 4.9.

3.6.3 Response Time (NERO). The IDS shall respond to a NERO, as verified in Section 4.10.

3.6.4 Intercept and Interdict. The IDS shall intercept and interdict TOI anywhere in the Deepwater AOR.

3.6.5 Conduct Boardings. The IDS shall safely and effectively launch and recover multiple, simultaneous boarding teams with equipment to and from vessels at sea, as verified in Section 4.11.

3.6.5.1 Pathogens. The IDS shall protect boarding team personnel and dispatching asset from food-borne, water-borne, air-borne, and blood-borne pathogens on-board target vessels.

3.6.5.2 Hazardous Atmospheres. The IDS shall detect vessel compartments containing hazardous atmospheres or potential hazardous atmospheres.

3.6.6 Command Presence. The IDS shall provide a command presence/cover for multiple, simultaneous boarding teams.

3.6.7 Transfers. The IDS shall conduct transfers of equipment and people to and from vessels, as verified in Section 4.12.

3.6.8 Escort. The IDS shall be capable of escorting vessels of any size.

3.6.9 Towing. The IDS shall tow vessels, as verified in Section 4.13.

3.6.10 Transport. The IDS shall have the capability to rapidly transport mission specific equipment and personnel to scene (i.e. IIP, Marine Environmental Response, Law Enforcement Operations, and Search and Rescue) as verified in Section 4.25. Locations for transporting equipment and personnel may include crossing international boundaries and/or use of facilities damaged or impacted by natural disasters.

3.6.11 Port Security. The IDS shall provide for the safe and efficient operation of all vessels transiting designated harbors anywhere in the Deepwater AOR, including protection of port assets and coastal patrols to enforce security perimeters during NERO.

3.6.12 HAZMAT Response Capabilities. The IDS shall provide Level A Hazardous Material (HAZMAT), per 29 CFR 1910.120 Appendix B, response up to 200 NM offshore.

3.6.13 Divert or Seize Vessels. The IDS shall divert or seize vessels as required and provide custody crews and security for seized vessels.

3.6.14 ESM/ECM. The IDS shall conduct Electronic Surveillance Measures (ESM) and Electronic Countermeasures (ECM) operations in support of own unit.

3.6.15 EMCON. The IDS shall conduct Emission Control (EMCON) operations in support of own unit.

3.6.16 Hazards to Navigation. The IDS shall mark, remove, sink or destroy hazards to navigation.

3.7 Support Operations.

3.7.1 Endurance. The IDS shall be capable of remaining on scene, as verified in Section 4.14.

3.7.2 Replenishment. The IDS shall conduct at-sea replenishment (surface-to-surface, surface-to-air and air-to-surface) without affecting embarked assets.

3.7.3 Health Care. The IDS shall provide an adequate health care facility to include triage, resuscitation, and coordinated transfer of patients in order to operate independently, as verified as Section 4.15.

3.7.4 Support Services. The IDS shall provide logistical/support services to subordinate units, including embarked air asset (CG and/or DOD), surface, and Port Security Unit (PSU) unit(s), as verified in Section 4.16.

3.7.5 Damage Control. The IDS shall minimize and control damage to own unit.

3.7.6 Long Term Personnel Evacuees. The IDS shall provide and or coordinate with other applicable agencies for security, food, water, sanitation, medical services, separate from own forces' facilities and the IDS asset, as verified in Section 4.17.

3.7.7 Short Term Personnel Evacuees. The IDS shall provide security, food, water, sanitation, medical services and shelter, separate from own forces' facilities, as verified in Section 4.18.

3.7.8 Short Term Support. The IDS shall provide support, including berthing and messing, as verified in Section 4.19.

3.7.9 Long Term Support. The IDS shall provide support, including berthing and messing, as verified in Section 4.20.

3.8 National Security Cutters.

3.8.1 General. A class of national security cutters shall be included in the IDS, to operate in the low-threat environment, with the following characteristics as a minimum.

3.8.1.1 Speed.

3.8.1.1.1 Commercial Shipping. The national security cutter shall be capable to take station on, maneuver around, and escort commercial shipping steaming at operational speeds, as verified in Section 4.21.

3.8.1.1.2 CVN Flight Operations. National Security Cutter shall be capable of operating at an operational speed to take and maintain station on a maneuvering Carrier; Fixed Wing Nuclear Powered (CVN) conducting flight operations."

3.8.1.2 Endurance. The national security cutter shall have the endurance necessary to provide on-station presence, as verified in Section 4.22.

3.8.1.3 Replenishment. The national security cutter shall be capable of underway replenishment including Continuous alongside underway Replenishment (CONREP) of fuel and water, and Vertical Replenishment (VERTREP) of munitions and provisions. The cutter shall be capable of conducting these operations with an embarked helicopter on deck or in the hangar.

3.8.1.4 Survivability. The national security cutter shall be designed to U.S. Navy Level I Survivability Standards, with the exception to shock hardening.

3.8.1.5 Damage Stability. The national security cutter shall be designed to U.S. Navy Damage Stability criteria.

3.8.2 Surface Warfare (SUW).

3.8.2.1 Detect and Track. The national security cutter shall detect, track, identify and intercept surface targets using techniques, such as, surface radar, visual, thermal imaging (infrared) and ESM.

3.8.2.1.1 Detect and Track For Assigned Forces. The national security cutter shall provide the decision support capabilities to plan and direct the detect and track function for assigned forces.

3.8.2.2 Board and Seize. The national security cutter shall allow Coast Guard personnel to board, inspect, interdict, report, and seize surface vessels.

3.8.2.2.1 Warning Shots / Disabling Fire. The national security cutter shall have the ability to fire warning and disabling shots against TOI in the course of interdictions.

3.8.2.3 Boat Transport, Deliver, and Retrieve. The national security cutter shall have the ability to transport, deliver, and retrieve Coast Guard Port Security Boats (PSU). These operations will be conducted in a harbor or port environment.

3.8.2.4 Surface Threats. The national security cutter shall allow Coast Guard personnel to plan, direct, and engage surface threats, independently or in cooperation with other forces, achieving mission kill on high-speed coastal patrol craft beyond small and intermediate caliber gunfire effective range.

3.8.2.5 Own-ship Defense. The national security cutter shall allow Coast Guard personnel to plan, provide, and direct own-ship defense and defense of escorted units.

3.8.2.6 Avoid Surface Attack. The national security cutter shall have the ability to disengage, evade or avoid surface attack by minimizing radar cross-section, employing ESM, soft-kill measures, evasion techniques, and EMCON procedures.

3.8.2.6.1 Avoid Surface Attack For Assigned Forces. The national security cutter shall have the ability to plan and direct the above for assigned forces.

3.8.2.7 Launch and Recover Aircraft. The national security cutter shall have the ability to launch, recover and fuel (on-deck and in-flight) Navy and NATO Vertical Take-Off and Landing (VTOL) aircraft, including armed helicopters.

3.8.2.8 Control Aircraft. The national security cutter shall control and direct aircraft.

3.8.3 Air Warfare (AW).

3.8.3.1 Air Targets. The national security cutter shall detect and track air targets and exchange track information with other naval forces.

3.8.3.2 Hard-Kill Cruise Missiles. The national security cutter shall perform self-defense from anti-ship cruise missiles, employing hard-kill capability.

3.8.3.3 Soft-Kill Cruise Missiles. The national security cutter shall perform self-defense from anti-ship cruise missiles by minimizing radar cross section and employing soft-kill capabilities.

3.8.4 Undersea Warfare (USW).

3.8.4.1 Launch and Recover Aircraft. The national security cutter shall have the ability to launch, recover and fuel (on-deck and in-flight) Navy and NATO VTOL aircraft, including armed helicopters.

3.8.4.2 Control Aircraft. The national security cutter shall control and direct aircraft.

3.8.4.3 Susceptibility to Magnetic Mines. The national security cutter shall maintain reduced susceptibility to magnetic mines.

3.8.5 Command and Control Warfare (C2W).

3.8.5.1 Emitters. The national security cutter shall search, intercept, and Direction Find (DF) emitters in passive mode to identify surface and air contacts and provide for timely defensive or evasion/avoidance actions.

3.8.5.2 Threat Library. The national security cutter shall maintain an updated threat library.

3.8.5.3 OPSEC. The national security cutter shall plan, direct and implement operations security measures for own ship and assigned forces, including EMCON.

3.8.6 Command, Control, Communications, Computers and Intelligence (C4I).

3.8.6.1 IT-21. The national security cutter shall meet frigate-like IT-21 (Information Technology for the 21st Century) standards to support joint tactical warfighting.

3.8.6.2 Functions. The national security cutter shall function as one of the following: Coastal Sea Control Commander (CSCC), Maritime Interception Commander (MIC) and SAR On-Scene Commander (OSC).

3.8.6.3 Support. The national security cutter shall provide Command and Control (C2) facilities and support (including work/watch space and communications) for own ship and an embarked Harbor Defense Commander (HDC) or CSCC.

3.8.6.4 Interoperability. The national security cutter shall maintain real-time, two-way voice and data communications interoperability and relay capability with joint and allied forces.

3.8.6.5 Data Exchange. The national security cutter shall exchange data to assist in identifying surface and air contacts.

3.8.6.6 ESM. The national security cutter shall support, conduct, and share electronic (ESM) intelligence information collection with joint and allied forces.

3.8.6.7 Links. The national security cutter shall exchange track data with joint and allied forces using common Navy links.

3.9 Interface Requirements. The IDS shall interface with the following legacy assets as these assets are gradually replaced, upgraded, and/or retained in current configuration. A comprehensive list of legacy assets and their locations is contained in Appendix C of the Modeling & Simulation Master Plan (MSMP).

3.9.1 Legacy Surface Assets.

3.9.1.1 378' (WHEC) High Endurance Cutters

3.9.1.2 270' (WMEC) Medium Endurance Cutters

3.9.1.3 210' (WMEC) Medium Endurance Cutters

3.9.1.4 Mature (WMEC)

3.9.1.5 110' (WPB) Patrol Boats

3.9.2 Legacy Air Assets.

3.9.2.1 HC-130H Long Range Surveillance Aircraft

3.9.2.2 HH-60J Medium Range Recovery Helicopters

3.9.2.3 HU-25A, HU-25B AND HU-25C Medium Range Surveillance Aircraft

3.9.2.4 HH-65A Short Range Recovery Helicopters

3.9.2.5 Gulfstream 3

3.9.3 Legacy Command and Control Assets.

3.9.3.1 Telecommunications Centers (COMMCEN). A COMMCEN is provided for Coast Guard Headquarters and each Area and District Commander. Networks connect the COMMCEN to communications facilities and other operational and administrative commands. COMMCENs provide access to the commercial and secure military common-user networks through which the bulk of the inter-service message traffic flows.

3.9.3.2 Operations Center/Command Centers (OPCEN). OPCENs serve Commandant and each Area, District and certain other commands for the coordination of all operational efforts within their areas of responsibility. The OPCEN watchstanders require direct communication with DOD, other civilian agencies and the general public. Specific communications requirements for facilities located in an OPCEN are established by the operational commander and therefore vary from facility to facility. All operational telephone circuits terminate at an OPCEN. All OPCENs have secure voice communications capabilities.

3.9.3.3 Transportable Communication Centers (TCC). The Coast Guard has three deployable TCCs, one under Pacific Area Control (PAC) and two under Atlantic (LANT) Area control. Atlantic Area has one standard TCC and a smaller, less capable Multi-Mission TCC (MTCC). TCCs provide support on all occasions where temporary communications facilities are needed. TCCs have multiple capabilities that emulate shore facilities and major cutters with High Frequency (HF), Very High Frequency (VHF), Ultra High Frequency (UHF) (both satellite and line-of-sight) and International Maritime Satellite (INMARSAT) voice and data communications. TCCs also have protected and

secure communications capabilities. While TCCs have a decision support system installed, they presently do not have the necessary supporting tactical data links. The MTCC has no decision support system.

3.9.3.4 Communications Area Master Stations (CAMS). CAMSLANT for Atlantic Area and CAMSPAC for Pacific Area provide communications support for all Coast Guard missions by providing the necessary gateway between various sites ashore and afloat. Access to HF voice, Radio Teletype (RATT), Simplex Teletype Over Radio (SITOR), High Frequency Data Link (HFDL), Automated Digital (AUTODIN), Coast Guard Data Network (CGDN) and MILSATCOM circuits is provided.

3.9.3.5 Communications Stations (COMMSTA). COMMSTAs generally provide the same level of support as the CAMS (all remotely operated from the CAMS except Kodiak) under the direction of an Area Commander. COMMSTAs provide the primary HF backbone to support Coast Guard Command and Control. COMMSTAs also provide vital communications support to the maritime community (i.e., distress communications and maritime information broadcasts).

3.9.4 Legacy Logistics Assets.

3.9.4.1 Maintenance and Logistics Commands (MLC).

The Maintenance and Logistics Command Atlantic (MLCA) is located in Norfolk, VA. Maintenance and Logistics Command Pacific (MLCP) is located in Alameda, CA. MLCs provide shore support to all cutters and boats in their respective Areas. Various organizations assist MLCs in providing this support as described in the following sections:

3.9.4.1.1 Naval Engineering Support Units (NESU)

3.9.4.1.2 Civil Engineering Units (CEU)

3.9.4.1.3 Electronic Support Units (ESU)

3.9.4.2 Integrated Support Commands (ISC)

3.9.4.3 Coast Guard Bases

3.9.4.4 Coast Guard Air Stations (CGAS)

3.9.4.5 Training Centers (TRACEN)

3.9.4.6 Other Logistics Organizations

3.10 Support Requirements.

3.10.1 Human Systems Integration (HSI). The IDS shall incorporate HSI.

3.10.1.1 Personnel. The IDS design shall reduce Life Cycle Cost by optimizing personnel for operational and support infrastructure. The IDS shall address the cumulative impact of personnel reductions as well as new skill requirements on the overall work force structure needed to meet IDS personnel requirements. This cumulative impact must consider the need to meet the remaining legacy (Non-IDS) personnel requirements. All IDS assets shall fully accommodate up to 50/50 male/female crew mix.

3.10.1.2 Training and Training Systems. The IDS shall include maintenance and operator training for new systems based on maintenance planning for the IDS. The IDS design shall minimize the training infrastructure where possible through use of intelligent systems, built-in test, diagnostics, installed training, and equipment commonality. The new IDS training should be compatible with legacy training systems where appropriate. The interface requirements in section 3.9 and 3.10.2.8 shall be considered in the design of the IDS in transition from legacy assets and legacy support infrastructure.

3.10.1.3 System Safety. The IDS and its assets shall be designed to reduce personnel and equipment losses from mishaps.

3.10.1.4 Human Factors Engineering. The IDS shall incorporate human factors (physical, mental, workload, performance limits, etc.) to ensure IDS systems can be operated, maintained, and controlled with the projected manpower force mix.

3.10.1.5 Habitability. The IDS shall design arrangements, system performance, and habitability features to maximize mission performance, comfort, convenience, and quality of life of assigned personnel.

3.10.2 Supportability. The IDS shall provide logistics to support the IDS infrastructure.

3.10.2.1 Maintenance. The IDS shall minimize overall maintenance at all levels on the operational unit and shore support activities. The interfaces requirements in section 3.9 and 3.10.2.8 shall be considered in the design of the IDS in transition from legacy assets and legacy support infrastructure.

3.10.2.1.1 Reliability. The IDS shall use highly reliable systems and subsystems. The IDS shall employ a strategy to maintain high reliability of assets and components. These strategies may include but are not limited to systems with extended maintenance cycles, redundancy and/or condition based maintenance and equipment health monitoring.

3.10.2.1.2 Equipment Commonality. The IDS shall use commonality and class standard equipment to minimize life-cycle cost.

3.10.2.1.3 Modularity. The IDS shall incorporate modularity to facilitate maintenance and replacement of components or assets for short-term and long-term maintenance planning, and system upgrades to minimize life-cycle cost.

3.10.2.1.4 Open System. Components and subsystems of all assets shall be open to the extent where future upgrades, level of modularity, and level of servicing is optimized with respect to cost within the life-cycle of the item (component, subsystem, and assets).

3.10.2.1.5 Component, Subsystem, and System Interfaces. Interfaces for all components, subsystems, and systems shall utilize expected industry standard interfaces during the expect life-cycle of all assets.

3.10.2.2 Computer Resources Support. IDS assets shall provide the capability for future software and hardware upgrades (open architecture), with sufficient documentation developed and maintained for software configuration management and upgrades. Where applicable and appropriate, the IDS shall be compliant with the Defense Information Infrastructure Common Operating Environment (DII COE), the Coast Guard Common Operating Environment (CG COE), the National Information Infrastructure (NII), the Global Information Infrastructure (GII), and commercial and non-developmental systems.

3.10.2.3 Facilities. The IDS shall be designed with consideration for the impact on shore support activities, including facility additions, modifications, expansions, contractions, or closures.

3.10.2.4 Supply Support. IDS asset supply support system shall be designed to minimize life-cycle cost. Consideration should be given to reduce onboard and government system stock storage and sparing, and optimizing the use of interim supply support. Any major shore insurance spares and storage facilities shall be identified. The interface requirements in sections 3.9 and 3.10.2.8 shall be considered in the design of the IDS in transition from legacy assets and legacy support infrastructure

3.10.2.5 Support and Test Equipment. IDS assets' support and test equipment shall be designed to minimize life-cycle cost. Consideration shall be given to full built-in diagnostic and test for mission critical systems.

3.10.2.6 Packaging, Handling & Transportation. The IDS assets shall be designed to minimize packaging required for supply support systems, and ensure appropriate handling, storage, and transportation requirements for IDS systems support.

3.10.2.7 Technical Data.

3.10.2.7.1 Support. The IDS shall provide sufficient technical data to support the IDS.

3.10.2.7.2 Integrated Product Data Environment (IPDE). The IDS shall incorporate IPDE throughout system development and transition through operational deployment.

3.10.2.8 Legacy Systems. The Integrated Logistics Support system shall consider integration of legacy systems and their support requirements.

3.10.3 Availability of Assets. The availability of IDS assets shall be sufficient with the number and mix of assets such that all IDS missions and capabilities are optimized at all times throughout the Coast Guard AOR.

3.11 Operational Environment. The IDS shall operate under the following environmental threshold requirements. The costs associated with proposed improvements in any asset's operating envelope shall be considered in the life-cycle cost estimate.

3.11.1 Operating period. The IDS shall retain its full operational capability, as verified in Section 4.23.

3.11.2 Sea State. The IDS shall retain its full operational capability in sea conditions up to and including sea state five.

3.11.3 Weather. The IDS shall retain its full operational capability in weather conditions up to and including: Moderate rain, fog, snow, sleet, and other adverse weather conditions

3.11.4 Air/Sea Temperature & Humidity. The IDS shall retain its full operational capability over all temperatures and humidity conditions experienced in the AOR, as verified in Section 4.24.

3.11.5. Reserved.

3.11.6 Shock. The IDS, assets, and each of its components shall operate during and after shock levels typical of the host system under all operational scenarios.

3.11.7 Vibration. The IDS, assets, and each of its components shall operate during and after exposure to vibration levels typical of the host system under all operational scenarios.

3.11.8 Electromagnetic Environmental Effects (E3). E3 shall not degrade the performance of the IDS.

3.11.9 Electrostatic Discharge (ESD). ESD generated by personnel, helicopters and other sources shall not degrade the IDS.

3.11.10 Electromagnetic Interference/Compatibility (EMI/EMC). EMI/EMC shall not degrade the IDS. The electromagnetic environment produced by radar, communications, and other electronic equipment of the IDS or legacy assets shall not degrade the performance of the IDS.

3.11.11 Aircraft Environment. All proposed aircraft shall be capable of operating in the Federal Aviation Administration (FAA) and International Civil Aviation Organization (ICAO) Instrument Flight Rules (IFR) environment, compliant with appropriate noise levels, and capable of operations in known icing conditions when appropriate.

3.11.12 Environmental Considerations

3.11.12.1 Environmental Impact. The IDS design shall minimize the negative impact of the IDS on the environment.

3.11.12.2 Environmental Regulations. The system shall be developed and designed to meet current and projected international, federal, state, and local environmental regulations throughout its life cycle.

3.11.12.3 Energy Consumption. The IDS shall minimize energy consumption for all IDS assets.

4.0 Verification.

4.1 Classification of Verifications. Verification classifications shall be proposed by the contractor. These classifications shall identify acceptable verification approaches to field the IDS and sub-systems of the IDS. Each approach shall contain the various methods (analysis, demonstration, examination, and/or test) of verification.

4.1.1 Production Qualification Test (PQT). A technical test completed prior to the full rate production decision to ensure the effectiveness of the manufacturing process, equipment, and procedures. This test also serves the purpose of providing data for the independent evaluation required for material release so that the evaluator can address the adequacy of the material with respect to the stated requirements. These tests are conducted on a number of samples taken at random form the first production lot, and are repeated if the process or design is changes significantly, and when second or alternative sources is brought on line.

4.1.2 Operational Test and Evaluation (OT&E). The field test, under realistic conditions, of any item (or key component) of weapons, equipment, or munitions for the

purpose of determining the effectiveness and suitability of the weapons, equipment, or munitions for the use by the users; and the evaluation of the results of such test.

4.1.3 First Article Test (FAT). First article includes preproduction models, initial samples, test samples, first lots, pilot lots; and approval involves testing and evaluating the first article for conformance with the specified contract requirements before or in the initial stage of the production under contract.

First article testing is production testing that is planned, conducted, and monitored by the material developer. FAT includes preproduction and initial production testing conducted to ensure that the contractor can furnish a product that meets the established technical criteria.

4.1.4 Conformance Acceptance Test (CAT). Testing conducted on an item or production of the item to a specific attribute, and evaluating the results of the test to ensure that the item meets a specific requirement.

4.2 Methods of Verification. IDS requirements verification methods shall be proposed by the Contractor team. Section 4 Table 1 is provided for guidance. The following methods may be utilized to accomplish verification.

4.2.1 Analysis. An element of verification that uses established mathematical models or simulations, algorithms, charts, graphs, circuit diagrams or other scientific principles and procedures to provide evidence that stated requirements were met.

4.2.2 Demonstration. An element of verification which generally denotes the actual operation, adjustment or reconfiguration of items to provide evidence that the designed functions were accomplished under specific scenarios. The items may be instrumented and quantitative limits of performance monitored.

4.2.3 Examination. An element of verification and inspection consisting of investigation, without the use of special laboratory appliances or procedures, of items to determine conformance to those specified requirements which can be determined by such investigations. Examination is generally non-destructive and typically includes the use of sight, hearing, smell, touch and taste, simple physical manipulation, mechanical and electrical gauging, and measurement and other forms of investigation.

4.2.4 Test. An element of verification and inspection which generally denotes the determination, by technical means, of the properties or elements of items, including functional operations, and involves the application of established scientific principles and procedures.

4.3 Verifications. Test samples may undergo any or all of the tests listed in Table 1 and verified for compliance with any or all of the requirements of the IDS.

4.3.1 Verification alternatives. Alternative test methods, techniques, or equipment, including the application of statistical process control, tool control, or cost effective sampling procedures may be proposed by the contractor. Alternative verification approaches shall be identified by the contractor.

4.4 Basis for Acceptance. Test samples shall meet all test and verification criteria.

4.5 IDS Demand. The IDS shall be verified through the Modeling and Simulation Master Plan (see Section 3.1.1).

4.6 Small Targets. This requirement shall be verified such that the probability of detection (POD) is at least 90% for small targets. Material size for objects in the water shall be as small as a single person. Material size for objects in the air shall be as small as an airborne single engine civil aircraft (see Section 3.2.5.1).

4.7 Glacial Ice Target. This requirement shall be verifiable with targets as small as three meters by four meters in the Coast Guard IIP area of responsibility (see Section 3.2.5.2).

4.8 Navigate. This requirement shall be verifiable to the accuracy of the current state of the market within operational consideration (see Section 3.5.5).

4.9 Response Time (Distress). This requirement shall be verifiable such that the IDS fulfills the requirement to at least 90% of all distress incidents within two hours (see Section 3.6.2).

4.10 Response Time (NERO). This requirement shall be verifiable such that response time is within 48 hours or less (see Section 3.6.3).

4.11 Conduct Boardings. This requirement shall be verifiable with boarding teams as large as 8 persons with up to 150 pounds of equipment (see Section 3.6.5).

4.12 Transfers. This requirement shall be verifiable with up to 12 personnel and 150 pounds of equipment, including personnel unfamiliar with at-sea evolution (see Section 3.6.7).

4.13 Towing. This requirement shall be verifiable with vessels up to 200 feet and/or 3000 tons, and equal in size of the towing vessel (see Section 3.6.9).

4.14 Endurance. This requirement shall be verifiable for 45 days (see Section 3.7.1).

4.15 Health Care. This requirement shall be verifiable for 45 days (see Section 3.7.3).

4.16 Support Services. This requirement shall be verifiable for 45 days (see Section 3.7.4).

4.17 Long Term Personnel Evacuees. This requirement shall be verifiable for 150 migrants at sea over four (4) weeks (see Section 3.7.6).

4.18 Short Term Personnel Evacuees. This requirement shall be verifiable for 300 migrants at sea over 72 hours (see Section 3.7.7).

4.19 Short Term Support. This requirement shall be verifiable for 16 additional personnel for 72 hours (see Section 3.7.8).

4.20 Long Term Support. This requirement shall be verifiable for supporting 6 representatives from other agencies or allied forces for 30 days (see Section 3.7.9).

4.21 Speed. This requirement shall be verifiable for 28 knots sustained speed. (see Section 3.8.1.1.1).

4.22 Endurance. This requirement shall be verifiable for 60 days and conducting extended independent operations over 12,000 NM (see Section 3.8.1.2).

4.23 Operating Period. This requirement shall be verifiable during both day and night, 24 hours a day, 365 days a year (see Section 3.11.1).

4.24 Air/Sea Temperature & Humidity. The temperature requirement shall be verifiable over a sea level temperature range from -40 °C (-40°F) to +51.7°C (125°F). The humidity requirement shall be verifiable over a relative humidity range of 20 to 100% with sea water temperature ranging from -2°C (28°F) to +35°C (95°F) (see Section 3.11.4).

4.25 Transport. This requirement shall be verifiable with the following cargo loads 3,000 cubic feet and 35,000 pounds (palletized); or 1,600 cubic feet, 25,000 pounds (palletized) and 20 Coast Guard personnel. These cargo loads do not necessarily require transport in a single block load. Mission specific equipment and personnel should be transported based on the type of cargo transported and the criticality of this cargo to the successful prosecution of the given mission (See Section 3.6.10).

Table 1: Requirement Verification Cross-Reference Table

Method of Verification

A = Analysis
D = Demonstration
E = Examination
T = Test

PQT/OT = Product Qualification Test/Operational Test
FAT = First Article Test
CAT = Conformance Acceptance Test
V = Applicable Verification Section

Requirement	Title	A	D	E	T	PQT/OT	FAT	CAT	V
3.1	**Functional Capabilities**								
3.1.1	IDS Demand								4.5
3.1.2	Margins								
3.2	**Information Collection and Recording Capabilities**								
3.2.1	Collect and Verify Mission Triggers								
3.2.1.1	Distress Calls								
3.2.1.2	Line of Bearing								
3.2.1.3	Transponders								
3.2.2	Intelligence								
3.2.3	Mission Event Data								
3.2.4	Unit Status								
3.2.5	Surveillance, Detection and Monitoring								
3.2.5.1	Small Targets								4.6
3.2.5.2	Glacial Ice Targets								4.7
3.2.5.3	Oil and Hazardous Materials								
3.2.6	Classify Targets								
3.2.7	Identify Targets								
3.2.8	Sort								
3.3	**Information Exchange Capabilities**								
3.3.1	Exchange Information with Other CG Assets								
3.3.2	Embarked Staff								
3.3.3	Information Exchange with External Organizations								
3.3.4	Dissemination								
3.3.5	Protect Information Exchanges at Appropriate Level of Security								
3.4	**Information Support Capabilities**								
3.4.1	Access Data Bases and Data								
3.4.1.1	Target Information								

Requirement	Title	A	D	E	T	PQT/OT	FAT	CAT	V
3.4.2	Store and Archive Information								
3.4.3	Preserve Data Integrity								
3.4.4	Preserve Data Security								
3.4.5	OPSEC								
3.4.6	OPDEC								
3.5	**Decision Support Capabilities**								
3.5.1	Determine High Interest Grids and Assess Threats								
3.5.2	Develop Plans								
3.5.3	Allocate Resources								
3.5.4	Direct and Oversee Operations								
3.5.5	Navigate								4.8
3.5.6	Maintain Situation Awareness								
3.5.6.1	Ocean Surface Current								
3.5.6.2	Oceanographic and Meteorological Observations								
3.5.6.3	Drift Rate Determination								
3.	Evaluate and Adjust Operations								
	Direct and Oversee Sustainment Actions								
3.6	**Prosecution**								
3.6.1	Enforcement								
3.6.2	Response Time (Distress)								4.9
3.6.3	Response Time (NERO)								4.10
3.6.4	Intercept and Interdict								
3.6.5	Conduct Boardings								4.11
3.6.5.1	Pathogens								
3.6.5.2	Hazardous Atmospheres								
3.6.6	Command Presence								
3.6.7	Transfers								4.12
3.6.8	Escort								
3.6.9	Towing								4.13
3.6.10	Transport								
3.6.11	Port Security								
3.6.12	HAZMAT Response Capabilities								
3.6.13	Divert or Seize Vessels								
3.6.14	ESM/ECM								
3.6.15	EMCON								
3.6.16	Hazards to Navigation								
3.	**Support Operations**								
3.	Endurance								4.14

Requirement	Title	A	D	E	T	PQT/OT	FAT	CAT	V
3.7.2	Replenishment								
3.7.3	Health Care								4.15
3.7.4	Support Services								4.16
3.7.5	Damage Control								
3.7.6	Long Term Personnel Evacuees								4.17
3.7.7	Short Term Personnel Evacuees								4.18
3.7.8	Short Term Support.								4.19
3.7.9	Long Term Support								4.20
3.8	**National Security Cutters**								
3.8.1	General								
3.8.1.1	Speed								
3.8.1.1.1	Commercial Shipping								4.21
3.8.1.1.2	CVN Flight Operations								
3.8.1.2	Endurance								4.22
3.8.1.3	Replenishment								
3.8.1.4	Survivability								
3.8.1.5	Damage Stability								
[illegible]	Surface Warfare (SUW)								
[illegible].1	Detect and Track								
3.8.2.1.1	Detect and Track for Assigned Forces								
3.8.2.2	Board and Seize								
3.8.2.2.1	Warning Shots / Disabling Fire								
3.8.2.3	Boat Transport, Deliver, and Retrieve								
3.8.2.4	Surface Threats								
3.8.2.5	Own-ship Defense								
3.8.2.6	Avoid Surface Attack								
3.8.2.6.1	Avoid Surface Attack For Assigned Forces								
3.8.2.7	Launch and Recover Aircraft								
3.8.2.8	Control Aircraft								
3.8.3	Air Warfare (AW)								
3.8.3.1	Air Targets								
3.8.3.2	Hard-Kill Cruise Missiles								
3.8.3.3	Soft-Kill Cruise Missiles								
3.8.4	Undersea Warfare (USW)								
3.8.4.1	Launch and Recover Aircraft								
3.8.4.2	Control Aircraft								
3.8.4.3	Vulnerability to Magnetic Mines								
3.8.5	Command and Control Warfare (C2W)								
[illegible].1	Emitters								
3.[illegible].2	Threat Library								

Requirement	Title	A	D	E	T	PQT/OT	FAT	CAT	V
3.8.5.3	OPSEC								
3.8.6	Command, Control, Communications, Computers and Intelligence (C4I)								
3.8.6.1	IT-21								
3.8.6.2	Functions								
3.8.6.3	Support								
3.8.6.4	Interoperability								
3.8.6.5	Data Exchange								
3.8.6.6	ESM								
3.8.6.7	Links								
3.9	**Interface Requirements**								
3.9.1	Legacy Surface Assets								
3.9.1.1	378' (WHEC) High Endurance Cutters								
3.9.1.2	270' (WMEC) Medium Endurance Cutters								
3.9.1.3	210' (WMEC) Medium Endurance Cutters								
3.9.1.4	Mature (WMEC)								
3.9.1.5	110' (WPB) Patrol Boats								
	Legacy Air Assets								
..1	HC-130H Long Range Surveillance Aircraft								
3.9.2.2	HH-60J Medium Range Recovery Helicopters								
3.9.2.3	HU-25A, HU-25B AND HU-25C Medium Range Surveillance Aircraft								
3.9.2.4	HH-65A Short Range Recovery Helicopters								
3.9.2.5	Gulfstream 3								
3.9.3	Legacy Command and Control Assets								
3.9.3.1	Telecommunications Centers (COMMCEN)								
3.9.3.2	Operations Center/ Command Centers (OPCEN)								
3.9.3.3	Transportable Communication Centers (TCC)								
3.9.3.4	Communications Area Master Stations (CAMS)								
3.9.3.5	Communications Stations (COMMSTA)								
3.9.4	Legacy Logistics Assets								
3.9.4.1	Maintenance and Logistics Commands (MLC)								
3.9.4.1.1	Naval Engineering Support Units (NESU)								
1.2	Civil Engineering Units (CEU)								
1.3	Electronic Support Units (ESU) s								
3.9.4.2	Integrated Support Commands (ISC)								

Requirement	Title	A	D	E	T	PQT/OT	FAT	CAT	V
3.9.4.3	Coast Guard Bases								
3.9.4.4	Coast Guard Air Stations (CGAS)								
3.9.4.5	Training Centers (TRACEN)								
3.9.4.6	Other Logistics Organizations								
3.10	**Support Requirements**								
3.10.1	Human Systems Integration (HSI)								
3.10.1.1	Personnel								
3.10.1.2	Training and Training Systems								
3.10.1.3	System Safety								
3.10.1.4	Human Factors Engineering								
3.10.1.5	Habitability								
3.10.2	Supportability								
3.10.2.1	Maintenance								
3.10.2.1.1	Reliability								
3.10.2.1.2	Equipment Commonality								
3.10.2.1.3	Modularity								
3.10.2.1.4	Open System								
3.10.2.1.5	Component, Subsystem, and System Interfaces								
3.10.2.2	Computer Resources Support.								
3.10.2.3	Facilities								
3.10.2.4	Supply Support								
3.10.2.5	Support and Test Equipment								
3.10.2.6	Packaging, Handling & Transportation								
3.10.2.7	Technical Data								
3.10.2.7.1	Support								
3.10.2.7.2	Integrated Product Data Environment (IPDE)								
3.10.2.8	Legacy Systems								
3.10.3	Availability of Assets								
3.11	**Operational Environment**								
3.11.1	Operating Period								4.23
3.11.2	Sea State								
3.11.3	Weather								
3.11.4	Air/Sea Temperature & Humidity								4.24
3.11.5	Reserved								
3.11.6	Shock								
3.11.7	Vibration								
3.	Electromagnetic Environmental Effects (E3)								
3.	Electrostatic Discharge (ESD)								

Requirement	Title	A	D	E	T	PQT/OT	FAT	CAT	V
3.11.10	Electromagnetic Interference/Compatibility (EMI/EMC)								
3.11.11	Aircraft Environment								
3.11.12	Environmental Considerations								
3.11.12.1	Environmental Impact								
3.11.12.2	Environmental Regulations								
3.11.12.3	Energy Consumption								

5.0 Packaging. Not applicable

6.0 Notes.

6.1 Definitions.

6.1.1 Deepwater Area of Responsibility (AOR). The Deepwater operating area includes the following areas located worldwide: United States Exclusive Economic Zone, Search and Rescue Area of Responsibility, High Interest Grids, and National Emergency Response Operations (NERO).

6.1.2 Exclusive Economic Zone (EEZ). EEZ is defined as the area out to 200 nautical miles from all U.S. coastlines.

6.1.3 High Interest Grid (HIG). The IDS supports applicable Coast Guard Missions in HIG areas depicted in Figure (1). HIG zones are historical/anticipated areas of high activity. They are relatively static with some degree of predictability for resource requirements due to such issues as fish migration routes, drug trafficking routes, documented illegal alien migration routes, etc. Multiple boarding or rescue teams of up to eight Coast Guard members are available and fully supported to prosecute these mission areas.

6.1.4 Human Systems Integration (HSI). HSI addresses the concerns of safely and efficiently matching technology and human interfaces, optimizing system performance through a coordination of manpower and personnel, training, systems safety, human factors engineering and habitability disciplines.

6.1.5 Low Threat Environment. A low-threat environment is defined as including the following types of threats:

- Militarily relatively small and normally ill equipped.
- Offensive Chemical & Biological Warfare (CBW) activity not noted.
- Possesses coastal radar and line of sight surveillance.
- May have some patrol craft and or maritime patrol aircraft for coastal patrol.
- Has no or low capability Electronic Support/ Electronic Attack (ES/EA) equipment
- Very few may have Anti Ship Cruise Missile (ASCMs), but only in very limited numbers.

6.1.6 Mission Trigger. Event or activity that prompts a response for Coast Guard mission performance.

6.1.7 National Emergency Response Operations (NERO). The IDS supports these response efforts, such as the TWA Flight 800 disaster, Exxon Valdez, mass migrations, and world-wide DOD operations to include both small scale contingencies and major theater wars such as Desert Storm, etc. NERO are similar to the HIG in that they demand the timely deployment of appropriate IDS resources. The main difference between NERO and HIG is the unpredictability of the events. The duration, extent, and type of IDS resources needed requires maximum flexibility.

6.1.8 Near Real Time. Near real time is defined as when the elapsed time between transmission to reception is less than 30 seconds.

6.1.9 Open Systems. Open systems are those that enable properly engineered applications to be ported across many systems, to be able to interoperate with other applications on local and remote systems, and to interact with users in a style that facilitates user portability.

6.1.10 Real Time. Real time is defined as when the elapsed time between transmission to reception is less than 10 milliseconds.

6.1.11 Search and Rescue (SAR) AOR. Internationally recognized Maritime SAR Region boundaries as depicted in Figure 2.

6.1.12 Sustained presence. Where the duration of a mission is beyond the normal range of single crewed shore based boats, where either extended on-scene presence, or forward deployment is required in order to perform the mission. In some cases the duration is defined specifically in the System Performance Specification. Where not defined, the duration is to be maximized.

6.1.13 Targets of Interest (TOI). An object in the Deepwater AOR identified for mission prosecution as a result of classification based on characteristics and or other identification. Classification is mission specific.

6.2 List of Acronyms.

ACINT	Acoustic Intelligence
AOR	Area of Responsibility
AMIO	Alien Migrant Interdiction Operation
ASCM	Anti Ship Cruise Missile
AUTODIN	Automated Digital
AW	Air Warfare
CG COE	Coast Guard Common Operating Environment
CAMS	Communications Area Master Station
CAMSLANT	Communications Area Master Station Atlantic Area
CAMSPAC	Communications Area Master Station Pacific Area
CAT	Conformance Acceptance Test
CBW	Chemical & Biological Warfare
CEU	Civil Engineering Unit
CG	Coast Guard
CGAS	Coast Guard Air Station
CGDN	Coast Guard Data Network
COMMCEN	Communications Center
COMMSTA	Communications Station
CONREP	Continuous alongside underway Replenishment
CSCC	Coastal Sea Control Commander
CVN	(C) Carrier, (V) Fixed Wing, (N) Nuclear Powered
C2	Command and Control
C2W	Command and Control Warfare
C4I	Command, Control, Communication, Computers, and Intelligence
C4ISR	Command, Control, Communication, Computers, Intelligence, Surveillance, Reconnaissance
DF	Direction Find(ing)
DII COE	Defense Information Infrastructure Common Operating Environment
DOD	Department of Defense
ECM	Electronic Countermeasures
EEZ	Exclusive Economic Zone
EMCON	Emission Control
EMI/EMC	Electromagnetic Interface/Compatibility
ES/EA	Electronic Support/ Electronic Attack
ESD	Electrostatic Discharge
ESM	Electronic Surveillance Measures
ESU	Electronic Support Unit
E3	Electromagnetic Environmental Effects
FAA	Federal Aviation Administration
FAT	First Article Test

PAC	Pacific
PME	Peacetime Military Engagement
POD	Probability of Detection
POSD	Port Operations, Security and Defense
PQT/OT	Product Qualification Test/Operational Test
PSU	Port Security Unit
RATT	Radio Teletype
SAR	Search and Rescue
SIGINT	Signals Intelligence
SITOR	Simplex Teletype Over Radio
SPS	System Performance Specification
SUW	Surface Warfare
TCC	Transportable Communications Center
TOI	Targets of Interest
TRACEN	Training Center
UHF	Ultra High Frequency
USCG	United States Coast Guard
USW	Undersea Warfare
VERTREP	Vertical Replenishment
VHF	Very High Frequency
VTOL	Vertical Take-Off and Landing
WHEC	High Endurance Cutter
WMEC	Medium Endurance Cutter
WPB	Patrol Boat

High Interest Grids in Deepwater Mission Areas

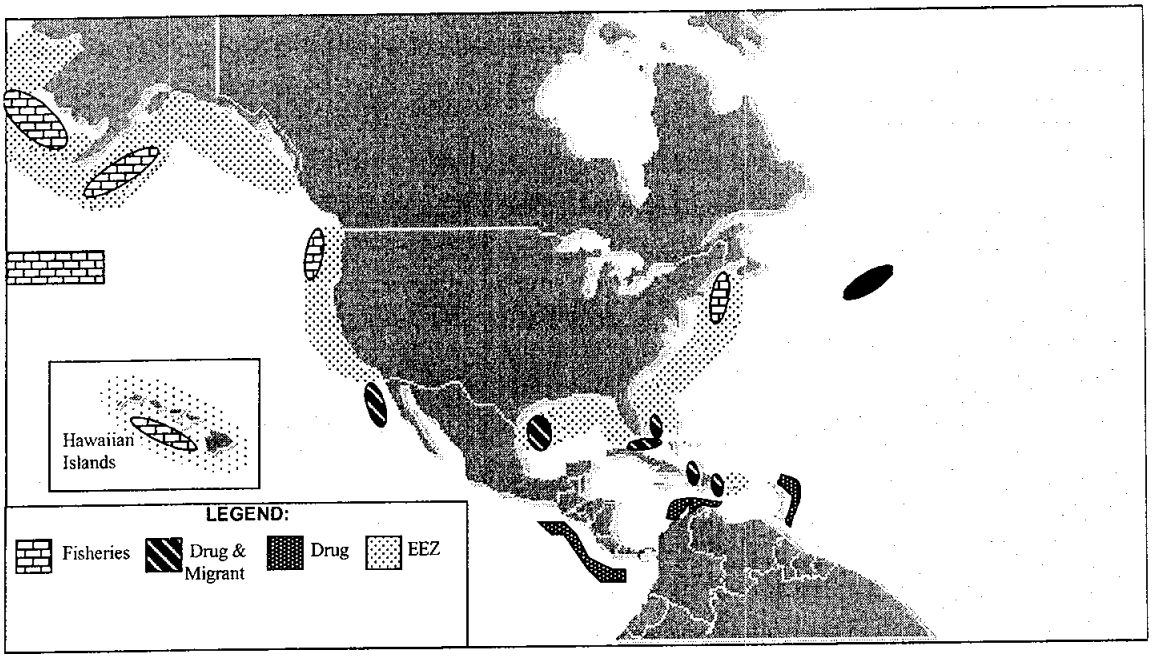

Figure 1

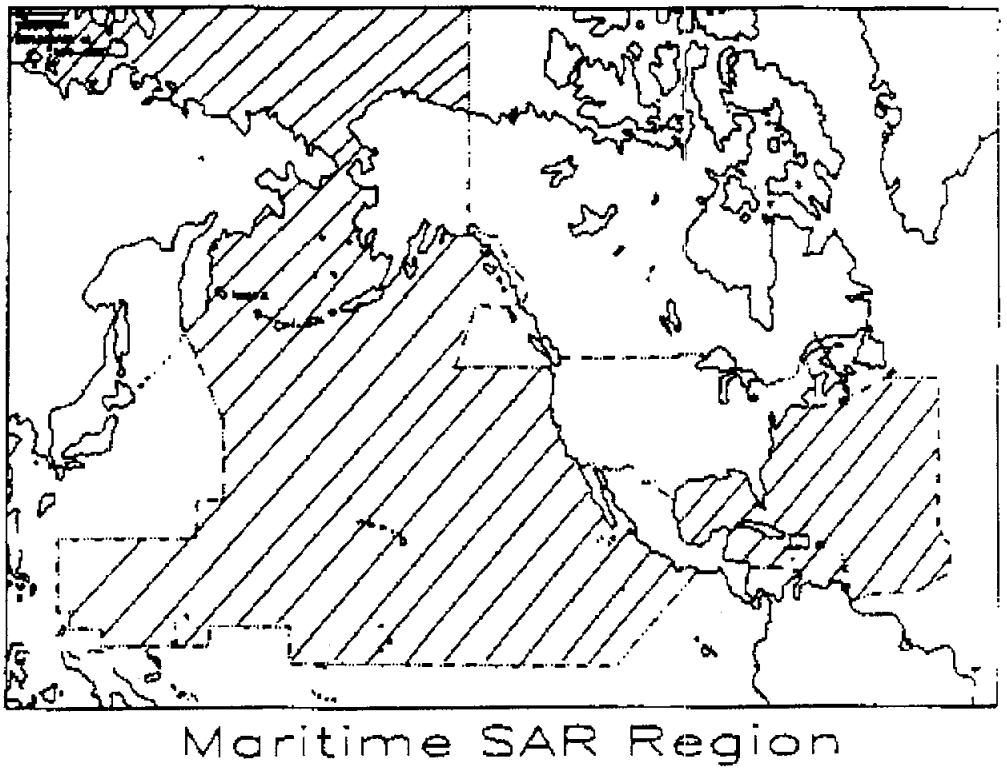

Figure 2