

Functional Area (SOW 3.1 – 3.22)	Contract No.	Description	Performer	Date Completed	Mission Areas For Which Function Was Performed
3.1 Research and Development (R&D) Support	SPO700-00-D-3180 D.O. 442; SubK #206604	<p>The ABSG team has a large staff of engineers, risk analysts, and naval architects available to evaluate routine and unusual designs and problems. We use state-of-the-art tools such as ANSIS, HECSALV, SAFEHULL, and SAFESHIP to evaluate ship designs and operational issues. We use tools such as AUTODYN to evaluate blast effects and progressive collapse. We established the U.S. standards for commercial safe ship design and operation, based on sound engineering principles and naval accident/ incident histories.</p> <p><u>Past Performance:</u> In recent years, ABS Consulting assisted the U.S. Coast Guard (USCG) R&amp;D Center in the development of risk-based decision-making methods – used now by the USCG to evaluate programs and operations and identify cost effective risk reduction measures. We also assisted the USCG R&amp;D Center and the Navy in using risk-based methods to evaluate the effectiveness of Underwater Port Security technologies and concepts for further development and implementation.</p>	ABS Consulting	Ongoing	Homeland Security and Force Protection
3.2 Engineering, Systems Engineering, and Process Engineering Support	N00033-03-D-8000	<p>Our team performs a broad spectrum of engineering and human factor disciplines capable of designing new naval systems and evaluation the capability for existing and or modified naval designs. The ABSG team has significant experience in developing/evaluating ship architectures and ship systems. Our team has reviewed numerous operations in the Navy/DoD complex, identified weaknesses, and suggested improvements. In the commercial arena, we have developed hundreds of design specifications for structures to comply with codes and thousands of procedures for the safe operation of facilities (e.g., weapons production, oil refinery operations, and equipment maintenance). The ABSG team has a large staff of engineers available across multiple disciplines such as naval architecture, industrial, electrical, mechanical engineering, and human factors specialists who can synthesize and evaluate concepts versus design requirements and can recommend a preferred concept. Our staff is thoroughly familiar with both standard design review processes and proactive hazard identification techniques (e.g., failure, modes, effects, and criticality analysis [FMECA], hazard and operability [HAZOP] analysis, fault trees) that enable us to efficiently evaluate the strengths and weaknesses of design alternatives.</p> <p><u>Past Performance:</u> For over a century, ABS has established classification rules for maritime assets that establish safe operating conditions and safe design standards for ships and ship systems. ABS daily evaluates ship designs and operations for conformance to safe, best practice. Our team partner, Herbert Engineering (HEC), is providing support (as a subcontractor) to ONR, Carderock Division for developing the preliminary design of a Seabasing ship.</p>	ABS	Ongoing	Ships and Ship Systems

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3.3 Modeling, Simulation, and Analysis Support	N00024-01-D-7023	<p>ABSG has a long history of the development of models for complex systems to forecast system performance under a variety of situations and to identify weaknesses in design. We routinely develop models of operating (and proposed) systems to simulate working environments and to identify potential problems. To support the Navy's modeling and simulation efforts we will use a broad base of tools in-house tools such as RiskMan and commercial off the shelf tools such as @Risk, MatLab, iThink, etc. to model and analyze system designs and predict where the system is more prone to problems. We have also developed customized tools for clients to use to evaluate their specific operations on a daily basis.</p> <p><u>Past Performance:</u> .ABSG currently is modeling antiterrorism/force protection (AT/FP) risks and costs for the Commander of Naval Installations Command (CNIC) to help identify cost effective measures for risk reduction by AT/FP capability area. ABSG has also modeled/simulated ferry transit operations in the San Francisco Bay area and for oil tanker transit operations for Chevron Oil to identify likely collision/allision events. Our team partner, MicroSystems Integration, currently supports the USCG's Operational Analysis Simulation Information Support (OASIS) Program and is the principal M&amp;S contractor for the Deepwater Program.</p>	MicroSystems Integration, Inc.	Ongoing	Ships and Ship Systems
3.5 System Design Documentation and Technical Data Support	N00033-03-D-8000	<p>One of ABSG's core business lines is the verification of ship designs and ship systems against standards and codes. The ABSG team has a large staff of engineers involved in design verification of ships and ship systems and field surveyors who inspect ships for conformance to Class Rules The ABSG team has extensive experience in the development of system design documentation for both the government and for commercial industry. We use both the government's industrial system design (ISD) process and our ISO-certified processes to ensure that system design documentation and technical support data are current and accurate.</p> <p><u>Past Performance:</u> For over 20 years, ABSG has developed detailed information in compliance with government requirements, documenting the design, technical specifications, and safety requirements for many elements of the Department of Energy's (DOE's) Y-12 weapons production complex. We also have personnel at over a dozen commercial industrial sites (e.g., oil and gas, manufacturing) preparing detailed operating and maintenance procedures.</p>	ABS Consulting	Ongoing	Ships and Ship Systems

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3.6 Software Engineering, Development, Programming, and Network Support	HSCG23-06-A-HCE002 – Enterprise Leadership Architecture (ELA)	<p>The ABSG team will support the Navy in its software engineering needs with a staff of engineers and programmers capable of planning, coding, testing, integrating, and supporting programs that are designed to the Navy's requirements. Our team has previously developed many software tools (e.g., MSRAM for analysis of maritime security risks for the USCG; HECSALV for analysis of ship salvage operations; HAZUS MH for FEMA that models natural hazard impacts across the U.S.). Our experience ranges from creating relatively small programs to address a particular client need to large GIS-based programs designed to analyze a large host of potential problems across the entire United States. With this depth of experience, we have the resources to efficiently create or modify software programs as may be needed by the Navy.</p> <p><u>Past Performance:</u> ABSG has created several large software tools for the USCG, including the MSRAM tool and the Enterprise Risk Management program. We are also a major contributor to the Federal Emergency Management Agency (FEMA) HAZard US (HAZUS) program and continue to maintain and support this software. ABSG and its team also created and support several commercial software products, such as EQECAT, HECSALV, SUPSALV, and POSSE.</p>	ABS Consulting	Ongoing	Homeland Security and Force Protection
3.7 Reliability, Maintainability, and Availability (RM&A) Support	GS-23F-0207L; Order #HSCGG1-95-F-3WK247; Requisition #24-05-G153WK247	<p>Another core capability of ABSG is developing RM&amp;A requirements, modeling complex, new system designs, and calculating system RM&amp;A performance characteristics. For over 30 years, ABSG has provided RM&amp;A services to a broad cross section of government agencies and commercial industries. We use tools such as FMECA, HAZOP, what-if, fault tree, reliability block diagrams, and event trees along with our extensive component failure data to estimate system and platform RM&amp;A performance and identify design deficiencies and critical parts. We also perform reliability-centered maintenance analyses to help optimize maintenance strategies and to help ensure life-cycle sustainment. We also offer all types of asset integrity management (AIM) services for all types of public/private vessels and associated shore infrastructure.</p> <p><u>Past Performance:</u> As part of its work in the DOE weapons complex, ABSG has performed RM&amp;A studies on many elements of the weapons production process. Working with our partner, ABS, we also developed a guidance document for evaluating the availability of critical ship systems</p>	ABS Consulting	4/17/2006	Ships and Ship Systems

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3.8 Human Factors, Performance and Usability Engineering Support	0138-001-01	<p>Our experience in the human factors (HF) and human systems integration (HSI) areas includes performing HF analyses using hazard identification techniques (e.g., HAZOP, checklists) to identify error-likely situations and estimate the likelihood of serious operator errors using a variety of techniques (such as the Technique for Human Error Rate Prediction method) and applying HSI to a variety of Navy acquisitions. We have on staff several HF subject matter experts (SMEs) familiar with these tools and with the fields of ergonomics and anthropometrics. We also use the ISD process to identify and document the knowledge, skills, and abilities required of personnel to perform their job requirements.</p> <p><u>Past Performance:</u> Our team partner, Carlow International, has provided HSI support to the Navy for development of Operator Guidance Displays for DDG 1000 and the LCS Acquisition. In addition, Carlow personnel have supported NAVSEA 03 in the development of several HSI guides, training manuals, templates, and certification plans. Our partner ABS has published Guidance Documents on Human Factors and Human Reliability in maritime operations.</p>	Carlow International	Ongoing	Ships and Ship Systems
3.9 System Safety Engineering Support	410000075; SubK #7058-ABS	<p>ABSG and its partners are internationally known for system safety engineering. Our broad base of experience in system safety across numerous industries (e.g., oil and gas, manufacturing, government weapons) and our commercial software (e.g., <i>HazardReview Leader</i>) enables us to systematically and efficiently identify potential safety problems. We have extensive knowledge in the codes and standards that establish system safety for both naval vessels and industrial systems.</p> <p><u>Past Performance:</u> ABS establishes the Class Rules (system safety standards) for all U.S.-classed commercial naval vessels. ABSG pioneered many of the analysis tools used today to analyze and manage system safety throughout the life cycle of a system. For example, ABSG authored the CCPS Guidelines book <i>Process Hazards Evaluation Methods for the Chemical Process Industry with Worked Examples</i> – a system safety guidance document that is referenced in OSHA safety regulations. For over 20 years, the ABSG team has also performed and prepared Documented Safety Analyses for the DOE Y-12 weapons complex.</p>	ABS Consulting	Ongoing	Relevant to Ordnance Safety

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3.10 Configuration Management (CM) Support	HSCG23-06-A-HCE002 (ELA)	<p>For the past 15 years, ABSG has helped design configuration management systems for the chemical and the oil and gas industries. We have helped companies comply with OSHA and EPA requirements that require them to have CM systems by designing such management systems when none existed and by auditing companies with such systems to verify compliance with the regulations. Our understanding of the elements of CM and how to monitor CM metrics will help ensure that the Navy maintains thorough, robust systems.</p> <p><u>Past Performance:</u> ABSG has developed CM systems for dozens of industrial clients and we have audited CM systems as required by OSHA regulations for hundreds of companies. We authored the Chemical Manufacturers Association’s <i>Guideline to Change Management</i> – an industry guidance document that shows companies how to create and maintain an effective CM system. And as part of our training division, we offer several courses that include sections on CM.</p>	ABS Consulting	Ongoing	Homeland Security and Force Protection
3.11 Quality Assurance (QA) Support	N00421-05-R-0125	<p>ABSG has rich history of operating in a quality environment and is an ISO 9001:2000-certified company. Our sister company, ABS QE, has helped hundreds of companies instill quality through its role as an ISO quality registrar, auditor, and a quality training provider. It is thoroughly familiar with the methods and processes used to help ensure quality in the design, development, fabrication, and manufacture of products. ABS QE is a Board-certified ISO 9001:2000 Registrar that has certified over 3,000 firms around the world to ISO standards. Our team will apply proven QA best practices in engineering and analytical disciplines to assist the Navy in establishing and/or maintaining quality programs, operations, products and services. We offer a full range of services in the quality management field, including TQM, Lean/Six Sigma, Statistical Process Control, and Design of Experiments.</p> <p><u>Past Performance:</u> ABS QE performs hundreds of ISO quality audits annually on all types of systems and manufacturing processes. ABS QE also provides “quality system” training to its client base. Recent projects include management system quality audits at the Naval Air Depot, Cherry Point; FAA program reviews; and Lean Six Sigma training for the U.S. Army Material Command.</p>	ABS Quality Evaluations (QE)	Ongoing	NAVAIR Cherry Point – Quality Audits; Quality and Material Readiness
3.13 Inactivation and Disposal Support.	N65540-02-D-0042 (sub to AMSEC LLC)	<p>ABSG, ABS, and HEC bring to our team decades of experience in ship inactivation and disposal. We will leverage our experience in salvage operations to provide the Navy with a capable support team that thoroughly understands the issues and requirements of inactivating equipment. ABSG also has extensive experience with the applicable environmental regulations in this area.</p> <p><u>Past Performance:</u> HEC has an array of software (e.g., SUPSALV, HECSALV, and POSSE) used by the Navy, USCG, MARAD, and MSC for salvage engineering analyses. ABSG developed a guide, <i>ABSG Guidance for the Lay-up of Vessels</i> (contained in our Steel Rules) that demonstrates our understanding of vessel inactivation. We also provide the USCG with salvage and damage assessment services in support of effectively securing the damaged assets.</p>	Herbert Engineering	05/2006	NSWCCD

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3.14 Interoperability/ Test & Evaluation/ Trial Support	N00024-03-D-6606; SubK #920289 (JEFX08)	<p>Mission success requires the operation and interoperability of many systems to accomplish a common goal. We have helped design test protocols to ensure systems and experiences perform as intended. We have a history of assisting companies with pre-start up safety reviews to ensure safe and reliable operation of equipment being put back into service. We will supply the necessary disciplines to ensure that platforms, systems, and warfighting capabilities have been properly tested and that they meet joint interoperability requirements across all periods of their lifecycle. As part of its standard services, ABS performs field inspections and certifies tests and evaluations of ships (both structural and operational) and ship systems to ensure equipment performs to specifications. ABSG also has ASME-certified inspectors who check and verify the service condition of equipment used in naval operations and in shipyards. Additionally, we have on staff operations research professionals who specialize in Test, Evaluation, Exercises, and Experimentation for military applications.</p> <p><u>Past Performance:</u> ABSG currently supports joint expeditionary forces field exercises (JIETF) of the Navy through our ongoing work with Johns Hopkins University Applied Physics Laboratory</p>	ABS Consulting	Ongoing	Force Level Warfare Systems
3.16 Logistics Support	N62472-02-C-0018	<p>An important element to the success of any system design is the proper planning of (1) acquisition logistics to ensure that the system can be cost effectively supported through its lifecycle and (2) the necessary infrastructure elements (identify, develop, and acquisition) needed to support the system during initial fielding, operation, and maintenance. Our teaming partner HPA, LLC, the largest marine engineering consultancy in the United States, has over 350 professionals to support the Navy's needs in this area. HPA offers a full range of engineering services required for the inspection, analysis, planning, permitting, design, and construction phase support of Navy projects. Through HPA, our work for the Navy includes a global underwater facility inspection and rehabilitation contract through the NFESC. HPA is also engaged in the redevelopment of the Norfolk Naval Shipyard, including the planning of the 2020 Vision Statement outlining the facilities required to meet the requirements of new naval vessels architecture and expected mission. HPA is now engaged in the design and management of construction of these new facilities.</p>	HPA, LLC	Ongoing	Surface Warfare Logistics and Maintenance

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3.18 Training Support	HHM40205M04 39	<p>The ABSG team has offered both technical and professional training for decades. Our team has trained over 100,000 personnel in just the past 20 years. We have experienced instructors who provide practical, “hands-on” training in hundreds of subjects. Our engineers use the ISD process to develop and continually improve courses. Our professional staff includes editors, programmers, and graphics artists who create very professional, state-of-the-art training packages. Our team has a full array of subject-matter expertise and ISD capability to develop and deliver blended learning training solutions via a variety of methods and media. Our goal is to enhance individual and organizational performance through a multimedia blended-learning approach utilizing traditional instructor-led training, Web-centric knowledge management, e-learning, intelligence and task support delivered when and where required. Using leading e-learning technology, our team develops Sharable Content Object Reference Model (SCORM) conformant/compliant curriculum to create multimedia presentations, Web-casts, and animation used in Reusable Learning Objects (RLO). Knowledge checks are employed throughout the courseware to reinforce the learning/enabling objectives and an electronic training jacket monitors student progress and records course completion, attendance, and grades automatically into a command database.</p> <p>Technical Training Support (SOW 3.18.1) ensures that the workforce has the skills to safely operate and maintain warfighting capabilities. ABSG operates several professional training programs with courses designed to equip the seaman with hands-on skills in areas such as safe work practices, naval operations, hazard identification, quality management, and RM&amp;A. We routinely work with clients to develop training materials and exercises that “fit the need”.</p> <p>Professional Development and Training Support (SOW 3.18.2) provides the workforce with the skills needed to development their leadership and management capabilities for running larger programs. As with our technical training, the ABSG team has a large complement of SMEs who are excellent instructors capable of supporting the Navy’s professional development and training support needs.</p> <p><u>Past Performance:</u> The U.S. Navy will benefit from receiving professional materials and instructors who deliver effective learning solutions. Several organizations within the ABSG team (ABSG, ABS, McMunn Associates, Unitech, BayFirst) provide technical and professional training across a broad variety of topics. For example, MAI is creating the Joint Intelligence Basic Online Core Curriculum (JIBOC) for the Defense Industry Agency’ JIVU. JIBOC is an on-demand, real-time, self paced series of Web-enabled, asynchronous computer-based courses consisting of 58 lessons/376 hours supporting all basic intelligence analyst training for the Navy, Air Force, Marines, USCG, and Army. MAI supports DoD training efforts through traditional instructor-led courses with 18 instructors deployed throughout the world.</p>	McMunn Associates, Inc.	9/8/2006	FORCEnet Activities

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3.19 In-Service Engineering, Fleet Introduction, Installation and Checkout Support	GS-10F-0218K	The ABSG team includes a large complement of engineers, naval architects, and field surveyors to support the Navy's in-service engineering needs. ABS routinely evaluates ship design changes to determine if they are structurally sound and compliant with code/standard/good engineering practice. HEC can also support this service area, using state-of-the-art engineering tools such as AQWA and ANSYS FEA, to perform evaluations. We also have field surveyors experienced in reviewing fabrication, construction, assembly, and maintenance of ships and ship systems/equipment. We will leverage this depth of experience to help the Navy maintain and modernize its warfighting capabilities. <u>Past Performance:</u> ABS currently provides engineering support to the Navy under contract N00033-03-D-8000	ABS Consulting	11/17/2006	Ships and Ship Systems
3.20 Program Support	ED04CO169	For the past decade, ABSG has supported the USCG in areas that now fall under its (1) Enterprise Leadership Architecture (ELA) activities, developing tools, programs, and processes to cost-effectively improve a multitude of USCG programs and (2) its Maritime Security Program, providing support to a variety of security projects as needed. ABSG has also provided program support for the DOE safety analysis needs at its Oak Ridge complex for over 20 years. <u>Past Performance:</u> Under ABSG's USCG ELA contract and its G-PCP contract, it has provided the USCG with personnel possessing a variety of skills to support specific program needs. Similarly, ABSG is supporting the Navy CNIC's risk assessments of AT/FP capabilities on an ongoing basis. Team partner, BayFirst, is currently providing program support to the Veterans Health Administration, the Department of Education, and the DHS. The ABSG team is focused on providing the Navy with the right people to meet the current needs of a program. The Navy will benefit from the experience of the ABSG team's qualified staff who are dedicated to program mission fulfillment – on budget and on schedule	BayFirst	Ongoing	Integrated Business & Automated Information Systems
3.21 Functional and Administrative Support – Most Efficient Organization (MEO) Teaming Support	HSCG23-06-A-HCE002 (ELA)	As it continually seeks to become a more efficient organization, the Navy will seek to improve its organizational structure, infrastructure, financial management, process engineering, and business activities. To achieve an MEO, one must understand the missions/goals of the many functions in the Navy; how they interact; and the resources/readiness/ responses required to achieve mission success. These factors can then be combined under Enterprise Risk Management architecture to determine where recommendations for technology infusion, capital investment, organizational and/or staffing changes, and lean performance execution may be cost effective in improving (or not significantly impairing) mission success. <u>Past Performance:</u> ABSG, through the development of tools and processes and through performing specific studies, has assisted the USCG in moving towards becoming an MEO.	ABS Consulting	Ongoing	Homeland Security and Force Protection; Integrated Business & Automated Information Systems



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3.22 Public Affairs and Multimedia Support	HHM40205A00017	<p>The ABSG team, through its partner MAI, will provide this support. MAI has the staff experience and resources needed to develop, implement, and execute command communication strategies. Its staff has performed stakeholder polling to understand their concerns/needs, developed strategic communication plans, prepared speeches and multimedia presentations tuned to address target audiences, and prepared publications that assist in the communication of the client's message.</p> <p><u>Past Performance:</u> MAI has provided extensive onsite and offsite support to the staff of a U.S. government intelligence organization in areas of command strategic communication and integration of media with analysis. MAI structured the implementation and execution of command mission planning and tactics for employment in the qualification of a variety of private sector specialists. MAI created specific technical documentation and instructional technology including textbooks, workshops, computer-based training purpose built for the audience, and interactive Web pages. Its support to command goals included developing strategic development plans with metrics, and providing technical writing services; brand development of instructional technology; visual media using still, video, and multimedia; and all aspects of bridging the command workflow with the end-user requirements.</p>	McMunn Associates, Inc.	07/25/06 - 07/24/07	National Needs