

**Quality Assurance Surveillance Plan (QASP)
R&D Services for Chemical/Materials R&D
and Sensors/Systems Development**

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Quality Assurance Surveillance Plan (QASP)

R&D Services for Chemical/Materials R&D and Sensors/Systems Development

1 Vision

Advancement of the frontiers of synthetic chemistry and materials science through research and development, development of definitive solutions to Navy needs in areas of critical material deficiencies, and the transition of that work to the field.

2 Mission

The Chemistry Division conducts basic research, applied research, and development studies in the broad fields of diagnostics, dynamics, synthesis, materials, surface/interfaces, environment, combustion, and fuels. Specialized programs currently within these fields include the synthesis and characterization of organic and inorganic materials, coatings, composites, nondestructive evaluation, surface/interface modification and characterization, nanometer structure science/technology, chemical vapor processing, tribology, solution and electrochemistry, mechanisms and kinetics of chemical processes, analytical chemistry, theoretical chemistry, decoy materials, radar absorbing materials /radar-absorbing structures(RAM/RAS) technology, chemical/biological warfare defense, atmosphere analysis and control, environmental remediation and protection, personnel protection, and safety and survivability.

In areas relevant to this contract, the Division has a mission to advance the frontiers of synthetic chemistry and materials science, and to provide definitive solutions to Navy needs in areas of critical material deficiencies. In addition, the Division provides direct support of current/future fleet concerns, and provides long-term engineering solutions and evaluation of materials for improved performance, cost savings, and life-cycle management. Support includes expertise in areas of seawater cathodic protection design, biofouling mitigation/antifouling coatings, marine coating development/qualification/evaluation, and material exposure testing/evaluation/certification. This work is applied to both short-range Navy problems, environmental issues of both DOD and national concern, and the long-range development of scientific expertise and knowledge relevant to future Navy and DOD missions.

3 Purpose

This Quality Assurance Surveillance Plan (QASP) is a government-developed document used to determine if the contractor's performance meets the performance standards contained in the contract. The QASP establishes procedures on how this assessment/inspection process will be conducted. It provides the detailed process for a continuous oversight process:

What will be monitored
How monitoring will take place
Who will conduct the monitoring
How monitoring efforts and results will be documented

The contractor is responsible for implementing and delivering performance that meets contract standards using its Quality Control Plan. The QASP provides the structure for the government's surveillance of the contractor's performance to assure that it meets contract standards. It is the government's responsibility to be objective, fair and consistent in evaluating contractor performance.

The QASP is not part of the contract nor is it intended to duplicate the contractor's quality control plan. This QASP is a living document. Flexibility in the QASP is required to allow for an increase or decrease in the level of surveillance necessary based on contractor performance.

The government may provide a copy of the QASP to the contractor to facilitate open communication. In addition, the QASP should recognize that unforeseen or uncontrollable circumstances might occur that are outside the control of the contractor. Bottom line, the QASP should ensure early identification and resolution of performance issues to minimize impact on mission performance.

4 Authority

Authority for issuance of this QASP is provided under Part 46 of the Federal Acquisition Regulation, Inspection of Services clauses, which provide for inspection, acceptance and documentation of the service called for in the contract or order. This acceptance is to be executed by the contracting officer or a duly authorized representative.

5 Roles and Responsibilities

The following personnel shall oversee and coordinate surveillance activities.

5.1 Contracting Officer (KO)

The KO shall ensure performance of all necessary actions for effective contracting, ensure compliance with the contract terms, and shall safeguard the interests of the United States in the contractual relationship. The KO shall also ensure that the contractor receives impartial, fair, and equitable treatment under this contract. Determine and document the final assessment of the contractor's performance in the government's past performance tracking system.

Assigned KO: Ms. Susan Wilson
Organization or Agency: Naval Research Laboratory
Telephone: 202-767-0666
Email: susan.wilson@nrl.navy.mil

5.2 Contracting Specialist (CS)

The CS will be the KO's primary assistant in the execution of the contract, and will be the contractor's primary point of contact for contractual matters. The COR is not empowered to make any contractual commitments or to authorize any contractual change on the Government's behalf.

Assigned CS: Ms. Patricia Woodhouse
Organization or Agency: Naval Research Laboratory
Telephone: 202-404-2074
Email: patricia.woodhouse@nrl.navy.mil

5.3 Contracting Officer's Representative (COR)

The COR is responsible for providing continuous technical oversight of the contractor's performance. The COR uses the QASP to conduct the oversight/surveillance process. The COR shall keep a Quality Assurance file that accurately documents the contractor's actual performance. The purpose is to ensure that the contractor meets the performance standards contained in the contract. The COR is responsible for reporting early identification of performance problems to the KO. The COR is required to provide an annual performance assessment to the KO which will be used in documenting past performance. The QASP is the primary tool for documenting contractor performance. The COR is not empowered to make any contractual commitments or to authorize any contractual change on the Government's behalf.

Assigned COR: Dr. Richard Colton
Organization or Agency: Naval Research Laboratory
Telephone: 202-767-3026
Email: rich.colton@nrl.navy.mil

5.4 Other Key Government Personnel

This may include performance monitors, inspectors, technical experts, or others who provide information that helps the COR monitor contractor performance.

5.5 Contractor Representatives

The following employees of the contractor serve as the contractor's Program Manager and Task Manager for this contract. (Complete this section after the contract award)

Program Manager - <upon award, enter name>
Telephone: <enter number>
Email: <enter address>

Task Manager - <upon award, enter name>
Telephone: <enter number>
Email: <enter address>

Other Key Contract Personnel - <upon award, enter name or delete these lines if not applicable>

Title: <enter title>
Telephone: <enter number>
Email: <enter address>

6 Performance Requirements and Method of Surveillance

This section describes the special requirements for this effort. The following subsections provide details of various considerations on this effort.

6.1 Contract Surveillance

The goal of the QASP is to ensure that contractor performance is effectively monitored and documented. The COR's contribution is their professional, non-adversarial relationships with the KO, PM and the contractor, which enables positive, open and timely communications. The foundation of this relationship is built upon objective, fair, and consistent COR evaluations of contractor performance against contract requirements. The COR uses the methods contained in this QASP to ensure the contractor is in compliance with contract requirements. The COR function is responsible for a wide range of surveillance requirements that effectively measure and evaluate the contractor's performance. Additionally, this QASP is based on the premise that the contractor, not the government, is responsible for management and QC/QA actions to successfully meet the terms of the contract.

6.2 Surveillance Matrix

The Surveillance Matrix (Attachment 1) is the list of performance objectives and standards that must be performed by the contractor. This matrix details the method of surveillance the COR will use to validate and inspect these performance elements. Inspection of each element will be documented in the COR file.

Performance objectives define the desired outcomes. Performance Standards define the level of service required under the contract to successfully meet the performance objective. The inspection methodology defines how, when, and what will be assessed in measuring performance. The Government performs surveillance, using this QASP, to determine the quality of the contractor's performance as it relates to the performance element standards. The PRS should be used to form the foundation of the COR's inspection checklist.

In evaluating the quality of contractor's performance, the following performance ratings may be used.

Performance Rating	Criteria
Excellent / Outstanding	Performance meets contractual requirements and exceeds many to the government's benefit. The contractual performance of the element or sub-element being assessed was accomplished with no problems and contractor actions were highly effective.
Very Good	Performance meets contractual requirements and exceeds some to the government's benefit. The contractual performance was accomplished with few minor problems for which corrective actions taken by the contractor were effective.
Good	Performance meets contractual requirements. The contractual performance contains some minor problems for which corrective actions taken by the contractor were satisfactory.
Marginal	Performance does not meet some contractual requirements. The contractual performance reflects a serious problem for which the contractor has not yet identified corrective actions. The contractor's proposed actions appear marginally effective or were not fully implemented.
Unsatisfactory	Performance does not meet most contractual requirements and recovery is not likely in a timely manner. The contractual performance contains serious problem(s) for which the contractor's corrective actions appear or were ineffective.

Appendix 1 - Surveillance Matrix

Statements	Standards/AQLs	Inspections	Ratings
3.1 Conduct Basic and Applied Research and Development.			
3.1.1 The contractor shall conduct basic and applied research and development in chemistry, materials, sensors, and systems. <u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim progress reports as required	a) Publication of applicable books, journal articles, or conference papers AQL: High quality, publishable research results b) Timely AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met	What: Research results How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards	
3.1.2 The contractor shall conduct experimental and theoretical studies in controlled combustion, deflagration, and detonation processes. <u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report	a) Publication of applicable books, journal articles, or conference papers AQL: High quality, publishable research results b) Timely AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met	What: Research results How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards	

<p>A003 Contract Summary Technical Report A004 Oral briefings and other interim progress reports as required</p>			
<p>3.1.3 The contractor shall perform fundamental research on non-energetic materials.</p> <p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim progress reports as required</p>	<p>a) Publication of applicable books, journal articles, or conference papers AQL: High quality, publishable research results b) Timely AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met</p>	<p>What: Research results How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards</p>	
<p>3.1.4 The contractor shall conduct basic and applied research centering on design, synthesis, and validation of nanostructured materials for energy generation, storage and conversion (batteries, capacitors, fuel cells) and filtration of vapor-phase toxins.</p> <p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim</p>	<p>a) Publication of applicable books, journal articles, or conference papers AQL: High quality, publishable research results b) Timely AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met</p>	<p>What: Research results How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards</p>	

progress reports as required			
<p>3.1.5 The contractor shall perform research on fuels chemistry.</p> <p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim progress reports as required</p>	<p>a) Publication of applicable books, journal articles, or conference papers AQL: High quality, publishable research results b) Timely AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met</p>	<p>What: Research results How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards</p>	
<p>3.1.6 The contractor shall research alternative fuels, efficient energy and power conversion, energy storage, and portable power.</p> <p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim progress reports as required</p>	<p>a) Publication of applicable books, journal articles, or conference papers AQL: High quality, publishable research results b) Timely AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met</p>	<p>What: Research results How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards</p>	
<p>3.1.7 The contractor shall perform research on physical, electrochemical, and environmental behavior of materials in a marine environment.</p>	<p>a) Annual publication of an applicable book, journal article, or conference paper AQL: High quality, publishable research results b) Timely</p>	<p>What: Research results How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards</p>	

<p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim progress reports as required</p>	<p>AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met</p>		
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Statements	Standards/AQLs	Inspections	Ratings
<p>3.2 Characterization of materials.</p>		<p>Standard(s): Inspection applies to all standards</p>	
<p>3.2.1 The contractor shall characterize electronic and geometric structure, mass, reactivity, molecular weight, or optical/electronic properties for materials.</p> <p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim progress reports as required</p>	<p>a) Materials Characterized AQL: 90% of prescribed characteristics fully determined and documented b) Timely AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met</p>	<p>What: Material Characterizations How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards</p>	
<p>3.2.2 The contractor shall use characterization tools for materials surface analysis, growth, and micro/nanofabrication.</p>	<p>a) Materials Characterized AQL: 90% of prescribed characteristics fully determined and documented b) Timely</p>	<p>What: Material Characterizations How: Inspection Who: COR or designated representative Standard(s): Inspection applies to</p>	

<p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim progress reports as required</p>	<p>AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met</p>	<p>all standards</p>	
<p>3.2.3 The contractor shall conduct studies of fundamentally new approaches for characterization and analysis of material structures and surfaces.</p> <p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim progress reports as required</p>	<p>a) Materials Characterized AQL: 90% of prescribed characteristics fully determined and documented b) Timely AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met</p>	<p>What: Material Characterizations How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards</p>	
<p>3.2.4 The contractor shall characterize materials for DoD applications.</p> <p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report</p>	<p>a) Materials Characterized AQL: 90% of prescribed characteristics fully determined and documented b) Timely AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met</p>	<p>What: Material Characterizations How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards</p>	

A004 Oral briefings and other interim progress reports as required			
<p>3.2.5 The contractor shall characterize non-lithographic functional patterns comprised of metal, dielectrics, polymers, and/or biomolecules.</p> <p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim progress reports as required</p>	<p>a) Materials Characterized AQL: 90% of prescribed characteristics fully determined and documented b) Timely AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met</p>	<p>What: Material Characterizations How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards</p>	

Statements	Standards/AQLs	Inspections	Ratings
<p>3.3 Design, synthesis, processing, and test of materials.</p>		<p>Standard(s): Inspection applies to all standards</p>	
<p>3.3.1 The contractor shall design, synthesize, and test materials for DoD applications.</p> <p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim</p>	<p>a) Novel materials developed AQL: Development sufficient for transition to the next prescribed state (i.e. funding category, test environment, or product development phase) b) Timely AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met</p>	<p>What: Materials How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards</p>	

<p>progress reports as required</p>			
<p>3.3.2 The contractor shall conduct research of non-lithographic techniques to fabricate 2D and 3D structures comprised of metal, dielectrics, polymers, and/or biomolecules for use in micro/nanoelectronic systems.</p> <p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim progress reports as required</p>	<p>a) Novel materials developed AQL: Development sufficient for transition to the next prescribed state (i.e. funding category, test environment, or product development phase) b) Timely AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met</p>	<p>What: Materials How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards</p>	
<p>3.3.2.1 The contractor shall build proof of concept micro/nanoelectronic components and devices using non-lithographic techniques assessed in preceding paragraph.</p> <p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim progress reports as required</p>	<p>a) Novel materials developed AQL: Development sufficient for transition to the next prescribed state (i.e. funding category, test environment, or product development phase) b) Timely AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met</p>	<p>What: Materials How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards</p>	

<p>3.3.2.2 The contractor shall test and evaluate novel non-lithographic processing approaches to digital micro/nanofabrication of micro/nanoelectronic devices and systems.</p> <p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim progress reports as required</p>	<p>a) Novel materials developed AQL: Development sufficient for transition to the next prescribed state (i.e. funding category, test environment, or product development phase) b) Timely AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met d) Test or evaluation report completed AQL: Fully documents technical results of test or evaluation</p>	<p>What: Materials How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards</p>	
<p>3.3.2.3 The contractor shall develop new materials for fabrication of 2D and 3D micro/nanostructures with unique properties and behavior.</p> <p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim progress reports as required</p>	<p>a) Novel materials developed AQL: Development sufficient for transition to the next prescribed state (i.e. funding category, test environment, or product development phase) b) Timely AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met</p>	<p>What: Materials How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards</p>	
<p>3.3.2.4 The contractor shall develop novel</p>	<p>a) Novel materials developed AQL: Development sufficient for</p>	<p>What: Materials How: Inspection</p>	

<p>methods for fabrication of 2D and 3D micro/nanostructures.</p> <p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim progress reports as required</p>	<p>transition to the next prescribed state (i.e. funding category, test environment, or product development phase)</p> <p>b) Timely AQL: 90% of Task schedule objectives met</p> <p>c) Cost effective AQL: 95% of Task cost objectives met</p>	<p>Who: COR or designated representative Standard(s): Inspection applies to all standards</p>	
<p>3.3.3 The contractor shall develop and test new fuels suitable for use by the U.S. Navy's ships and aircraft.</p> <p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim progress reports as required</p>	<p>a) Novel materials developed AQL: Development sufficient for transition to the next prescribed state (i.e. funding category, test environment, or product development phase)</p> <p>b) Timely AQL: 90% of Task schedule objectives met</p> <p>c) Cost effective AQL: 95% of Task cost objectives met</p>	<p>What: Materials How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards</p>	
<p>3.3.3.1 The contractor shall conduct tests to determine the properties and stability of traditional Navy mobility fuels</p> <p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report</p>	<p>a) Novel materials developed AQL: Development sufficient for transition to the next prescribed state (i.e. funding category, test environment, or product development phase)</p> <p>b) Timely AQL: 90% of Task schedule objectives met</p>	<p>What: Materials How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards</p>	

<p>A003 Contract Summary Technical Report A004 Oral briefings and other interim progress reports as required</p>	<p>c) Cost effective AQL: 95% of Task cost objectives met</p>		
<p>3.3.3.2 The contractor shall develop, test, and certify fuels produced from non-petroleum sources.</p> <p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim progress reports as required</p>	<p>a) Novel materials developed AQL: Development sufficient for transition to the next prescribed state (i.e. funding category, test environment, or product development phase) b) Timely AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met</p>	<p>What: Materials How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards</p>	
<p>3.3.4 The contractor shall provide research and engineering support to develop and field test materials to control anti-fouling, adhesion, friction, wear and corrosion.</p> <p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim progress reports as required</p>	<p>a) Novel materials developed AQL: Development sufficient for transition to the next prescribed state (i.e. funding category, test environment, or product development phase) b) Timely AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met</p>	<p>What: Materials How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards</p>	

Statements	Standards/AQLs	Inspections	Ratings
<p>3.4 Design, fabrication, and test of sensors and systems in the laboratory and/or field.</p>		<p>Standard(s): Inspection applies to all standards</p>	
<p>3.4.1 The contractor shall design, fabricate and test chemical and biological sensors and systems (hardware and software) to detect, identify and quantify single-component and/or mixtures of analytes in gas, liquid or solid forms as applied to the detection of drugs of abuse, explosives, pollutants and other environmental contaminants, pathogenic organisms, chemical/biological warfare agents, and other analytes.</p> <p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim progress reports as required</p>	<p>a) New sensors and systems developed AQL: Development sufficient for transition to the next prescribed state (i.e. funding category, test environment, or product development phase) b) Timely AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met</p>	<p>What: Sensors and systems How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards</p>	
<p>3.4.1.1 The contractor shall support the development of simulants and training aids based on chemical and biological sensors and systems.</p>	<p>a) New sensors and systems developed AQL: Development sufficient for transition to the next prescribed state (i.e. funding category, test</p>	<p>What: Sensors and systems How: Inspection Who: COR or designated representative Standard(s): Inspection applies to</p>	

<p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim progress reports as required</p>	<p>environment, or product development phase) b) Timely AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met</p>	<p>all standards</p>	
<p>3.4.1.2 The contractor shall miniaturize analytical and bioanalytical tools to meet Navy requirements.</p> <p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim progress reports as required</p>	<p>a) New sensors and systems developed AQL: Development sufficient for transition to the next prescribed state (i.e. funding category, test environment, or product development phase) b) Timely AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met</p>	<p>What: Sensors and systems How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards</p>	
<p>3.4.2 The contractor shall support scientific computing activities.</p> <p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report</p>	<p>a) New sensors and systems developed AQL: Development sufficient for transition to the next prescribed state (i.e. funding category, test environment, or product development phase) b) Timely AQL: 90% of Task schedule objectives met</p>	<p>What: Sensors and systems How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards</p>	

<p>A004 Oral briefings and other interim progress reports as required</p>	<p>c) Cost effective AQL: 95% of Task cost objectives met</p>		
<p>3.4.2.1 The contractor shall support scientific computing activities associated with data acquisition, measurements, data processing and graphics.</p> <p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim progress reports as required</p>	<p>a) New sensors and systems developed AQL: Development sufficient for transition to the next prescribed state (i.e. funding category, test environment, or product development phase) b) Timely AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met</p>	<p>What: Sensors and systems How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards</p>	
<p>3.4.2.2 The contractor shall support scientific computing activities associated with instrument control, networking and communications.</p> <p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim progress reports as required</p>	<p>a) New sensors and systems developed AQL: Development sufficient for transition to the next prescribed state (i.e. funding category, test environment, or product development phase) b) Timely AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met</p>	<p>What: Sensors and systems How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards</p>	
<p>3.4.2.3</p>	<p>a) New sensors and systems</p>	<p>What: Sensors and systems</p>	

<p>The contractor shall support scientific computing activities associated with data fusion, multivariate analysis, and modeling and simulation.</p> <p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim progress reports as required</p>	<p>developed AQL: Development sufficient for transition to the next prescribed state (i.e. funding category, test environment, or product development phase) b) Timely AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met</p>	<p>How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards</p>	
<p>3.4.2.3.1 The contractor shall apply artificial intelligence techniques to data interpretation problems associated with hazardous material detection and improved situational awareness.</p> <p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim progress reports as required</p>	<p>a) New sensors and systems developed AQL: Development sufficient for transition to the next prescribed state (i.e. funding category, test environment, or product development phase) b) Timely AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met</p>	<p>What: Sensors and systems How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards</p>	
<p>3.4.2.3.2 The contractor shall analyze sensor array data using multivariate mathematical and statistical methods, such as pattern recognition</p>	<p>a) New sensors and systems developed AQL: Development sufficient for transition to the next prescribed state (i.e. funding category, test</p>	<p>What: Sensors and systems How: Inspection Who: COR or designated representative Standard(s): Inspection applies to</p>	

<p>algorithms, neural networks, and machine vision.</p> <p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim progress reports as required</p>	<p>environment, or product development phase) b) Timely AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met</p>	<p>all standards</p>	
<p>3.4.2.3.3 The contractor shall develop methods for fusion of disparate data sources.</p> <p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim progress reports as required</p>	<p>a) New sensors and systems developed AQL: Development sufficient for transition to the next prescribed state (i.e. funding category, test environment, or product development phase) b) Timely AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met</p>	<p>What: Sensors and systems How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards</p>	
<p>3.4.3 The contractor shall provide research and engineering support to assist in the transition of sensors to autonomous systems.</p> <p><u>Deliverables:</u> A001 Monthly Progress and Funds</p>	<p>a) New sensors and systems developed AQL: Development sufficient for transition to the next prescribed state (i.e. funding category, test environment, or product development phase) b) Timely</p>	<p>What: Sensors and systems How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards</p>	

<p>Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim progress reports as required</p>	<p>AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met</p>		
<p>3.4.4 The contractor shall provide research and engineering support to assist in the transition of power and energy systems to autonomous systems. <u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim progress reports as required</p>	<p>a) New sensors and systems developed AQL: Development sufficient for transition to the next prescribed state (i.e. funding category, test environment, or product development phase) b) Timely AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met</p>	<p>What: Sensors and systems How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards</p>	
<p>3.4.4.1 The contractor shall integrate the research results of two separate research efforts - unmanned vehicles (air, ground and underwater) and fuel cell systems. <u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report</p>	<p>a) New sensors and systems developed AQL: Development sufficient for transition to the next prescribed state (i.e. funding category, test environment, or product development phase) b) Timely AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met</p>	<p>What: Sensors and systems How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards</p>	

<p>A004 Oral briefings and other interim progress reports as required</p>			
<p>3.4.4.2 The contractor shall develop methods for the precise placement and control of sensors to enable real time situational awareness and support the battlespace management needs of DoN autonomous systems.</p> <p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim progress reports as required</p>	<p>a) New sensors and systems developed AQL: Development sufficient for transition to the next prescribed state (i.e. funding category, test environment, or product development phase) b) Timely AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met</p>	<p>What: Sensors and systems How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards</p>	
<p>3.4.5 The contractor shall design, fabricate and test physical sensors and systems (hardware and software) to detect buried ordnance from vehicular, man-portable, airborne, and/or marine platforms.</p> <p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim</p>	<p>a) New sensors and systems developed AQL: Development sufficient for transition to the next prescribed state (i.e. funding category, test environment, or product development phase) b) Timely AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met</p>	<p>What: Sensors and systems How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards</p>	

<p>progress reports as required</p>			
<p>3.4.5.1 The contractor shall support laboratory and field operations to evaluate buried ordnance sensor systems.</p> <p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim progress reports as required</p>	<p>a) New sensors and systems developed AQL: Development sufficient for transition to the next prescribed state (i.e. funding category, test environment, or product development phase) b) Timely AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met</p>	<p>What: Sensors and systems How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards</p>	
<p>3.4.5.2 The contractor shall provide accurate and efficient data acquisition, preprocessing, and target analysis using prototype systems.</p> <p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim progress reports as required</p>	<p>a) New sensors and systems developed AQL: Development sufficient for transition to the next prescribed state (i.e. funding category, test environment, or product development phase) b) Timely AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met</p>	<p>What: Sensors and systems How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards</p>	
<p>3.4.5.3 The contractor shall process and analyze data in the field in support of target selection, reacquisition, and</p>	<p>a) New sensors and systems developed AQL: Development sufficient for transition to the next prescribed</p>	<p>What: Sensors and systems How: Inspection Who: COR or designated representative</p>	

<p>remediation.</p> <p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim progress reports as required</p>	<p>state (i.e. funding category, test environment, or product development phase) b) Timely AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met</p>	<p>Standard(s): Inspection applies to all standards</p>	
<p>3.4.5.4 The contractor shall provide surge UXO/HAZWOPR field personnel and UXO remediation support as required to validate system performance.</p> <p><u>Deliverables:</u> A001 Monthly Progress and Funds Status Report A002 Studies Final Report A003 Contract Summary Technical Report A004 Oral briefings and other interim progress reports as required</p>	<p>a) New sensors and systems developed AQL: Development sufficient for transition to the next prescribed state (i.e. funding category, test environment, or product development phase) b) Timely AQL: 90% of Task schedule objectives met c) Cost effective AQL: 95% of Task cost objectives met</p>	<p>What: Sensors and systems How: Inspection Who: COR or designated representative Standard(s): Inspection applies to all standards</p>	

Appendix 3 - Customer Complaint Record

CUSTOMER COMPLAINT RECORD			DATE/TIME OF COMPLAINT
SOURCE OF COMPLAINT			
ORGANIZATION	BUILDING NUMBER	INDIVIDUAL	PHONE NUMBER
NATURE OF COMPLAINT			
CONTRACT REFERENCE			
VALIDATION			
DATE/TIME CONTRACTOR INFORMED OF COMPLAINT			
ACTION TAKEN BY CONTRACTOR			

RECEIVED/VALIDATED BY

Appendix 4 - Performance Assessment Report (PAR)

PERFORMANCE ASSESSMENT REPORT (PAR) <i>(If more space is needed, use reverse and identify by number)</i>		
1. CONTRACT/TASK ORDER NUMBER	2. CONTRACTOR	3. TYPE OF SERVICES
4. QUALITY ASSURANCE PERSONNEL (COR) SIGNATURE AND DATE		5. COR PHONE
6. SUSPENSE DATE		
I. PERFORMANCE		
7. <input type="checkbox"/> DEFICIENCY (CHECK ALL BOXES THAT APPLY) <input type="checkbox"/> NEW <input type="checkbox"/> REPEAT <input type="checkbox"/> NO DEFICIENCY NOTED	8. SERVICES SUMMARY or PWS PARAGRAPH ITEM REVIEWED	
9. BRIEF DESCRIPTION OF DEFICIENCY (IF DEFICIENCY BOX WAS CHECKED)	10. DETAILED PERFORMANCE ASSESSMENT	
II. CONTRACTOR VALIDATION		
11. CONTRACTOR REPRESENTATIVE <input type="checkbox"/> CONCUR <input type="checkbox"/> NON-CONCUR	12. CORRECTIVE ACTION ESTIMATED COMPLETION DATE	
13. CONTRACTOR REPRESENTATIVE CORRECTIVE ACTION AND PREVENTION OF RECURRENCE <u>OR</u> REASON FOR NON-CONCURRENCE OF COR CITED DEFICIENCY		
III. ACTION CORRECTED		
14. <input type="checkbox"/> CONCUR <input type="checkbox"/> NON-CONCUR COR SIGNATURE AND DATE		
15. COR REMARKS (REQUIRED)		

6. CONTRACTOR REPRESENTATIVE REMARKS