

Group A

FOIA/PA NO: 2014-0306 & 2014-0307

RECORDS BEING RELEASED IN THEIR ENTIRETY

Independent Verification and Validation for the U.S. Nuclear Regulatory Commission Information Systems Statement of Work

1. INTRODUCTION

The Nuclear Regulatory Commission's (NRC) Office of Information Services (OIS) is responsible for overseeing the agency's information technology (IT) and information management activities. The OIS Business Process Improvement & Applications Division (BPIAD) coordinates all agency IT business system development activities to assure that applications are effectively developed and maintained to support agency business needs. BPIAD also oversees the agency's IT Project Management Methodology (PMM), contained in Management Directive 2.8, which established a unified investment management process at the NRC to facilitate the effective selection, implementation, management, and evaluation of IT investments throughout their entire life cycle.

2. OBJECTIVE

The NRC utilizes numerous information systems to support its mission. To support effective development of new systems, maintenance of legacy systems, and effective project performance, the NRC requires a broad range of project management support and Independent Verification and Validation (IV&V) services. The purpose of this Indefinite Delivery Indefinite Quantity (IDIQ) Task Order (TO) contract is to obtain professional IV&V services in support of NRC system development, maintenance, and IT planning activities. This contract also supports the NRC in IT independent baseline review of project planning activities and ensures compliance with software quality standards, OIS processes, and applicable NRC and federal standards and regulations. The contractor shall keep abreast of changes in these standards and regulations.

3. NRC AND CONTRACTOR ROLES AND REFERENCES

The work description in this document involves numerous roles. All references to the IV&V support contractor shall be indicated as "the contractor." In cases where another contractor is referenced, the nature of their contract will be indicated (e.g., "the Software Developer"). In addition to the NRC Project Officer (PO), the NRC will designate a Task Order Manager (TOM) for each task and this individual is responsible for providing technical guidance to the performing organization. All work products must be reviewed and approved by the NRC TOM before they are submitted as final documents however the NRC PO shall have ultimate authority to provide technical direction to contractor, particularly regarding issues of resource availability, task prioritization, or work scope. All technical directions given to the performing organization must be consistent with the work scope and schedule of the applicable task order. The NRC TOM is not authorized to unilaterally make changes to the approved work scope or schedule for the task, or give the performing organization any direction that would increase costs over approved levels. In the event of a conflict of direction between the PO and TOM, the PO's direction shall govern.

The contractor shall provide a team structure, specifically an overall IV&V Team Leader. The IV&V Team Leader shall provide overall coordination of shared contractor resources and shall provide a single point of contact for coordination of day-to-day activities in support of each task.

This role shall be designated as key personnel. The contractor shall provide at least two contractor staff to be cleared at the "Q" or "blue badge" level for permissible access to work on safeguards systems.

4. CONTRACT TYPE

This is an indefinite delivery indefinite quantity, time and materials type contract with individual task orders.

5. SCOPE

The contractor shall provide all personnel, materials, hardware, software, labor, supplies, equipment, travel, and other direct costs necessary to accomplish the performance of the tasks described below.

6. PERIOD OF PERFORMANCE

The period of performance of this contract will be one base year and four 1-year options from the date of award.

7. PLACE OF PERFORMANCE

The primary place of performance shall be at the NRC headquarters in Rockville, Maryland. The contractor may be required to travel to software development and maintenance contractor sites to perform testing and quality reviews. While all current development and maintenance contractors are located in the Washington, DC, metropolitan area, some contractor hosting sites are located throughout the continental United States. The contractor may also be required to travel to system stakeholder sites throughout the regulatory domain of the NRC.

7.1 Contractor Staff Availability and Hours of Work

The contractor shall ensure that all key personnel are available, either on-site at NRC headquarters in Rockville Maryland (if directed in the specific task orders to be issued under this contract), or off-site during the hours of 8:00 a.m. to 5:00 p.m. Eastern Time (ET), except when the government facility is closed due to federal holidays, local or national emergencies, administrative closings, or similar government directed facility closings. In instances when work requirements necessitate a change to these hours, the NRC PO will notify the IV&V Team Leader, and the schedule shall be modified accordingly. However, the contractor shall have access to NRC headquarters 5 days per week, Monday through Friday from 6:00 a.m. to 6:00 p.m. ET, except when the government facility is closed due to federal holidays, local or national emergencies, administrative closings, or similar government-directed facility closings. Due to office space limitations at NRC headquarters, the contractor should not expect that office space will be available on-site. Specific work locations will be defined in each task order to be issued.

7.2 Travel Requirements

1. Local travel expenses will not be reimbursed by the NRC. On-site parking is not available.
2. Travel to the current development and maintenance contractor locations, contractor hosting sites, and system stakeholder sites may be required and will not be reimbursed if within the greater Washington, D.C. Metro area. All travel, other than local travel, requires the prior approval of the NRC PO.
3. Total expenditure for domestic travel does not include travel to NRC headquarters and may not exceed the NOT TO EXCEED amounts listed in Section B of this contract, for each year of the period of performance, without the prior approval of the NRC contracting officer (CO). Please note: Profit/fee shall not be added to any travel performed.
4. The contractor is encouraged to use government contract airlines, AMTRAK rail services,

and discount hotel/motel properties in order to reduce the cost of travel under this contract. The NRC CO, upon request, will provide each traveler with a letter of identification which is required in order to participate in this program. The federal travel directory (FTD) identifies carriers, contract fares, schedules, payment conditions, and hotel/motel properties which offer their services and rates to government contractor personnel traveling on official business under this contract. The FTD, which is issued monthly, may be purchased from the U.S. Government Printing Office, Washington, DC 20402.

5. The contractor will be reimbursed for reasonable travel costs incurred directly and specifically in the performance of this contract, except as stated above. The cost limitations for travel costs are determined in accordance with the specific travel regulations cited in Federal Acquisition Regulation 31.205-46, as are in effect on the date of the trip. Travel costs for research and related activities performed at state and nonprofit institutions, in accordance with section 12 of Public Law 100-679, shall be charged in accordance with the contractor's institutional policy to the degree that the limitations of Office of Management and Budget (OMB) guidance is not exceeded. Applicable guidance documents include OMB Circular A-87, Cost Principles for State and Local governments; OMB Circular A-122, Cost principles for Nonprofit Organizations; and OMB Circular A-21, Cost Principles for Educational Institutions.

6. When the government changes the Federal Travel Regulations, or other applicable regulations, it is the responsibility of the contractor to notify the NRC CO in accordance with the Limitations of Cost clause of the General Services Administration (GSA) contract if the contractor will be unable to make all of the approved trips and remain within the travel costs and limitations of this contract due to the changes.

8. SUPPORT ACTIVITIES

This section details the full range of IV&V technical support activities that the contractor shall provide. The specific technical support to be provided will be detailed in each Task Order.

8.1 General Support

Note: These activities may or may not be associated with a project or project phase.

8.1.1 System Integration Planning Studies

The contractor shall conduct or review studies performed by NRC contractors, as specified in individual task orders, to determine and objectively rank and present risks related to the task being evaluated. In conducting these studies, the contractor shall investigate alternatives identified by the NRC as well as identify further alternatives based on the contractor's independent knowledge. In identifying further alternatives, the contractor shall consider re-use of other federal and private sector systems as well as emergent technologies not yet employed within the NRC.

8.1.2 Feasibility Studies

The contractor shall conduct or review studies performed by NRC contractors, as outlined by the NRC, potentially regarding a broad range of topics of concern to IT strategic planning and specific project planning. Feasibility studies may be conducted to investigate an emergent technology with potential application at the NRC or to consider feasibility of actions related to an NRC IT project. While these feasibility studies may require investigation of the applicable project or NRC system context, most effort will be focused on compiling expert contractor opinions to better inform NRC IT strategic planning.

8.1.3 Technology Assessments

The contractor shall provide unbiased assessments of candidate technologies or products that

may be applicable to NRC projects, citing objective sources for all information that the NRC might use to frame related decisions. The subject technology assessments will generally relate to software products (e.g., commercial off-the-shelf (COTS) or government off-the-shelf), including tools used to support the software development or management processes. The emphasis of these assessments will generally be on the functional fit with current or projected NRC requirements. These assessments are limited to a review of proposed technologies in the system design document or changes to the system design in the life cycle of the IT investment. These assessments must be coordinated with the OIS/Enterprise Architecture and Standards Branch. Copies of all technology assessments must be placed in the Enterprise Architecture Virtual Object Base in the NRC Rational ClearCase system.

8.2 Lifecycle Project Review (by project phase)

The contractor may be required to perform a review of a project at any or all phases of its lifecycle. The PMM provides guidance for developing and maintaining software application systems and this is the standard against which the lifecycle phase reviews will be based. The PMM methodology is based on the Rational Unified Process. NRC Management Directive (MD) 2.8, Project Management Methodology ¹ and its associated manual² include the policy and a configurable process with guidance, tools, and templates to support the implementation of that process. Refer to Enclosures 1 and 2 for MD 2.8 and Manual 2.8.

The PMM provides an integrated solution for IT system development and covers the management of an IT investment throughout its life cycle. The PMM life cycle consists of three major cycles and six phases:

Initial Development Cycle:

- Inception Phase – Define scope, collect requirements, and develop business justification.
- Elaboration Phase – Refine requirements, baseline architecture, and update project plans.
- Construction Phase – Build and test all functions iteratively on proven architecture.
- Transition Phase – Deploy and transition the system to the users.

Evolution Cycle (may include either steady-state or mixed life cycle activities):

- Operations and Maintenance Phase – Operate and support the deployed system, manage and implement enhancements, and correct defects.

Retirement Cycle:

- Retirement Phase – Plan and execute the decommissioning of the system.

8.2.1 Project Planning

8.2.1.1 Requirements Definition

For a new IT system development project, the contractor shall survey the stakeholder community, develop a requirements definition approach, obtain NRC concurrence, and facilitate the requirements definition, all under NRC direction and in accordance with the PMM. The contractor shall adhere to prevailing NRC standards and practices for documentation of requirements. Currently, the NRC standard is to document requirements in the use case method in IBM Rational RequisitePro, Rose, and Software Modeler. The contractor shall ensure that all requirements definition efforts directly support development of the business case System Requirements Specification document.

8.2.1.2 Business Case Review

The contractor shall review all necessary information gathering efforts and develop comprehensive business case documentation to ensure compliance with prevailing NRC formatting standards. The current NRC business case format requires use of the following

document templates which are included as enclosures:

- Business Case
- Project Justification
- Initial Risk Identification
- Return on Investment
- Lifecycle Cost Projections
- Alternatives Analysis
- System Architecture Document
- Concept of Operations
- System Requirements Specification
- Functional and Technical Requirements
- Project Management Plan
- Management Approach
- Capital Planning and Investment Control - Control Phase Review Schedule

8.2.1.3 Project Schedule, Cost, and Spending Plan Reasonableness Assessments

Note: These activities may be repeated in other project phases due to changes to address schedule or cost variance.

The contractor shall perform and deliver reports of findings resulting from assessments of project schedules, cost estimates and spending plans. The primary focus of these assessments will be to determine the reasonableness of the plans reviewed. The contractor shall also prepare alternate schedules, cost estimates, and spending plans for NRC consideration.

8.2.1.4 Review and Support in Developing Standards and Guidelines Related to Development and Maintenance of NRC Systems

The contractor shall provide documentation of the development of supplemental standards and guidelines for prevailing NRC and federal standards related to the effective performance of NRC IT projects. Since the NRC has comprehensive standards for IT project management, the support required here relates to standards for application of software development technologies to be used on NRC projects (e.g., object naming conventions; Web application standards) or detailed guidelines for documenting NRC system design specifications. In drafting these documents for NRC consideration, the contractor shall document authoritative industry sources and foundations for the proposed standards.

8.2.2 Project Execution

8.2.2.1 Advising Source Evaluation Panels (SEP)

The contractor shall provide subject matter experts with applicable skills to give advice to acquisition SEPs. The nature of this technical advice would relate to the impact of proposed technologies on the NRC environment and identification of potential risks related to the proposed solution and/or services.

8.2.2.2 Functional Gap Analysis

In cases where a proposed IT solution involves use of a COTS product or other type of existing solution, the contractor shall conduct a thorough analysis of the gaps between the COTS product and the NRC requirements and provide recommendations to NRC staff. The nature of such studies will vary by project and may only involve contractor efforts to validate externally provided gap analysis documents.

8.2.2.3 Requirements Validation

The contractor shall provide support to the NRC staff to ensure that the Software Developer contractor has an accurate understanding of NRC requirements within a reasonable amount of time as specified by the NRC TOM. This support may involve presentations to the development team and response to requests for requirements clarification. The contractor shall also support the NRC staff in cases where the foundation for a given requirement is required, including identifying the requesting stakeholder(s) and rationale behind the requirement.

8.2.2.4 Design Review

The contractor shall assist NRC staff with reviewing the design proposed by the Software Developer contractor to ensure the accuracy and completeness of requirements compared to the program needs. The contractor shall assist NRC staff with reviewing the application code to ensure the Software Developer contractor complied with the system Use Cases and NRC design documentation standards. The contractor shall assist NRC staff to ensure the Software Developer contractor implemented the application accurately according to the system requirements, and that the application adheres to commonly accepted practices for open architecture, maintainability, and extensibility.

8.2.3 Project Controlling

8.2.3.1 Review Project Performance Monitoring

The contractor shall develop and implement project performance monitoring plans for review by the NRC. These plans shall address a systematic approach to monitoring overall schedule, projected cost analysis, and associated risks of NRC IT projects. While the review perspective is the overall NRC project, the contractor shall consider input from Software Developer contractors and other contributors to the overall project. Cost and schedule monitoring shall use, but not be limited to earned value analysis, particularly in cases where work breakdown structure decomposition does not permit sufficient monitoring detail. Project risk monitoring shall include periodic assessment of known and emergent project risks and promptly reporting the findings to the NRC PO. The contractor shall provide all support needed to produce periodic earned value management (EVM) assessments in compliance with prevailing American National Standards Institute/Electronic Industries Alliance Standard 748 EVM system guidelines.

8.2.3.2 Review of Software Developer Contractor Deliverables

The contractor shall perform reviews of Software Developer contractor deliverables, beyond those directly related to software code and system components and provide recommendations to NRC staff. These deliverables will include, but not be limited to, quality assurance plans, software development plans, Software Developer contractor test plans, data conversion scripts, and test result summaries. In reviewing each deliverable, the contractor shall inform the NRC PO of any issues with accuracy, completeness, or potential project risk.

8.2.3.3 Technical Code Audits

The contractor shall review the validity of all software products delivered in relation to tasks ordered for NRC IT projects and provide recommendations to NRC staff. For each deliverable review, the contractor shall assess compliance with NRC requirements, the approved design, applicable standards, and absence of techniques that may reduce maintainability or extensibility.

The contractor shall summarize the audit results in a written report delivered to the NRC TOM within 5 days after the completion of the audit or as directed by the NRC TOM. An audit is

required when change to the software and/or hardware occurs.

As part of these reviews, the contractor shall ensure the Software Developer contractor has complied with Section 508 of the Rehabilitation Act of 1973, as amended, and the applicable technical standards (36 CFR 1194).

8.2.3.4 User Acceptance Testing

The contractor shall provide comprehensive technical assistance and support for NRC user acceptance testing in concert with the System Requirements Specification. This support shall include development of user support test plans, ensuring coverage of all requirements, and shall include development of scripts for automated performance of acceptance testing. The contractor shall execute test scripts and supplement the NRC user role to the extent directed by the NRC TOM. All test plans shall be outlined using available IBM Rational RequisitePro requirements and plans shall be developed using the IBM Rational Test Manager. Test scripts shall be automated unless otherwise directed by the NRC TOM. The contractor shall develop automated scripts in the IBM Rational Robot, Functional Tester, and Manual Test tools.

8.2.3.5 Security

The contractor shall comply with all IT security requirements as stated in MD 12.5, as well as the following security management directives:

- MD 12.1 NRC Facility Security Program
- MD 12.2 NRC Classified Information Security Program
- MD 12.3 NRC Personnel Security Program
- MD 12.4 NRC Telecommunication System Security Program
- MD 12.5 NRC Automated Information Security Program
- MD 12.7 NRC Safeguard Information Security Program

All work under this contract shall comply with the latest version of all applicable guidance and standards. Individual task orders will reference applicable versions of standards or exceptions as necessary. These standards include, but are not limited to, NRC MD 12.5 Automated Information Security Program, National Institute of Standards and Technology (NIST) guidance and Federal Information Processing Standards (FIPS), and Committee on National Security Systems (CNSS) policy, policy, directives, instructions, and guidance. This information is available at the following URLs:

NRC Policies, Procedures and Standards (Computer Security Office (CSO) internal website): <http://www.internal.nrc.gov/CSO/policies.html>

All NRC Management Directives (public website):

<http://www.nrc.gov/reading-rm/doc-collections/management-directives/>

NIST Special Publications (SP) and FIPS documentation is located at:

<http://csrc.nist.gov/>

CNSS documents are located at:

<http://www.cnss.gov/>

All studies must address NRC and federal security requirements from laws, standards, and guidelines. All work performed at non-NRC facilities shall be in facilities, on networks, and on computers that have been accredited by NRC for processing information at the sensitivity level of the information being processed.

The contractor shall ensure that its employees, in performance of the contract, receive IT security training in their role at the contractor's expense. The contractor must provide the NRC with written certification that employee training is complete, along with the title of the course and

dates of training, as a prerequisite to starting work on the contract.

The contractor shall not publish or disclose in any manner, without the NRC CO's written consent, the details of any protections either designed or developed by the contractor under this contract or otherwise provided by the government. The System Security Plan and other information system security documentation for this contract are considered Sensitive Unclassified Information. The contractor agrees to abide by NRC regulations for handling sensitive unclassified information governed by the NRC's Sensitive Unclassified Non-Safeguards Information program (SUNSI) and NRC's Management Directive 12.5, "NRC Automated Information Security Program."

Any contract going into FY 2013 must account for the modifications taking place for Controlled Unclassified Information to replace SUNSI and Safeguards Information (SGI). When e-mail is used, the contractors shall only use NRC provided e-mail accounts to send and receive sensitive information (information that is not releasable to the public) or use mechanisms to protect the information during transmission to NRC that have been approved by CSO. Separation of duties for the systems must be enforced by the system through assigned access authorizations. The information system shall provide only essential capabilities and specifically prohibit and/or restrict the use of specified functions, ports, protocols, and/or services. The most restrictive set of rights/privileges or accesses needed by users (or processes acting on behalf of users) for the performance of specified tasks must be enforced by the system through assigned access authorizations.

The contractor shall only use licensed software and in-house developed authorized code (including government and contractor developed) on the system and for processing government information. Public domain, shareware, or freeware shall only be installed after prior written approval is obtained from the NRC Designated Approving Authority (DAA). The contractor shall provide proof of licensing upon request of the NRC CO, the Contracting Officer's Technical Representative, the Senior IT Security Officer (SITSO), or the DAA.

All development and testing of the system shall be performed on a network separate and isolated from the NRC operational network and that is protected at the system sensitivity level. All system computers must be properly configured and hardened and comply with all NRC security policies and procedures based on the sensitivity of the system.

User accounts that have system-level or administrative privileges must have a unique password from all other accounts held by that user, and general user tasks must be performed from a general user account, not from the administrative account.

The contractor shall not hardcode any passwords into the software unless the password only appears on the server side (e.g., using server-side technology such as Active Server Pages, Hypertext Preprocessor, or JavaServer Pages.)

All sensitive data transmitted over a network by the system shall use FIPS 140-2 validated encryption. The contractor shall provide the FIPS 140-2 cryptographic module certificate number and a brief description of the encryption module that includes the encryption algorithm(s) used, the key length, and the vendor of the product.

All media produced by the contractor must include appropriate markings to indicate the sensitivity of the information contained on the media, and the media shall be controlled according to that sensitivity.

Contractor shall adhere to NRC policies, including but not limited to:

- NRC Sensitive Unclassified Non-Safeguards Information (SUNSI)
- Computer Security Policy for Encryption of Data at Rest When Outside of Agency Facilities
- Policy for Copying, Scanning, Printing, and Faxing SGI & Classified Information
- Computer Security Information Protection Policy
- Remote Access Policy
- Laptop Security Policy
- Computer Security Incident Response Policy

All systems used to process NRC sensitive information shall meet NRC configuration standards available at: <http://www.internal.nrc.gov/CSO/standards.html>. Contractor will adhere to NRC's prohibition of using personal devices to process and store NRC sensitive information.

Any IT system used to process NRC sensitive information shall:

- Include a mechanism to require users to uniquely identify themselves to the system before beginning to perform any other actions that the system is expected to provide.
- Be able to authenticate data that includes information for verifying the claimed identity of individual users (e.g., passwords)
- Protect authentication data so that it cannot be accessed by any unauthorized user
- Be able to enforce individual accountability by providing the capability to uniquely identify each individual computer system user
- Report to appropriate security personnel when attempts are made to guess the authentication data whether inadvertently or deliberately

Any contractor system being used to process NRC data shall be able to define and enforce access privileges for individual users. The discretionary access controls mechanisms shall be configurable to protect objects (e.g., files, folders) from unauthorized access.

The contractors shall only use NRC approved methods to send and receive information considered sensitive or classified. Specifically:

• **Classified Information** - All NRC classified data being transmitted over a network shall use NSA approved encryption and adhere to guidance in MD 12.2 NRC Classified Information Security Program, MD 12.5 NRC Automated Information Security Program and Committee on National Security Systems. Classified processing shall be only within facilities, computers, and spaces that have been specifically approved for classified processing.

• **SGI Information** – All SGI being transmitted over a network shall adhere to guidance in MD 12.7 NRC Safeguards Information Security Program and MD 12.5 NRC Automated Information Security Program. SGI processing shall be only within facilities, computers, and spaces that have been specifically approved for SGI processing. Information designated as SGI may only be transmitted using FIPS 140-2 validated encryption or encryption approved for classified processing.

For unclassified information used for the IV&V effort, the contractor shall provide an information

security categorization document indicating the sensitivity of the information processed as part of this contract if the information security categorization was not provided in the statement of work.

The determination shall be made using NIST SP 800-60 and must be approved by CSO.

The NRC CO and NRC PO shall be notified immediately if the contractor begins to process information at a higher sensitivity level. If the effort includes use or processing of classified information, the NRC CO and NRC PO shall be notified immediately if the contractor begins to process information at a more restrictive classification level. The mechanisms within the contractor system or application that enforces access control and other security features shall be continuously protected against tampering and/or unauthorized changes.

Other Computer Security Requirements

- All contractor employees must acknowledge the NRC Agency-wide Rules of Behavior for Authorized Computer Use prior to being granted access to NRC computing resources.
- The contractor must ensure that required refresher training for their employees is accomplished in accordance with the required frequency specifically associated with their IT security role.
- If new or unanticipated threats or hazards are discovered by either the government or the contractor, or if existing protections have ceased to function, the discoverer shall immediately bring the situation to the attention of the other party.
- The contractor shall ensure that the NRC data processed during the performance of this contract shall be purged from all data storage components of the contractor's computer facility, and the contractor will retain no NRC data within 30 calendar days after contract completion. Until all data is purged, the contractor shall ensure that any NRC data remaining in any storage component will be protected to prevent unauthorized disclosure.
- When contractor employees no longer require access to an NRC system, the contractor shall notify the NRC PO within 24 hours.
- Upon contract completion, the contractor shall provide a status list of all NRC system users and shall note if any users still require access to the system to perform work if a follow-on contract or task order has been approved by NRC.
- For any contractor system used to process NRC information, the contractor must ensure that information loaded into the system is scanned for viruses prior to posting; servers are scanned for viruses, adware, and spyware on a regular basis; and virus signatures are updated at least every 7 calendar days.
- The contractor shall not perform sanitization or destruction of media approved for processing NRC information designated as SGI or Classified. The contractor must provide the media to NRC for destruction.

8.2.3.6 System Security Accreditation Support

The contractor shall provide limited technical assistance and support for specific activities related to the system certification and accreditation (C&A) process. The contractor shall support the NRC's OIS security personnel and C&A contractors in understanding the proposed system architecture and technological concerns related to C&A.

All system modifications shall undergo a security engineering review commensurate with the Security Categorization of the system and the NRC SITSO/DAA-approved FIPS 199 security baseline for the system. The contractor shall perform reviews of Software Developer contractor test plans to ensure that all system modifications address the security controls as specified in

FIPS 200, and NIST SP 800-53 and 800-53A, or the then current publication.

Additionally, the IV&V contractor shall review the test results of all changes to ensure that any change to existing security controls or requirements for new security controls are implemented and tested by the Software Developer contractor. The criteria for testing and acceptance shall be based on the original content of the release together with the technical approach/design, as approved by the NRC task manager. The contractor shall support the NRC task manager in verifying that valid test cases are provided for all of the release's requirements. A "valid test case" is one that will fully exercise and verify the change requests (CR) requirements. The test plans shall also exercise the systems' security controls and security requirements and associated technical resolutions, risk mitigation, and implementations to confirm that the system and associated controls are operating as intended, and in accordance with FIPS 200, and NIST SP 800-53 and 800-53A, NIST SP 800-37 Guide for the Security Certification and Accreditation of Federal Information Systems, and the NRC System Security Test and Evaluation (ST&E) Plan Template. The contractor shall update the test plan after completion of the system security test and evaluation plan test report to reflect validated information. The NRC SITSO/DAA must approve the final system ST&E test report to enable system release deployment.

8.2.4 Maintenance Support Activities

8.2.4.1 Defect Verification and Analysis

The contractor shall investigate reported software defects, confirming their existence, proposing a short-term work-around, defining relationships to stated system requirements, evaluating maintainer-proposed solutions, and providing recommendations to NRC staff. All software change requests are tracked in the IBM Rational ClearQuest tool.

8.2.4.2 Software Change Specification Review

The contractor shall review, for clarity and completeness, proposed system changes to NRC systems under maintenance and provide recommendations to NRC staff. The contractor shall verify that each CR specification was implemented.

8.2.4.3 Configuration/Change Control Board (CCB) support

The contractor shall serve as an expert advisor to Configuration/CCB for NRC systems. In this capacity, the contractor shall explain the implications of each defect or proposed enhancement that is under consideration by the CCB. The contractor shall also advise the NRC PO during the evaluation of maintainer cost and schedule proposals.

9. CONTRACTOR PERFORMANCE REQUIREMENTS

9.1 Performance Requirements

The deliverables required under this order must conform to the standards contained, or referenced, in the statement of work for each task order. All deliverables required under this order must be delivered to the NRC in electronic format (in both Microsoft Word and ADOBE Acrobat Portable Document Format PDF) on 2 CDs or in the Rational ClearCase, if the contractor has access to the NRC Rational ClearCase. Submissions must follow NRC Guidance for Electronic Submissions; see <http://www.nrc.gov/site-help/e-submittals/guide-electronic-subr5.pdf>. At the same time, the contractor shall also provide with each deliverable, any IBM Rational tool or Microsoft files (e.g., Project or Excel), if applicable, to the NRC PO. The contractor shall deliver draft and final versions of all deliverables required under this order, addressing NRC comments and concerns prior to delivery of the final version of each product.

9.1.1 508 Compliance

The contractor shall support government compliance with Section 508 throughout the development and implementation of the work to be performed. Section 508 of the Rehabilitation Act of 1973, as amended (29 U.S.C 794d), requires that when federal agencies develop, procure, maintain, or use electronic information technology, federal employees with disabilities will have access to and use of information and data that is comparable to the access and use by federal employees who do not have disabilities, unless an undue burden would be imposed on the agency. Section 508 also requires that individuals with disabilities, who are members of the public seeking information or services from a federal agency, have access to and use of information and data that is comparable to that provided to the public who are not individuals with disabilities, unless an undue burden would be imposed on the agency.

The contractor should review the following websites for additional information:

<http://www.section508.gov/index.cfm?FuseAction=Content&ID=12>

<http://www.access-board.gov/508.htm>

<http://www.w3.org/WAI/Resources>

9.2 Post Award Meeting

The government will schedule a kick-off meeting within 5 business days after delivery order award or upon security clearance authorization. The NRC PO will provide an agenda prior to the meeting. The contractor shall participate in the meeting to establish process, procedures and priority of tasking. The NRC CO, the NRC PO, and the NRC TOM will represent the government. The contractor shall have equivalent representation at the meeting.

9.3 Deliverable Format and Submission

All deliverables shall become the property of the United States Government (NRC) and be delivered electronically to the NRC PO.

All documentation shall be submitted to the NRC PO in draft form for comment.

The contractor shall incorporate into the final deliverable documentation any NRC comments received on the draft documentation within 3 business days of receipt of comments from the NRC PO.

The NRC PO will review all draft documents submitted as part of contract deliverables for conformity to the standards referenced in this Statement of Work. Any changes required after the first revision cycle shall be completed at no additional cost to the government. The first revision cycle for a deliverable shall be acceptable to the government when the contractor submits a revised deliverable incorporating any comments and suggestions made by the NRC PO on his review of the initial draft.

The following provisions also apply to all deliverables:

Reporting Requirements: In addition to meeting the delivery schedule for the timely submission of any draft and final reports, summaries, data and documents that are created in the performance of this contract, the contractor shall comply with the directions of the NRC regarding the contents of the report, summaries, data and related documents to include correcting, deleting, editing, revising, modifying, formatting, and supplementing any of the information contained therein at no additional cost to the NRC. Performance under the delivery order will not be deemed accepted or completed until the NRC's directions are fulfilled. The reports, summaries, data, and related documents will be considered draft until approved by the NRC. The contractor agrees that the direction, determinations, and decisions on approval or

Attachment 1

disapproval of reports, summaries, data and related documents created under this delivery order remains solely within the discretion of the NRC.

Publication of Results: Prior to any dissemination, display, publication or release of articles, reports, summaries, data or related documents developed under the contract, the contractor shall submit for NRC review and approval the proposed articles, reports, summaries, data, and related documents that the contractor intends to release, disseminate or publish to other persons, the public, or any other entities. The contractor shall not release, disseminate, display, or publish articles, reports, summaries, data, and related documents or the contents therein that have not been reviewed and approved by the NRC for release, display, dissemination, or publication. The contractor agrees to conspicuously place any disclaimers, markings, or notices directed by the NRC on any articles, reports, summaries, data and related documents that the contractor intends to release, display, disseminate, or publish to other persons, the public, or any other entities. The contractor agrees and grants a royalty free, nonexclusive, irrevocable world-wide license to the government to use, reproduce, modify, distribute, prepare derivative works, release, display or disclose the articles, reports, summaries, data and related documents developed under the contract, for any governmental purpose and to have or authorize others to do so.

Identification/Marking of Sensitive and Safeguards Information: The decision, determination or direction by the NRC that information constitutes sensitive or safeguards information remains exclusively a decision within the authority of the NRC. In performing the contract, the contractor shall clearly mark sensitive unclassified non-safeguards information, sensitive, and safeguards information to include, for example, Official Use Only and Safeguards Information on any reports, documents, designs, data, materials and written information as directed by the NRC. In addition to marking the information as directed by the NRC, the contractor shall use the applicable NRC cover sheet forms (e.g., NRC Form 461 Safeguards Information and NRC Form 190B Official Use Only) in maintaining these records and documents. The contractor will ensure that sensitive and safeguards information is handled appropriately, maintained, and protected from unauthorized disclosure. The contractor shall comply with the requirements to mark, maintain and protect all information including documents, summaries, reports, data, designs, and materials in accordance with the provisions of Section 147 of the Atomic Energy Act of 1954 as amended, its implementing regulations (10 CFR 73.21), and NRC MD and Handbook 12.6.

Remedies: In addition to any civil, criminal and contractual remedies available under the applicable laws and regulations, failure to comply with the above provisions and or NRC directions may result in suspension, withholding, or offsetting of any payments invoiced or claimed by the contractor. If the contractor intends to enter into any subcontracts or other agreements to perform this contract, the contractor shall include all the above provisions in any subcontract or agreements. Additional written reports may be required and negotiated.

9.4 Reporting Requirements

9.4.1 Status Reports and Meetings

Following the kick-off meeting, the contractor shall meet at least twice a month with the NRC PO to discuss the accomplishments during the prior period, any notable variance from anticipated support schedules, and any resource balancing issues. Meetings may be conducted via teleconference or less frequently, as determined by the NRC PO.

The contractor shall attend status meetings on a monthly basis or as requested by the NRC

TOM to discuss the accomplishments during the prior period, any notable variance from anticipated support schedules, and any resource balancing issues related to the TO. Meetings may be conducted via teleconference or less frequently, as determined by the NRC TOM. The contractor shall provide a monthly billing report for each TO to the NRC PO and the NRC CO within 15 days of the end of the reporting period. The contractor shall provide a status report³ on the 1st and 15th of the month. Each status report will include, at a minimum:

- Updates to the Project Management Plan and schedule (Work Breakdown Structure), listing the reasons for changes, proposed adjustments and justification, cost and schedule impacts.
- Contract number and task order numbers.
- Period covered by the report.
- Summary of work performed during the reporting period for each task order, including appropriate statistics and plans for the next reporting period.
- Discussion of project plans, problems, and the proposed corrective action, and analysis of the impact on other task orders.
- Status of expenditures under each task order for the reporting period, cumulative expenditures to date, funds obligated to date, and balance of funds required to complete each task order.
- Any project risks and appropriate risk mitigation strategies, especially those which require NRC management action.
- List of any deliverables completed during the prior month as well as deliverables scheduled for completion during the next month and the schedule and cost variances, if any, for those upcoming deliverables.

Further information on the content of the status and monthly billing reports will be provided during the kick-off meeting.

9.5 Project Management Plan

As part of the Project Management Plan, the contractor shall maintain a detailed Microsoft (MS) Project Plan for each task order, including activities, schedule and cost, and provide to the NRC PO a revised copy whenever the plan is revised, or as requested by the NRC PO. If outside resources are needed to complete the tasks specified, the NRC PO shall obtain those resources and the contractor shall consolidate them into the MS Project Plan. The contractor shall update the plan within two business days of a revision to the task order schedule, or a change of 15 percent or greater in the duration of a subtask. Where near term NRC task specifications permit, the contractor shall decompose the work breakdown structure, as represented by MS Project tasks, such that no task has a time span greater than 80 hours.

9.6 Independent Reporting

In providing Project Controlling support as detailed in Section 8.2.3, the contractor shall specifically watch for project performance or deliverable quality issues that may introduce a significant risk to the NRC through project schedule, cost or quality. In cases where the contractor detects such issues, the contractor shall notify the NRC PO and NRC CO of the issues immediately. Within 2 business days, the contractor shall provide a written report detailing all available background and a summary of the perceived risks.

9.7 Auditing

The contractor shall support external interviews and questionnaires that may be required by the

OIS or other external organizations tasked with ensuring the independence of NRC IV&V services.

10. FOOTNOTES

¹ NRC Management Directive (MD) 2.8, Project Management Methodology

² PMM Manual 2.8

³ Semi-Monthly Status Report