NR IMPLEMENTATION BULLETIN NUMBER 415.1-143, REVISION 0 FOR DOE ORDER 415.1, INFORMATION TECHNOLOGY PROJECT MANAGEMENT

NR Implementation Bulletin (IB) 415.1 Revision 0 implements DOE Order 415.1 dated December 3, 2012. DOE Order 415.1 contains an equivalency for Naval Reactors and specifically identifies that the "Deputy Administrator for Naval Reactors (Director) will implement and oversee requirements and practices pertaining to the Directive for activities under the Director's cognizance, as deemed appropriate."

Consistent with the Naval Nuclear Propulsion Program (NNPP) overall concept of operations, the following provides specific implementation guidance for DOE Order 415.1, *Information Technology Project Management* (hereafter referred to as "the Order"), for those activities under the Director's cognizance. This guidance takes precedence over DOE Order 415.1, *Information Technology Project Management,* and guidance found in other related DOE documents.

For matters in which Naval Reactors has prescribed or approved requirements for use in the NNPP, the Naval Reactors requirements shall be used in lieu of guidance contained in DOE Order 415.1 or any referenced order or guide. Such matters include shipboard naval nuclear propulsion plants and their support equipment and test facilities; radiological matters, including the control of radioactivity and radiation associated with Naval Reactors program; reactor and nuclear safety; and matters affecting the occupational safety and health of the workforce.

For the purposes of this Order and IB, an Information Technology Project is defined as a temporary endeavor undertaken to accomplish a unique product or service with a defined start and end point and specific objectives that, when attained, signify completion. IT Projects are undertaken for development, modernization, enhancement, disposal, or maintenance of an IT asset (e.g., computer hardware, software). An Information Technology project may be undertaken to develop a subsystem of a larger Program asset (e.g., IT infrastructure supporting a training simulator). In this case, the IT subsystem should be managed with the same rigor required by this order but these requirements can be met as part of the larger system's project management structure.

For the purposes of this Order and IB, operations work is separate from IT project work and is defined as the day-to-day management of an IT asset in the production environment and includes activities to operate data centers, help desks, operational centers, telecommunication centers, and end user support services (e.g., Enterprise Business System (EBS), Oracle electronic Business (OeB)). Operations costs include the expenses associated with an IT asset that is in the production environment to sustain an IT asset at the current capability and performance levels including federal and contracted labor costs.

The intent of this IB is not to require duplicative effort. The requirements defined in this Order and IB can be met using existing Naval Reactors processes (e.g., Technical Work Program submittals, Planning Estimates, existing periodic status reporting).

This Order has NR equivalency, and it is NNPP practice to apply the provisions of DOE Orders to the extent they are appropriate and consistent with the Program practices. Accordingly, Program elements shall implement the requirements of DOE Order 415.1 in accordance with the following:

1. The duties and responsibilities delineated in the Order for various DOE headquarters components are carried out by Naval Reactors in accordance with existing Program policies and practices. Involvement of other DOE headquarters offices, such as the DOE Chief Information Officer, shall be initiated by Naval Reactors as appropriate.

2. Section 3.a, Departmental Applicability, establishes that the requirements identified in Appendix A of the Order are for Information Technology (IT) projects having a Total Project Cost (TPC) greater than or equal to $25M. NR implements this Order for projects with a planned TPC greater than or equal to $10M or as directed by Naval Reactors for a specific project.

3. Paragraph 4.a states that "Successful management of IT projects requires the application of knowledge, skills, tools, techniques, and resources to ensure that the IT system or asset meets or exceeds the stakeholders' needs and expectations." In order to meet or exceed stakeholder's needs and expectations, certain project processes are required. The project requirements discussed in Paragraph 4.a will be reviewed or approved by Naval Reactors consistent with existing Naval Reactors policy. These include:

   a. A project management plan that includes a budget and resources, key decision points, and a description of the project management tools and reports that will be used during the project.

   b. Alternatives Analysis for IT projects – Specifically, the Prime Contractor, as part of the initial recommendation to begin work on a project, will conduct an alternatives analysis for all IT projects to which this IB applies.

   c. Requirements document approved by the Project Manager that outlines functional, operational, and acceptance criteria.

   d. Project schedule documenting the entire lifecycle of the project.

   e. Configuration management and change control plan.

f. Risk management plan.

g. Cyber Security plan.

4. Paragraph 4.b discusses the required project management methodologies, tools, and techniques that:

a. Establish the project scope, schedule, and budget.

b. Hold the Project Manager accountable for delivering the project within cost, scope, and schedule.

c. Align IT investments to the departmental and/or organizational strategic plan and objectives.

d. Establish clearly defined metrics and business value based objectives.

e. Are consistent with the appropriate statutory, regulatory, Office of Management and Budget, and departmental requirements.

f. Ensure the products or services are produced according to requirements and specifications, on time, and within budget.

g. Ensure reporting to the Acquisition Executive (AE) and Naval Reactors, as appropriate, on project performance and status.

h. Strengthen line management accountability for successful IT projects.

i. Implement, as appropriate, formal Stage Gates or transition points during the projects life cycle to validate that the project is proceeding as planned and a go, no-go, or hold decision is made.

j. Establish a Naval Reactors Enterprise culture that recognizes the need to manage risk, control cost and schedules, and invest in enterprise-wide projects with the goal of meeting mission schedules. Invest in enterprise-wide IT projects with the goal of meeting the Naval Reactors mission objectives on budget, on schedule, and with the functionality required.

k. Tailor projects, as appropriate.

5. Naval Reactors and the Prime Contractors will implement the above requirements consistent with the Order except where in conflict with existing Naval Reactors policy. Conflicts should be directed to Naval Reactors for resolution.

6. Paragraph 4.c requires that each IT organization establish an IT asset/project inventory. This will be accomplished through the normal Naval Reactors business practice (e.g., Materials and Information Management, Technical Work Program, and Confirmation submittals and responses).

7. Paragraph 5 states that the roles and responsibilities for projects in which this order applies are described in Appendix A to the Order. The duties and responsibilities delineated in Appendix A of the Order are to be carried out by Naval Reactors Headquarters, Naval Reactors Laboratory Field Office, or Naval Reactor's Prime Contractor per this IB as described below.

The following guidance is for Appendix A of the Order

1. Appendix A paragraph 1 and throughout the order – The order establishes that the Administrator, NNSA, maintains responsibility and has the authority to delegate responsibilities and authority for implementing the relevant requirements and responsibilities of the Order. This authority will be exercised by Naval Reactors Headquarters.

2. Appendix A paragraph 2– The Order establishes that the authority and accountability for oversight, planning, execution, and reporting of an integrated IT strategy rests with the DOE Chief Information Officer. Within the NNPP these functions rest with the Naval Reactors Director of Information Technology Management. Responsibility for planning and execution of individual IT projects rests with the Naval Reactors Section Head cognizant of that project.

3. Appendix A paragraph 3 and 4 – The Order establishes the responsibilities of the DOE Corporate IT Project Management Office (PMO), DOE Under Secretaries, and NNSA Administrators/Heads of Field Elements. Within the NNPP, these functions shall be carried out by Naval Reactors consistent with existing NR policy.

4. Appendix A paragraph 5 specifies the responsibilities of Program Managers and Heads of Field Organizations. These responsibilities are assigned as follows:

   a. Appendix A, paragraph 5, items a – d will be the responsibility of Naval Reactors and implemented as follows:

      (1) Item b discusses establishing an Integrated Project Team (IPT) if required. IPTs for IT projects may be utilized by the Prime Contractor. Establishment of an IPT may be directed by NR for a specific project or recommended by the Prime Contractor. If an IPT will be established for a

project, the roles and responsibilities of that team will be developed by the Prime Contractor and submitted to Naval Reactors for information.

(2) Item d requires that a Project Manager be assigned to each project with the necessary training, experience, and skills necessary to meet the requirements of the project objectives, budget, and schedule. Within the NR Program, Project Managers are Naval Reactors personnel assigned responsibility for projects by the Naval Reactors Section Head cognizant of that project. For projects with a TPC greater than $25M over three years, a certified federal project manager will be designated. NR's implementation of DOE O 361.1B establishes NR's requirements for certification of NR Federal Project Managers. NR Federal Project Managers are certified in accordance with Federal Procurement Policy requirements and the Federal Acquisitions Institute (FAI) Federal Acquisition Certification for Program and Project Managers (FAC-P/PM) requirements. Consistent with NR's implementation of DOE O 361.1B, the Deputy Director of Naval Reactors will designate NR Federal Project Managers for projects that require a Federal Project Manager. NR Federal Project Managers should be designated prior to approval of the subject IT project's Project Management Plan. An individual who is not a certified federal project manager may still be assigned as the project manager for a project with TPC greater than or equal to $25M, but should attain a waiver consistent with the requirements set forth in NR's implementation of DOE O 361.1B.

5. Appendix A, paragraph 5, items e – i – Responsibilities will be assigned to the Prime Contractor and all required reports shall be made to Naval Reactors. Naval Reactors will make all necessary external reports as required.

6. Appendix A, paragraph 5, item j – While Naval Reactors will manage the tailoring of IT investments, the Prime Contractors should recommend tailoring of IT investments to Naval Reactors as appropriate.

7. Appendix A paragraph 5.g –The Order requires that the cost, schedule, and performance of all IT projects governed by the Order be reported to the Office of the Chief Information Officer, Corporate IT, DOE PMO, and Steady State performance be reported through the Capital Planning and Investment Control (CPIC) process. All IT project status reports within the Naval Reactors Program should be made to the appropriate Naval Reactors section periodically, as approved in the project plan. Any reporting outside the NNPP program will be accomplished by Naval Reactors as appropriate.

8. Appendix A paragraph 7 and 8 – The Order assigns the responsibilities of the DOE Chief Architect and Chief Health, Safety, and Security Officer. These

functions are assigned to Naval Reactors consistent with existing Naval Reactors Policy, including NR IB number 414.1D – 86, Revision 3.

9. Appendix A paragraph 9 – The Order establishes the roles and responsibilities of the Acquisition Executive (AE). AE authority is a Naval Reactors Headquarters function. AE authority within the Naval Reactors Program rests with the Director NNPP but may be delegated to Naval Reactors personnel at the discretion of the Director.

10. Additional NR directed Prime Contractor roles not specifically defined in the Order are:

    a. Plan and execute projects within the NR Program in accordance with Prime Contract requirements and established budget and project controls, including Naval Reactors Procurement Memorandums (NRPMs), NR technical letters, local Field Office Guidance and this IB.

    b. Manage and perform day-to-day execution of assigned projects in a cost-effective manner, in accordance with requirements set forth in the Order and this IB;

    c. Execute projects within approved cost, schedule, and scope baselines, as defined in the applicable Project Management Plan;

    d. Develop and/or maintain applicable site documents as needed to implement program requirements and deliverables identified within the Order and IB;

    e. Develop and submit project documents based on applicable project requirements in the Order and this IB;

    f. Ensure that personnel responsible for management and execution of projects are appropriately trained and qualified to manage and execute projects covered by the Order. Any individual given the responsibility for management of an IT project with a total estimated cost of $10M or more will be formally qualified. Qualification requirements should be established by the Prime Contractor and address core project management training including:

        (1) Basic project management principles
        (2) Project scoping
        (3) Project Risk Management
        (4) Earned value management
        (5) Project procurement management

g. An individual who is not formally qualified as a project manager may still be assigned responsibility for a project with TPC greater than or equal to $10M, but should attain qualification as a project manager within two years of assignment;

h. Formally track issues raised by Naval Reactors Headquarters, Naval Reactors Laboratory Field Office, or project stakeholders in an open items list.

Additional NR Guidance:

1. Performance Reviews and Reporting: The Prime Contractor shall propose reporting requirements based on the scope and complexity of the project and ensure consistency with other NR requirements. This may include the use of Earned Value Management if approved in the project plan or otherwise directed by NR.

2. IT projects less than $10M shall be executed in accordance with existing controls established in the latest revision of NRPM 43, and Prime Contractor Funding and Laboratory Technical Work Plan Controls.

3. Major Items of Equipment (MIE): MIE projects greater than $10M requiring significant facility design and construction are subject to the current revision of Naval Reactors Implementation Bulletin 413.3 – 109. All other MIEs shall be conducted in accordance with the requirements of NRPM 43.

4. There may be non-IT investment projects (e.g., construction projects) that include a substantial IT asset or require integration with IT. These non-IT projects should follow the direction of the Naval Reactors Implementation Bulletin 413.3 – 109. The project director for these projects should request guidance and project oversight assistance form the Naval Reactors Director of Information Technology Management to assist in oversight of and IT component to that project, as appropriate.

5. The Naval Reactors Program has and continues to develop software to support the design and analysis of reactor plant systems and the operation of laboratory test systems. Because the resources available to complete specific project work in this area are used concurrently to respond to urgent Fleet support and reactor plant design issues, these projects are subject to substantial uncertainty and receive very specific management oversight to determine relative priorities. Project work is frequently offset to accomplish emergent design and support work and thus the project management structure required by this IB would not add value. Accordingly, reactor plant design software (e.g., MC21, CAPS)

should continue to be managed using the existing Technical Work Program and technical and funding practices which meet the requirements of this IB.

6. For the purposes of this Order and IB, embedded propulsion plant control systems for the operation and maintenance of naval nuclear propulsion plants are not considered IT systems as they are managed separately from IT systems. These systems include, but are not limited to, Reactor Plant Instrumentation & Control and Navy Platform IT (e.g., Propulsion Plant Monitoring and Control).