

**NR IMPLEMENTATION BULLETIN (IB) NUMBER 413.3-109 REVISION 3 FOR DOE
ORDER 413.3B, PROGRAM AND PROJECT MANAGEMENT FOR THE ACQUISITION
OF CAPITAL ASSETS**

Naval Reactors Implementation Bulletin (IB) 413.3-109 Revision 2 for DOE Order 413.3B, is hereby cancelled. NR IB 413.3-109 Revision 3 implements DOE Order 413.3B dated November 29, 2010. DOE Order 413.3B 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 this 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 413.3B, PROGRAM AND PROJECT MANAGEMENT FOR THE ACQUISITION OF CAPITAL ASSETS (hereafter referred to as "the Order"), for those activities under the Director's cognizance. This guidance takes precedence over DOE Order 413.3B PROGRAM AND PROJECT MANAGEMENT FOR THE ACQUISITION OF CAPITAL ASSETS 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 413.3B or any referenced order or guide. Such matters include requirements pertaining to the design, development and servicing of prototype and shipboard naval nuclear propulsion plants and their support equipment and test facilities; radiological matters, including the control of radioactivity and radiation associated with the Naval Reactors program; reactor and nuclear safety; and matters affecting the occupational safety and health of the workforce.

This Order has an NR equivalency, and it is NNPP practice to apply the provisions of DOE orders to the extent they are appropriate and consistent with Program practices. Accordingly, Program elements shall implement the requirements of DOE Order 413.3B 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 newly formed Office of Acquisition and Project Management (APM) (OECM in the order) 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 capital asset projects having a Total Project Cost (TPC) greater than or equal to \$50M. NR Implements this order for

Enclosure (1) to
U#13-00555

projects with a Total Estimated Cost (TEC) greater than \$10M. Additionally, the principles of the Order and IB should also be applied to NR decontamination and decommissioning (D&D) projects. D&D projects will identify in the respective Project Execution Plan (PEP) how the project will meet the intent of the IB.

3. Section 3.a - Naval Reactors Major Systems Projects (i.e., greater than \$750M) shall develop specific implementation plans consistent with this IB and DOE O 413.3B. These projects shall be conducted consistent with the Critical Decision (CD) process of this IB and may incorporate project-specific requirements for each CD milestone. A compliance matrix, project internal and external review strategy, and a project-specific implementation plan shall be developed to ensure consistency with this IB and the Order and shall be based on the complexity of the project. Implementation plan recommendations from the Prime Contractor should be submitted to NR following the approval of CD-0.
4. Section 3.a notes that principles of the Order apply to General Plant Projects (GPPs) using a tailored approach. NR's policy on GPP project management approvals shall continue as outlined in Enclosure (2) and (3) and the Additional NR Guidance section at the end of this enclosure.
5. Section 3.a and Appendix A identify requirements to use DOE's Project Assessment and Reporting System (PARS II). Naval Reactors utilizes an internal tracking system for all capital projects. Performance reporting in DOE's PARS II is not required. Other NR reporting requirements are listed at the end of this enclosure under Additional NR Guidance.
6. Section 3.c (3) addresses the need and dissemination for reviews to be conducted as listed in Appendix A, Tables 2.0 through 2.4. Naval Reactors is responsible for ensuring External Independent Reviews (EIR) are conducted and will disseminate the results as deemed appropriate. Project plans developed by the Prime Contractor should allot time in the project schedule for those reviews and corresponding time to respond to review findings. Those reviews should be scheduled consistent with the CD-submittal requirements defined in Appendix A, Tables 2.0 through 2.3. Although not a requirements document, the DOE's External Independent Review Standard Operating Procedure should be consulted by project teams initiating any new Major Construction Project (MCP). In addition to the reviews prescribed by the order, all MCPs shall have a design review at NRHQ prior to CD-3 unless waived by NR.
7. Paragraph 4.a.(3) addresses delegation of acquisition authority and tailoring. Delegation of Acquisition Executive (AE) authority is an NR Headquarters

Enclosure (1) to
U#13-00555

(NRHQ) function and shall be done in accordance with existing NRHQ policy. Additionally, tailoring strategies for individual projects shall either be recommended by the Prime Contractor and approved by NR or directed by NR.

8. Paragraph 5 states that the key roles and responsibilities of line managers are described in Appendix B of the Order. The duties and responsibilities delineated in Appendix B of the Order are to be carried out by Naval Reactors Headquarters, Naval Reactors Field Offices, or Naval Reactors' Prime Contractor per this IB or existing NR policy.

The following guidance is for Appendix A of the Order:

1. Appendix A paragraph 1 and throughout the Order – The Order establishes the authority and accountability for execution of a project rests with the Federal Project Director. DOE O 361.1B chapter IV identifies the certification process for DOE's Federal Project Directors. Within the NNPP these functions rest with the NR Federal Project Manager. 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 certified project manager. NR Federal Project Managers should be designated prior to approval of CD-1.
2. Appendix A, Table 2.1 and throughout the Order - The Order and NR practices and procedures differ regarding the directed use of integrated project teams (IPTs) and Prime Contractor responsibilities. IPTs and Project Execution Teams (PETs) for construction projects are utilized by the Prime Contractor. The Prime Contractor, per NR direction, developed the Project Execution Guide which delineates the roles and responsibilities of those teams. 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.

Enclosure (1) to
U#13-00555

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 Execution Plan.

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

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

f. As directed by NR (see paragraph 6. above), support External Independent Reviews and Cost Estimates for Program projects. In general, Bettis shall be responsible for independent cost estimates/reviews for Knolls and Kesselring Site (KS) projects and Knolls shall be responsible for reviews of Bettis and Naval Reactors Facility (NRF) projects. The Prime Contractor shall coordinate with NR in advance of these reviews. The prime Contractor shall coordinate with NR if the use of subcontractors (e.g. nuclear capable shipyards) is being considered to support this function.

g. Ensure that personnel responsible for management and execution of projects are appropriately trained and qualified to manage and execute projects covered by this order. Any individual given the responsibility for a capital asset project with a total estimated cost of \$5M or more will be formally qualified. The qualification requirements should address core project management training and include:

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

The above core training requirements shall be incorporated into the Prime Contractor's PEG. Project leadership & communication skills and Integrated cost and schedule control topics should be required training for Project Managers to be qualified above entry level. At the discretion of a Prime Senior Manager, an individual may be assigned to a Project Manager role prior to completion of required Core and Compliance

Enclosure (1) to
U#13-00555

Training; however, the individual must complete the missing training within the 24 months following assignment.

h. Formally track issues raised by NR, NRLFO, or project stakeholders in an open items list. The open Items list should be reviewed with the stakeholders at a minimum of quarterly and in conjunction with quarterly construction reviews.

3. Appendix A, Page 3 and 4 – The Order defines CD approval authority within the DOE for various projects based on threshold dollar values. Similarly in Appendix B, the Order defines responsibilities for various DOE management levels and organizations. The approval authorities in Enclosure (2) of this IB should be used in lieu of Appendix B of the Order. The duties and responsibilities delineated in Appendix B for various DOE headquarters components are carried out by Naval Reactors in accordance with existing Program policy and practices.
4. Appendix A, Page 4 – The Order's requirements for a CD-0 cost-range do not align with NR direction for MCP CD-0 submittals. Although performance baseline values are not required, the Prime Contractor should develop sufficiently bounded cost range estimates for CD-0 submissions commensurate with the complexity, risk, and relative priority of the proposed project. To support NR's review, the Prime Contractor should submit MCP CD-0s (i.e., Mission Need) 72 months in advance of the fiscal year of the project's planned construction funding. Project Engineering and Design (PED) funds may still be identified in the NR Plan without a CD-0. CD-2 should be approved for all projects 17 months prior to the beginning of the fiscal year of Construction funding. Other CD submission approval date requirements are dictated by annual budget guidance and will be passed to the Prime Contractor accordingly.
5. Appendix A and throughout the Order, DOE refers to requirements for Hazard Category 1, 2, and 3 nuclear facilities. The Prime Contractor shall address the hazard category of the facility and the nuclear safety aspects beginning with CD-0 and at each Project milestone. The Prime Contractor should refer to NR's implementation bulletin for 420.1-81 for guidance related to nuclear safety and design. Additionally, CD submittals shall highlight if planned construction could impact existing safety systems to ensure these impacts are known and included in the planning of the project.

Enclosure (1) to
U#13-00555

6. Appendix A, Page 7 and throughout the Order – The Order references sustainability requirements from Executive Orders 13423 and 13514, DOE O 450.1A, and DOE O 430.2B. The referenced DOE orders have been cancelled. NR's Implementation Bulletin 436.1-134 and the approved Naval Reactors Sustainability Plan should be referenced for NR's policy on sustainable requirements and environmental stewardship considerations.
7. Appendix A, Page 9 – The Order requires that a budget funding profile be developed that supports execution of the Performance Baseline and requires the AE (NR) to consider fully funding projects (excluding MIE) with a TPC less than \$50M. Appendix C of the Order, *Topical Areas*, provides additional guidance on full funding and states that all capital asset line item projects (excluding MIE) with a TPC less than \$20M will request all construction funds within the same appropriation year as the start of construction. NR policy on full funding is consistent with the DOE's policy. Therefore, phased funding of line item projects less than \$20M would be considered only on an exception basis and would require NR approval. For GPP funding, see the Additional Guidance section at the end of this enclosure.
8. Appendix A, Page 11 – Paragraph 2 discusses integration of construction projects into the DOE budget process. Existing NR policies for budgeting assure integration of construction projects with the Program's budget and take precedence over the Order.
9. Appendix A – Requirements for CD-1 through CD-3 submittals include review of Quality Assurance (QA), Security and Safety and Health Plans; however, there is no reference to Fire Hazards Analyses (FHAs). Preliminary and Final FHAs shall be submitted for new construction projects with CD-1 and CD-3 respectively. The Prime Contractor Project Execution Guide (PEG) shall include the requirement for and timing of preliminary and final FHAs for design-build and design-bid-build projects, which may be different.
10. Appendix A, Pages 14 & 16 – The Order requires submittal of a lessons learned document following CD-3 and CD-4. When there are important lessons learned, either positive or negative regardless of the milestone, the Prime Contractor should share those lessons learned with the rest of the facilities enterprise promptly. Additionally, the Prime Contractor shall document the roll up Lessons Learned with or immediately following CD-3 and CD-4.

Enclosure (1) to
U#13-00555

11. Appendix A, Page 17 – The Order provides high-level guidance on application to other projects, including environmental management clean-up projects. Use of DOE's Office of Environmental Management for Program work (outside of Separations Process Research Unit (SPRU) efforts) is not being pursued by NR. The principles of the Order and IB should also be applied to environmental clean-up projects. The Prime Contractor shall identify in project plan documents how the intent of the IB will be met.
12. Appendix A, Page 18 – NR historically has not requested Project Engineering and Design (PED) funding for Design-Build projects. If the site considers PED funding is needed for a particular design-build project, a recommendation shall be submitted to NR for approval.
13. Appendix A, Page 18 – The Order requires commissioning of Nuclear/Chemical Process Facilities. NR requires commissioning for all projects subject to this IB. Commissioning provides a systematic process to ensure new facilities and systems function as designed prior to turnover or operation. A graded approach should be used to determine the extent of detail for each commissioning plan.
14. Appendix A, Page 19 – Paragraph 6 discusses performance baseline deviations and changes. Performance Baseline Change Control shall be done in accordance with Enclosure (3).
15. Appendix A – The Order discusses the role of the Energy Systems Acquisition Advisory Board (ESAAB). NR's concurrence process meets or exceeds the requirements of the ESAAB, and is therefore equivalent.
16. The Contractor Requirements Document (CRD) (Attachment 1 to the Order) should not be included in the Prime Contract. This IB shall be considered the CRD.

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 the requirements of the Order and NR requirements. Reporting should include the use of Earned Value Management for all MCPs. For capital projects which have design and development contracts greater than \$20M, the Prime and sub-contractor shall develop an Earned Value Management System (EVMS) for the project that is certified compliant with

Enclosure (1) to
U#13-00555

ANSI/EIA-748B. In addition, the Prime Contractor should submit to NR, at a minimum, combined quarterly reports summarizing progress to the baseline of all capital asset projects. A combined report for D&D projects shall be provided separately.

2. Capital projects less than \$10M shall be executed in accordance with existing controls established in the latest revision of NRPM43, Prime Contractor Funding and Laboratory Technical Work Plan Controls and the Prime Contractor's Project Execution Guide.
3. Major Items of Equipment (MIE): MIE projects greater than \$10M requiring significant facility design and construction are subject to the same requirements as MCPs. All other MIEs shall be conducted in accordance with the requirements of NRPM 43.
4. Since the last revision of this IB the GPP threshold increased from \$5M to \$10M. Additional requirements on GPP projects >\$5M are as follows:
 - a. GPPs greater than \$5M require special notifications outside of the NNPP, therefore, the Prime contractor should submit CD-0 recommendations 20 months in advance of the start of the fiscal year of GPP funding.
 - b. CD-0 recommendations should have a "budget-bounding cost estimate" to ensure that TEC is executed within the prescribed budget.
 - c. Projects will be fully funded in the year of execution unless the Prime Contractor request includes sufficient justification that full-funding is a detriment to other Program work or budget costing. It is incumbent upon the Prime Contractor to recommend the optimum solution to balance project needs and funding execution.
 - d. An External Independent Review is required for all technical projects or complex infrastructure projects >\$8M unless waived by NR.

Enclosure (1) to
U#13-00555

CRITICAL DECISION APPROVAL AUTHORITY

Project Type	TEC	CD-0	CD-1	CD-2	CD-3	CD-4
Major Construction Projects ^{1,3}	≥\$10M	APPROVAL AUTHORITY NR NR NR			FO	FO
General Plant Projects	>\$.5M <\$10M ⁴	NR-Technical ² FO-Infrastructure ³			FO	FO
D&D, Demolition, Corrective Actions	>\$10M	NR	NR	FO	FO	NR if req'd by Lab-0288 /FO
Capital Equipment MIE with Significant Design and Construction	<\$10M >\$10M	See NRPM 43 NR	NR-Technical FO-Infrastructure		FO FO	FO/PC FO/PC

1.) NR approves all Critical Decisions for TECs >\$100M

2.) NR provides approval for GPPs/MIEs on technical projects

3.) Field Office provides approval for GPPs on infrastructure projects and MCP's when delegated

4.) GPPs greater than \$5M require special notifications outside of the NNPP, therefore, the Prime contractor should submit CD-0 recommendations 20 months in advance of the start of the fiscal year of GPP funding.

NR – Naval Reactors Headquarters

FO – Naval Reactors Field Office

PC – Prime Contractor

Enclosure (2) to
U#13-00555

PERFORMANCE BASELINE CHANGE CONTROL APPROVAL AUTHORITY

APPROVAL AUTHORITY

Level 0 Changes- NRHQ

Level 1 Changes- NRHQ or NRLFO See CD-2 Approval Authority in Enclosure (2)

Change Type	Level 0	Level 1	Other Changes
Scope	Changes to scope impacting the mission of the project as defined in/approved in CD-2 documentation	Minor scope changes not impacting the mission or capability of the project	Other changes as defined in project or other documentation
Schedule	>6 Month Change in CD-4 completion date	3 < x < 6 Month Change in CD-4 completion date	Other changes as defined in project or other documentation
Cost	<p><u>Major Construction Project (MCP):</u> Any increase in the CD-2 cost baseline for Construction or Design activities.</p> <p><u>General Plant Project (GPP):</u> Any increase in the CD-2 cost baseline that causes the GPP upper threshold to be exceeded.</p>	<p><u>Major Construction Project (MCP):</u> N/A</p> <p><u>General Plant Project (GPP):</u> Increase in CD-2 cost baseline of 10% or greater</p>	Other changes as defined in project or other documentation

Enclosure (3) to
U#13-00555