

## BUSINESS OPERATING PROCEDURE

BOP -  
~~413.406.04~~

Approved: 11-18-14

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# PROJECT REVIEWS

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## NATIONAL NUCLEAR SECURITY ADMINISTRATION Office of Acquisition and Project Management

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OFFICE OF PRIMARY INTEREST (OPI):  
Office of Project Analysis, Oversight, and Review

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11-18-14

## **PROJECT REVIEWS**

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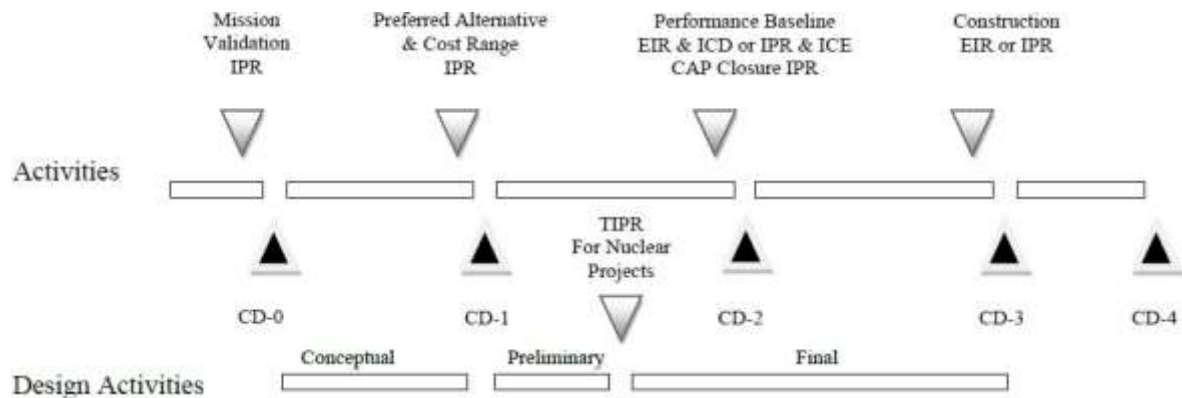
1. PURPOSE. This National Nuclear Security Administration (NNSA) Business Operating Procedure (BOP) describes the process for conducting Project Reviews on projects executed by the NNSA. The principal customers of the reviews are the Administrator, the Principal Deputy Administrator, the Deputy and Associate Administrators, Federal Project Directors, Project Managers, and the individual project Acquisition Executives. The reviews advise Managers on the status of projects and assist management in their project decisions.
2. CANCELLATION. BOP-50.003, *Establishment of a National Nuclear Security Administration (NNSA) Independent Project Review (IPR) Policy*, dated June 6, 2007 was cancelled on January 14, 2013.
3. APPLICABILITY.
  - a. NNSA Applicability. This policy applies to all projects (except General Plant Projects and third party financed projects) constructed for NNSA with an estimated Total Project Cost (TPC)  $\geq$  \$10 million. These projects include Line Item (Capital) projects and Major Items of Equipment (MIE) projects.
  - b. Contractors. Does not apply to contractors.
  - c. Exclusion. In accordance with the responsibilities and authorities assigned by Executive Order 12344, codified at 50 U.S.C. sections 2406 and 2511 and to ensure consistency through the joint Navy/DOE Naval Nuclear Propulsion Program, 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.
4. BACKGROUND.
  - a. Independent Project Reviews (IPRs) provide a method of evaluating the cost, scope, schedule, and technical attributes of a project, often authorized prior to the various Critical Decision (CD) milestones during project execution.
  - b. Technical Independent Project Reviews (TIPRs) are conducted on high risk, high hazard and Hazard Category 1, 2, or 3 nuclear projects following the completion of preliminary design. TIPRs are reviews of Nuclear Safety to determine if the safety documentation is sufficiently conservative and bounding to be relied upon for the next phase of the project, final design. TIPRs ensure the requirements of DOE-Standard (STD)-1189-2008 are being appropriately incorporated into project design deliverables and development of project safety documentation is compliant with the standard.
  - c. Peer Reviews (PR) are conducted at least annually on all NNSA projects after achieving CD-1 to provide expert corroboration/evaluation on a project's scope,

cost, schedule, and technical progression. An annual Peer Review will normally not be conducted in the year an IPR is conducted due to the effort being duplicative and a distraction from work progress. For the same reason, an annual Peer Review may be eliminated in the year prior to CD-4 approval. Other circumstances (project placed on-hold, project approach being revisited, good project cost and schedule performance, etc.,) may arise that would make an annual review un-necessary. The requirement for a review will be coordinated among stakeholders with the final decision residing with APM.

- d. The Acquisition Executive (AE) uses these reviews, IPRs, TIPRs, or PRs, to determine the readiness level of a project prior to proceeding into subsequent phases or, in the case of a Peer Review, the overall status of the project. The National Research Council has recognized the value of NNSA conducting internal, non-advocate reviews as a means of improving overall project performance.

## 5. INTEGRATION OF PROJECT REVIEWS AND PROJECT LIFECYCLE.

Typical:



## 6. REQUIREMENTS.

- a. This policy will be applied in conjunction with the requirements established by DOE Order (O) 413.3B. Execution of project activities, including responsibilities, will follow the requirements of DOE O 413.3B unless otherwise noted herein.
- b. All applicable review teams will be appointed and led by personnel from NNSA Office of Acquisition and Project Management (NA-APM) or the designated review owner (DOE O 413.3B). These reviews will be conducted to provide emphasis on technical approach (including nuclear safety for Hazard Category 1, 2, and 3 nuclear facilities), cost and schedule risks; management and acquisition;

safety culture; environmental safety and health, quality assurance, and commissioning.

The information below highlights some of the requirements in DOE O 413.3B that impact NNSA projects and adds additional requirements for NNSA Projects.

c. Prior to CD-0

(1) Mission Validation Independent Review

Criteria: > \$750M (Major System Project (MSP))

Responsible Party: Deputy or Associate Administrators

This review is a limited review for MSP's. The purpose is to validate the mission need, review the rough order of magnitude (ROM) cost range and to designate the appropriate AE. A value study may be conducted, as appropriate, to assist in establishing CD-0.

(2) Independent Cost Review (ICR)

Criteria: > \$750M (MSP)

Responsible Party: DOE APM

For MSP's or projects designated by the Secretarial Acquisition Executive (SAE), Department of Energy Office of Acquisition and Project Management (DOE APM) will conduct an ICR. This review validates the basis of the ROM cost range; provides an assessment of whether the ROM reasonably bounds the alternatives to be analyzed in the next project phase; and assists in determining the AE authority designation.

d. Prior to CD-1

(1) Acquisition Strategy (AS) Review

Criteria: TPC >\$750M

Responsible Party: DOE-APM

Acquisition Strategies (AS) for MSP's must be sent to the Energy Systems Acquisition Advisory Board (ESAAB) Secretariat for review by DOE-APM prior to scheduling CD-1 decisional briefings. The Federal Project Director (FPD) and CO must concur with the AS prior to the DOE-APM review. Within 10 days upon receipt, DOE-APM will provide a recommendation to the appropriate PSO who holds approval authority. Approval of the AS does not constitute approval of the Acquisition Plan (AP). The AP

must be submitted for review and approval in accordance with established procurement procedures including DOE Acquisition Guide, Chapter 7.1.

(2) Acquisition Strategy (AS) Review (Additional requirements for NNSA Projects)

Criteria:  $\$10M < TPC < \$750M$

Responsible Party: NA-APM

Approval: Acquisition Strategies for Projects within this range must be sent to NA-APM-1 prior to scheduling CD-1 decisional briefings. The Federal Project Director (FPD) and CO must concur with the AS prior to the NA-APM review. Within 10 days upon receipt, NA-APM will provide a recommendation to the appropriate Deputy or Associate Administrators who holds approval authority. Approval of the AS does not constitute approval of the Acquisition Plan (AP). The AP must be submitted for review and approval in accordance with established procurement procedures including DOE Acquisition Guide, Chapter 7.1.

(3) Independent Project Reviews (High Hazard & Nuclear Facilities)

Criteria: Hazard Category 1, 2, 3, and Nuclear Facilities including modifications to Nuclear Facilities. Excludes building equipment and systems that are not line item and are under \$50M.

Responsible Party: NA-APM

Note: Chief of Defense Nuclear Safety (CDNS) concurrence on charge memorandum and review plans is required for reviews of projects that must implement DOE-STD-1189-2008.

For Hazard Category 1, 2, and 3 nuclear facilities, the NA-APM will conduct an IPR to ensure early integration of safety into the design process. The review must: 1) ensure that safety documentation is complete, accurate, and reliable for entry into the next phase of the project; 2) evaluate whether the preferred alternative process and facility design, and corresponding safety analyses, are sufficiently detailed to identify any safety controls that, because of cost, maintainability, complexity or other limiting characteristics, could significantly impact the decision to select the preferred alternative; and 3) validate that the Integrated Project Team (IPT) charter has identified appropriate functions, roles and responsibilities for members needed to support nuclear safety, and

that the IPT members supporting nuclear safety are appropriately qualified, and have the availability to meet their responsibilities. The Deputy or Associate Administrators approval of IPRs means that the Program Office and FPD jointly request the review and establish the review scope and schedule.

(4) Independent Cost Estimate (ICE) and/or Independent Cost Reviews (ICR)

Criteria:  $TPC \geq \$100M$

Responsible Party: DOE-APM

For projects with a TPC greater than or equal to \$100M, DOE-APM will develop an ICE and/or conduct an ICR, as they deem appropriate. This review validates the basis of the preliminary cost range for reasonableness and executability. It also includes a full accounting of life cycle costs to support the alternative selection process and budgetary decisions.

(5) Independent Cost Estimate (ICE) and/or Independent Costs Reviews (ICR) (Additional requirements for NNSA Projects)

Criteria:  $\$10M < TPC < \$100M$

Responsible Party: NA-APM

For capital projects managed with a TPC less than \$100M but greater than \$10M, NA-APM will conduct an ICE or an ICR. This review validates the basis of the preliminary cost range for reasonableness and executability. It also includes a full accounting of life cycle costs to support the alternative selection process and budgetary decisions.

For Federal direct contracts, NNSA will develop a cost estimate, in accordance with the BOP-~~413.306.03~~, *Independent Cost Estimates Procedures*, which will be reviewed by NA-APM prior to approval of CD-1.

e. Prior to CD-2

(1) Technical Independent Project Reviews (High Hazard & Nuclear Facilities)

Criteria: Hazard Category 1, 2, 3, and Nuclear Facilities including modification to Nuclear Facilities. Excludes building equipment and systems that are not line item and are under \$50M.

Responsible Party: NA-APM

Note: CNS or CDNS concurrence on charge memorandum and review plans, as appropriate, is required for reviews of projects that must implement DOE-STD-1189-2008.

For Hazard Category 1, 2, and 3 nuclear facilities, the Deputy or Associate Administrators will conduct a TIPR, at the completion of preliminary design, to ensure early integration of safety into the design process. The TIPR must: 1) ensure that safety documentation is complete, accurate and reliable for entry into the next phase of the project; 2) evaluate the IPT to ensure that appropriate team member functions to support nuclear safety during final design have been established, and appropriately qualified team members have been selected and have needed availability to address nuclear safety-related matters during final design. Completion or closure of the TIPR recommendations, i.e. the CAP, is not required prior to CD-2 approval. The Deputy or Associate Administrators approval of a TIPR means that the Program Office and FPD jointly request the review and establish the review scope and schedule.

(2) Performance Baseline Validation Review (CD-2)

Criteria: TPC >\$100M

Responsible Party: DOE-APM, External Independent Review (EIR)

A Performance Baseline Validation Review is required to provide reasonable assurance that the project can be successfully executed. For all projects with a TPC greater than or equal to \$100M, DOE-APM will conduct an EIR and develop an ICE in support of the PB validation. Findings resulting from project reviews must be addressed by the IPT in their corrective action plan and expeditiously resolved. Follow-up reviews to validate finding resolution may be required at the discretion of the reviewing entity. The estimate shall be at least an Association for the Advancement of Cost Engineering (AACE) International Inc., Class II estimate.

(3) Independent Project Review (CD-2) (Additional requirements for NNSA Projects)

Criteria: \$10M < TPC <\$100M

Responsible Party: NA-APM, Independent Project Review

An Independent Project Review (IPR) is required to provide reasonable assurance that the project can be successfully executed.



IPRs are required to validate the Performance Baseline (PB) for projects with a TPC greater than \$10M but less than \$100M.

(4) Project Definition Rating Index (PDRI) Analysis

Criteria: TPC > \$100M

Responsible Party: FPD/IPT

For projects with a TPC greater than \$100M, the FPD shall conduct a PDRI Analysis. Such analyses are also encouraged for projects with a TPC less than \$100M.

(5) Technology Readiness Assessment.

Criteria: TPC >\$10M

Responsible Party: FPD/IPT (IPR will review)

For all Projects where new critical technologies are being deployed, the IPT shall complete a Technology Readiness Assessment (TRA) and Technology Maturation Plan, as appropriate.

(6) Final Design Review

Criteria: All Projects

Responsible Party: FPD/IPT

Final Design Review must be conducted for all projects and involve external reviewers using a formalized, structured approach to ensure that the reviews are comprehensive, objective and documented. The purpose of the review is to validate the project has completed 90% design (full plans and specs without final signatures), has incorporate safety in design (if required), and the design is adequate to proceed into final design. For nuclear projects, including modifications to nuclear projects, this design review should include confirmation that an appropriate As Low as Reasonably Achievable (ALARA) Review has been completed as required by 10 CFR 835 and DOE Order 458.1.

f. Prior to CD-3

(1) Construction or External Independent Review (EIR)/Execution Readiness Review (ERR)

Criteria: TPC >\$750M

Responsible Party: DOE-APM

An EIR must be performed by DOE-APM on Major System Projects to verify construction or execution readiness.

- (2) Independent Project Review (IPR) (Additional requirements for NNSA Projects)

Criteria:  $\$10M < TPC < \$750M$

Responsible Party: NA-APM

An IPR is required for non-Major System Projects to verify construction or execution readiness, unless waived by NA-APM.

- (3) Independent Cost Estimate (ICE)

Criteria:  $TPC > \$100M$

Responsible Party: DOE-APM

For projects with a TPC greater than or equal to \$100M, DOE-APM will develop an ICE, if warranted by risk and performance indicators or as designated by the AE.

- (4) Independent Cost Review (ICR) (Additional requirements for NNSA Projects)

Criteria:  $\$10M < TPC < \$100M$

Responsible Party: NA-APM

For projects managed by an M&O contractor with a TPC greater than \$10M and less than \$100M NA-APM will conduct an Independent Cost Review (ICR).

For Federal direct contracts, NNSA will develop an independent cost estimate, in accordance with the FAR, which will be reviewed by NA-APM prior to approval of CD-3.

- (5) Technology Readiness Assessment.

Criteria:  $TPC > \$750M$

Responsible Party: FPD/IPT

For Major System Projects where a significant critical technology element modification occurs subsequent to CD-2, conduct a TRA, as appropriate.

- (6) Final Design Review for projects not already at 90% design prior to CD-2

Criteria: All Projects

Responsible Party: FPD/IPT

A Final Design Review must be conducted for all projects and involve external reviewers using a formalized, structured approach to ensure that the reviews are comprehensive, objective, and documented.

- g. Prior to CD-4

- (1) Operational Readiness Review (ORR)

Criteria: High Hazard & Nuclear Facilities, including modifications to Nuclear Facilities. Radiological Facilities may also require an ORR. The requirement for an ORR will be determined on a case by case basis.

Responsible Party: NNSA Line Management as defined by DOE Order 425.1D

Conduct an ORR for Hazard Category 1, 2, and 3 nuclear facilities, including modifications to nuclear facilities, in accordance with DOE O 425.1D and DOE-STD-3006-2010. Per DOE O 425.1D, tailoring of the effort is possible

- (2) Readiness Assessment (RA)

Criteria: Low Hazard & Non-Nuclear. Radiological Facilities may also require an RA. The requirement for an RA will be determined on a case by case basis.

Responsible Party: NNSA Line Management

For non-nuclear projects, conduct a formal assessment of the project's readiness to operate, as appropriate. Determine the basis for DOE acceptance of the asset and if the facility or area can be occupied from both a regulatory and work function standpoint. Establish a beneficial occupancy/utilization date for the facility and/or equipment. Per DOE O 425.1D, tailoring of the effort is possible, and for Low Hazard & Non-Nuclear Facilities, an RA is optional but not required.

- h. Project Peer Reviews (PR)
- (1) These focused, in-depth reviews are conducted by non-advocates (Federal and M&O or other contractor experts) and support the design and development of a project. For projects greater than \$10M, NA-APM should conduct a Project Peer Review at least once a year, starting at CD-1 and continuing through CD-4, for large or high-visibility projects and more frequently for the most complex projects or those experiencing performance challenges. The reviews should be performed by peers (with relevant experience and expertise) independent of the project, to evaluate technical, managerial, cost, scope, and other aspects of the project, as appropriate. These Project Peer Reviews may supplement or replace applicable IPRs at the discretion of the AE and vice versa.
  - (2) PRs will be tailored reviews to address project execution and/or specific project issues or concerns identified during Quarterly Project Reviews, external reviews (e.g. IG, GAO, DNFSB, etc.), or by the Deputy or Associate Administrators or the Acquisition Executive. The tailoring will be accomplished in consultation with the Federal Project Director, the Acquisition Executive, the Chief of Defense Nuclear Safety (for Hazard Category 1, 2, and 3, nuclear facilities, and modifications to nuclear facilities only), and the associated HQ Program Office to meet the specific needs of the Administrator, Principal Deputy Administrator, and Deputy and Associate Administrators. Tailoring will be documented in the review Charge Memorandum issued by the AE.
  - (3) For Cause Peer Reviews are initiated due to a significant decline in a project's performance, as depicted on the "Monthly Project Status Report for the Deputy Secretary," or from other sources. PRs can be initiated by the Acquisition Executive or NA-APM, for projects that are post CD-2, if sufficient cause warrants a review. These reviews will generally be conducted if the project has not corrected performance issues as reported (i.e. project performance changes from green to yellow or yellow to red). For Cause Reviews may also be initiated due to significant technical issues or obstacles that jeopardize project performance and warrant an independent evaluation and the involvement of the Acquisition Executive in the resolution of the issue.
  - (4) Circumstances (project placed on-hold, project approach being revisited, good project cost and schedule performance, etc.,) may arise that would make an annual review un-necessary. The requirement for a review will be coordinated among stakeholders with the final decision residing with NA-APM.
- i. Any of the above reviews may be combined where it is in the best interest of the project and does not specifically conflict with guidance outside this BOP. The

decision to combine reviews will be reviewed by all stakeholders with NA-APM making the final decision.

## 7. REVIEW PROCESS

- a. The Office of Acquisition and Project Management (NA-APM) leads, manages, and performs all IPRs, T-IPRs, and PRs within the NNSA. While NA-APM will lead the reviews, Program Office, Field Office, and appropriate technical expertise, including the Contracting Officer, are expected to participate in all reviews, consistent with their individual areas of expertise and the needs of the review team. To obtain experienced personnel for the Peer Reviews, NA-APM will attempt to obtain Subject Matter Experts (SME) from incumbent M&O contractors and other offices within NNSA and DOE as necessary. This will ensure fair and balanced assessments and have the additional benefit of cross-pollination, sharing best practices in project management complex-wide. Federal personnel from NNSA sites that are managing projects of a similar size or technical complexity may be requested to participate on the reviews. Such participation will be done in consultation with their management.
- b. IPRs are performed at the request of the Program Office, the FPD, NA-APM, or Deputy or Associate Administrators. IPRs are also required prior to CD-1, 2, and 3 ESAABs. NA-APM will lead a Corrective Action Plan (CAP) Closure Review for all recommendations identified at previous IPRs, TIPRs, and PRs. The CAP Closure Review can be addressed at a Peer Review or IPR. This CAP Closure Review must be addressed prior to a project moving into the next project phase (e.g. preliminary design to final design) or approval of a Critical Decision. NA-APM, the Review Committee Lead, and the Federal Project Director approve the CAP and CAP Closure Review. The Associate Administrator for Acquisition and Project Management (NA-APM-1) resolves disagreements.
- c. Review scope varies with the type of review being conducted. IPR scope, unless tailored, will include as a minimum, technical approach, project management systems, acquisition, cost, schedule, and risk, "safety in design" review (if applicable and in consultation with CDNS for nuclear facilities, and modifications to nuclear facilities), safety culture, environmental, occupational safety and health, quality assurance, start-up/commissioning and any specific review areas requested by the Project and/or Program Office. For nuclear projects, TIPRs will include a comprehensive technical review of nuclear safety and security particularly related to project design. Peer Review scope can be similar to an IPR or may be proposed and negotiated with the Program Office and FPD. The review process will be conducted in a non-adversarial manner with the objective of increasing the project's likelihood of success.
- d. The reviews will be conducted in an open format. Program offices will be invited to attend all review team sessions. For nuclear projects, which have Defense Nuclear Facilities Safety Board (DNFSB) oversight, the DNFSB staff will be invited to observe the review.

- e. The Integrated Project Team (IPT) will prepare a Project Definition Rating Index (PDRI) for each review of a project with TPC greater than \$10 million, as requested by the Acquisition Executive. The PDRI is a management tool for the IPT and is not required to be used by either the IPR or TIPR. All IPRs, PRs, and TIPRs will review Technology Readiness Assessments conducted by projects as required by DOE Order 413.3B and other applicable NNSA Policy.
- f. All IPR/TIPR/PR Reports will be approved/signed by the Review Committee Leader.
- g. At the conclusion of each review, an out brief will be conducted, if practical, with the Federal Project Director regarding the review results. Project site officials and program managers are encouraged to attend the out brief. CDNS (or appropriate CDNS representative) should attend the out brief for nuclear projects.
- h. The Review Committee Leader is responsible for conducting post-review briefings to the Administrator, Principal Deputy Administrator, and the Deputy and Associated Administrators, the AE, CDNS (for nuclear projects), and the Program Office or their designee regarding the review results.
- i. The funding for TIPRs, IPRs, and Peer Reviews, on large (>\$750M), complex projects will be the responsibility of the Program Office. All other smaller project reviews will be funded by the Project. Funding needs/amounts for each review will be identified, working with the Program Office, after receipt of a Charge Memorandum. Funding issues will be resolved with the Project/Program Office by the 10<sup>th</sup> of the month prior to conducting the review. Required funding is to be used for SME contractor participation, travel, and support and will be provided by the project at the beginning of the Fiscal Year. This funding will support both contractor and federal participation.
- j. A Charge Memorandum is the initiating documentation and the official request by the Deputy or Associate Administrators, the Acquisition Executive or the FPD to conduct an IPR/TIPR/PR. This Charge memorandum will outline areas and issues that are to be addressed in the review. NA-APM negotiates the dates on which the review is to be conducted with the FPD. Review documentation will be available to the Review Committee a minimum of four (4) weeks prior to the onsite review. If documentation is not available four weeks ahead of the onsite review, the review may be postponed. For nuclear facilities, CDNS will be consulted, and will concur on the nuclear safety scope and breadth of reviews through formal concurrence on the Charge Memorandum, Review Plans, and associated Criteria and Review Approach Documents (CRADs). Project reviews previously conducted by the Program/Project office, as well as external reviews (IG, GAO, DOE-APM, DNFSB, etc.) will be considered in scoping/tailoring the IPR/TIPR/PR. For nuclear projects, previous formal CDNS Advice regarding approval of the Safety Design Strategy will also be considered in the scoping of these reviews.

8. RESPONSIBILITIES.

- a. Acquisition Executive (AE). The approving authority for a project's Critical Decisions per DOE O 413.3B. The AE may request a project review.
- b. Chief of Defense Nuclear Safety (CDNS). For nuclear facilities, CDNS concurrence is required for the Charge Memorandum, Review Plans, and associated Criteria and Review Approach Documents (CRADs). CDNS must ensure the qualifications of IPT members, review committee members, and effective implementation of DOE-STD-1189-2008 as applicable.
- c. Federal Project Director (FPD). Individual certified under the Department's Project Management Career Development Program as responsible and accountable to NA-APM for project execution.
- d. Office of Project Analysis Oversight and Review (NA-APM 1.1). The NNSA staff responsible for leading, managing, and performing all Peer Reviews, Independent Project Reviews, Technical Independent Project Reviews, and CAP Closure Reviews within the NNSA. NA-APM may select a Review Team Leader external to the NA-APM organization.
- e. Deputy or Associate Administrators /Federal Program Manager. An office/individual in the headquarters organizational element responsible for managing a program. They may request a review.
- f. Heads of Field Elements and Headquarters NNSA Elements.
  - (1) Review procurement requests for new non-M&O contracts and other site and facility management contracts that involve classified matter or nuclear materials and contain DEAR clause 952.204-2, Security Requirements, and ensure that the requirements are included in those contracts.
  - (2) NNSA elements must notify contracting officers of affected M&O contracts and other site and facility management contracts to incorporate a CRD into those contracts.
- g. Contracting Officers.
  - (1) Once notified, are responsible for incorporating a CRD into the affected contracts via the laws, regulations, and DOE directives clause of the contracts.
  - (2) Assist originators of procurement requests to incorporate the requirements in new non-M&O contracts and other site and facility management contracts, as appropriate.



8. REFERENCES.

- a. DOE Order 413.3B, *Program and Project Management for the Acquisition of Capital Asset*, dated 11-29-10.
- b. DOE G 413.3-9, *Project Review Guide for Capital Asset Projects*, dated 9-23-08.
- c. DOE G 413.3-12, *Project Definition Rating Index Guide for Traditional Nuclear and Non-Nuclear Construction Projects*, dated 7-22-10
- d. DOE O 425.1D, Admin Change 1, *Verification of Readiness to Start Up or Restart Nuclear Facilities*, dated 4-2-13
- e. DOE-STD-1189-2008, *Integration of Safety into the Design Process*.
- f. DOE-STD-3006-2010, *Planning and Conducting Readiness Reviews*
- g. *NNSA Annual Peer Review, Independent Project Review and Technical Independent Project Review Handbook*, January 2011.
- h. DOE Order 430.1B, Real Property and Asset Management

9. DEFINITIONS.

- a. Annual Peer Reviews – An Annual Peer Review will be conducted for each project with a TPC greater than \$10M that has achieved CD-1. Other circumstances (project placed on-hold, project approach being revisited, good project cost and schedule performance, etc.) may arise that would make an annual review un-necessary. The requirement for a review will be coordinated among stakeholders with the final decision residing with APM.
- b. CAP Closure Process – A CAP Closure Review will be conducted for each project with a TPC greater than \$10M that has had a previous IPR/TIPR with Recommendations. A CAP Closure Review will be conducted for all high risk, high hazard, and Hazard Category 1, 2, and 3 nuclear facilities to ensure closure of previously identified Recommendations. CAP Closure will be led by the NA-APM incorporated into an IPR, PR, or TIPR.
- c. Charge Memorandum – A memorandum written and signed by NA-APM directing a Project Review and charging the Review Committee. The memorandum states the purpose for the review, suggested tailoring, and areas of particular concern or needing special attention. A copy is included as an attachment to the IPR report.
- d. Critical Decisions (CD) – a formal determination made by the Secretarial Acquisition Executive/Acquisition Executive at a specific point in a project's life cycle that allows the project to proceed to the next phase.



- e. Design Maturity – Advancing design maturity to a sufficient level prior to establishing the performance baseline is essential to project management success. The project design will be considered sufficiently mature when the Program has developed a cost estimate and all relevant organizations have a high degree of confidence that it will endure to project completion. In determining the "sufficiency" of the design level, factors such as project size, duration, and complexity will be considered. For basic facilities, such as administrative buildings, general purpose laboratories, and utilities, the design does not have to be as mature as for a complex chemical or nuclear processing facility, which would necessitate the design being complete before work begins and at 90% before CD-2. In any case, construction should not be allowed to proceed until the design is sufficiently mature to limit change orders to a minimum.

In conducting External Independent Reviews, NA-APM, will evaluate the sufficiency of the project's design maturity. This analysis will serve as a key evaluation factor in formulating its recommendation to validate a project performance baseline. In addition, when approving a Critical Decision (CD), the Acquisition Executive should consider the sufficiency of the design maturity.

- f. For Cause Peer Review – A For Cause PR is initiated due to significant declination in a project's performance.
- g. Independent Project Review (IPR) – An important project management tool that serves to verify the project's mission, organization, development, processes, technical requirements, baselines, progress, etc. IPR's are conducted prior to Critical Decisions. IPR's are performed by reviewers from within or outside the Program but having no association with the project being reviewed.
- h. Project Peer Reviews - Focused, in-depth reviews conducted by non-advocates (Federal and M&O or other subject matter experts) supporting the design and technical development of a project. Project Peer Reviews should be conducted at least once a year for all >\$10M projects and more frequently for the most complex projects or those experiencing performance challenges. An IPR may supplement or replace applicable Project Reviews at the discretion of the Program Office or NA-APM (post CD-2 projects). The Office of Project Analysis Oversight and Review (NA-APM 1.1) staff will conduct Peer Reviews. A copy of all Project Peer Reviews will be forwarded to the Project Program Office.
- i. Preliminary Design – Continues the design effort utilizing the conceptual design and the Program Requirements Document (PRD) as a basis for project development. Preliminary Design develops topographical and subsurface data and determines the requirements and criteria, which will govern the definitive or final design. Tasks include preliminary planning and engineering studies, preliminary design calculations, drawings, and outline specifications, life-cycle cost analysis, preliminary cost estimates, and scheduling for project completion. Preliminary design provides identification of long lead procurement items and analysis of risks associated with continued project development.

- J. **Project**- A group of related activities ~~that has~~that has a defined starting and end point and is undertaken to create a unique product or service in support of a program.
- k. **Technical Independent Project Review (TIPR)** - an IPR conducted prior to initiation of Final Design for high risk, high hazard, and Hazard Category 1, 2, and 3 nuclear facilities. At a minimum, the TIPR shall be conducted prior to CD-2, Approve Performance Baseline. The focus of this review is to determine that safety documentation and design is sufficiently conservative and bounding to be relied upon for the next phase of the project (DOE-STD-1189).
10. **CONTACT**. Office of Project Analysis, Oversight, and Review (NA-APM 1.1), 202-586-6567.

BY ORDER OF THE ADMINISTRATOR:



Robert B. Raines  
Associate Administrator  
for Acquisition and Project Management