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SUBJECT AREA: Nuclear Safety	EFFECTIVE DATE: 6/10/02	Page 1 of 5
DOC TYPE: Policy	PREPARER/POC: Bruce Wilson	
TITLE: NUCLEAR SAFETY ASSURANCE	APPROVED BY/DATE: Paul F. Clay 6/7/02 [Approval Signature On File]	

POLICY STATEMENT

This Policy affirms Bechtel Jacobs Company LLC (BJC) commitment to excellence in nuclear safety assurance by:

- establishing requirements for the nuclear safety program,
- outlining disciplined and rigorous approach to developing, maintaining, and implementing Safety Basis (SB) documents, and
- establishing controls for safety management programs that support the nuclear safety program.

It is BJC policy to plan, manage, and conduct nuclear safety related activities and operations in a manner that assures protection of the safety and health of the public, the environment, and workers, and that complies with requirements defined in 10 CFR 830, *Nuclear Safety Management*, and 10 CFR 835, *Occupational Radiation Protection*, and related standards.

SCOPE

This nuclear safety assurance policy applies to category 2 and 3 nuclear facilities and to the categorization of nuclear facilities in accordance with Department of Energy (DOE) STD 1027-92, Change Notice 1.

DEFINITIONS

Authorization Basis: Safety documentation that supports the decision to allow a process or facility to operate. Includes documents relating to environmental issues, such as permits, as well as SB documentation.

Safety Basis: The documented safety analysis and hazard controls that provide reasonable assurance that a DOE nuclear facility can be operated safely in a manner that adequately protects workers, the public, and the environment.

Nuclear Facility: A reactor or a nonreactor nuclear facility where an activity is conducted for or on behalf of DOE and includes any related area, structure, facility, or activity to the extent necessary to ensure proper implementation of the requirements established by 10 CFR 830.

Radiological Facility: A facility that contains radioactive materials above the reportable quantities in Appendix B to 40 CFR 302.4 but less than nuclear category 3 threshold quantities. A nuclear facility may be categorized as radiological based on an unmitigated hazards analysis.

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NUCLEAR SAFETY ASSURANCE PROGRAM REQUIREMENTS

1. **Facility Categorization** – BJC facilities will be categorized in accordance with DOE STD 1027-92 to designate facilities that are Nuclear Facilities (Category 1, 2, or 3), Radiological Facilities, or Other Industrial Facilities. For facilities determined to be nuclear category 3, or radiological through an unmitigated hazards analysis, the resultant facility hazards assessment document (if not part of the SB document) will be submitted to DOE for approval.
2. **Nuclear Facilities Safety Basis List** – A controlled listing of Nuclear Facility SB documentation for each nuclear facility will be maintained current, and will be readily available to BJC and DOE personnel requiring access to the information. The controlled list shall identify specific nuclear facilities within the scope of the SB documentation; reference or list the active SB documents [Documented Safety Analysis (DSA), DOE Safety Evaluation Report, any Justifications for Continued Operations, any positive Unreviewed Safety Question Determinations (USQD) with attendant DOE approvals]; provide ready linkage to a listing of all USQDs processed against the DSA; and be maintained up-to-date as changes to the SB documentation are approved.
3. **Radiological Facilities List** – A controlled listing of radiological facilities with supporting data regarding the basis for categorization in accordance with DOE STD 1027-92 shall be maintained. For radiological facilities based on inventory alone, DOE approves the hazard categorization by approving this list.
4. **Safety Basis Documents** – For category 2 and 3 nuclear facilities, DSA shall be developed and maintained compliant with the requirements of 10 CFR 830 Subpart B, *Safety Basis Requirements*. Development of DSAs for a nuclear facility shall comply with the safe harbor methods and standards authorized in Subpart B.
5. **Inventory Control** – Inventory controls shall be established to assure that nuclear and radiological facility inventories are maintained within the DOE approved hazard categorization. For facilities with changing inventories (e.g., waste storage), a definition of the inventory control methodology or process used to assure that the facility inventory does not exceed the next higher categorization limit for the facility shall be documented and approved as a reference document supporting the facility SB. Software systems used for inventory control shall meet software quality assurance requirements.
6. **Nuclear Safety Procedures, Guides, and Instructions** – BJC Nuclear Facility Safety shall develop and maintain a comprehensive set of Company level procedures, guides, instructions, and subcontract specifications for use in development, maintenance, and implementation of SB documents. These procedures, guides, and instructions shall be used by BJC and BJC subcontractors in the development of all BJC DSAs. The BJC USQD procedure shall comply with provisions of 10 CFR 830.203, shall be approved by DOE, and shall be mandatory for all BJC subcontractors involved in nuclear facility management and change control.
7. **Flowdown to Subcontractors** – The flowdown of nuclear safety requirements to BJC subcontractors involved in the management of nuclear facilities shall be assured through provisions set forth in subcontract terms and conditions, the imposition of a set of Technical Specifications that clearly define requirements and associated standards, and related subcontractor submittals, approved by BJC, which represent the standards of performance to which the subcontractor is obligated to perform. Technical Specifications shall include Nuclear Safety, Nuclear Criticality Safety, and Facility Safety (for facilities less than nuclear category 3).

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8. **Flowdown Implementation** – Requirements and limitations defined in SB documents shall be implemented through plans, procedures, instructions, and training in accordance with the requirements of the BJC Quality Assurance Program or BJC approved subcontractor Quality Assurance Programs, as applicable. To facilitate this implementation, an implementation matrix shall be maintained by the responsible Manager of Project (MOP) for each DSA to document flowdown of DSA requirements into implementing performance management documents. The implementation matrix shall be utilized by the MOP, facility manager, and subcontract management to assure that requirements are implemented and that personnel involved in facility management are knowledgeable of SB requirements that govern their facility, limiting hazards and initiating events, and associated controls.
9. **Personnel Training and Qualification** – The BJC Training Manager shall ensure that the BJC training and qualification program complies with the requirements of 5480.20A, *Personnel Selection, Training and Qualification Requirements for DOE Nuclear Facilities*. The training and qualification program shall include a graded approach to achieve competence commensurate with responsibilities, shall include provisions for both generic SB training and facility specific training for issued DSAs. Subcontractor compliance shall be confirmed through the use of management assessments.
10. **Document Control and Records Management** – SB documents and supporting documents shall be managed in accordance with the BJC Document Control and Records Management Program, or applicable approved subcontractor program, including tracking of SB documents to the associated facilities, verification that active SB documents are readily retrievable in the BJC records management system, tracking of pending (submitted) DSAs until approved by DOE, and retiring of inactive DSAs once superceded by updated documents.
11. **Annual Review/Update** – SB documents shall be updated on an annual basis in accordance with the provisions of 10 CFR 830.202. The responsible MOPs shall review the SB, document to DOE that the SB is current and an update is not required, or submit the required update.
12. **Safety Basis Submittals** – SB submittals shall be processed through Nuclear Facility Safety and the General Manager to the DOE Contracting Officers Representative. An up-to-date status of SB submittals shall be maintained and used in management of interfaces with DOE.
13. **Compliance with 10 CFR 830 Subpart B** – A plan for bringing the SB documents into compliance with 10 CFR 830 Subpart B shall be developed and maintained by Nuclear Facility Safety, with input and support from the responsible MOPs and with DOE concurrence on the selected Safe Harbor Methods and associated standards. Exemptions to 10 CFR 830 Subpart B requirements shall be developed and submitted to DOE as needed and prior to the associated compliance milestone.
14. **Performance of Work** – 10 CFR 830 Subpart B requires the contractor (and subcontractors) to perform work in accordance with the DOE approved SB for nuclear facilities. Work shall only be performed in accordance with SB documents that have been reviewed and approved by DOE via a Safety Evaluation Report or similar document.

SAFETY MANAGEMENT PROGRAMS

Safety Management Programs (SMP) shall be established to assure effective management and controls in the areas listed below and consistent with the applicable requirements of 10 CFR 830 and associated standards. These SMPs are recognized to support facility safety analyses and associated SB documentation, and to provide an essential framework for nuclear safety assurance.

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Required SMPs and the responsible functional organization are listed below:

<i>SMP Title</i>	<i>Responsible Functional Organization</i>
• Prevention of Inadvertent Criticality	Nuclear Facility Safety
• Radiation Protection	Environment, Safety and Health
• Hazardous Material Protection	Environment, Safety and Health
• Radioactive and Hazardous Waste Management	Waste Generator Services
• Initial Testing, In-Service Surveillance, and Maintenance	Field Services
• Operational Safety	Safety Systems Integration (Conduct of Operations)
	Security, Fire, and Emergency Management (Fire Protection)
• Procedures and Training	Performance/Quality Assurance (Procedures)
	Human Resources (Training)
• Human Factors	Nuclear Facility Safety
• Quality Assurance	Performance/Quality Assurance
• Emergency Preparedness Program	Security, Fire and Emergency Management
• Provisions for Decontamination and Decommissioning	Engineering Services
• Management, Organization, and Institutional Safety Provisions	Safety Systems Integration (Management and Organization)
	Environment, Safety and Health (Institutional Safety)

Requirements for BJC SMPs include:

- The BJC Functional Manager (FM) is responsible for the development of SMPs for Company wide implementation, with provisions for graded application.
- For each SMP, the FM shall designate a Safety Program Manager with responsibility for program development and implementation. The Safety Program Manager may also be designated as the subject matter expert (SME).
- For each SMP, the Safety Program Manager shall be responsible for assuring that the BJC management systems in his/her functional area are adequate, complete, effective, and compliant with governing standards and requirements. For each SMP that cross-cuts one or more subject matter areas, the Safety Program Manager shall coordinate with applicable SME assuring all cross-cutting requirements are adequate, complete, effective, and compliant with governing standards and requirements.
- For each SMP, the BJC program shall include all or a portion of the following, as determined by the Safety Program Manager to be needed:
 - Policy
 - Program Description/Plan (including definition of governing standards and requirements/work smart standards)
 - Standard SMP Description for incorporation into BJC SB documents, including key elements of the program
 - Site Specific Guidance or Implementing Strategy (including interface agreements with other Primes)
 - Company Level Procedures
 - Assessment and Feedback Process Metrics.

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ASSESSMENT AND OVERSIGHT

MOPs and FMs are required to conduct management assessments in their areas of responsibility in accordance with 10 CFR 830.122, Criterion 9. Independent assessment (Criterion 10) of nuclear safety will be conducted by the Performance/Quality Assurance, Nuclear Facility Safety, and Training Organizations. These assessments will focus on the adequacy of the SB documents, training and qualification of staff, the flowdown of SB requirements to procedures, the implementation of procedures, and the USQD process.

RESPONSIBILITIES

Key responsibilities for implementation of this policy are as follows:

Line Management – BJC line management responsibilities flow from the President through the General Manager to the MOPs and down to designated facility managers and subcontractors. MOPs are responsible for the development, maintenance, and implementation of nuclear safety assurance for those facilities assigned to them. For their assigned facilities, these accountabilities include facility categorization, maintenance of the nuclear facilities SB list, maintenance of the radiological facilities list, development and maintenance of the SB, inventory control, flowdown to subcontractors, SB flowdown and implementation, training and qualification of nuclear personnel, SB document control, annual review and update, and implementation of SMPs.

Functional Managers – BJC FMs are responsible for the development of effective SMPs and for assuring effective implementation and enforcement of the program requirements. Additionally, FMs support BJC MOPs through deployment of qualified staff to project teams, supporting project specific needs, and assessing the effectiveness of project implementation of SMPs.

Safety Program Managers – Safety Program Managers support the FM and are responsible for assuring that the BJC management systems in their safety management program areas are adequate, complete, effective, and compliant with governing standards and requirements.

Subject Matter Experts – SMEs assure all subject matter area requirements within safety management program areas are adequate, complete, effective, and compliant with governing standards and requirements.

Nuclear Facility Safety – Nuclear Facility Safety is responsible for providing leadership and direction to the BJC Nuclear Safety Program, including: providing SMEs for nuclear safety, nuclear criticality safety, facility categorization, and USQDs; developing and maintaining BJC nuclear safety, nuclear criticality safety, and facility safety procedures, guides, and instructions; and management of interfaces with DOE regarding SB submittals, and 10 CFR 830 Subpart B implementation and compliance plans.

Human Resources Training - The BJC Training Manager shall ensure that the BJC training and qualification program complies with the requirements of 5480.20A, *Personnel Selection, Training and Qualification Requirements for DOE Nuclear Facilities*.

REVISION LOG		
Revision Number	Description Of Changes	Pages Affected
0	Initial Release.	All