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USQD Screening Required

It has been determined that prior to issuing a new revision to this procedure, a USQD Screening is required. It is the responsibility of the person revising the procedure to insure that this review is performed.

BECHTEL JACOBS
Bechtel Jacobs Company LLC

OWNER: Nuclear Safety	BJC-NS-1001	REV. NO. 7
SUBJECT AREA: USQD	EFFECTIVE DATE: 10/1/02	Page 1 of 37
DOC TYPE: Procedure	PREPARER/POC: J. P. Little, Jr.	
TITLE: UNREVIEWED SAFETY QUESTION DETERMINATIONS FOR NUCLEAR CATEGORY 2 AND 3 FACILITIES	APPROVED BY/DATE: Allen B. Schade 7-12-02	

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REVISION LOG		
Revision Number	Description of Changes	Pages Affected
2	Intent Change. • Facility Managers and Project Managers are to maintain awareness of changes in leased spaces that might affect safety in BJC facilities. • Require the completion of USQDs of as-found conditions within 30 days. • USQD and USQ Screenings document numbers are to be obtained from the BJC Document Management Center. • Allow the BJC Deputy General Manager Designee to approve USQ submittals to DOE. • The next revision to this procedure will incorporate new requirements of 10 CFR 830.	4, 6, 7, 10, 11 and 28
3	Non-Intent Change: Define "Designee"	4 and 12
4	Intent Change. • Incorporated requirements of 10 CFR 830 Subpart B. • Revised this procedure to only cover Nuclear Category 2 and 3 facilities. • Placed change control requirements for facilities with hazards less than Nuclear Category 3 into a new procedure, BJC-NS-1008.	All
5	Non-intent Change. Inserted use of form BJCF-554 to transmit approved USQD and USQD Screening Worksheet to the DMC.	7-11, 21, 25
6	Intent Change. • Incorporated DOE comments: 11/01 and 3/02 • Made procedure applicable to Subcontractors • Incorporated Guidance in DOE G 424.1-1 *Revision 6 was transmitted to DOE for comments, but was never issued for BJC use.*	All
7	Changes made at the request of DOE Headquarters Reviewer: • Added "Consequences to workers and the public should be considered." to procedure step No. C.14.a. • Added page criteria to change package list, Section E.1. • Added definition of "Change Package" to Attachment A. • Added "significantly affect another facility" to screening criteria No. 3(d), Attachment D.	12 15 17 29

PURPOSE

This procedure establishes the process for determining whether proposed changes are adequately evaluated relative to the approved safety basis (SB) and that those proposed changes determined to involve unreviewed safety questions (USQ) are brought to the attention of the Department of Energy (DOE) for review and approval before changes are made.

10 CFR 830, Section 203(d) requires "The contractor responsible for a hazard category 1, 2, or 3 DOE nuclear facility must implement the DOE approved process in situations where there is a:

(1) Temporary or permanent change in the facility as described in the existing documented safety analysis (DSA),
(2) Temporary or permanent change in the procedures as described in the existing DSA,
(3) Test or experiment not described in the existing DSA, (or)
(4) Potential inadequacy of the DSA because the analysis potentially may not be bounding or may be otherwise inadequate."

This procedure also provides the process for adequately evaluating proposed changes to transportation activities involving Category 2 or 3 quantities of nuclear material and for evaluating proposed new or changed processes involving fissile material operations. This procedure also applies to proposed changes to other facility SB documents defined in Attachment A in addition to the DSA.

The existence of a USQ does not mean that the facility or operation is unsafe. The purpose of the USQ process is to alert DOE of events, conditions, or actions that affect the DOE-approved SB of the facility or operations.

The term "facility" is meant to encompass activities and operations as well as physical facilities. Refer to 10 CFR 830.3 for the definition of nuclear facility.

The process implements Prime Contract requirements for nuclear facilities.

NOTE: For more information on this process, see Attachment B, "Background Information."

SCOPE

This procedure applies to:

1. Hazard category 2 or 3 DOE nuclear facilities for situations where there is a:
- Temporary or permanent change in the facility as described in the existing DSA,
- Temporary or permanent change in the procedures as described in the existing DSA,
- Test or experiment not described in the existing DSA, (or)
- Potential inadequacy of the DSA because the analysis potentially may not be bounding or may be otherwise inadequate.

2. Bechtel Jacobs Company LLC (BJC) employees and their management who:
- Are responsible for the design, engineering, maintenance, inspection, operation, review, quality, or assessment of hazard category 2 or 3 DOE nuclear facilities,
- Are qualified to prepare, review, and approve the evaluations specified in this procedure, **OR**
- Prepare, review, and approve SB documents for hazard category 2 or 3 DOE nuclear facilities.

3. Subcontractor employees and their management who:
- Are responsible for the design, engineering, maintenance, inspection, operation, review, quality, or assessment of hazard category 2 or 3 DOE nuclear facilities, **OR**
- Are qualified to prepare, review, and approve the evaluations specified in this procedure, **OR**
- Prepare, review, and approve SB documents for hazard category 2 or 3 DOE nuclear facilities.

TRAINING

1. BJC employees and management who:
- Prepare, perform independent review, and approve the unreviewed safety question determination (USQD) evaluations must meet the formal training requirements listed in Attachment C or a DOE-approved alternative.
- Are responsible for the design, engineering, maintenance, inspection, operation, review, quality, or assessment of hazard category 2 or 3 nuclear facilities must read this procedure and future intent-change revisions. The training will equip them to be capable of identifying activities that might need to enter the USQ process, while carrying out their normal responsibilities.

2. Subcontractor employees and management who:
- Prepare, perform independent review, and approve the USQD evaluations must meet the qualification and training requirements listed in Attachment C or a DOE-approved alternative.
- Are responsible for the design, engineering, maintenance, inspection, operation, review, or assessment of hazard category 1, 2, or 3 DOE nuclear facilities must read this procedure and future intent change revisions. The training will equip them to be capable of identifying activities that might need to enter the USQ process, while carrying out their normal responsibilities.

OTHER DOCUMENTS NEEDED

- 10 CFR 830 Subpart B, *Nuclear Safety Management*
- DOE G 424.1-1, *Implementation Guide for Use in Addressing Unreviewed Safety Question Determination*
- BJC-NS-1002, *Safety Documentation for Hazard Category 2 and 3 Nuclear Facilities*
- BJC-PQ-1220, *Occurrence Notification and Reporting*
- BJC-OS-1004, *Document Numbering and Issuance*
- OS-A-0201, *Records Management, Including Document Control*
- BJC-GM-515, *Facility Management*
- DE-A-0500, *Configuration Management Program*
- BJC-PQ-1107, *Performance Document Process*
- BJCF-554, Safety Document Worksheet

WHAT TO DO

A. Programmatic Requirements for Identification and Evaluation of Unreviewed Safety Questions

NOTE 1: The use of the graded approach is not appropriate in implementing the USQ process or in implementing technical safety requirements that establish clearly defined limits or action.

NOTE 2: The BJC configuration management program is described in DE-A-0500, *Configuration Management Program*. DE-A-0500 contains steps to ensure that the USQ process is applied when required. Subcontractor configuration management programs shall refer to this USQD procedure to ensure that the USQ process is applied when required.

NOTE 3: BJC performance documents and procedures processes are described in BJC-PQ-1107, *Performance Document Process*. This procedure contains steps that ensure the USQ process is applied when required. Subcontractor performance document and procedure processes shall include appropriate referral to this (USQD) procedure to ensure that the USQ process is applied when required.

NOTE 4: This procedure gives the review and approval requirements for USQD documentation. The requirements are summarized in Attachment F, “USQD – Approval Matrix.”

NOTE 5: BJC Manager of Projects (MOP) may not delegate to others the approval of USQs.

NOTE 6: SUBCONTRACTORS may be the preparers and independent reviewers for all USQs, USQDs, and USQD screenings provided they meet the qualification and training requirements of this procedure.

BJC MOP/ Subcontractor Managers (responsible for the facility)

1. Ensure that personnel who prepare, review, and approve USQDs and Screenings for nuclear facilities are qualified and trained according to the requirements specified in Attachment C, "Qualifications for Preparer/Independent Reviewer and Approver."

3. Ensure that individuals who are trained to identify potential USQs are involved in the technical aspects of design, engineering, maintenance, inspection, operations, quality, and assessment of facilities or activities that are covered in the scope of this procedure.

These individuals shall be familiar with the requirements of 10 CFR 830 Subpart B and able to identify potential USQs in the course of carrying out their duties.

4. Ensure that USQDs and Screenings are performed and documented in accordance with this procedure.

5. Ensure that the following are evaluated in accordance with this procedure before they are physically implemented:

- Temporary or permanent change in the facility as described in the existing DSA,
- Temporary or permanent change in the procedures as described in the existing DSA,
- Test or experiment not described in the existing DSA.

For more explanation see Attachment B.

6. Ensure that as found conditions or conditions which indicate a potential inadequacy of the DSA because the analysis potentially may not be bounding or may be otherwise inadequate are evaluated in accordance with this procedure as promptly as practical.

7. Ensure that changes evaluated in accordance with this procedure are incorporated in the annual update of the facility SB documentation, as applicable.

8. Ensure that any special requirements or assumptions resulting from USQDs and Screenings performed as a result of this procedure are maintained valid.

9. Ensure the record copy of a USQD or USQD Screening is maintained for the life of the facility for which the document was prepared.

10. Ensure that documents generated as a result of this procedure are transferred to any new facility operator or subsequent contractor before the end of BJC's contract. For those facilities where the subcontractor retains the records, ensure these documents are transferred to BJC prior to the end of the subcontract.

NOTE: The MOP, in consultation with the Nuclear Facility Safety (NFS) Organization and DOE, as appropriate, shall establish a plan and schedule for the annual review and update of their facility SB documentation.

BJC MOP

11. Submit a written report to DOE on a schedule corresponding to the annual updates of the facility SB documentation a report summarizing:

- All situations for which a USQD was required,
- At a minimum all changes implemented 6 months or more before the submittal of the annual update of the report, and more current changes where practicable,
- All new or changed categorical exclusions.

BJC Facility Managers and/or Subcontractor Managers

12. Maintain an awareness of planned or actual facility changes in other Prime Contractor spaces or Community Reuse Organization of East Tennessee leased space for the effects on BJC facilities and take appropriate action.

B. Preparation of USQD Screenings

Requester

1. Contact the BJC MOP (designee) and/or Subcontractor Manager regarding the need to initiate the USQD process.

BJC MOP/ Subcontractor Managers (responsible for the facility)

2. Assign qualified individuals to implement the USQD process.

NOTE: The purpose of USQD Screening is to ascertain if it is necessary to expend valuable time and resources necessary to perform a USQD, or if there is reasonable technical justification for not performing a USQD. The use of screenings is encouraged to limit the number of matters for which a USQD must be performed, provided the reasons for screening out are documented and well supported. When an item is screened out from further consideration, the rationale shall be documented and retained with records of USQD actions. The following are examples of candidate items for screening wherein the USQD process may not be required.

- The installation of an item that is an exact replacement (that is, same manufacturer, same model number, etc.),
- Changes to documents that are purely editorial and make no technical change,
- Categorical exclusions as identified in Attachment D.

Preparer of USQD Screenings

3. **IF** evaluating an as-found or potentially inadequate safety analysis, **THEN** **GO TO** Section D of this procedure.

4. **IF** it is obvious that the change, test, or experiment affects the facility SB documentation, **THEN**
GO TO Section C of this procedure to prepare a USQD; preparation of the USQD Screening may be skipped.

5. Review the proposed change.

6. Prepare the USQD Screening Work Sheet (Attachment D).

7. **IF** the USQD Screening indicates that a USQD is required, **THEN**,

a. Notify the responsible manager of the facility.

b. Notify the requestor to NOT implement the proposed change, test, or experiment unless the proposed activity is determined not to involve a USQ.

c. Terminate the USQD Screening (retention of USQ screening worksheet is not required).

d. **GO TO** Section C of this procedure (prepare a USQD).

8. **IF** the USQD Screening indicates that a USQD is not required, **THEN** obtain a USQD Screening Work Sheet document number from the BJC Document Management Center (DMC) and submit the USQD Screening for appropriate review and approval.

NOTE: An independent reviewer must be someone who did not participate in the selection of a particular approach.

Independent Reviewer

9. Indicate, by signature and date, that

- The evaluation was reviewed,
- The reviewer agrees with the conclusions,
- The USQD screening stands alone such that a qualified individual, not familiar with the subject of the evaluation, can understand the basis for and agree with the conclusions of the evaluation.

NOTE 1: The BJC MOP may designate the NFS Technical Lead, the Chairperson of the Site Independent Review Committee, Nuclear Safety (NS) Supervisor, and/or the NFS Manager or a qualified subcontractor as the approver for USQD screenings. This delegation shall be in writing.

NOTE 2: The USQD Reviewer may also be the Approver at the discretion of the BJC MOP (designee) or Subcontractor Manager provided the approver is also qualified as a reviewer.

BJC MOP and/or Subcontractor Manager

10. Review, approve, sign and date the USQD Screening.

The approver's signature (or designee's) indicates the preparer and independent reviewer meet the training and qualification requirements of this procedure, and the responsible management concurs with the conclusions of the evaluation and believes they are correct.

NOTE: The responsible BJC MOP, or designee, could also request a review and recommendation for approval from the NFS Technical Lead and/or the Site Independent Review Committee.

11. Forward a copy of the USQD Screening to the requester and to the Facility Manager for their information.

a. **IF** the USQD Screening was prepared by the Subcontractor, **THEN** submit a copy of the screening to the Subcontractor Technical Representative for submission to the DMC using BJCF-554**,** Safety Document Worksheet.

12. Forward the record copy to the DMC using BJCF-554, Safety Document Worksheet.

C. Preparation of USQDs

Preparer of USQD

1. **IF** evaluating as-found condition or a Potentially Inadequate Safety Analysis, **THEN**
GO TO Section D of this procedure.

NOTE: The format to document USQDs is the USQD Work Sheet (Attachment E).

2. Obtain a USQD document number from the BJC DMC. Prepare the USQD in accordance with Attachment E.

3. Submit the completed USQD to the Independent Reviewer.

NOTE: An independent reviewer must be someone who did not participate in the selection of a particular approach.

Independent Reviewer

4. Indicate, by signature and date, that

- The evaluation was reviewed,
- The reviewer agrees with the conclusions,
- The USQD "stands alone" such that a qualified individual, not familiar with the subject of the evaluation, can understand the basis for and agree with the conclusions of the evaluation.

Preparer and Independent Reviewer

5. **IF** the change, test, or experiment is considered to be a potential USQ, **THEN**
notify the management directly responsible for the facility and the requestor, and complete the remaining steps in this Section.

NOTE 1: When the USQD **DOES NOT** identify a USQ, the BJC MOP may delegate approval authority <u>in</u> <u>writing</u> to his/her designee. The BJC MOPs may designate the NFS Technical Lead, NS Supervisor, and/or the NFS Manager as the approver for USQDs. The MOP may NOT designate a SUBCONTRACTOR as the approval authority for USQDs.

NOTE 2: When the USQD **DOES** identify a USQ, the BJC MOP may not delegate approval authority.

NOTE 3: The responsible BJC MOP, or designee, could also request a review and recommendation for approval from the Site Independent Review Committee.

Approver

6. Indicate, by signature and date, on the USQD

- That the preparer and independent reviewer meet the training and qualification requirements of this procedure,
- Agreement with the conclusions of the evaluation, the evaluation addresses the scope of the change, and the description is accurate and complete,
- That the review and approval process has been performed.

BJC MOP (or designee)

7. Forward a copy of the USQD to the requester and to the manager of the facility for their information.

a. If applicable, forward a copy to the NFS Technical Lead and/or the Site Independent Review Committee Chair for information.

8. Forward the record copy to the DMC using BJCF–554, Safety Document Worksheet.

9. Inform the manager directly responsible for the proposed change, test, or experiment, of the results of the USQD.

10. **IF** the conclusion of the USQD is that the proposed change, test, or experiment **DOES NOT** involve a USQ, **THEN**
EXIT this procedure and proceed with implementation plans,
OTHERWISE continue with this procedure.

11. **IF** the change, test, or experiment is determined to be a USQ, **THEN** notify the management directly responsible for the facility and the requestor.

Requester, Manager of the Facility

12. **IF** the manager decides <u>not</u> to proceed with the proposed change, test, or experiment, **THEN**

a. Cancel the proposed change, test, or experiment.

b. Notify the NFS Technical Lead.

c. Notify the DMC to mark the USQD as “Not Implemented,” using BJCF-554.

d. EXIT this procedure.

13. **IF** the requester and/or responsible manager of the facility decides to alter the proposal, **THEN**

a. Revise the change, test, or experiment.

b. GO TO step C.1.

14. **IF** the responsible manager wants to proceed with the proposed change, test, or experiment as-is, **THEN**

a. Provide sufficient safety analysis information such that the proposed change, test, or experiment can be reviewed and approved. Consequences to workers and the public should be considered.

NOTE: See Attachment F for required approvals of a USQ. DOE must approve the safety analysis supporting the USQ for the proposed change.

b. Forward a copy of the USQ to requester and to the manager of the facility for their information.

c. Coordinate, with the NFS Manager, a USQ Change Package for review and approval by DOE.

NOTE: The USQ Change Package must be approved at the same level of the original DSA.

15. **IF** the proposed change, test, or experiment is approved by the MOP and DOE, **THEN**
proceed with implementation plans.

D. Potentially Inadequate Safety Analysis/As-found Conditions

NOTE: As found conditions or conditions which indicate a potential inadequacy of the DSA because the analysis potentially may not be bounding or may be otherwise inadequate are evaluated in accordance with this procedure as promptly as practical.
10 CFR 830.203(g) requires, "If a contractor responsible for a hazard category 1, 2, or 3 DOE nuclear facility discovers or is made aware of a potential inadequacy of the DSA, it must:

(1) Take action, as appropriate, to place or maintain the facility in a safe condition until an evaluation of the safety of the situation is completed
(2) Notify DOE of the situation
(3) Perform a USQ determination and notify DOE promptly of the results; and
(4) Submit the evaluation of the safety of the situation to DOE prior to removing any operational restrictions initiated to meet paragraph (g)(1) of this section."

DOE G 424.1-1, Section B.2 states "When an employee identifies a potentially inadequate safety analyses, the facility management is allowed a reasonable time prior to notifying DOE to confirm the reasonableness of the potential for having an inadequate safety analysis. This time should be on the order of hours, up to several days, but not a matter of weeks or months."

BJC MOP (or designee)

1. The confirmation of reasonableness should be completed as soon as practicable, but in all cases in less than three working days.

2. **IF** an as-found condition or it has been determined reasonable that a potentially inadequate safety analysis exists, **THEN** proceed with all of the following:

NOTE: A discrepancy with the Technical Safety Requirements (TSR) is a special case of as-found condition that must be handled in the same way as other as-found conditions and resolved expeditiously.

a. Take action (compensatory measures), as appropriate, to place or maintain the facility in a safe condition.

b. Promptly inform the NFS Technical Lead, if applicable for the facility, of the potentially inadequate safety analysis/as-found condition.

c. Promptly notify the Park/Plant Shift Superintendent (PSS) of the potentially inadequate safety analysis/as-found condition and any safety measures taken.

NOTE: The PSS must notify DOE in accordance with the Occurrence Reporting System.

d. Notify the DOE facility representative of the potentially inadequate safety analysis/as-found condition and any safety measures taken.

NOTE: In some cases preparation of the safety analysis (e.g., facility safety evaluation) may take longer than preparation of the USQD. DOE must be kept informed of the progress and conclusions of the draft safety analysis.

e. Ensure that a USQD is issued as soon as practicable and in all cases <u>within</u> <u>days</u> to evaluate the potentially inadequate safety analysis/as-found condition and to provide input to the Occurrence Notification Reporting process (see Section C of this procedure). Although the USQD should be completed within days, a safety analysis that supports the final resolution of the potentially inadequate safety analysis/as-found condition may be provided at a later date.

3. **IF** the USQD indicates the potentially inadequate safety analysis/as-found condition is <u>not</u> a USQ, **THEN**

a. Submit the USQD and supporting documentation that evaluated the safety of the situation for approval as defined in Attachment F, Page 2, and notify the DOE facility representative and PSS when the negative USQD and supporting documentation have been approved.

b. Submit the evaluation of the safety of the situation to DOE prior to removing any operational restrictions initiated to meet paragraph D.2.a above.

c. **EXIT** this procedure.

4. **IF** the USQD indicates the potentially inadequate safety analysis/as-found condition is a USQ, **THEN**,

a. Notify the DOE Contracting Officer's Representative (COR) and the BJC approval authority (as defined in Attachment F, page 3 of 4), the DOE facility representative, and the PSS of the results and update the occurrence report per the occurrence report procedure (BJC-PQ-1220).

b. Notify the DOE COR and the BJC approval authority (as defined in Attachment F, pages 2 and 3 of 4) of any additional or changes to operational restrictions that were implemented beyond those in Step D.2.a.

c. Obtain DOE approval of the USQ change package.

d. DO NOT remove any operational restrictions that were implemented in Step D.2.a above or any additional restrictions required by the DOE COR until DOE approval is received.

e. **IF** operations are desired to be continued, e.g., some of the operational restrictions (compensatory measures), removed, **THEN**
submit a Justification for Continued Operations (JCO) in accordance with Section F.

E. Submittals to DOE for Changes to Facilities

NOTE: Major modifications to facilities may not be implemented until a DOE Safety Evaluation Report is issued per 10 CFR 830 Subpart B.

BJC MOP

1. IF a positive USQD is identified for a change to facility as described above, **THEN**

provide DOE with a USQD change package which contains the following:

- Description of the change or other issue invoking the USQD process,
- Description of specific equipment, system, parameters or procedures affected,
- Identification of associated SB issues, including inadequacies, new potential events, and effects on safety structure, system or component, design basis accidents, and TSRs,
- Bases for decisions made, including any analyses performed,
- Revised pages to the safety basis document(s) showing changes by use of revision bars, and
- The positive USQD.

NOTE: To enable DOE to accept the risk implied by a positive USQD, the risk must be clearly defined. To completely and quantitatively define the risk prior to full completion of the safety evaluation phase of the USQ process, enough information must be supplied to justify a reasonable conclusion regarding safety of the activity.

F. Submittals to DOE for Potentially Inadequate Safety Analysis/As-Found Condition

BJC MOP

1. IF a positive USQD or potential USQ has been identified and it is desired to continue/resume operations prior to completion and/or DOE approval of a full safety evaluation and a reasonable level of risk can be demonstrated, **THEN**

provide a JCO to DOE to modify the existing SB during the period of approval.

2. IF DOE approved controls cannot be met and it is desired to temporarily resume operations without satisfying the controls, where full facility compliance with the SB cannot be achieved, but a reasonable level of risk can be demonstrated, **THEN**

provide a JCO to DOE to modify the existing SB during the period of approval.

3. Provide the following information to DOE in the JCO package:

(1) Background information to allow a full understanding of the nature and evolution of the safety issue.
(2) Identification of the affected SB document(s) with specific reference to sections that are impacted.
(3) The probability of the potential adverse event and the worst credible consequences based on adequate and current understanding of the issues.
(4) The details regarding any interim controls proposed to be enacted to control the risk. Mitigative actions may be directed at minimizing the probability and/or consequences of the potential occurrence.
(5) A specific expiration date based one or more of the following:
- A specific USQ/analysis completion time line,
- An aggressive corrective action for the condition,
- An SB control being instituted,
- A commitment to provide DOE a more complete analysis, and
- A final safety evaluation to DOE and associated approval.

(6) A schedule for corrective actions if multiple actions are required to address resolution of the issue which necessitated the JCO.
(7) A commitment to update DOE on the status of JCO's on a periodicity related to the safety significance and progress toward completion of milestones described in the JCO.

RECORDS

Records prepared or received as a result of implementing this procedure including USQD Screening Worksheets, USQD Work Sheets, and USQs including JCO if applicable must be submitted to the DMC for retention and disposition in accordance with BJC Records Management Program requirements. BJCF-554, Safety Document Worksheet, is to be used for submittal to the DMC.

NOTE: As a minimum, these records shall be maintained for the life of the facility for which the document(s) was prepared.

BJC MOP and/or Subcontractor Manager

- USQD Screening Worksheet (maintain only those screenings that determine that no USQD is required)
- USQD Worksheet and any support documentation
- USQ Support Documentation (e.g., facility safety determination)

SOURCE DOCUMENTS

- Environmental Management and Enrichment Facilities (EMEF), Operations, Work Smart Standards for Environmental, Safety and Health (ES&H) Hazards [BJC/OR-64], Part 1, Section 12, Integrated Safety Management (Requirements and Guidance)
- DE-A-0500, *Configuration Management Program*
- 10 CFR 830 Subpart B
- DOE G 424.1-1, *Implementation Guide For Use in Addressing Unreviewed Safety Question Requirements*
- BJC-PQ-1107, *Performance Document Process*

Attachment A
DEFINITIONS/ACRONYMS
Page 1 of 3

BJC – Bechtel Jacobs Company LLC

Categorical Exclusion – Evaluation of a procedure or group of procedures to show they do not result in changes to a facility. After this evaluation is issued, changes to the procedures do not require a USQD since there is no change to the facility. A detailed evaluation must be maintained to justify a categorical exclusion.

Change – As used in the USQD process, a change is as follows:

- Temporary or permanent change in the facility as described in the existing DSA.
- Temporary or permanent change in the procedures as described in the existing DSA.
- Test or experiment not described in the existing DSA.

Change Package - documentation submitted to DOE for approval as a result of the USQD process containing the following:

- Description of the change or other issue invoking the USQD process,
- Description of specific equipment, system, parameters or procedures affected,
- Identification of associated SB issues, including inadequacies, new potential events, and effects on safety structure, system or component, design basis accidents, and TSRs,
- Bases for decisions made, including any analyses performed,
- Revised pages to the safety basis document(s) showing changes by use of revision bars, and
- The positive USQD.

Compensatory Measures – Those immediate or short term actions taken to place the facility in a safe condition after the discovery of a potential inadequate safety analysis. Compensatory measures identify facility limits and the basis for which the limits put the facility in a safe condition.

COR – Contracting Officer's Representative

Corrective Actions – Those longer term actions implemented in order to prevent recurrence of the safety issue and implement procedures and processes to ensure that facility operations are conducted safely. Compensatory measures must remain implemented and effective pending approval of removal from DOE.

Design basis accidents – Accidents that are postulated for the purpose of establishing functional requirements for structures, systems, components, and equipment that are important to safety.

Designee – Person delegated by the BJC MOP to perform facility management functions. Designee position titles may vary depending upon the project. Example designee's position titles include: Project Manager, Project Engineer, Facility Manager, Subcontract Technical Representative, Building Operator, or Facility Operator.

DOE – Department of Energy

DMC – Document Management Center

DSA – Documented Safety Analysis

Attachment A
DEFINITIONS/ACRONYMS
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Important to Safety – Any equipment whose function can impact safety either directly or indirectly. This includes safety-related equipment (i.e., equipment with a direct safety-function), equipment relied upon for safe shutdown, and, in some instances, equipment that is not safety-related. Equipment that is not safety-related can be important to safety if it can fail in a way that could prevent a safety-related component from accomplishing its safety function. Excluded are standard industrial safety devices such as machine guards, stair rails, and electrical plates unless they can impact safety, e.g., fall on a piece of equipment that is important to safety.

Justification for Continuing Operations (JCO) – A formal document that DOE approves to amend the current, approved safety basis for defined, discreet periods of time when the current, approved SB requirements cannot be fully met.

Major Modification - A modification to a DOE nuclear facility that is completed on or after April 9, 2001 that substantially changes the existing SB for the facility.

Margin of Safety – The margin built into the safety analysis of the facility as set forth in the bases of the TSRs or they may be described in another form as allowed by 10 CFR 830.205 for certain environmental restoration activities.

MOP – Manager of Projects

NS – Nuclear Safety

Nuclear Facility Safety (NFS) Technical Lead – Engineer in the Nuclear Facility Safety Organization assigned to the BJC Project for technical support and oversight of the nuclear/facility program.

Operational Safety Requirements (OSR) – See TSR.

Potentially Inadequate Safety Analysis/As-Found Condition – This term includes any of the following:

- Analytical errors, omissions, inadequacies, or inconsistencies between the facility physical configuration and the SB documentation that have the potential for calling into question information relied upon for authorization of operations.
- Inadequacy in the safety analysis, discovery of new information, operating events, or other issues that question the validity of the safety analysis, which supports the safety basis documentation.
- A possible reduction in the margin of safety as defined in the Bases of TSR or OSR.

Procedures – Procedures are not limited to those specifically identified as procedure type but could include anything described in the SB that defines or describes activities or controls over the conduct of work.

PSS – Park/Plant Shift Superintendent

Attachment A
DEFINITIONS/ACRONYMS
Page 3 of 3

Requestor – Person proposing a temporary or permanent change to a facility, procedure, or test or experiment for a category 2 or 3 DOE nuclear facility.

Safety Analysis – Establishes the set of limiting analyses important to safe operation. The limiting analyses are used to confirm the adequacy of the systems and equipment design and performance. These analyses support the determination of whether or not the proposed change or potentially inadequate safety analysis/as-found condition is safe and may subsequently become part of the authorization basis for the facility.

Safety Basis (facility safety basis documentation) (SB) – Those aspects of the facility design basis and operational requirements relied upon by DOE to authorize operation. These aspects are considered to be important to the safety of facility operations. The facility SB documentation for Nuclear Category 2 and 3 facilities includes (if they exist for a specific facility) approved Safety Analysis Reports (SAR), TSRs, Safety Analysis Report Update Program (SARUP) documents, Basis for Interim Operations (BIO), DOE Safety Evaluation Reports (SER), USQDs prepared since the last update to the DSA, and facility specific commitments.

Safety Evaluation – Unlike a safety analysis, the evaluation is limited in scope and is the supporting documentation in the USQD form. It is normally the qualitative reasoning for the decisions in the USQD and can reference the safety analysis for its conclusions.

Technical Safety Requirements (TSR) – A binding agreement or contract between DOE and the BJC, that defines the conditions, safe boundaries and bases thereof, and the management controls required to ensure safe operation of the facility.

Unreviewed Safety Question (USQ) – A situation involves a USQ if:

(1) The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the facility safety analysis could be increased;

(2) The possibility for an accident or malfunction of a different type than any evaluated previously in the facility safety analysis could be created; or

(3) Any margin of safety, as defined in the bases of the TSR, could be reduced.

Unreviewed Safety Question Determination (USQD) – A formal, documented safety evaluation to ascertain if a change (or as-found condition) could result in a facility being outside its facility SB documentation.

USQD Screening – A formal documented evaluation that determines whether a USQD is required to be performed.

Attachment B
BACKGROUND INFORMATION
Page 1 of 4

This procedure implements the requirements of 10 CFR 830.203. Section 203(a) requires "The contractor responsible for a hazard category 2 or 3 Department of Energy (DOE) nuclear facility must establish, implement, and take actions consistent with a unreviewed safety question (USQ) process that meets the requirements of this section." Section 203(b) requires the contractor to "submit for DOE approval a procedure for its USQ process."

This procedure establishes the process for determining whether proposed changes are adequately evaluated relative to the approved safety basis and that those proposed changes determined to involve USQs are brought to the attention of DOE for review and approval before changes are made.

10 CFR 830 Section 203(d) requires "The contractor responsible for a hazard category 1, 2, or 3 DOE nuclear facility must implement the DOE approved process in situations where there is a:

1. Temporary or permanent change in the facility as described in the existing documented safety analysis (DSA).
2. Temporary or permanent change in the procedures as described in the existing DSA.
3. Test or experiment not described in the existing DSA (or)
4. Potential inadequacy of the DSA because the analysis potentially may not be bounding or may be otherwise inadequate."

DOE G 424.1-1 states that a proposed change or test or experiment involves a USQ if -

- The probability or consequences of an accident or malfunction of equipment important to safety could be increased,
- The possibility of a different type of accident or malfunction of equipment important to safety than previously evaluated in the DSA could be introduced, or
- Margins of safety could be reduced.

Potentially inadequate safety analysis/as-found conditions result from finding that a facility or operation differs in some way from its facility safety basis documentation. Potentially inadequate safety analysis/as-found conditions can include analytical errors, omissions, inadequacies, and inconsistencies between the physical configuration of the facility and its that have the potential for calling into question information relied upon for authorization of operations. A discrepancy with the Technical Safety Requirements (TSR) is also an as-found condition that must be resolved expeditiously. In general, it is possible for a potentially inadequate safety analysis to arise form three entry conditions: (1) a discrepant as-found condition, (2) and operational event or incident, or (3) new information, including discovery of an error. The main consideration is that the analysis does not match the current physical configuration of the facility, or the analysis is inappropriate or contains errors.

To ensure that the facility is not changed in a way that bypasses this procedure, the various sources of a change for each facility must be identified. Then the various sources of change are to be integrated into this procedure. This process should ensure that the need for completion of an evaluation in accordance with this procedure is not overlooked.

Attachment B
BACKGROUND INFORMATION
Page 2 of 4

An overview of the process described in this procedure is depicted in the flowchart shown in Figure 1, Unreviewed Safety Question Determination Process. Whether the action is a proposed change to the facility or procedure, test, experiment, or potentially inadequate safety analysis/as-found condition, a determination of facility safety must be made to ensure that the action is safe and a determination of whether the proposed changes need to be brought to the attention of DOE for review and approval before the changes are made.

The preparer should answer the question regarding whether or not a change to the TSRs is necessary. If not, then the action may first be screened to determine if further evaluation is required. If the screening determines that further evaluation is required, an Unreviewed Safety Question Determination (USQD) work sheet is completed. If it is obvious that a USQD will be required, the screening step should be skipped. In general, if the situation involves a change or a potentially inadequate safety analysis/as-found condition, the preparer should proceed directly to the USQD. USQDs are required for changes that directly or indirectly alter the design, function, or method of performing the function of a structure, system or component (SSC) described in the facility safety basis documentation either by text, drawing, or other information relied upon as the facility safety basis documentation. USQDs must be performed for changes to SSCs not explicitly described in the facility safety basis documentation and which do not have a safety function if the change can have the potential for altering the function of an SSC explicitly described in the facility safety basis documentation. For example, if an SSC is not described in the facility safety basis documentation, but is a part of a larger SSC which is described in the facility safety basis documentation and if the change alters the design, function, or method of performing the function of the larger SSC, then a USQD is required for a change to the smaller SSC. Changes to non-safety-related systems may affect safety-related systems. For example, the installation of a non-seismically supported piece of equipment above a seismically qualified component that performs a safety function explicitly or implicitly assumed in the facility safety basis documentation may be determined to involve a USQ. Changes that have the potential to alter the ability of a structure, system, or component to meet its expected performance based on the facility safety basis documentation may involve a USQ.

Changes to procedures that are outlined, summarized, or described in the facility safety basis documentation must have a USQD prepared if the outline, summary, or description is impacted. Procedures are not limited to those items specifically identified as procedures but could include anything described in the facility safety basis documentation that defines or describes activities or controls over the conduct of work. If changes to these activities or controls are made, such changes qualify as changes to procedures as described in the facility safety basis documentation. Unless the changes are inconsequential (a USQD Screening may be needed to decide) the changes must be evaluated in a USQD. A group of procedures may be evaluated once, to show that they do not result in changes to a facility. Such an evaluation is called a “categorical exclusion.” An example of such a group of procedures could be maintenance procedures, if the evaluation showed that the facility was always returned to exactly the same condition after maintenance than it was in prior to the maintenance. If the evaluation documented that a group of procedures does not result in modifications to the facility, then a change to this group of procedures would not require a USQD.

Attachment B
BACKGROUND INFORMATION
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Written safety evaluations are required for tests or experiments not described in the facility safety basis documentation. One-of-a-kind tests used to measure the effectiveness of new techniques or a new system configuration that might affect systems important to safety will require evaluation before they can be conducted. Post-modification testing should be considered and included in the safety evaluation for the modification.

A USQD is a two-part document. The first part consists of a determination of whether or not the item being evaluated could result in a change to the TSRs. If the item being evaluated would require a change to the TSRs, then DOE must review the item before it is implemented and there is no requirement to complete the USQD unless the item being evaluated is a potentially inadequate safety analysis/as-found condition. For potentially inadequate safety analysis/as-found conditions, DOE must be informed if an USQ existed during the potentially inadequate safety analysis/as-found condition.

The second part of the document is the USQD. The purpose of the USQD is not to determine the safety of a situation, but to establish the proper approval authority for specific situations. If the change, test, or experiment could result in the facility being outside its facility safety basis documentation; i.e., could involve a USQ, then DOE must review the change before it is implemented. The actual modification process (e.g., work authorization system) used in the field should be reviewed for possible development of USQs. To determine whether the proposed change alters the design, function, or method of performing the function of the SSC, an engineering evaluation and a thorough understanding of the design basis of the system involved are essential. Those aspects of design that support the particular performance of systems, structures, and components relevant to the change are to be reviewed, although others may not be. All aspects of both design and performance, including physical interactions that could affect the facility safety basis documentation must be considered when evaluating a change.

For each of the questions in the USQD a YES or NO answer is not adequate. A defensible justification/explanation is required for each of the answers. The justification/explanation should provide a good technical basis, using sound engineering judgement, for each of the answers. The USQD, when completed, along with the supporting information and documents should be sufficient to allow an independent reviewer to come to the same conclusions.

Attachment B
BACKGROUND INFORMATION
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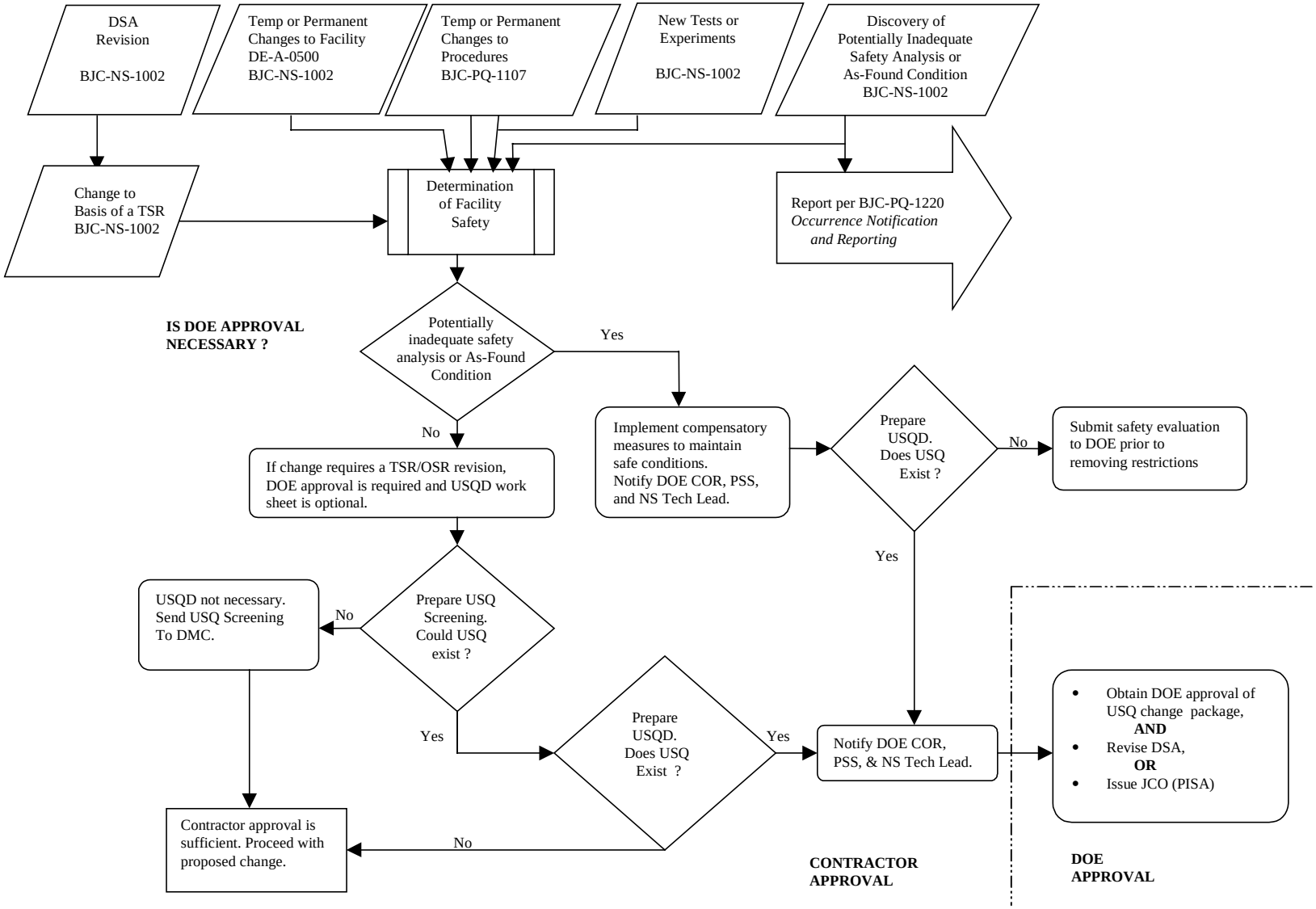

Figure 1. Unreviewed Safety Question Determination Process.

Attachment C
QUALIFICATIONS FOR PREPARER/INDEPENDENT REVIEWER AND APPROVER
Page 1 of 1

The **Nuclear Facility Safety Manager** shall maintain a list of those Bechtel Jacobs Company LLC (BJC) and subcontractor personnel who are currently qualified to prepare and/or independently review Unreviewed Safety Question Determination (USQD) and screenings. Subcontractors shall maintain a list of all subcontractor personnel who are currently qualified to prepare and/or independently review USQDs and screenings.

	PREPARER/INDEPENDENT REVIEWER	APPROVER
EDUCATION	High school diploma or equivalent. A Baccalaureate degree in Engineering/Science is preferred.	Baccalaureate degree in Engineering/Science or appropriate related experience as approved by the Manager of Projects.
EXPERIENCE	Six months site experience or related nuclear experience with a minimum of three months process or facility related experience. Six months experience in a group that prepares USQDs or other safety documentation for multiple facilities is considered equivalent to the process-related experience.	Four years site or related nuclear experience.
TRAINING	Successful completion of formal USQD training on 10 CFR 830 Subpart B, Section 830.203 and DOE G 424.1-1. Site-specific training in addition to these requirements may be imposed.	Successful completion of formal training on the DOE USQ process. Site-specific training in addition to these requirements may be imposed. *
RETRAINING	Personnel shall complete a requalification examination to maintain qualification every two years.	Personnel shall complete a requalification examination to maintain qualification every two years. *

* Other functional/project personnel who sign as *additional* approvers would be attesting only to the accuracy and validity of the description of the change for which they are responsible and concurrence with the determination. In all cases, these functional/project personnel shall meet qualification requirements for their positions and shall have completed *required reading* of this procedure.

Attachment D
SCREENING WORK SHEET
Page 1 of 5

This work sheet is included as a sample. The format of the work sheet is not critical. The critical elements are documenting the answers to all the questions in the work sheet and securing the minimum signatures required by this procedure.

The purpose of Unreviewed Safety Question (USQ) screening is to ascertain if it is necessary to expend valuable time and resources necessary to perform a Unreviewed Safety Question Determination (USQD), or if there is reasonable technical justification for not performing a USQD. The use of screenings is encouraged to limit the number of matters for which USQD must be performed, provided the reasons for exclusion are documented and will supported. When an item is screened out from further consideration, the rationale should be documented and retained with records of USQ actions. The following are examples of candidate items for screening wherein the USQD process may not be required:

- Changes to a requirement in the Technical Safety Requirements (TSR), or the addition of a new TSR requirement;
- Changes that management has already decided will be submitted to Department of Energy (DOE) for safety review and approval;
- The installation of an item that is an exact replacement (that is, same manufacturer, same model number, etc.);
- Changes to documents that are purely editorial and make no technical change.

Screening Work Sheets are intended to document changes, tests, and experiments that appear to have no impact on the facility safety basis documentation. If an USQD is prepared as the result of a Screening Work Sheet, the Screening Work Sheet does not have to be signed or maintained as a record. The USQD will serve as the record of the evaluation of the change. If there is any doubt as to the effect of the change, test, or experiment on the facility safety basis documentation, then a USQD should be prepared and preparation of a Screening Work Sheet may be skipped.

Question 3.a

A categorical exclusion is mentioned in Question 3.a. Since changes to procedures enter into this process, a group of procedures may be evaluated once, to show that they do not result in changes to a facility. An example of such a group of procedures could be maintenance procedures, if the evaluation showed that the facility was always returned to exactly the same condition after maintenance as it was prior to the maintenance. If the evaluation documented that a group of procedures did not result in modifications to the facility, then a change to this group of procedures would not require a USQD. The following are approved categorical exclusions for procedures/performance documents:

- Human Resources, except safety related position qualifications
- Labor Relations, except safety related position qualifications
- Internal Audit
- Business Management
- Legal
- Public Affairs.

Attachment D
SCREENING WORK SHEET
Page 2 of 5

DOE shall approve other categorical exclusions. The Nuclear Facility Safety Organization will control the categorical exclusions.

Question 3.d

Question 3.d is intended, among other things, to cause USQDs to be prepared for changes in one facility that could significantly affect other facilities. For example, consider a change that could concentrate people near a hazardous facility such as an existing facility being renovated to provide office space or a change house. Previously, the facility had only a few people present. After the change, the facility will have a large number of people present. If the renovated facility is adjacent to a tank of hazardous material, concentrating people near the hazardous material tank may have significantly increased the consequences of an accident associated with the tank. Therefore, the consequences of an accident associated with the hazardous material tank have been increased by a change in another facility. If a change could significantly affect another facility, it should be evaluated in a USQD. If needed, consult the site Nuclear Facility Safety Organization for assistance in evaluating facility interactions.

Question 3.e

This question asks if the subject of the evaluation could affect, directly or indirectly, any systems, structures, or components described in the facility safety basis documentation in a significant manner. If the subject of the evaluation could directly or indirectly alter the design, function, or method of performing the function of a structure, system or component (SSC) described in the facility safety basis documentation either by text, drawing, or other information relied upon as the facility safety basis documentation, then Question 3.e should be answered "yes." If the subject of the evaluation is a change to a SSC that is not described in the facility safety basis documentation but that could affect a SSC described in the facility safety basis documentation, Question 3.e should be answered "yes" and a USQD prepared. For example, if a SSC not described in the facility safety basis documentation is part of a larger SSC described in the facility safety basis documentation, and if the change alters the design, function, or method of performing the function of the larger SSC, then Question 3.e should be answered "yes" and a USQD prepared. Changes to non-safety-related systems may affect safety-related systems. For example, the installation of a non-seismically supported piece of equipment above a seismically qualified component that performs a safety function may be a USQ and should have a USQD prepared. For additional information see Attachment B, “Background Information.”

Question 3.f

Question 3.f addresses items that could affect procedures. In instances when procedural modifications are implementing operational changes, such as setpoint changes, while changes to the procedure itself may not meet the criteria that require a USQD, the operational change should be evaluated in a USQD to assure it does not impact facility safety basis documentation limits or supporting safety analysis.

Attachment D
SCREENING WORK SHEET
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Question 3.g

Tests and experiments are addressed in Question 3.g. Written safety evaluations are required for tests or experiments not described in the facility safety basis documentation. One-of-a-kind tests used to measure the effectiveness of new techniques or a new system configuration that might affect systems important to safety will require evaluation before they can be conducted. Post-modification testing should be considered and included in the safety evaluation for the modification.

Question 3.h

Question 3.h asks if the item being evaluated could result in a system or component described in the facility safety basis documentation being removed from service. If so, and if there is no allowable time for that component or system to be out of service as specified in the TSR/Operational Safety Requirements (OSR) then a USQD is to be prepared to evaluate this item.

Attachment D
SCREENING WORK SHEET
Page 4 of 5

USQD Screening Number _____
Revision No. _____
Date _____

UNREVIEWED SAFETY QUESTION SCREENING WORK SHEET

1. Facility: _____

2. Subject of Evaluation: _____

_____

3. Screening Criteria:

If needed, the preparer should consult the BJC Nuclear Facility Safety Organization for assistance in evaluating the effects of changes on other facilities.

(a) Is the subject of this evaluation a change to a procedure or other administrative change (that is, not a physical change) and covered by a one-time categorical exclusion?

Yes No

If yes, the document that evaluated the one-time categorical exclusion is _____

_____

If the answer to 3.a is "yes", list the document that evaluated the one-time categorical exclusion and no USQD is required (complete part 4 of this work sheet). If the answer is "no", answer the questions below.

Could the subject of this evaluation:

(b) Require a revision to the TSRs or OSRs? Yes No

If the answer to 3.b is "yes", DOE approval is required before implementation. If the subject of the evaluation is not a potentially inadequate safety analysis/as-found condition, the rest of the work sheet does not need to be completed and a USQD does not have to be prepared. Even if a TSR/OSR change and DOE approval is required, the preparation of a USQD may be desired. This is acceptable, but not required. If the answer is "no" or if the subject of the evaluation is a potentially inadequate safety analysis/as-found condition, go to the next question.

(c) Represent an as-found condition that indicates a potential inadequacy of the existing safety analysis or a possible reduction in margins of safety.

Yes No

If the answer to Question 3.c is "yes", notify facility management of the findings. The facility must be placed in a safe condition. The approver shall notify DOE, the Park/Plant Shift Superintendent, and the Nuclear Facility Safety Technical Lead. A USQD must be initiated promptly.

Attachment D
SCREENING WORK SHEET
Page 5 of 5

If the answer to any of the following questions is "yes", a USQD is required. If the answer to all of the following questions is "no", a USQD is not required.

(d) Result in a change in the function of a facility (or part of a facility), increase the magnitude of a hazard (e.g., the amounts of hazardous materials), introduce a new hazard (e.g., a different hazardous material) than presently described in the facility safety basis documentation, or significantly affect another facility? Yes No

(e) Affect, directly or indirectly, any systems, structures, or components described in the facility safety basis documentation in a significant manner? Yes No

(f) Affect procedures as described, referenced, outlined, or summarized in the facility safety basis documentation in a significant manner? Yes No

(g) Involve tests or experiments not described in the facility safety basis documentation? Yes No

(h) Involve removing a system or component described in the facility safety basis documentation from service to perform maintenance when the TSRs/OSRs for the facility do not have an allowable time for the system or component to be out of service? Yes No

4. List the facility safety basis documentation documents consulted [applicable sections of the Safety Analysis Reports (SAR), Basis for Interim Operation (BIO), and any other documents (logs, pending files, etc.) consulted (with Rev Numbers): _____

_____

5. Screening Approval:

The item described in part 2 has been evaluated using the criteria in part 3 and it has been determined a USQD is not required.

Prepared by: _____ Date: _____

Independent Reviewer: _____ Date: _____

Approved by: _____ Date: _____

NOTE: More than one approval may be required (see Section B of this procedure).

Attachment E
UNREVIEWED SAFETY QUESTION DETERMINATIONS (USQD) WORK SHEET
Page 1 of 4

This work sheet is included as a sample. The format of the work sheet is not critical. The critical elements are documenting the answers to all the questions in the work sheet and securing the minimum signatures required by this procedure.

Question 1

Question 1 asks if the change, test, or experiment could require a change to the Technical Safety Requirements (TSR) or Operational Safety Requirements (OSR)? If so, the change, test, or experiment will require Department of Energy (DOE) approval before implementation. Since the purpose of the Unreviewed Safety Question Determination (USQD) is to determine if DOE review is required before implementation, there is no reason to complete the USQD if a TSR/OSR change is required for a change, test, or experiment. If the subject of the change is a potentially inadequate safety analysis/as-found condition, then complete the USQD section of the work sheet whether or not a TSR/OSR revision would be required.

USQD - Questions 2 through 8

Questions 2 through 8 comprise the USQD portion of the work sheet and determine if the change, test, experiment, or potentially inadequate safety analysis/as-found condition is a USQ.

For each of the questions a “Yes” or “No” answer by itself is not adequate. A defensible justification/explanation is required for each of the answers. The justification/explanation should provide a good technical basis, using sound engineering judgment, for each of the answers.

Attachment E
UNREVIEWED SAFETY QUESTION DETERMINATIONS (USQD) WORK SHEET
Page 2 of 4

USQD WORK SHEET

USQD Number _____

Revision Number_____

Date _____

Description of the item being evaluated: _____

_____

_____

(1) Could the subject of this evaluation require a revision to the TSRs/OSRs?
Yes No

Justification:[1] _____

_____

_____

If the answer is "yes," DOE approval is required before implementation. Since DOE approval is required before implementation, the USQD part of the evaluation (questions 2 through 8) does not have to be completed unless this is a potentially inadequate safety analysis/as-found condition. Even if a TSR/OSR change and DOE approval is required, preparation of a USQD may be desired. This is acceptable, but not required. If the answer is "no," go to the next question.

USQD

(2) Could the proposed change or as-found condition increase the probability of an accident previously evaluated in the facility's safety analyses? Yes No

Justification: [1] _____

_____

_____

[1] A "Yes" or "No" answer by itself is not adequate. Use as much space as is needed for the justification to each of the questions. Attach additional sheets if required to provide an adequate justification. Merely restating the question in a positive form is not adequate justification. Referencing another justification is not adequate unless there is an explanation as to why the referenced justification is applicable.

Attachment E
UNREVIEWED SAFETY QUESTION DETERMINATIONS (USQD) WORK SHEET
Page 3 of 4

(3) Could the proposed change or as-found condition increase the consequences (to workers or the public) of an accident previously evaluated in the facility's existing safety analyses?

Yes No

Justification: [1] _____

_____

_____

(4) Could the proposed change or as-found condition increase the probability of a malfunction of equipment important to safety previously evaluated in the facility's existing safety analyses?

Yes No

Justification: [1] _____

_____

_____

(5) Could the proposed change or as-found condition increase the consequences of a malfunction of equipment important to safety previously evaluated in the facility's existing safety analyses?

Yes No

Justification: [1] _____

_____

(6) Could the proposed change or as-found condition create the possibility of a different type of accident than any previously evaluated in the facility's existing safety analyses?

Yes No

Justification: [1] _____

_____

(7) Could the proposed change or as-found condition create the possibility of a malfunction of equipment important to safety of a different type than any previously evaluated in the facility's existing safety analyses?

Yes No

Justification: [1] _____

_____

Attachment E
UNREVIEWED SAFETY QUESTION DETERMINATIONS (USQD) WORK SHEET
Page 4 of 4

(8) Does the proposed change, activity, or as-found condition reduce the margin of safety?

Yes No

Justification:[1] _____

_____

_____

SPECIAL REQUIREMENTS: Identify any key assumptions or provisions necessary to support the safety evaluation conclusions.

SAFETY EVALUATION CONCLUSIONS

Based upon the safety evaluation the change

_____ does not constitute an unreviewed safety question
_____ does constitute an unreviewed safety question

List the facility safety basis documentation documents consulted [applicable sections of the Safety Analysis Reports (SARs), Basis for Interim Operation (BIO), and any other documents (logs, pending files, etc.) consulted (with Rev Numbers). Copies of supporting documentation should be attached to the USQD package or reference to the location of information are to be included with the package.

_____
Preparer Date

_____
Independent Reviewer Date

_____
Approvals Date

NOTE: More than one approval may be required (see Section C and Attachment F).

Attachment F
USQD - APPROVAL MATRIX
Page 1 of 4

Unreviewed Safety Question Determination (USQD) Screening Worksheet - Approval Matrix

Bechtel Jacobs Company LLC Deputy General Manager	**Nuclear Facility Safety Technical Lead (if applicable for the facility)**	**Independent Review Committee Chair (If applicable for the facility)**	**Engineering & Construction Services – Nuclear Facility Safety Organization**	**Responsible Bechtel Jacobs Company LLC MOP or Subcontractor Manager**
Delegated to the responsible Bechtel Jacobs Company LLC (BJC) Manager of Projects (MOP).	No approval is required. Receives an information copy.	No approval is required.	No approval is required. Reviews the document if requested by the BJC MOP having responsibility for the facility.	Approves the USQD Screening Worksheet. Approval indicates the USQD Screening Worksheet addresses the scope of the intended change, the description is accurate and complete, and concurrence with the conclusions. The responsible manager may delegate approval authority to his/her designee.

Department of Energy	DOE does not approve.

(See notes at the end of this Attachment.)

Attachment F
USQD - APPROVAL MATRIX
Page 2 of 4

Unreviewed Safety Question Determinations (USQD) - Approval Matrix (see note below)

Bechtel Jacobs Company LLC Deputy General Manager	**Nuclear Facility Safety Technical Lead (If applicable for the facility)**	**Independent Review Committee Chair (If applicable for the facility)**	**Engineering & Construction Services – Nuclear Facility Safety Organization**	**Responsible Bechtel Jacobs Company LLC MOP**
Delegated to the responsible BJC MOP unless a USQ/ safety concern is identified, i.e., the subject of the evaluation could result in the facility being outside its facility safety basis documentation.	Reviews and approves the USQD. Approval indicates the USQD is correct, agreement with its conclusions, and the prescribed review and approval process has been performed.*	No approval is required. Reviews and approves the USQD if requested by the responsible BJC MOP having responsibility for the facility.	No approval is required. Reviews and approves the USQD if requested by the BJC MOP having responsibility for the facility.	Approves the USQD. Approval indicates the USQD addresses the scope of the intended change, the description is accurate and complete, and concurrence with the determination. * Where no USQ/safety concern is identified, the responsible manager may delegate approval authority to the Nuclear Facility Safety Technical Lead, the Chair of the Site Independent Review Committee, or the Nuclear Facility Safety Manager as the approver. See Attachment C for approver training and qualifications.

Department of Energy	DOE does not approve a USQ change package unless an Unreviewed Safety Question is indicated for hazard category 2 or 3 facilities. If the USQD was performed for a Potentially Inadequate Safety Analysis and indicated that there was not a positive USQ, the basis for removing any restrictions must be submitted to DOE prior to removing those restrictions.

*When nuclear criticality issues are involved, a nuclear criticality representative will review the criticality safety portion of the document.
(See notes at the end of this Attachment.)
NOTE: USQDs also require an independent reviewer qualified and trained in accordance with Attachment C.

Attachment F
USQD - APPROVAL MATRIX
Page 3 of 4

Submittal to DOE to resolve Unreviewed Safety Question (USQ) - Approval Matrix (see note below)

Bechtel Jacobs Company LLC Deputy General Manager or Designee	**Nuclear Facility Safety Technical Lead** **(If applicable for the facility)**	**Independent Review Committee Chair** **(If applicable for the facility)**	**Engineering & Construction Services - Nuclear Facility Safety Organization**	**Responsible Bechtel Jacobs Company LLC MOP**
Approves submittal to DOE. Approval indicates awareness of the risk identified in the submittal and commitment to carrying out the risk management controls listed in the submittal; BJC approves the document and is committed to abide by its identified limitations. Approval also indicates the submittal and any associated TSRs or OSRs adequately establish the safe operating envelope suitable for the authorization basis for the change.*	Reviews and approves the submittal. Approval indicates awareness of the risk identified in the document and the management commitments made, agreement that the document meets program requirements (including adequacy of the format and content), and a recommendation for approval by project and site management.*	Reviews and recommends approval of the submittal if requested by the responsible manager. Recommendation for approval indicates that based on the descriptive information provided, the safety analysis is appropriate and technically correct, conclusions are adequately supported, and the risk is identified. Recommendation for approval also indicates concurrence that the documents meet DOE requirements.	Reviews and approves submittal. E&CS review would typically consist of an overview and selected detailed reviews to confirm that the submittal appears to have correctly evaluated the hazards and the associated preventers and mitigators. E&CS also reviews to ensure the submittal meets DOE expectations on format and content.	Approves submittal to DOE for category 2 or 3 nuclear facilities*. Approval indicates the document is accurate and complete; and agreement to operate at level of risk (authorization basis) and within the restrictions identified in the safety document. Approval indicates recommendation for approval by Deputy General Manager.

Department of Energy	DOE approves the USQ change package for hazard category 2 or 3 facilities .

*When nuclear criticality issues are involved, a nuclear criticality representative will review the criticality safety portion of the document.
(See notes at the end of this Attachment.)

NOTE: USQDs also require an independent reviewer qualified and trained in accordance with Attachment C.
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Attachment F
USQD - APPROVAL MATRIX
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NOTES

1. Any document may be submitted for independent review and approval, if judged necessary, by the responsible manager.

2. The responsible BJC MOP (or designee) may coordinate the independent review and approval function. As such, the responsible manager (or designee) convenes independent technical reviewers as necessary.

3. The DOE row in the matrix identifies documents DOE must approve. DOE of course, may review any BJC document it chooses. Typically, documents that must be provided to DOE will be provided to the DOE Contracting Officer's Representative, who in turn will be responsible for making any distribution of the document within DOE.