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*GN470080 - IMPLEMENTING THE UNREVIEWED SAFETY QUESTION (USQ) PROCESS FOR NUCLEAR FACILITIES

Subject Matter Expert: Bonnie Shapiro; CA Counterpart: N/A
Contributor: Sean Hedger
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Change History

* Indicates a substantive change

1.0 PURPOSE

Requirements

The purpose of this procedure, which implements the unreviewed safety question (USQ) process, is to allow Sandia Members of the Workforce to make physical and procedural changes to hazard category 1, 2, or 3 DOE nuclear facilities and to conduct tests and experiments without prior National Nuclear Security Administration/Sandia Site Office (NNSA/SSO) approval if the proposed change can be accommodated within the existing safety basis. This process is applied for proposed changes, as well as to situations where new information causes the facility to evaluate their present safety basis documentation. Proposed changes are addressed in Section 4.0, while the latter situation, which is called a “Potentially Inadequate Safety Analysis,” is addressed by Sections 5.0 and 6.0.

The USQ process does **not** determine whether a change is safe, and it is **not** a substitute for a safety analysis. Safety of the change is determined separately and prior to entering the USQ process via an appropriate safety analysis.

The USQ process described in this document complies with 10 CFR 830.203, *Unreviewed Safety Question Process*, and should be integrated into all technical aspects of Sandia organizations that are responsible for design, engineering,

maintenance, inspection, operation, and assessment of a hazard category 1, 2, or 3 DOE nuclear facility or activity. This document supplements CPR400.1.1/MN471001, *ES&H Manual*, Chapter 13, "Hazards Identification/Analysis and Risk Management."

Changes to this document require NNSA/SSO approval in accordance with 10 CFR 830.203. A list of terms and definitions that are unique to the USQ process has been provided to NNSA/SSO. Changes to those definitions require NNSA/SSO approval.

2.0 APPLICABILITY

Requirements

This document applies to all Members of the Workforce involved in design, engineering, maintenance, inspection, operations, and assessment of hazard category 1, 2, or 3 DOE nuclear facilities operated by Sandia.

For purposes of this document, Members of the Workforce are:

- Sandia employees.
- Sandia contractors as specified in Section 1B, "What Is the Scope."

3.0 RESPONSIBILITIES

Requirements

Managers shall be responsible for implementing work processes associated with the design, engineering, maintenance, inspection, operations, and assessment of hazard category 1, 2, or 3 DOE nuclear facilities that comply with the requirements of 10 CFR 830.203, Managers are also responsible for identifying activities that need to enter the USQ process. The following table lists activities for Members of the Workforce responsible for USQ activities:

Responsible Individual(s)	Activities
Safety Basis Department	• Support the overall USQ process, which includes preparation, review, and approval, of Unreviewed Safety Question Determinations (USQD) as required. • Maintain this document and ensuring NNSA/SSO approval of this process, in accordance with 10 CFR 830.203. • Assist line organizations in the application of the USQ process. • Develop, schedule, and conduct a USQ Initial Training Program and a USQ Refresher Training Program (consult the authorization basis contact for assistance). • Maintain a list of Sandia Members of the Workforce who are qualified to prepare, review, and approve USQ documents based on input from line organizations. • Ensure that an annual USQ activity summary report is submitted by each of the hazard category 1, 2, or 3 DOE nuclear facilities at a date consistent with their annual safety basis documentation update submissions. • Conduct a periodic USQ process sampling and review activity with the hazard category 1, 2, or 3 DOE nuclear facilities in an effort to improve the use of the USQ process. • Submit a summary of the results of the periodic USQD sampling and review activity to NNSA/SSO for review. • Review positive USQD evaluations prepared by line organizations prior to transmittal to the NNSA/SSO. • Provide a SME for the USQ Process.

Preparers of USQ documentation	• Ensure qualification in terms of education, experience, and training in accordance with Section 7, "Training and Qualifications," of this process, and the qualifications stated in SF 2001-IQF, "USQ Individual Qualification Form" (Word file/ Acrobat file). • Follow this process in preparation of USQ documentation. • Verify that safety analysis documents that identify pertinent technical and safety concerns have been developed and provided, as applicable. • Determine the need for documentation and obtaining cross-disciplinary input or specialist assistance, as needed, to prepare such documents. • Prepare written results and justification when required by the USQ process using SF 2001-USC, "USQ Screening Checklist," SF 2001-USQ, "Unreviewed Safety Question Determination (USQD) Worksheet," and SF 2001-NIP, "New Information Processing Form," as applicable. • Resolve comments received during review and approval processes. • Ensure the USQ documentation is technically defensible. • Submit USQ documentation to the responsible facility manager/approver for review and approval.

Independent reviewers

- Ensure qualification in terms of education, experience, and training in accordance with Section 7, "Training and Qualifications," of this process, and the qualifications stated in SF 2001-IQF, "USQ Individual Qualification Form" (Word file/ Acrobat file).
- Perform independent technical reviews to ensure associated USQ screenings and USQDs are accurate and complete.
- Obtain cross-discipline input or specialist assistance, as appropriate, when performing technical reviews.
- Follow technical reviews, communicating comments, if any, to preparers for resolution.
- Concur with comment resolutions or preparing a difference of opinion document regarding resolutions of comments.
- Sign USQ screening and USQD forms.

  Note: Independent reviewer signature indicates that the reviewer was appropriately independent of the preparer. In addition, the provision of the signature means that the independent reviewer has verified that the USQ documentation provided for review has been prepared according to this procedure. Also, it indicates that the independent reviewer concurs/agrees with the conclusions provided in the USQ screen or USQD in question. When the documentation is signed by the independent reviewer, this indicates that the documentation is released for further processing in accordance with the requirements of this document.

Managers/ Approvers	**Documentation Preparation and Processing:**

- Ensure that required documentation is prepared for activities and processes that are subject to the USQ process. This includes USQ screening documents and relevant supporting documentation resulting from the application of the USQ process (see Section 4.0, "USQ Process").

- Ensure that new information or events at the facility are entered into the New Information Processing mechanism (Section 5.0) for proper consideration.

- Take action, as specified in Section 6.0, “Potentially Inadequate Safety Analysis (PISA),” if they discover or are made aware of a potential inadequacy of the documented safety analysis (DSA).

- Ensure the approved and implemented changes that result from the USQ process are appropriately reflected in the annual update of the facility safety basis documentation.

- Ensure the USQD documentation is technically defensible.

- Approve the USQD documentation.

- Ensure all USQ preparers, independent reviewers, and approvers in their organization(s) are properly trained and qualified in accordance with this process (see Section 7.0, "Training and Qualifications").

  Note: Document qualification using form SF 2001-IQF, "USQ Individual Qualification Form” (Word file/Acrobat file).

- Ensure that independent reviewers of USQ screening and USQD documents are appropriately independent.

- Maintain a list of personnel qualified to review USQ screening and USQD documents and forwarding said list to the Safety Basis Department by February 28th of each year.

- Approve USQ actions, if qualified.

Note: The facility manager's/approver's signature on a USQD document signifies that the document has been properly prepared and reviewed, the USQD is technically defensible, and that concurrence signatures, if required, have been obtained.

- Coordinate the review of positive USQ determinations prepared by their line organizations with the Safety Basis Department, prior to transmittal to the NNSA/SSO.

- Transmit positive USQ determinations to NNSA/SSO via appropriate management channels (see CPR400.1.1/ MN471001, *ES&H Manual*, Section 18C, "Occurrence Reporting," if related to Potentially Inadequate Safety Analysis situation), with information copies provided to the Safety Basis Department authorization basis contact.

- Maintain records in accordance with Section 8.0, "Records."

Change Authorization and Implementation:

- Receive NNSA/SSO approval prior to implementing any changes described in positive USQDs.

USQ Documentation Reporting:

- Ensure that the annual USQ activity summary report is prepared for the nuclear facilities for which they are responsible.

- Ensure that the annual USQ activity summary report is submitted with the annual update submission of the hazard category 1, 2, or 3 DOE nuclear facility's safety basis documents.

  The annual USQ activity summary report should list the facility in question, USQD identification numbers, and a description of the proposed change associated with each USQD. A count of the number of USQ screens should be provided as well.

Note: Questions regarding the preparation or submission of the annual USQ activity summary reports should be directed to the authorization basis contact.

- Ensure that the facility staff provides needed support to the Safety Basis Department when conducting periodic USQ process sampling and review activities.

  Note: USQ documents are retained by line organizations (see Section 8.0, "Records").

4.0 USQ PROCESS

Requirements

The USQ process is intended to be used in conjunction with the technical work document (TWD) processing system and the facility-specific change control process. The graded approach may **NOT** be used in implementing the USQ process.

This process is described in detail in the following sections and in Attachment A, "USQ Process Overview."

When applying this process, it is important to note that any references to "described in the existing documented safety analysis," "existing safety analyses," or the like are intended to mean that a review of the proposed change in question is reviewed versus the DSA. It also includes other related documents, such as the Technical Safety Requirements (TSRs) and their Bases; the Safety Evaluation Report (SER), and all NNSA/SSO conditional approval documents for DSA-related documents; any existing NNSA/SSO-approved DSA that may not yet have been implemented, and any other documents that may be associated with the acceptable methodologies for preparing a DSA as described in Table 2, Appendix A to Subpart B, 10 CFR 830. In effect, when the term DSA is used associated with either the USQ Screening or the USQD, that term should be taken to mean the whole safety basis.

4.1 Entry Conditions

4.1.1 Purpose of Entry Conditions

Entry conditions are those changes/activities that shall be considered for applicability of the USQ process in conjunction with the TWD system and the facility-specific change control processes. Examples of these entry conditions can come from initiatives related to: design, engineering, maintenance, inspection, operations, and assessments of hazard category 1, 2, or 3 DOE nuclear facilities or activities.

4.1.2 Entry Conditions

Members of the Workforce shall be responsible for ensuring that the USQ process is implemented at hazard category 1, 2, or 3 DOE nuclear facilities where any of the following three circumstances exist.

Circumstance	Description
(1) New Activity	Test or experiment that is not described in the existing documented safety analysis.
(2) Physical Change	Temporary or permanent change to the facility.
(3) Document Change	Temporary or permanent change in the procedures as described in the existing documented safety analysis. **Note:** This includes both revising an existing procedure and creating a new one.

4.2 USQ Process Screening

4.2.1 Purpose

The purpose of screening is to identify situations that do **not** need USQD processing.

4.2.2 Screening Checklist

The following questions determine which proposed changes may be immediately screened out and which require preparation of USQD documentation. These questions are placed in three sub-groups: Group I, Group II, and Group III. Group I involves those changes for which further USQ consideration is not necessary and also that NNSA/SSO review and approval is not necessary. Group II involves those changes for which further

USQ consideration would not be appropriate, but NNSA/SSO review and approval is necessary. Group III involves those changes for which routine USQ processing is appropriate (that is, preparing a USQD) to determine if NNSA/SSO review and approval is necessary. The answers to the questions in the sub-groups will necessitate different actions by the evaluator of the proposed change. These screening questions are also provided in SF 2001-USC, “USQ Screening Checklist” (Word file/Acrobat file).

4.2.2.1 Group I

The questions are the following (correlated to form SF 2001-USC) :

a. Is the change covered by a NNSA/SSO approved categorical exclusion?

   Note: Per NNSA/SSO direction, categorical exclusions are explicitly excluded from this revision of this document. Categorical exclusions may be included in a future revision of this document. Until the revised procedure is approved and implemented, categorical exclusions are **not** allowed at Sandia.

b. Is this change completely enveloped by a previous USQD?

c. Is this a proposed action that involves the installation of an item that is an exact replacement (i.e., same manufacturer and same model number)?

d. Is this a proposed action or proposed maintenance action that involves the installation or replacement of an item that is on the facility approved equivalent parts list?

   In developing an approved equivalent parts list, it is expected that the SSC listed have been evaluated by a facility engineer, and their respective evaluations have concluded that the replacement item meets all the requirements pertinent to the specific application at the facility, including the service conditions. As part of this evaluation, the facility engineer needs to consider whether new failure mechanisms are created and whether all safety requirements are met with the proposed part.

e. Is this a non-conforming part restored to become compliant with the requirements (i.e., the disposition of the non-conformance report is "reject" or "rework")?

   In the Quality Assurance (QA) program there is a set of standard dispositions for nonconformances. These may include the following dispositions:

- Reject disposition in which the nonconforming part is replaced with a conforming part.

- Rework disposition in which the part is restored to the point that it becomes fully compliant with the requirements.

Discovery of a non-conforming part in an operating system requires that the facility evaluate the operability of the system and take appropriate steps to report the condition and place the facility in the required operating mode. Depending on the situation, it may require entry into the New Information Process (Section 5.0).

f. Is this a corrective action for a condition that involves a restoration modification (return to original condition), as described in the DSA? If not, the as-found condition must be considered a PISA and a USQD performed.

   The restoration modification must be based on the existing approved design. Such restorations should include verifications that the existing approved design does not conflict with the existing approved DSA.

g. Is this purely an editorial change without any technical change to a procedure or document (not applicable to TSR changes)?

   The editorial (i.e., a spelling or typographical correction, grammatical change, clarification, or additional note or reference) must not affect/change the technical content.

The answers are the following :

If the answer to **any** of the questions above is “Yes,” then the proposed change does not need to be evaluated any further in the USQ process and does not need NNSA/SSO approval prior to proceeding with the change. The summary at the end of form SF 2001-USC needs to be completed with the results of the screening, and signed by the USQ screening preparer and independent reviewer.

If the answer to **all** of the questions is “No,” then the proposed change will require further evaluation, using the Group II questions.

4.2.2.2 Group II

The questions are the following (correlated to form SF 2001-USC):

a. Is this change a major modification?

   Note: A major modification would be a modification that requires a substantial change to the safety basis that requires preparation of a preliminary documented safety analysis.

b. Has management decided to submit the proposed change to NNSA/SSO for review and approval?

c. Is this a change to the facility TSR document (includes editorial changes)?

The answers are the following:

If the answer to **any** of the questions is "Yes," then the proposed change does not need to be evaluated any further in the USQ process, **but** the proposed change **needs to go to NNSA/SSO for approval** prior to proceeding with the proposed change. The summary at the end of form SF 2001-USC needs to be completed with the results of the screening, and signed by the USQ screening preparer and independent reviewer.

If the answer to **all** of the questions is "No," then the proposed change will require further evaluation, using the Group III questions.

4.2.2.3 Group III

The questions are the following (correlated to form SF 2001-USC):

a. Is this a temporary or permanent change in the facility as described in the existing documented safety analysis?

   Note 1: This question is related to a facility change that alters or impacts a SSC design, function, or method of performance as described in the existing safety analyses. It may involve a SSC implicitly defined in the safety basis documentation.

   Note 2: The recommended approach for deciding whether a modification involves a change to the hazard category 1, 2, or 3 DOE nuclear facility, as described in the safety analyses, is to consider the effect of the change on the SSC of which the SSC being modified may be a part or which the SSC being modified may

support. If the change alters the design, function, or method of performing the function of the SSC, as described in the safety analyses, a USQ determination is required. Also, a change to an SSC that does not involve equipment important to safety could initiate an accident or affect the course of an accident, so virtually no change can be ignored.

Note 3: Changes to non-safety SSCs must be considered, as well as safety SSCs. Proposed changes to non-safety SSCs must be evaluated unless they can be excluded or screened for well documented and supportable reasons.

b. Is this a temporary or permanent change in the procedures as explicitly or implicitly described in the existing documented safety analysis?

Note: This question is related to the identification of procedures that may be explicit or implicit in the facility documented safety analysis (e.g., those procedures relating to the facility safety management program (SMP) processes described in the DSA, or those operating, testing, surveillance, and maintenance procedures for equipment that are identified in the documented safety analysis). It applies to both revising an existing procedure and creating a new procedure, if the new procedure should be identified in the DSA.

c. Is this a new activity , such as an operation, test, or experiment **not** described in the existing documented safety analysis?

Regarding this screening question, there are a number of items that require more clarification to determine, if the proposed change is a new activity in the context of the USQ process, and they are as follows:

1. New configurations that require a criticality safety evaluation (CSE) should be considered as a test or experiment.

2. Post modification testing associated with a proposed modification should be considered and included in the USQ screening process, as well as in the subsequent USQD, as needed.

3. Outages of systems or components that are included in safety analyses for the hazard category 1, 2, or 3 DOE nuclear facility, for which allowed outage times are not included in the TSRs, should be considered a new activity.

4. New transportation activities not described in the documented safety analysis should be considered a new activity.

General Note for Group III Screening Questions: If dealing with nonconformances, there are two dispositions that should **not** be screened out of the USQ process:

- Use-As-Is disposition in which the nonconforming part is justified as not meeting all functional requirements but is nonetheless an acceptable part.

- Repair disposition in which the part is made to agree better with requirements for the part (but remains not fully compliant with the requirements).

The answers are the following:

If the answer to **any** of the questions is “Yes,” then the proposed change needs to be evaluated with a USQD (see Section 4.3). The summary at the end of form SF 2001-USC, “USQ Screening Checklist,” (Word file/Acrobat file) needs to be completed with the results of the screening, and signed by the USQ screening preparer and independent reviewer.

If the answer to **all** of the questions is “No,” then the proposed change does not need to be evaluated any further in the USQ process. **However**, it is expected that an explanation will be provided in form SF 2001-USC to justify the questions with “No” answers.

The USQ screening process is documented, justified, and independently reviewed, using SF 2001-USC, "USQ Screening Checklist." The worksheet must be reviewed and executed by the facility as appropriate, regardless of the outcome of the screening process.

4.3 USQ Determination (USQD)

4.3.1 Purpose

If the previous screening section indicates that the USQD process is required, then perform the USQD. The USQD determines whether or not the subject change requires NNSA/SSO approval prior to implementation. It is a rigorous process that includes seven criteria (see Section 4.3.2, "USQD Question Set") to ensure that all aspects of safety are considered, and it is a benchmark for whether the safety basis is being preserved. A

summary of the proposed change, the facility references used in the evaluation, the evaluation of the seven criteria, and documentation of all necessary reviews and approvals need to be documented in SF 2001-USQ, “Unreviewed Safety Question Determination (USQD) Worksheet.”

4.3.2 USQD Question Set

Preparers shall ensure that answers to all of the following seven questions, one for each of the USQD criteria, are individually justified on SF 2001-USQ, "Unreviewed Safety Question Determination (USQD) Worksheet" form. Additional information and documentation may be required to support the answers to the questions.

Note: Use Attachment B, “USQ Question Set Guidance,” as a reference for additional guidance.

If **any** of the answers to the following questions is “Yes,” the result is a positive USQD. (Answers that consist only of a simple statement or conclusion are **not** sufficient. A defensible explanation is required to support each response. If additional controls not credited in the DSA need to be considered, then it is likely that a positive USQD exists.)

Previously evaluated conditions (this applies to changes to information currently contained in the existing facility safety analyses):

1. Could the proposed change increase the probability of an accident previously evaluated in the facility's existing safety analyses?

2. Could the proposed change increase the consequences of an accident previously evaluated in the facility's existing safety analyses?

3. Could the proposed change increase the probability of a malfunction of equipment important to safety previously evaluated in the facility's existing safety analyses?

4. Could the proposed change increase the consequences of a malfunction of equipment important to safety previously evaluated in the facility's existing safety analyses?

New conditions:

5. Could the proposed change create the possibility of an accident of a different type

than any previously evaluated in the facility's existing safety analyses?

6. Could the proposed change 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?

7. Could the proposed change reduce a margin of safety?

4.3.3 USQD Review and Approval

The USQD preparer shall ensure that completed USQD documentation is reviewed and approved, as appropriate.

4.3.3.1 Preparer's Signature

- The preparer collects the supporting information required for completing the USQD.
- The preparer completes the USQD packet by signing and dating the SF 2001-USQ, "Unreviewed Safety Question Determination (USQD) Worksheet," form.

4.3.3.2 Independent Review

- The preparer shall send the completed USQD packet to an authorized trained independent reviewer.
- The independent reviewer shall review the USQD.
- The independent reviewer and preparer shall resolve any comments resulting from the independent review.
- The independent reviewer shall sign the USQD once all comments are resolved.

4.3.3.3 Management Approval

- The preparer/independent reviewer shall transmit all USQDs to the appropriate management, or management designee, for approval.
- Management shall sign all USQDs (in the “Approver” signature block on the SF 2001-USQ Summary Sheet).

- All USQDs with positive outcomes shall be transmitted to the Safety Basis Department for review and approval prior to transmittal to NNSA/SSO.

4.3.4 Potential Outcomes

Management should be informed of the outcomes for all USQDs. The following potential outcomes may result from the USQD process:

- Negative: If the answer to **all** seven questions is “No,” then the USQD is negative and the facility may proceed with the proposed change.

- Positive: If the answer to **any** of the seven questions is “Yes,” then the USQD is positive and NNSA/SSO approval is required prior to proceeding with the proposed change.

For a positive USQD, the following actions shall be taken:

- Prepare an amendment to the Safety Basis documentation.

- Submit the amended Safety Basis documentation to NNSA/SSO for approval.

If there are any questions on how to address these actions, consult the authorization basis contact (Safety Basis Department).

5.0 New Information (NI) Process

The New Information (NI) Process is designed to evaluate and track new information to the point of resolution. NI can be sorted into two different categories of resolution:

- The NI is within the scope of the current safety basis and the associated entry in the NI Process can be closed; or

- The NI may not be within the current safety basis and should be considered for entry conditions to the Potentially Inadequate Safety Analysis (PISA) process (see Section 6.0, “Potentially Inadequate Safety Analysis (PISA)”).

Each facility shall use the NI Process to track and disposition NI issues. Information to be considered includes, but is not limited to:

- Whether information is draft or final.
- Potential Consequences.
- Frequency of Potential Accidents.
- Source of information.

If any NI that is being processed cannot be resolved to disposition within 10 calendar days of initiation, the manager for the facility evaluating the NI needs to notify the Safety Basis Department and NNSA/SSO of the status of the situation.

Note: Attachment C has been provided to aide in completion of NI processing.

Upon receipt of NI, the Safety Basis and operational support staff for a given Sandia hazard category 1, 2, or 3 DOE nuclear facility qualified in the USQ process will perform the following actions:

1. Determine if the NI is applicable to a facility, process, or SSC described in the safety basis.
    a. If the NI is NOT applicable, then document the closure of the issue as needed. No further action is necessary.
    b. If the NI is applicable, then continue with steps 2-5 below of this process.
2. Initiate completion of the form SF 2001-NIP by indicating the Facility Name, Date, NI document number [“New Information (NI) #”], and a description of the New Information [“Identification” section].
3. Determine if the NI is mature enough to be confirmed as a valid issue.
    a. If the NI is **NOT** mature enough at the time to confirm a valid issue, then continue the NI investigation until it has reached maturity.
    b. If the NI is mature enough at the time to confirm a valid issue, then:

- Indicate a “Yes” answer to the maturity question on SF 2001-NIP, and
- Continue to step 4 in this process.

4. Determine if the NI is significant enough to warrant implementing compensatory measures to assure current operations are safe prior to any assessment of the NI. Significant NI is information that involves the analysis, design, manufacturing, or installation of related safety-SSC.

   a. If the NI is significant enough to warrant implementing compensatory measures, then:

      - Proceed to PISA entry conditions (Section 6.0), and
      - Complete the documentation in SF 2001-NIP (provide a “Yes” answer to the significance question).

   b. If the NI is **NOT** significant enough to warrant implementing compensatory measures, NNSA/SSO declares that the issue involves a PISA, then:

      - Proceed to PISA entry conditions (Section 6.0), and
      - Complete the documentation in SF 2001-NIP (provide the appropriate answers to the significance and NNSA/SSO declaration questions).

   c. If the NI is **NOT** significant enough to warrant implementing compensatory measures, **and** NNSA/SSO does not declare that the issue involves a PISA at the time, then:

      - Answer the questions on significance and the NNSA/SSO declaration on SF2001-NIP, and
      - Proceed to step 5 in this process.

5. Determine if the NI could impact the content of the safety basis documents for the facility.

   a. If it is determined that the NI could **NOT** impact the content of the safety basis documents, then:

- Document these results in SF 2001-NIP (include a “No” answer to the impact question), and
- Communicate the results to those involved in the situation. No further action is required.

b. If it is determined that the NI could impact the content of the safety basis documents, then:

- Proceed to the PISA entry conditions (Section 6.0), and
- Document these results in SF 2001-NIP (include a “Yes” answer to the impact question).

6.0 Potentially Inadequate Safety Analysis (PISA)

Note: Attachment D has been provided to assist the user of this section understand the process.

The purpose of the Potentially Inadequate Safety Analysis (PISA) process is to evaluate situations where it is discovered that the existing configuration of the facility may be different from that described in the safety basis or that supporting analyses may be different, inadequate, or invalid.

The documented safety analysis (DSA), defines the safety risks that NNSA/SSO is willing to accept when authorizing the operation of a hazard category 1, 2, or 3 DOE nuclear facility. It is the analysis baseline that is referenced and assessed in the USQ process. If the DSA was found to be inadequate, the safety analysis could be compromised and the USQ process must be entered. Therefore, the USQ process includes special actions to be taken if it appears that the safety analysis might be inadequate.

The USQ process **does not** apply to the process of upgrading DSAs in response to new requirements or to the use of new or different analytical tools during the upgrade process. However, the USQ process does apply when there is reason to believe that the current safety analysis might be in error or otherwise inadequate, as discussed in this section.

While the traditional application of the USQ process is associated with a proposed change, activity, or future work function, this section provides some additional guidance on how to deal with situations that indicate there may be a problem with the existing Safety Basis documents. The USQ process includes special actions for a potentially inadequate DSA (this may also be referred to as a PISA).

The PISA process consists of the following three steps:

- Entry Conditions.
- Results of PISA Decision.
- PISA Actions.

6.1 Entry Conditions

After information identification through the NI process mentioned in Section 5.0, facility management is allowed a brief period to confirm this potential inadequacy. This confirmation may take different forms, but must be completed in a matter of hours, up to several days based on complexity, but not a matter of weeks or months. It is recognized that identifying this point in the process cannot be precisely defined; rather, it is based on the judgment of facility management, considering all of the circumstances and factors involved. When this input information regarding a potential inadequacy has been confirmed, the facility must initiate the special PISA required actions.

Once it is determined that an entry condition is met, a PISA exists and shall be declared per occurrence reporting criteria. This declaration does not include the evaluation of whether or not a safety impact exists.

In general, there are three types of initiating events leading to a PISA action:

- Discrepant As-Found Conditions.
- New Information.
- Operational Event.

The following set of questions may be helpful in determining if the discovery of discrepant as-found conditions, new information, or operation events has the potential to

call into question the adequacy of the safety analysis.

6.1.1 Discrepant As-Found Condition

A discrepant as-found condition is where the actual physical configuration of the facility or experimental setup may not agree with that described in the DSA. Examples of discrepant as-found conditions are:

- The description of the facility, equipment or the operations that take place in the facility may not agree with the description in the DSA;
- The evaluation of normal, abnormal, and accident conditions, including the identification of hazards and analysis of the hazards and potential accidents may not agree with the description in the DSA; or
- The identification or description of important hazard control measures to be included in the technical safety requirements (TSRs) may not agree with the description in the DSA.

The following questions provide guidance to determine if a discrepant as-found condition exists:

- Are aspects of the physical configuration important to the safety analysis incorrect, and does the existing configuration potentially compromise the safety analysis ?
- Has a physical modification been discovered that is not reflected in the safety analyses that may adversely affect the analyses?
- Has an existing facility condition been discovered that may be outside of the bounds of the existing analyses?

6.1.2 New Information

The content of new information received by a facility could impact the Safety Basis. Examples of new information sources include:

- A vendor notification.
- An occurrence report from another facility that pertains to the DSA.

- A change in the technology.

- The discovery of errors in an analysis in the DSA.

In situations where an analysis that is presented or that supports the DSA may have analytical errors, the analysis may be inadequate. Such analytical errors might include invalid input values into a computer code, invalid assumptions, improper analytical tools (codes), and errors interpreting the outputs of an analysis.

The following questions provide guidance to determine if receipt of new information constitutes an entry condition:

- If a piece of equipment important to safety or a component affecting the safety function of such equipment has experienced a malfunction or failure, could the conditions leading to the failure of this equipment potentially compromise the existing safety analyses under defined accident scenarios?

- Is the validity or adequacy of the existing safety analyses questionable because of an advance in technology that renders information assumed in the safety analyses less conservative than originally thought?

- Has the discovery of an analytical error or omission resulted in a quantity of hazardous or radioactive material vulnerable to release greater than originally assumed?

- Are energy sources available for dispersion of hazardous or radioactive material greater than originally assumed, and may they increase consequences?

- Has there been a discovery of an inaccurate calculation or incorrect assumption that could bring the validity of the existing analyses into question?

- Has an important piece of safety information been omitted in previous safety analyses?

- Has a potential new failure mechanism or new accident initiator been identified?

- Has it been identified that the performance of a piece of equipment important to safety may not meet the performance metrics specified as required in the safety basis?

6.1.3 Operational Event

An operational event is a condition or transient that exceeds the boundaries of the Safety Basis documentation. Examples include:

- An operational event that could represent a new or different accident initiator other than those considered in the facility safety basis.
- Facility response to an event that is not consistent with the analyzed events.
- Operational event progressed differently than anticipated e.g., unplanned actuation of safety systems.

The following questions provide guidance to determine if an operational event constitutes an entry condition:

- Did an operation event progress differently than anticipated and could it have potentially exceeded the bounds of the safety analyses?
- Is the event or incident significant, or does it have the potential to affect safety functions in the facility?

6.2 Results of PISA Decision

6.2.1 A PISA Does Not Exist

If a PISA does not exist, then the USQ process no longer applies. Document the decision that a PISA does not exist via Section 5.0, the NI processing portion of the procedure.

6.2.2 A PISA Does Exist

If a PISA is determined to exist, the USQ process applies. Commence PISA Actions.

6.3 PISA Actions

6.3.1 Place Facility in a Safe Condition

Review actions to ensure the safety of Members of the Workforce and to place or

maintain the facility in a safe condition.

Note: The action to place the facility in a safe condition continues throughout the implementation of PISA actions until SSO agrees that the operational restrictions can be removed.

6.3.2 Notify the NNSA/SSO

The NNSA/SSO notification can be accomplished by following protocols established in the "Early Notification Process" followed by submission of appropriate notification documentation. Submit Occurrence Report in accordance with CPR400.1.1/MN471001, *ES&H Manual*, Chapter 18, "Reporting, Investigating, and Correcting ES&H Events," Section 18C, "Occurrence Reporting."

6.3.3 Perform PISA USQD

Perform a backward-looking PISA USQD for each situation. The purpose of performing the PISA USQD is to determine if the potential inadequacy is an actual inadequacy or not. A backward-looking PISA USQD evaluates the change by looking back in time to a point before the discrepancy was discovered, and performing a USQD evaluation as if it were a proposed change.

The time period for the performance of a USQD related to a PISA should be on the order of days, not weeks, or months. Refer back to Section 4.3 for direction on preparation of a USQD.

Note: It may be necessary to support a Root Cause Analysis (RCA) effort in this period to support the occurrence report.

6.3.4 Notify NNSA/SSO of USQD Results

If the USQD is negative, notify NNSA/SSO by submitting a USQD with a completed evaluation of safety of the situation. See Section 6.3.5.

If the USQD is positive:

- An actual inadequacy of the safety basis exists.
- Notify by updating the Occurrence Report according to CPR400.1.1/MN471001,

ES&H Manual , Chapter 18, “Reporting, Investigating, and Correcting ES&H Events,” Section 18C, “Occurrence Reporting.”

6.3.5 Submit Evaluation to NNSA/SSO

If the USQD is negative:

- Prepare and submit the evaluation of the safety of the situation to NNSA/SSO. The content of the evaluation of the safety of the situation should be discussed with NNSA/SSO and the appropriate information provided in the evaluation documentation.
- Obtain NNSA/SSO concurrence to lift operational restrictions.
- Cancel the Occurrence Report.
- Exit the USQ procedure because an actual inadequacy does not exist.

If the USQD is positive:

- Prepare and submit the evaluation of the safety of the situation to NNSA/SSO for approval. The evaluation of safety shall include all of the following items:
    - A safety analysis
    - A management plan for addressing deficiencies
    - A proposed DSA change or Justification for Continued Operation (JCO)

  At a minimum, the evaluation of the safety should include a description of the situation and appropriate background information; the current status of the facility; an evaluation of the situation with a hazard or safety analysis (as appropriate); a summary of compensatory measures needed to maintain a safe condition, and a summary of conclusions.
- Obtain NNSA/SSO approval prior to taking further actions, including the removal of operational restrictions.
- Close out the Occurrence Report upon receipt of final NNSA/SSO approvals.

7.0 TRAINING AND QUALIFICATIONS

Requirements

Managers shall ensure that Members of the Workforce who originate, review, or approve USQ worksheets have the following minimum qualifications and have completed the SF 2001-IQF, “USQ Individual Qualification Form” (Word file/Acrobat file):

- Appropriate educational background (at minimum, a BS degree in engineering or physical science, or equivalent experience approved by management).
- Appropriate years and types of relevant work experience (at a minimum, 2 years at a hazard category 1, 2, or 3 DOE nuclear facility (at least one year at Sandia) or the equivalent approved by management).
- Appropriate knowledge of the facility.
- Understanding of NNSA/SSO requirements related to the facility safety basis, including the USQ process.
- Demonstrated knowledge of the facility-specific safety basis.
- Technical training (at minimum, satisfactory completion of USQ Initial Training, consult the authorization basis contact for training assistance).

Re-qualification in the USQ Process is required in accordance with the following guidelines:

- USQ training is valid for a period of 2 years, with an additional 6-month grace period.
- Qualification to perform USQ operations expires after 30 months and requires initial qualification training to re-qualify.
- Re-qualification and recording requirements are as stated on the reverse of SF 2001-IQF, "USQ Individual Qualification Form" (Word file/Acrobat file). This includes:

- Performing, reviewing, or approving at least 4 USQDs in the last two years.
- Satisfactory completion of USQ Refresher Training (consult the authorization basis contact for training assistance).

8.0 RECORDS

Requirements

Managers shall ensure that:

- USQ documents are retained by line organizations in accordance with SNL CPSR400.2, “Information Management,” for at least the operational life of the facility, or until the hazard categorization of the facility falls below Hazard Category 3 per DOE-STD-1027 (decommissioning activities). This includes the screening checklist (see SF 2001-USC, "USQ Screening Checklist"), the determination worksheet (see SF 2001-USQ, "Unreviewed Safety Question Determination (USQD) Worksheet"), and the NI processing form (see SF 2001-NIP, “New Information Processing Form”).

  Note: Retention of USQ documentation is to occur regardless of the number of times the safety basis is updated.

- Documents are transferred to the incoming contractors in the event there is a change in Management & Operating (M&O) contractors.
- Qualification records for Members of the Workforce who are qualified to perform the USQ process are maintained for the life of the facility.
- Copies of qualification records are forwarded to the Safety Basis Department.

9.0 REFERENCES

Requirements Source Documents

10 CFR 830, *Nuclear Safety Management*.

DOE O 471.1A, *Identification and Protection of Unclassified Controlled Nuclear Information*.

Implementing Documents

DOE G 424.1-1, *Implementation Guide for Use in Addressing Unreviewed Safety Question Requirements.*

SNL, CPR 400.1.1/ MN471001, *ES&H Manual*.

Related Documents

DOE O 200.1, *Information Management Program*.

DOE O 231.1A, Change 1, *Environment, Safety, and Health Reporting*.

DOE O 251.1A, *Directives System Order and Directives System Manual*.

DOE O 425.1C, *Startup and Restart of Nuclear Facilities*.

DOE-STD-1027-92, Change Notice 1, *Hazard Categorization and Accident Analysis Techniques for Compliance with DOE Order 5480.23, Nuclear Safety Analysis Reports.*

DOE-STD-1104-96 , Change Notice 2, *Review and Approval of Nonreactor Nuclear Facility Safety Analysis Reports.*

DOE-STD-3009-94,Change Notice 2, *Preparation Guide for U.S. DOE Nonreactor Nuclear Facility Safety Analysis Reports*.


Bonnie Shapiro, bshapir@sandia.gov

Bob Goetsch, rsgoets@sandia.gov

CHANGE HISTORY

GN470080, *Implementing the Unreviewed Safety Question (USQ) Process for Nuclear Facilities*

February 24, 2006

Note: This document has been altered by greater than 75% and should be read in its entirety.

* Indicates a new definition or a substantive change.

ES&H Manual Glossary:

- **Add:**
  - *Decommissioning.
  - *Independent [USQ process].
  - *Limiting conditions for operation.
  - *Limiting controls settings.
  - *Safety Limits.
  - *Safety Management Program (SMP).
  - *Hazard [USQ process].
  - *Nuclear facility [USQ process].
- **Change:**
  - **Safety basis** - Documented safety analysis and hazard controls that provide reasonable assurance that a DOE facility can be operated in a manner that adequately protects workers, the public, and the environment.

- Safety Basis is a subset of the authorization basis.
- Safety Basis is the baseline, point of reference for the USQ process (nuclear facilities).

- *** Unreviewed Safety Question (USQ)** - A situation where:
  - The probability of the occurrence or the consequences of an accident or the malfunction of equipment important to safety previously evaluated in the documented safety analysis could be increased.
  - The possibility of an accident or malfunction of a different type than any evaluated previously in the documented safety analysis could be created.
  - A margin of safety could be reduced.
  - The documented safety analysis may not be bounding or may be otherwise inadequate

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June 29, 2005
Administrative Changes

This document was administratively revised to:

- **Change:** Executive Policy Sponsor from Les Shephard to Frank Figueroa

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March 19, 2003
Administrative Changes

This document was changed to:

Revise Forms:

- SF 2001-USQ "Unreviewed Safety Question (USQ) Screening and Determination Worksheet," minor editorial changes were made to clarify user instructions.
- Change Appendix B-1, "UAQ Applicability Pre-Screen Checklist," to Form SF 2001-APS (3-2003) and clarified information contained therein.

- SF 2001-IQF, "Personnel Qualification Form" name change to "Individual Qualification Form," minor editorial changes were made to clarify user instructions.

September 19, 2002

This document was changed to:

Revise:

- Entire text to:
  - Reflect the requirements of 10 CFR 830 (i.e., the new requirements source for this GN).
  - Distinguish, where appropriate, between USQ and USQD.
  - Clarify the responsibilities of affected personnel and organizations.
- Reference list (which included changing the requirements source from DOE 5480.23 to 10 CFR 830.203).
- Relevant glossary entries to conform with 10 CFR 830.3, if applicable.
- SF2001-IRQ, Independent Reviewer Qualification Form was revised and renamed as SF2001-IQF, Personnel Qualification Form, to ensure correlation with the requirements of the GN.
- SF2001-USQ, Unreviewed Safety Question Screening and Determination Worksheet, was revised to ensure correlation with the requirements of the GN. Also added a list of instructions.

Add:

- Requirements under the topic, "Responsibilities":
  - Department 3111 risk management personnel to develop, schedule, and conduct a USQ Initial Training Program and a USQ Refresher Training Program.

- Preparers and independent reviewers of USQ documentation are to be qualified in accordance with Section 5, "Training and Qualifications."
- Managers and approvers of USQ documentation ensure that USQ preparers, reviewers, and approvers in their organization are properly trained and qualified in accordance with Section 5, "Training and Qualifications."
- Section 5.0, "Training and Qualifications."
- Section 6.0, "Records."

Delete:

- From Section 3.0, "Responsibilities," the manager's responsibility to ensure that an authorized derivative classifier (ADC) review the USQD documentation, as necessary and the preparer's determining if an ADC should review the USQD documentation.
- Section 3.5, "DOE"

October 9, 2000
Administrative Changes

This document was changed to:

- **Add** the following example (in Section 4.3.2) to the list of document changes that may accompany a USQ screening:
  - Nonsubstantive document changes

April 4, 2000
Administrative Changes

This document was changed to:

- **Clarify** various statements throughout the text (including changes suggested by DOE reviewers). For example, use of the phrase "...if the safety evaluation indicates a USQ" was revised to indicate that associated actions are required when the evaluation indicates a "positive" USQ. Similar changes were made to the associated form SF 2001-USQ Worksheet.

- **Delete** Section 3.5, "Safety Committees," which specified the role of such committees in the USQ process.

- **Add** a signature block on SF 2001-USQ, USQ Worksheet, for risk management personnel in the event of a positive USQ.

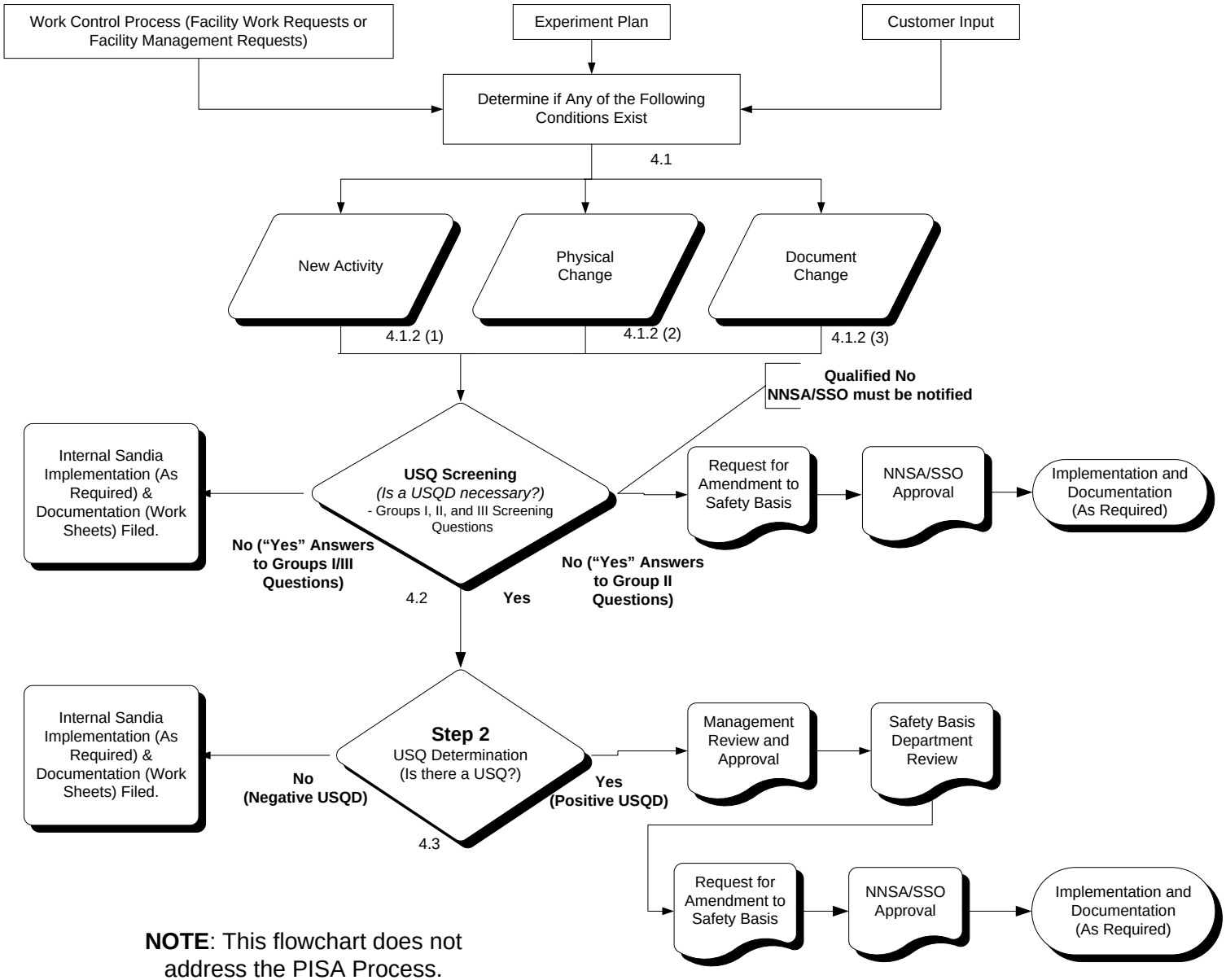
  Note: Obtaining this signature is not a line responsibility (i.e., risk management personnel will sign the form when they deem it necessary).

October 22, 1999

This document has been completely rewritten to correlate with the recently revised version of *ES&H Manual*, Chapter 13, "Hazard Identification/Analysis and Management."

Bob Goetsch, rsgoets@sandia.gov

ATTACHMENT A – USQ PROCESS OVERVIEW



NOTE: This flowchart does not address the PISA Process.

GN470080 - Implementing the Unreviewed Safety Question (USQ) Process for Nuclear Facilities

ATTACHMENT B - USQ QUESTION SET GUIDANCE

Subject Matter Expert: Bonnie Shapiro; CA Counterpart: N/A
Contributor: Sean Hedger
GN470080, Issue H
Revision Date: February 24, 2006; Replaces Document Dated: September 19, 2002
Review Date: November 10, 2005

Guidance is provided below to help users of the Unreviewed Safety Question (USQ) process understand the considerations that should be taken when addressing the USQ question set. The discussions are provided for each of the seven questions.

1. Could the proposed change increase the probability of an accident previously evaluated in the facility's existing safety analyses?

   In answering this question, the first step is to determine if the accidents, which have been evaluated in the previously approved safety basis, may be affected by the proposed change. By focusing on the initiators of the previously evaluated accidents, a determination is made as to whether there is an increased likelihood that a given accident would occur. The following questions may provide a useful approach in making this determination.

   Could the proposed change affect overall structures, systems, or components (SSC) performance in a manner that could increase the probability of a previously analyzed accident? Examples of questions that assist in this determination are as follows:

   a. Could the proposed change employ instrumentation with accuracies or response characteristics that are different from those of existing instrumentation such that an accident is more likely to occur?

b. Could the proposed change cause a SSC to be operated outside their design or testing limits? Examples include the following: overloading electrical systems, over pressurizing a piping system, or operating a motor outside its rated voltage and amperage.

c. Could the proposed change cause system vibration, water hammer, fatigue, corrosion, thermal cycling, or degradation of the environment for SSC that would exceed the design limits?

d. Could the proposed change cause a change to any SSC interface in a way that could increase the likelihood of an accident?

Note: The increase in probability or consequence may be expressed as a discernible qualitative increase [e.g., it is inappropriate to set a numerical margin for increases in probability or consequences within which a positive Unreviewed Safety Question Determination (USQD) would not be triggered] evaluated on a case-by-case basis.

2. Could the proposed change increase the consequences of an accident previously evaluated in the facility's existing safety analyses?

   In answering this question, the first step is to determine which accidents evaluated in the safety analyses may have their radiological or hazardous material consequences altered as a direct result of the change. The next step is to determine whether the change could, in fact, increase the occurrence of any of the accidents evaluated in the existing safety analyses. It is important to note that consequences to Members of the Workforce (in-facility and outside, or collocated) as well as to the public. Examples of questions that assist in this determination are as follows:

   a. Could the proposed change degrade or prevent safety functions described or assumed in the existing safety analyses?

   b. Could the proposed change alter any assumptions previously made in evaluating the radiological or hazardous material consequences in the existing safety analyses?

   c. Could the proposed change play a direct role in mitigating the radiological or hazardous material consequences assumed in the existing safety analyses?

d. Could the proposed change affect the integrity or function of any fission product barrier or any radioactive or hazardous material barriers?

Note: When evaluating "increases in consequences" of an accident, if the previous bounding case for that family of accidents remains the same for the target receptor, then generally there is no increase in the consequences within the USQ process.

When considering these issues in the context of bounding accidents, it is important to recognize that the bounding accident for Members of the Workforce may be (and probably are, especially for immediately involved members) different than bounding accidents for the public.

3. Could the proposed change increase the probability of a malfunction of equipment important to safety previously evaluated in the facility's existing safety analyses?

The safety analyses for the facility assume the proper functioning of equipment important to safety in demonstrating the adequacy of design. The proper functioning of other systems, including support systems, is generally assumed. The scope of the USQ determination should include these other systems. For example, a change that does either of the following is a change that increases the probability of occurrence of a malfunction of equipment important to safety:

- Degrades the performance of a equipment important to safety, assumed to function in the accident analysis, to below the performance level assumed in the existing safety analyses.
- Increases the challenge to equipment important to safety assumed to function in the accident analysis (e.g., more rapid pressure rise) such that performance is degraded below that assumed in the existing safety analyses.

Note: In answering this question, the first step is to determine what SSC could be impacted by the proposed change. Then the effects of this change on equipment important to safety are evaluated, including both direct and indirect effects. Direct effects are those in which the change affects the equipment (e.g., a motor change on a pump). Indirect effects are those in which the change impacts one piece of equipment, which in turn can affect

equipment important to safety. An example of indirect effects would be one piece of equipment falling on safety equipment.

After the impact of the change on equipment important to safety is identified, a determination is made as to whether an increase in the probability of a malfunction of the safety SSCs has occurred. The following are examples of questions that can be used in making this determination.

Will the proposed change degrade equipment important to safety reliability by:

- Imposing additional loads not analyzed in the design?
- Deleting or reducing system/equipment protection features?
- Downgrading the support system performance necessary for reliable operation of the equipment?
- Reducing safety system/equipment redundancy or independence?
- Increasing the frequency of operation of safety systems/equipment?
- Imposing increased or more severe testing requirements on safety systems/equipment?
- Failing to meet the original design specifications for materials and construction practices?

Note: If the change adversely impacts the equipment important to safety, the likelihood of equipment malfunction may be increased. A "yes" answer to any question above may not mean that there is a negative impact on safety. It would, however, indicate the existence of a USQ and the need for further analyses.

4. Could the proposed change increase the consequences of a malfunction of equipment important to safety previously evaluated in the facility's existing safety analyses?

This question asks whether, assuming a malfunction of equipment important to safety, the change would result in increased radiological or hazardous material

consequences. For example, consider if a proposed activity was to replace an existing centrifugal slurry pump used to mix waste in a tank with a pneumatic slurry pump. The new pump worked by blowing compressed air over the top of a vacuum chamber creating a negative pressure in a pulse tank. When the pulse tank is about full of waste material, a timer in the control system signals a solenoid valve to switch and the waste material is forced out in a pulse. The pulsing action of the pump is sufficient to keep the tank well mixed and remove any waste deposits. During the USQD review it was discovered that if the timer or solenoid valve failed it was possible to pull waste to the top of the vacuum chamber. At this point the waste would be mixed with the compressed air, used to power the pneumatic pump, causing the waste to aerosolize. This created a possible new event not previously analyzed in the documented safety analysis (DSA), having radioactive waste sprayed out of the tank .

5. Could the proposed change create the possibility of an accident of a different type than any previously evaluated in the facility's existing safety analyses?

   An accident or malfunction that involves an initiator or failure not considered in the nuclear facility's existing safety analyses is potentially an accident or malfunction of a different type. An example would be turbine missiles from a gas turbine added as an alternate power source. Certain accidents or malfunctions are not treated in the nuclear facility's existing safety analyses because their effects are bounded by similar events with the same control sets that are analyzed.

   In answering this question, the first step is to determine the types of accidents evaluated in the existing safety analyses. The types of credible accidents that the change could create can then be identified and listed. Evaluating the differences between the existing list of types of accidents with the newly generated list will determine the answer to the question. The accidents evaluated in the existing safety analyses are generally chosen to be bounding for a broad class of credible accidents. Thus, comparison of a new accident to the existing analyses may require referral to the underlying hazard analyses.

6. Could the proposed change 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?

   To answer this question, the types of failure modes of equipment important to safety that have been previously evaluated in the existing safety analyses and that would be affected by the change are identified. Then the types of failure modes

that the change could create need to be identified. Comparing the existing list of types of failure modes with the newly generated list of the same can provide an answer to the question. A change that might create a malfunction of a different type could be the relocation of equipment so that it becomes susceptible to flooding. Another might be replacement of a mechanical control system with a digital control system that could potentially fail in a different mode.

7. Could the proposed change reduce a margin of safety?

   This question deals with applicable margins of safety related to Department of Energy (DOE) approved DSA/safety analysis report (SAR) and/or technical safety requirement (TSR) documents.

   For purposes of performing the USQD, a margin of safety is defined by the range between two conditions. The first is the most adverse condition estimated or calculated in the safety analyses to occur from an operational upset or family of related upsets. The second condition is the worst-case value known to be safe, from an engineering perspective. This value would be expected to be related to the condition at which some accident prevention or mitigation action must be taken in response to the upset or accident, not the actual predicted failure point of some component.

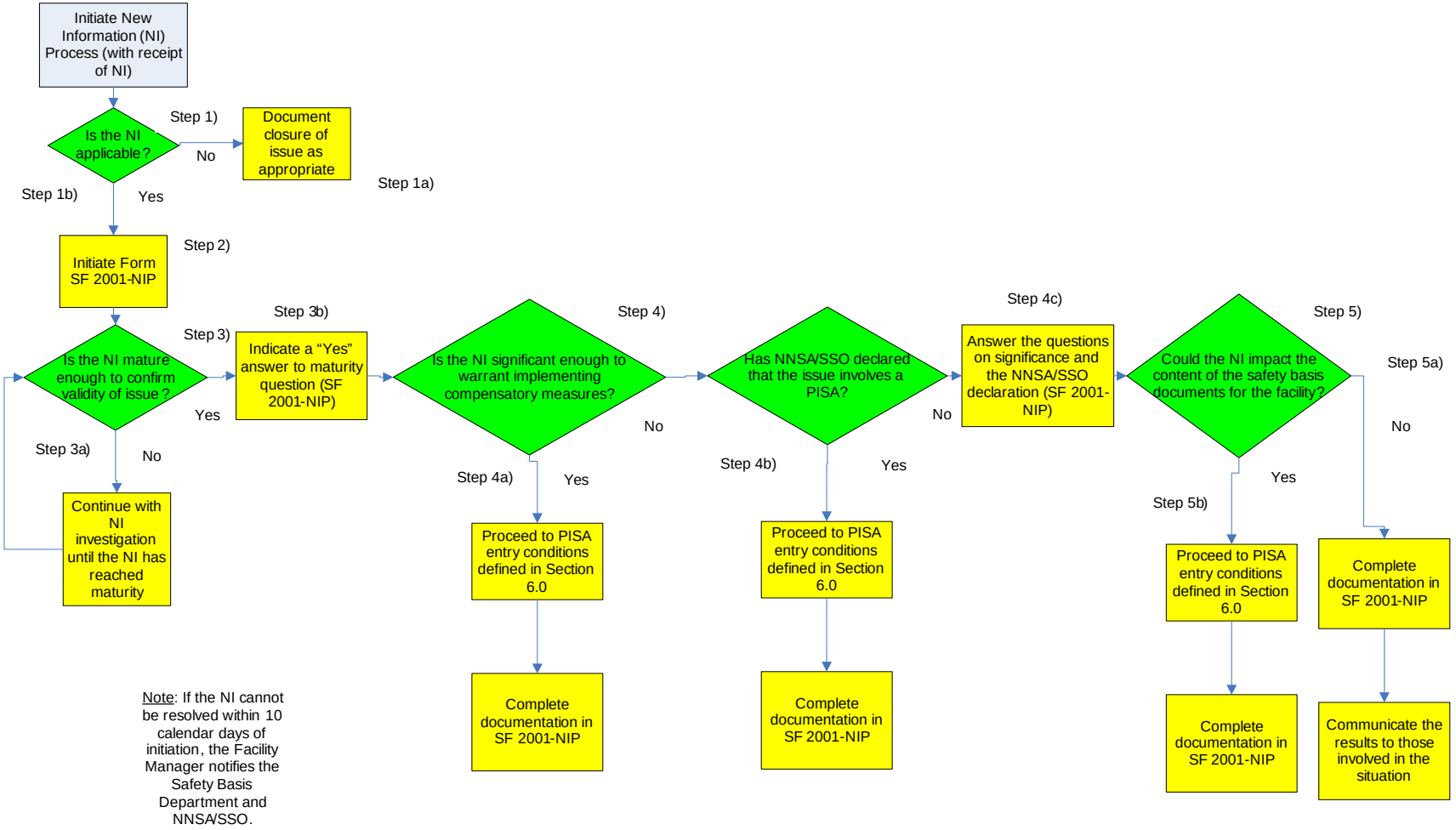
   The documented safety analysis and other appropriate safety basis documents should be reviewed to determine whether the proposed change, test or experiment, or new information has or would result in a reduction in a margin of safety. The judgment on whether the margin is reduced should be based on physical parameters or conditions that can be observed or calculated.

   With regard to the margin of safety, the change, test or experiment, or new information should be evaluated with respect to safety limits, limiting control settings (LCSs), and limiting conditions of operation (LCOs), as well as design parameters for safety systems or components. These safety margins are based on, for example, assumptions of initial conditions, conservative assumptions in computer modeling and codes, allowance for instrument drift and system response time, redundancy and independence of components in safety trains, and plant response during operating transient and accident conditions. However, a change in the margin of safety above the acceptance limit is the focus of 10 CFR 830, Subpart B, Section 830.203. A change in initial conditions, in a system response time, or in some other parameters affecting the course of an accident analysis supporting the bases of hazard controls must be evaluated to determine whether

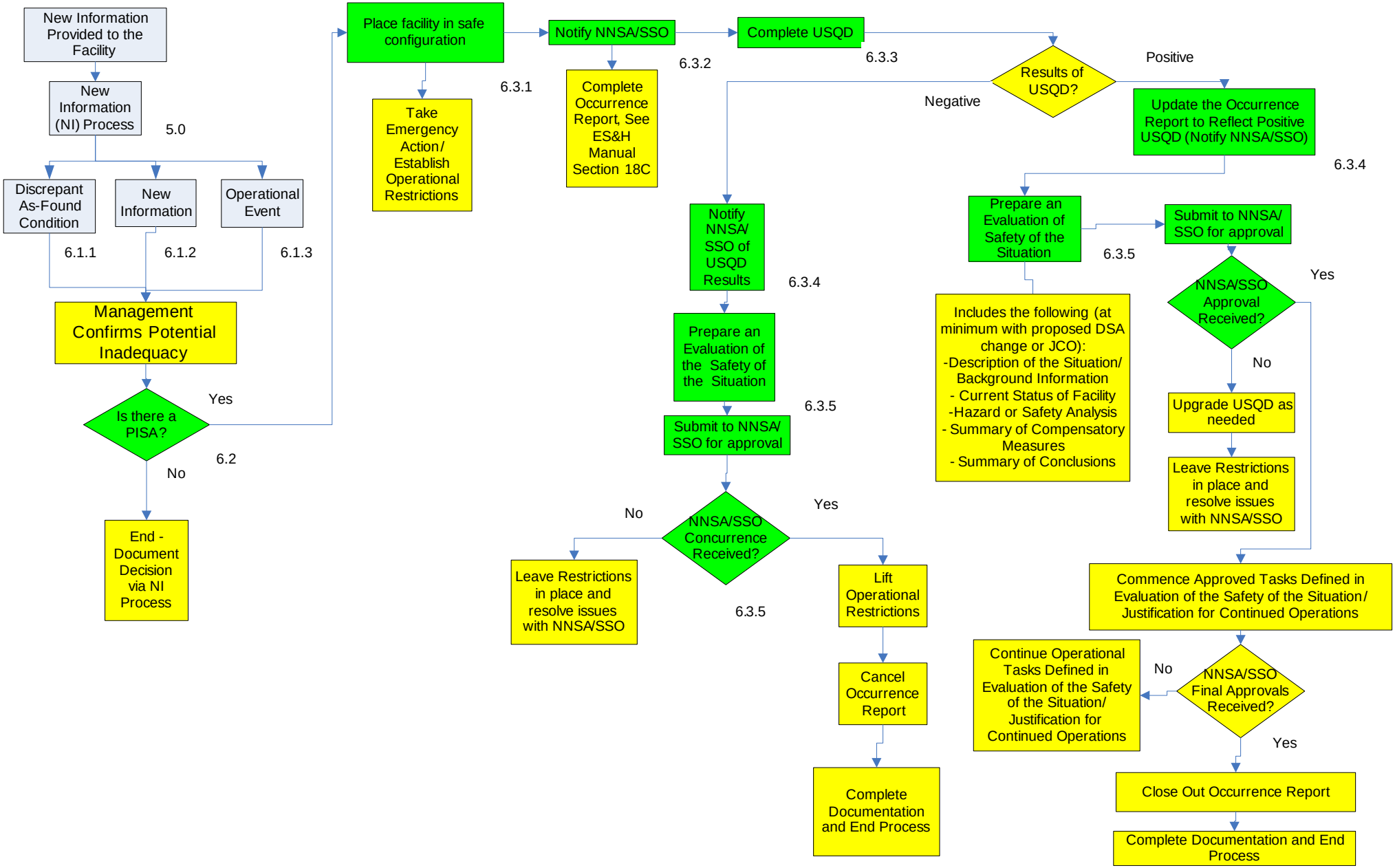
the change causes the acceptance limit to be exceeded for that analysis. If the limit were exceeded, the change would involve a reduction in the margin of safety pursuant to 10 CFR 830, Subpart B, Section 830.203.

Bonnie Shapiro, bshapir@sandia.gov
Bob Goetsch, rsgoets@sandia.gov

ATTACHMENT C – NEW INFORMATION (NI) PROCESS FLOWCHART



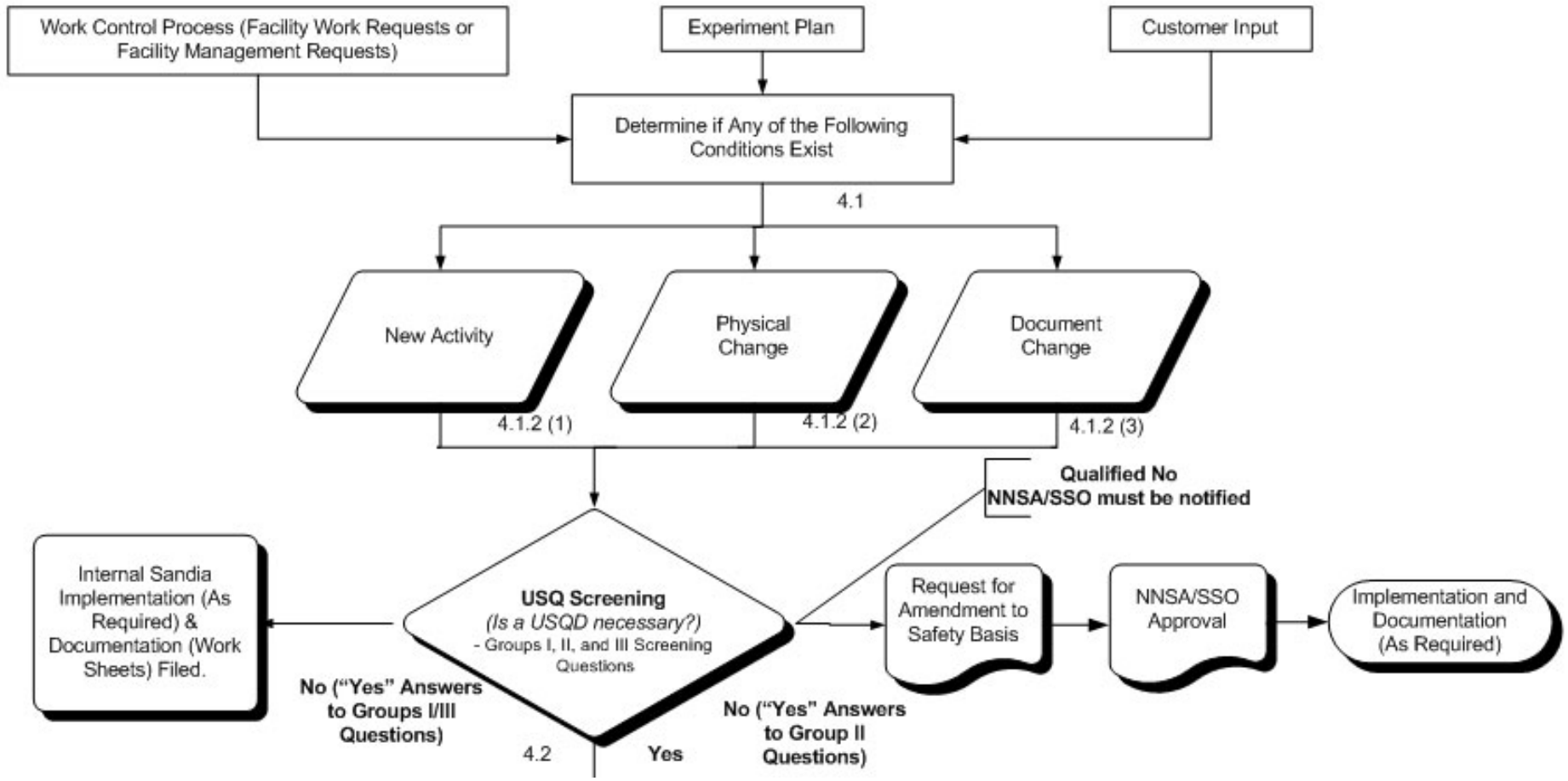
***ATTACHMENT D - USQ PISA PROCESS FLOWCHART**

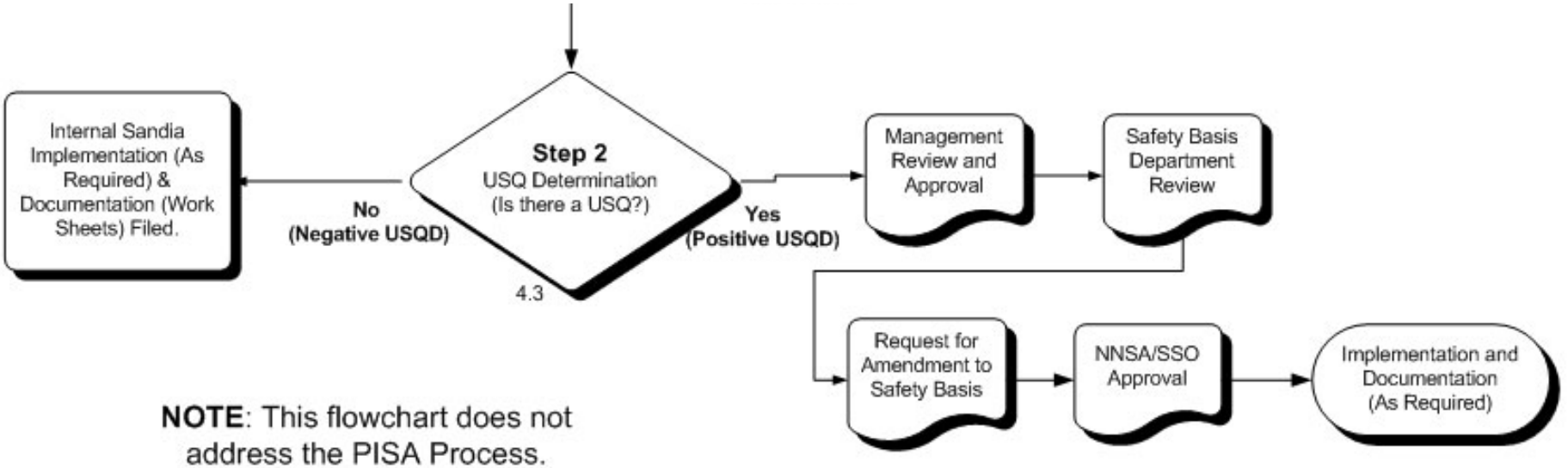


GN470080 - Implementing the Unreviewed Safety Question (USQ) Process for Nuclear Facilities

ATTACHMENT A - USQ PROCESS OVERVIEW

Subject Matter Expert: Bonnie Shapiro; CA Counterpart: N/A
Contributor: Sean Hedger
GN470080, Issue H
Revision Date: February 24, 2006; Replaces Document Dated: September 19, 2002
Review Date: November 10, 2005





Bonnie Shapiro, bshapir@sandia.gov
Bob Goetsch, rsgoets@sandia.gov

GN470080 - Implementing the Unreviewed Safety Question (USQ) Process for Nuclear Facilities

ATTACHMENT C - NEW INFORMATION (NI) PROCESS FLOWCHART

Subject Matter Expert: Bonnie Shapiro; CA Counterpart: N/A
Contributor: Sean Hedger
GN470080, Issue H
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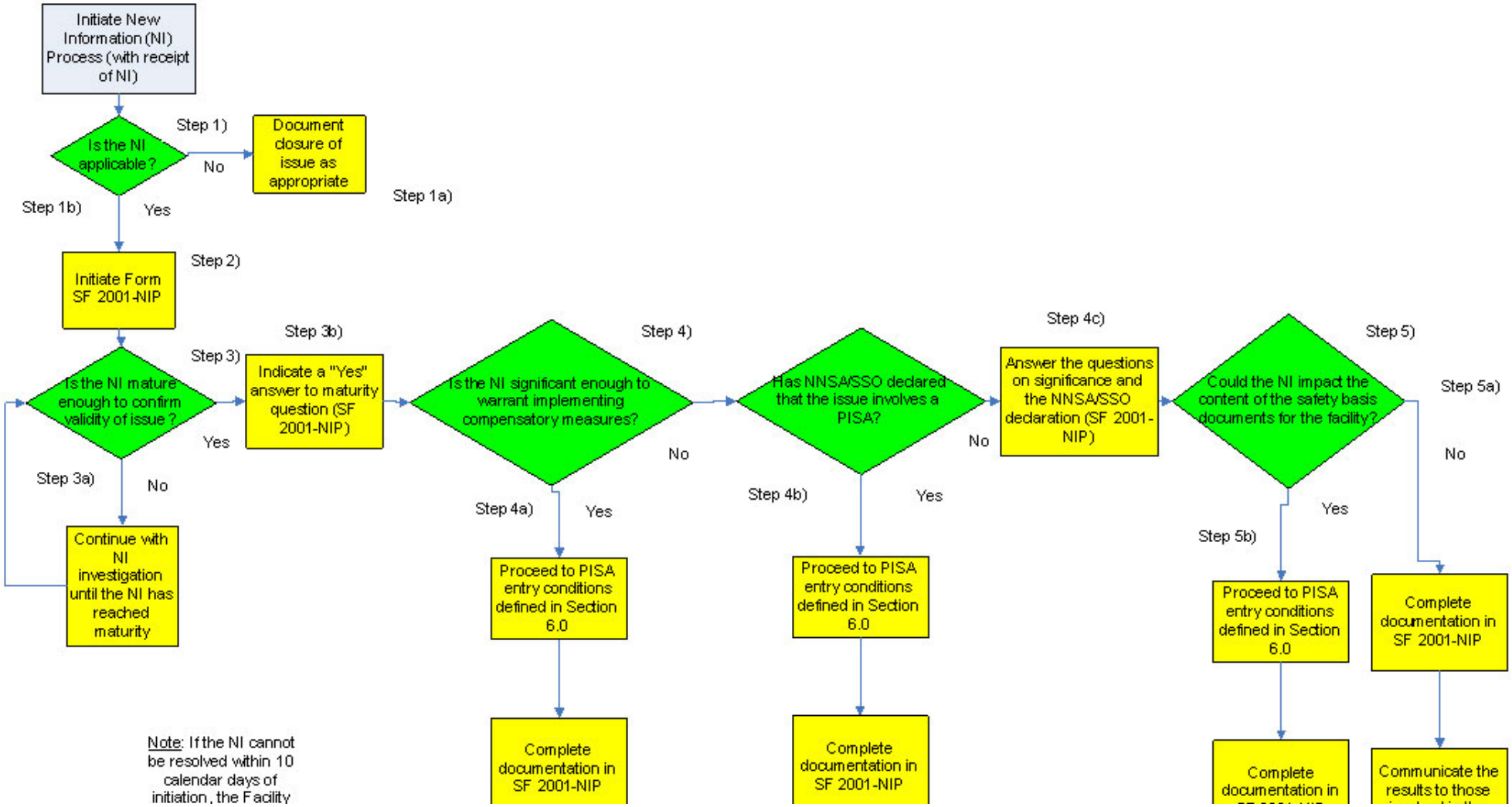

Bonnie Shapiro, bshapir@sandia.gov
Bob Goetsch, rsgoets@sandia.gov

GN470080 - Implementing the Unreviewed Safety Question (USQ) Process for Nuclear Facilities

ATTACHMENT D - USQ PISA PROCESS FLOWCHART

Subject Matter Expert: Bonnie Shapiro; CA Counterpart: N/A
Contributor: Sean Hedger
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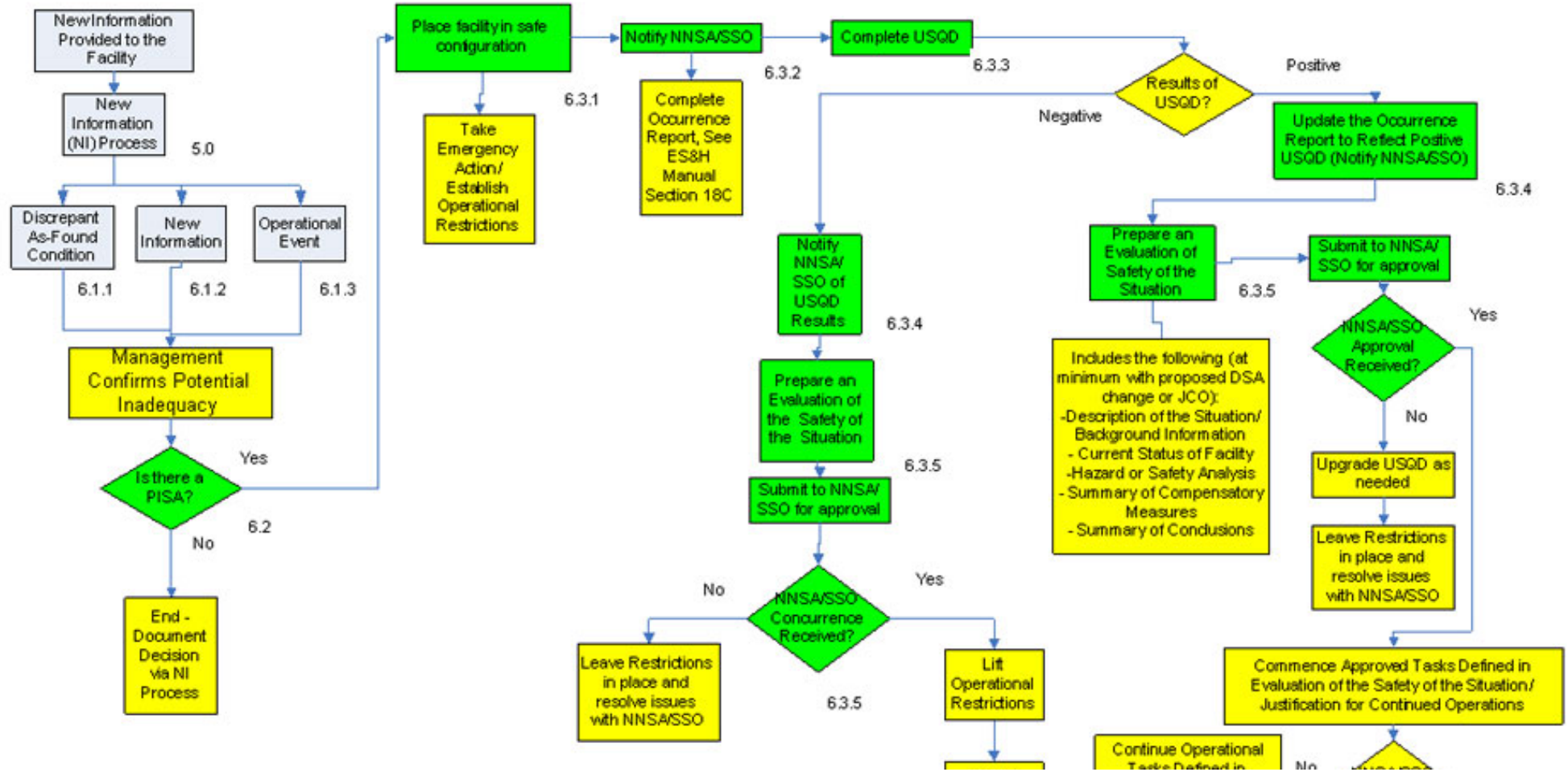

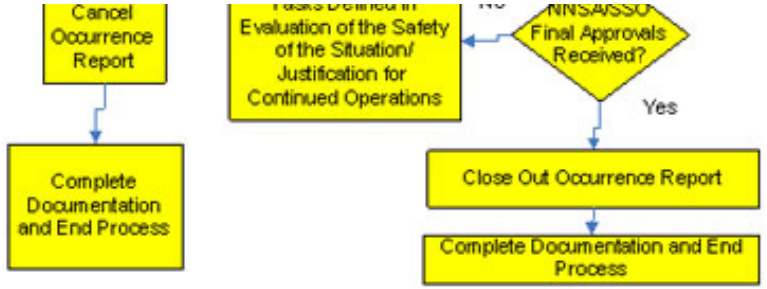

Bonnie Shapiro, bshapir@sandia.gov
Bob Goetsch, rsgoets@sandia.gov