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1.0 PURPOSE AND SCOPE

This procedure establishes the Tank Operations Contractor (TOC) unreviewed safety question (USQ) process for conducting Hazard Category 2 and 3 nuclear facility USQ evaluations pursuant to the requirements of 10 CFR 830.203 “Nuclear Safety Management,” Section 830.203, “Unreviewed Safety Question Process.” This procedure applies to the Tank Farms, 242-A Evaporator, and the 222-S Laboratory facilities. Hazard Category 2 and 3 nuclear facilities are defined within the associated documented safety analyses (DSAs). For tank farms, the most detailed listing of Hazard Category 2 and 3 facilities is found in the Technical Safety Requirements (TSR). The USQ process allows contractors to make physical and procedural changes and to conduct tests and experiments without prior U.S. Department of Energy (DOE) approval if the proposed change can be accommodated within the existing safety basis. The contractor must evaluate any proposed change to ensure that it will not affect the safety basis of the facility either explicitly or implicitly. (7.1.2)

Per 10 CFR 830.203, the USQ procedure shall be applied in situations where there is a:

- Temporary or permanent change in the facility as described in the existing documented safety analysis.
- Temporary or permanent change in the procedures as described in the existing documented safety analysis.
- Test or experiment not described in the existing documented safety analysis.
- Potential inadequacy of the documented safety analysis because the analysis potentially may not be bounding or may be otherwise inadequate.

1.1 Proposed Activities Outside the Scope of the USQ Process

The following are outside the scope of the USQ process and are addressed per the instructions in Section 4.3.

NOTE 1: Nonconformance reports (NCRs) applicable to SSCs installed in a Hazard Category 2 or 3 nuclear facility (regardless of safety classification) with a disposition of “use-as-is” or “repair” are not outside the scope of the USQ process, but require evaluation in a USQD (Section 4.5).

NOTE 2: NCRs applicable to SSCs installed in a Hazard Category 2 or 3 nuclear facility with a disposition of “rework” or “reject” are outside the scope of the USQ process (see N/A-2).

Documents that are outside the scope of the USQ process are listed below along with the applicable N/A designators (e.g., N/A-1), which are applied in Section 4.3.

NOTE: Active and inactive waste transfer systems are Hazard Category 2 or 3 nuclear facilities.

- N/A-1. Work authorization documents that do not direct work in Hazard Category 2 or 3 nuclear facilities and can have no effect on Hazard Category 2 or 3 nuclear facilities.
● N/A-2. Changes that are not performed in Hazard Category 2 or 3 nuclear facilities and can have no effect on Hazard Category 2 or 3 nuclear facilities, including:
  – Documents prepared for planning purposes that have no effect on installed SSCs or controls in Hazard Category 2 or 3 nuclear facilities and are not referenced in the DSA.
  – Safeguards and Security documents, except those that direct work in, or could impact, Hazard Category 2 or 3 nuclear facilities, and are not referenced in the DSA.
  – NCRs (regardless of disposition) applicable to SSCs not installed in a Hazard Category 2 or 3 nuclear facility (e.g., located in a warehouse or in receiving).
  – NCRs applicable to SSCs installed in a Hazard Category 2 or 3 nuclear facility with a disposition of “rework,” or “reject.”

● N/A-3. Documents that are used to support procurement or fabrication activities performed outside of Hazard Category 2 or 3 nuclear facilities, and that do not result in changes to Hazard Category 2 or 3 nuclear facilities. (NOTE: Procured or fabricated SSCs are evaluated in the USQ process when facility modifications are USQ reviewed.)

● N/A-4. Procedures, plans, and other documents related to safety management program (SMP) implementation, except for the Top-Level Implementing Document for each program and other documents specifically referenced in the DSA (see definition in Section 5.0), including:
  – Safety management program implementing procedures including work activities required to implement those programs as described in the applicable Tank Farms and 242-A Evaporator DSA programmatic chapters (or in Chapter 3 of the 222-S Laboratory DSA), except procedures that implement TSR controls or DSA requirements not associated with safety management program implementation.
  – Fire Protection Permits that do not require changes to the fire hazard analysis, hazard analysis, or DSA.

● N/A-5. Waste transportation equipment, operations, or activities, which are addressed in TFC-OPS-WM-C-13.

NOTE: Safety basis amendment implementing documents are not outside the scope of the USQ process, but may be eligible for categorical exclusion under GCX-1 (see Figure 3).

● N/A-6. Documents approved by DOE [e.g., DOE orders, standards, and guides, this procedure, RPP-27195, safety basis amendments, changes that are part of a safety basis amendment submitted to DOE for approval (i.e., documents identified by document number and revision in the e-mail draft sent to ORP for review or in the DOE submittal letter or enclosure) or specifically referenced in the DOE approval letter].

● N/A-7. Documents (e.g., drawings, calculations, reports) that support Conceptual Design, Preliminary Design, and Final Design for projects subject to DOE-STD-1189-2008, “Integration of Safety into the Design Process.” (7.1.3)
Exception: DOE-STD-1189 project documents that authorize facility modifications to Hazard Category 2 or 3 nuclear facilities are not within the scope of N/A-7. The facility modifications (implementing work packages) require USQ review.

- N/A-10. Cancellation/inactivation of documents (e.g., procedures, work orders, design documents) that are not referenced in the DSA, do not require changes to the DSA as result of their cancellation, and are cancelled prior to performing any modifications in Hazard Category 2 or 3 nuclear facilities (if applicable).

1.2 Proposed Activities Evaluated in a Process Hazard Analysis USQD

The following are not outside the scope of the USQ process, but USQ evaluation is deferred until completion of the PrHA USQ Determination (see definition of “PrHA USQD” in Section 5.0).

N/A-8. Project design documents (e.g., Engineering Change Notices (ECNs), drawings, calculations, engineering reports) that are within the scope of a final PrHA (see TFC-ENG-DESIGN-C-35) and therefore will be USQ reviewed via a PrHA USQD (see definition in Section 5.0) as required by TFC-ENG-DESIGN-C-47 prior to operation of hazard category 2 or 3 nuclear facilities.

Exception: Project design documents that authorize facility modifications identified to be within the scope of a PrHA require USQ review prior to installation in the facility. The facility modification (design changes and implementing work packages) USQ review is limited in scope to evaluation of the hazards associated with the installation/modification. Operation of the facility will be evaluated after ORP approval is received or as part of the PrHA USQD, unless the N/A for DOE-STD-1189-2008 (N/A-7) applies. (7.1.3)

Operation of the facility includes all activities within the scope of the PrHA (with the exception of facility modifications which require USQ evaluation prior to actual modification of the facility). For example, a PrHA was performed for the Single-Shell Tank (SST) 241-C-107 waste retrieval system (WRS) and associated transfer activities. The 241-C-107 WRS was designed to remove residual sludge and solid waste from the tank using the Mobile Arm Retrieval System (MARS) and transport it to Double-Shell Tank (DST) 241-AN-106 via hose-in-hose transfer lines. In this example, a USQD was performed to evaluate operation of the facility (i.e., retrieval of SST waste from 241-C-107 using the MARS and transfer of the waste to 241-AN-106) before operation of the facility was authorized. However, the work packages and associated design documents were USQ reviewed prior to making any physical modifications in the field.

1.3 Engineering Documents Outside the Scope of the USQ Process

The following are outside the scope of the USQ process and are addressed per the instructions in Section 4.3.

Note 1: Facility modifications (design changes and implementing work packages) require USQ review prior to installation in Hazard Category 2 or 3 nuclear facilities.

Note 2: As-built drawing changes applicable to Hazard Category 2 or 3 nuclear facilities are not outside the scope of the USQ process, but require evaluation in a USQD (Section 4.5).
N/A-9. Engineering documents (e.g., procedures, drawings, except as-built drawing changes, calculations, reports, plans, specifications, special tool evaluations, software change requests) that do not authorize modifications to Hazard Category 2 or 3 nuclear facilities, do not implement DSA or TSR requirements, are not referenced in the DSA or TSR, do not involve as-built drawing changes, and do not provide new information that could result in a PISA, are outside the scope of the USQ process.

1.4 Documents and Non-Nuclear Facilities Listed in RPP-27195

Documents and non-nuclear facilities listed in RPP-27195 are outside the scope of the USQ process. The following are not addressed in Section 4.3, but are processed in accordance with this section.

- Administrative documents (e.g., procedures, charters, management directives, plans, programs, policies) listed in RPP-27195.

- Technical documents released per TFC-ENG-DESIGN-C-25 (e.g., reports, plans, digital images) that are listed in RPP-27195.

- Documents (e.g., Engineering documents, procedures, work packages) performed in, or applicable to, non-nuclear facilities listed in RPP-27195.

DOE approval is required to add new out-of-scope documents, document types, and non-nuclear facilities to RPP-27195. Removal of existing out of scope documents or document types (e.g., due to document cancellations, addition of documents to the DSA as a reference, discovery of documents inappropriately listed in RPP-27195) and non-nuclear facilities (e.g., due to removal, relocation, or transfer of a facility to another contractor, discovery of facilities inappropriately listed in RPP-27195), and changes to titles of documents listed in RPP-27195 and non-technical information on non-nuclear facilities (e.g., building description, status), do not require DOE approval. However, notification will be provided to the ORP Director of Nuclear Safety Division (i.e., “cc’d” on WRPS internal correspondence from the Manager, Nuclear Safety to the Chief Engineer) after documents, document types, or non-nuclear facilities are removed from RPP-27195.

New or existing documents, document types, or non-nuclear facilities that are candidates for addition to RPP-27195 (i.e., are outside the scope of the USQ process per this procedure) are submitted in a draft revision to the DOE for approval. If a document, document type, or non-nuclear facility is determined to not be eligible for inclusion in RPP-27195, or if DOE does not approve the addition, the draft revision is cancelled and the applicable documents are submitted for USQ review per Section 4.3. When DOE approval is received, RPP-27195 is revised in accordance with the change process described in TFC-ENG-DESIGN-C-25.
1.5 Routine Maintenance

Routine maintenance activities (see definition in Section 5.0) are outside the scope of the USQ process. Routine maintenance activities performed via work orders are performed in accordance with TFC-OPS-MAINT-C-01. Routine maintenance activities performed via maintenance procedures are developed in accordance with TFC-OPS-OPER-C-13 and performed per the applicable procedures. Routine maintenance is not addressed in Section 4.3, but is processed in accordance with TFC-OPS-MAINT-C-01 or the applicable maintenance procedures.

1.6 Activities that do not Require Evaluation Under the New Information/PISA Process

The following are not required to be evaluated under the New Information/PISA process (See Section 4.8).

For the purposes of the USQ process, design reconstitution projects can be regarded as DSA upgrades; that is, for DSA upgrades, USQs should not result from the use of new analytical tools or in response to new requirements.

The USQ process is not applicable when new requirements are being implemented or different analysis methods that are used result in changed accident consequences or probabilities. The USQ process is applicable when the project identifies situations where it is apparent that the existing safety basis may not be bounding or may be otherwise inadequate. A reconstitution project should have a process for prompt sorting and prioritizing of the questions and issues between those that can be addressed as a normal part of the reconstitution project and those that are to be handled promptly as PISAs. This process should be sufficiently timely to ensure that the expectations for PISAs can be met.

The USQ process does not apply to DSA upgrades 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 basis might be in error or otherwise inadequate. (7.1.2)

2.0 IMPLEMENTATION

This procedure is effective on the date shown in the header.

3.0 RESPONSIBILITIES

3.1 Operations Manager or Designees

The operations managers or designees are responsible for:

- Obtaining evaluation under the USQ process prior to conducting any tests or experiments not described in the DSA.
- Notifying the Nuclear Safety Manager upon declaration of a PISA.
- Reviewing and signing USQ determinations that are positive or that evaluate PISAs.
Notifying the shift office and occurrence report specialist of the results of the USQ determination if the determination was initiated because of a PISA.

Ensuring a Problem Evaluation Request (PER) is generated in accordance with TFC-ESHQ-Q_C-C-01 once a PISA is declared to track the PISA.

3.2 Nuclear Safety Manager

The Nuclear Safety Manager is responsible for:

- Developing, implementing, and maintaining the USQ process (7.1.1)
- Performing USQ process documentation assessments on an annual basis
- Submitting revisions of this procedure to DOE for approval (7.1.1)
- Approving USQ evaluator qualifications and revoking qualifications for unacceptable performance
- Requesting a USQ evaluation upon notification of a PISA from the operations managers or designees
- Submitting the annual summary of USQ determinations to DOE by July 31 of each year, and (7.1.1)
- Identifying and approving designated staff who can apply the Categorical Exclusion for inconsequential changes (GCX-2) and N/A-7 for DOE-STD-1189 projects.

3.3 USQ Coordinator

The USQ coordinator is responsible for:

- Maintaining a list of negative USQ determinations with attached DSA page changes.
- Maintaining a list of USQ screens and determinations.
- Logging completed USQ screens and determinations into the USQ Database.
- Posting negative USQ determinations with associated DSA page changes on the WRPS Safety Basis Home page / Safety Basis Documents.
- Posting safety basis bulletins on the Washington River Protection Solutions, LLC (WRPS) Safety Basis website.

3.4 USQ Evaluators

The USQ evaluators are responsible for:

- Preparing USQ evaluations when requested, in accordance with Attachment A or Attachment B.
• Presenting USQ determinations for proposed activities and new categorical exclusions to the Plant Review Committee (PRC) as requested.

3.5 USQ Reviewers

The USQ reviewers are USQ evaluators that are responsible for performing independent technical review of USQs evaluations. When USQ evaluators perform as USQ reviewers, they shall not have been involved in the preparation of the original USQ document.

3.6 Nuclear Safety Engineers

Nuclear Safety Engineers are responsible for the following:

NOTE: Safety basis bulletins shall not be used to modify the USQ process.

• Developing safety basis bulletins to provide information and guidance to USQ evaluators as necessary.

• Performing evaluations when requested to determine the existence of a PISA.

• Completing the PISA Evaluation Worksheet (Attachment D) when requested and for forwarding the completed evaluation to the Nuclear Safety Manager.

3.7 Project Operations Manager

The Project Operations Manager is responsible for providing written notification to DOE if the USQ evaluation for a PISA will take longer than ten working days (from the date the PISA is declared) to complete.

4.0 PROCEDURE

NOTE: Text portions in italics are direct quotes from the cited references.

4.1 General

*The USQ process is not intended to replace or to serve instead of a safety analysis of the change. The safety implications of a change should be reviewed, analyzed, understood, addressed, determined whether it is acceptable, and documented by the contractor separately from the USQ process. Using the USQ process instead of the safety analysis complicates the USQ process. Further, such a usage is inappropriate because the seven questions to be answered in the USQ determination are not geared toward understanding whether the change is safe but rather if any of the probability or consequence risk factors may have increased beyond what has been accepted previously by DOE and hence if the existing safety controls remain adequate.* (7.1.2)

*The change should already be known to be safe before it enters the USQ process. The USQ process determines if final approval by the contractor is sufficient or DOE review and approval are required. DOE wants to review and approve those changes that involve a USQ (that is, when the USQ determination is positive) to verify that the safety controls are adequate to provide an acceptable level of safety to the public and workers. The existence of a positive USQ*
determination does not mean that the change is unsafe, but only that DOE is to be responsible for the final approval action. (7.1.2)

A proposed change or test involves a USQ if—

- 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, or

- a margin of safety could be reduced (7.1.2)

- the documented safety analysis may not be bounding or may be otherwise inadequate. (7.1.1) (This bullet refers to PISAs, which are addressed in Section 4.8)

Documents that are outside the scope of the USQ process are required to be addressed per the instructions in Section 4.3.

Activities and situations that are within the scope of the USQ process are defined in Section 1.0. A USQ evaluation is not required to document that an activity or situation is outside the scope of the USQ process.

The USQ process will be entered as directed by implementing procedures for change processes, upon notification from the operations managers or designees prior to conducting tests or experiments not described in the DSA, and upon notification from the operations managers or designees of a PISA.

Figure 1 provides an overview of the USQ process for proposed activities. Figure 2 provides an overview of the PISA process. Attachment A provides required guidance for completion of USQ screens. Attachment B provides guidance for completion of USQ determinations.

4.2 Training and Qualification

USQ evaluators shall be trained and qualified in accordance with the following requirements. Initial USQ evaluator qualification requires completion of the initial qualification portion of the USQ Evaluator Qualification Card (Course #350950), which has the following criteria:

- Bachelor’s degree in engineering or science, or equivalent related experience, as approved by the Nuclear Safety Manager

- One year nuclear facility experience with a minimum of three months USQ process related experience or equivalent, as approved by the Nuclear Safety Manager

- Successful completion of applicable facility specific safety basis and USQ training and examination (Course #350935)

- Successful completion of five USQ evaluations, of which at least three must be USQ determinations (all five may be USQ determinations).
USQ evaluators shall be requalified every two years after initial qualification. Requalification requires completion of the requalification portion of the USQ Evaluator Qualification Card (Course #350950), which has the following criteria.

- Successful completion of USQ requalification training and examination (Course #350935).

- Successful completion of ten USQ evaluations, of which at least six must be USQ determinations (all ten may be USQ determinations) in the 24 month period following initial qualification or requalification.

USQ evaluators whose qualification has expired are required to complete the requalification to become qualified again.

Designated staff who can apply the categorical exclusion for inconsequential changes (GCX-2) and N/A-7 for DOE-STD-1189 projects shall be trained and qualified in accordance with the following requirements. Initial qualification (i.e., training) is provided by the Nuclear Safety Manager, or designee. Requalification (i.e., retraining), provided by the Nuclear Safety Manager, or designee, is required every 2 years.

### 4.3 USQ Applicability Process

NOTE: Documents should be in final draft form when presented for USQ evaluation. If any changes are made to the document after the USQ evaluation is complete, the document will be resubmitted to the USQ Process to determine if additional USQ evaluation is required.

Documents are submitted for USQ review via document management system [e.g., SmartPlant® Foundation (SPF), Integrated Document Management System (IDMS), Workflow Review and Approval Process (WRAP)], email, or hard-copy.

Documents and non-nuclear facilities listed in RPP-27195 (see Section 1.4) are outside the scope of the USQ process.

Procedure Writer/Work Planner/Document Author/Originator

1. If the document is listed in RPP-27195, or if the document is performed in, or applicable only to, a non-nuclear facility listed in RPP-27195, proceed as follows:
   a. If the document is processed external to a document control system, enter “RPP-27195” in the USQ Number field of the change authorization form, and exit this procedure.
   b. If the document is processed in SPF, check the USQ Number N/A box and select “RPP-27195” from the USQ N/A Designator dropdown menu, and exit this procedure.
   c. If the document is processed in IDMS, WRAP, or other document management systems, enter “RPP-27195” in the USQ Number field, and exit this procedure.

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1 SmartPlant is a registered trademark of Intergraph Corporation.
USQ Requestor  2. Submit documents for USQ evaluation via the applicable document management system (e.g., SPF, IDMS, WRAP), email to the USQ Coordinator at ^USQ Requests, or hard copy.

USQ Coordinator  3. If the document submitted for USQ evaluation is listed in RPP-27195, or routine maintenance (see definition in Section 5.0), return to the USQ Requestor.

USQ Coordinator  4. Assign documents for USQ review to a USQ Evaluator.

USQ Evaluator  5. If the document does not require evaluation in the USQ process based on N/A-1 through N/A-6, N/A-9, or N/A-10, or if USQ evaluation is deferred based on N/A-8 (see Section 1.1 through 1.3 for additional detail), mark the applicable N/A designator on the change authorization form, print name, sign, date, and submit the completed form to the USQ Requestor or process in the applicable document management system (e.g., SPF, IDMS, WRAP), and exit this procedure.

USQ Evaluator/Designated Staff  6. If the document does not require evaluation in the USQ process based on N/A-7 (see Section 1.1), mark “N/A-7” on the change authorization form, print name, sign, date, and submit the completed form to the USQ Requestor or process in the applicable document management system (e.g., SPF, IDMS, WRAP), and exit this procedure.

USQ Evaluator  7. If the document was resubmitted for USQ review because additional changes were made after completion of the original USQ evaluation (screening or determination), but prior to release of the document, proceed as follows:

a. If the changes do not require a change to the original USQ evaluation, apply the original USQ number to the change and exit this procedure.

b. If the changes require a change to the original USQ evaluation, proceed to step 8.

8. If the document requires USQ evaluation, proceed in accordance with Section 4.4.

4.4 USQ Screening Process

Screening is intended to be a simple go/no-go decision-making step without evaluative consideration. When appropriately streamlined, a screening decision can often be completed in a matter of minutes. ...changes to SSCs not explicitly described in a DSA have the potential to affect the course of an accident that is addressed in the DSA or create the possibility of an accident not addressed in the DSA. If evaluating whether an item can be screened out takes the character of answering the seven USQD questions...the item should not be screened out unless there is a categorical exclusion. If an item has not been screened out, a USQD should be completed. (7.1.2)
USQ Evaluator/Designated Staff

1. If the document can be categorically excluded under GCX-2 (see Figure 4), add the “GCX-2” designator in the appropriate location on the change authorization form, print name, sign, and date, and submit the completed form to the USQ Requestor, or process in the applicable document management system (e.g., SPF, IDMS, WRAP), and exit this procedure.

NOTE: The USQ Screening form (A-6003-507) is available through Site Forms.

USQ Evaluator

2. If the document can be categorically excluded under GCX-1, GCX-3, GCX-4, or GCX-5, document the basis for the categorical exclusion on the USQ screening form (see Attachment C) using guidance in Attachment A, sign, date, and submit the form to the USQ Coordinator, and continue at step 9.

USQ Evaluator

3. If it is obvious that a USQ determination is required, proceed to Section 4.5.

ELSE, complete a new USQ screening or revise an existing USQ screening using guidance in Attachment A and the USQ screening form (see Attachment C).

4. If the USQ screening is positive (at least one question answered “yes”), discontinue the USQ screening and perform a USQ determination per Section 4.5.

NOTE: USQ reviewers shall not have been involved in the preparation of the original USQ document.

5. Forward the USQ screening to a USQ reviewer for independent technical review.

USQ Reviewer

6. Review, verify accuracy, and validate the work of the USQ evaluator using Attachment A, and provide comments as applicable.

USQ Evaluator

7. Resolve reviewer comments as applicable.

8. Obtain the reviewer’s signature, sign and submit the USQ screening to the USQ Coordinator.

USQ Coordinator

9. Log the completed USQ screening into the USQ Database.

4.5 USQ Determination Process

NOTE 1: If the USQ determination is being performed on a PISA, the time frame after initial notification of DOE until submittal of the USQ determination results should be less than ten working days.

NOTE 2: Written notification will be provided to DOE if a USQ determination that was initiated because of a PISA will take longer than ten working days (from the date the PISA is declared) to
be complete. The written notification will include the reason additional time is needed to complete the USQ determination.

NOTE 3: The USQ Determination form (A-6003-583) is available through Site Forms.

NOTE 4: Technical Safety Requirement (TSR) changes require DOE approval and cannot be made in negative USQDs.

USQ Evaluator

1. Complete a new USQ determination or revise an existing USQ determination, using guidance in Attachment B and the USQ determination form (see Attachment C).

2. If the wording being incorporated in a DSA page change in accordance with TFC-ENG-SB-C-01 is different than the wording attached to a negative USQ determination and:
   
   a. The change is not an inconsequential change. Revise the USQ determination and remove the original DSA page change and replace it with the actual incorporated DSA page change.
   
   b. The change is an inconsequential change. Revise the DSA page change and document that GCX-2 was applied for the change (on the document release form for the revised DSA) per Section 4.4, Step 1.

3. Forward to a USQ Reviewer for independent technical review.

NOTE: USQ reviewers shall not have been involved in the preparation of the original USQ document.

USQ Reviewer

4. Review, verify accuracy, and validate the work of the USQ Evaluator using Attachment B, and provide comments as applicable.

USQ Evaluator

5. Resolve the reviewer comments, as applicable.

6. If no USQ exists (all questions are answered “no”) and the determination was not initiated because of a PISA, submit USQ determination to the USQ Coordinator and continue to step 17.

7. If a potential positive USQ exists (at least one question is answered “yes”), on a proposed activity, notify the responsible organization that the change being evaluated may not be implemented until it is modified to eliminate the USQ issue, or a safety basis amendment has been submitted and approved per TFC-ENG-SB-C-01 and the safety basis amendment has been implemented per TFC-OPS-OPER-C-02 and exit this procedure.

8. If the USQ determination is due to a declared PISA (regardless of whether it is positive or negative), forward the USQ determination to the operations manager for review and signature.
Operations Manager or Designee

9. If USQ/PISA determination is negative, continue to Step 13.

NOTE: In accordance with TFC-ENG-SB-C-09, the PRC reviews new information to determine if a PISA exists and reviews and concurs with all PISA USQ determinations (positive and negative) and recommends actions (operational restrictions) required to place or maintain the facility in a safe condition for any PISA.

10. Present positive USQ/PISA determinations to the PRC for review per TFC-ENG-SB-C-09.

11. If the conclusion of the USQ determination is changed (from positive to negative) as a result of the PRC review, return to step 8 and process as a negative USQ/PISA determination.

Operations Manager or Designee

12. After obtaining the PRCs concurrence, notify the shift office and occurrence report specialist of the results of the positive USQ determination (or negative USQ determination if the PRC review resulted in the conclusion of the USQ determination being changed).

NOTE 1: DOE approval is not required prior to initiation of any additional operational restrictions that are deemed necessary after the initial operational restrictions in response to a PISA have been put into place.

NOTE 2: For a negative USQ determination, operational restrictions cannot be removed until the USQ determination is complete and an evaluation of the safety of the situation (ESS) has been submitted to DOE.

13. Notify DOE of the results of the USQ determination (whether it is positive or negative) in accordance with TFC-OPS-OPER-C-24 and submit an ESS to DOE prior to removing any operational restrictions initiated in response to the PISA.
14. For a positive USQ determination, prior to continued operations, either:
   
a. Ensure a safety basis change has been submitted and approved per TFC-ENG-SB-C-01 and implemented per TFC-OPS-OPER-C-02.

b. If the positive USQ can be promptly resolved (<1 month) or the facility is in a TSR safe mode, and no controls other than operational restrictions are required, submit an ESS providing a final evaluation of the problem and specifics of how the facility has been/will be within the DSA, and ensure it is approved per TFC-ENG-SB-C-01 and implemented per TFC-OPS-OPER-C-02, if applicable.

c. Ensure an ESS for longer resolution path (see Figure 2) as applicable, or a justification for continued operation (JCO) has been submitted and approved per TFC-ENG-SB-C-01 and implemented per TFC-OPS-OPER-C-02.

d. Ensure the facility or operation is modified to a condition that is within the approved DSA and notify DOE of the results of the USQ determination in accordance with TFC-OPS-OPER-C-24.

USQ Evaluator 15. If the USQ determination is negative and a DSA page change is associated with the negative USQ that has potential impacts to the DSA Requirements Implementation Matrix (RIM) [e.g., changes to documents referenced in Chapter 3 or 4 of the DSA that require DSA changes], notify the Safety Basis Compliance Officer (SBCO) who will update the DSA RIM and website in accordance with TFC OPS-OPER-D-20, as necessary.

USQ Coordinator 16. Forward the USQ determination to the USQ Coordinator.

USQ Coordinator 17. If the USQ determination is negative and a DSA page change is associated with the negative USQ, post the USQ on the WRPS Safety Basis Home page/Safety Basis Documents.

USQ Coordinator 18. Log the completed USQ determination into the USQ Database.

4.6 Annual USQ Determination Summary Report

Nuclear Safety Manager 1. On an annual basis, designate a Nuclear Safety Engineer to coordinate preparation of a summary report of the USQ Determinations that have been completed since the last submission. (7.1.1)

Nuclear Safety Engineer 2. Develop the annual USQD summary report, including a list of negative USQDs issued by the cut-off date (e.g., March 31 to meet the July 31 transmittal date). Indicate whether USQDs have safety basis page changes or not (i.e., a simple “Yes/No” is sufficient).
NOTE: The USQD summary report and annual safety basis update performed per TFC-ENG-SB-C-01 require separate transmittal letters to ORP.

3. Submit email draft of the annual summary report to the ORP for review (e.g., by June 30 to meet the July 31 transmittal date).

4. Resolve any comments received from ORP on the email draft submittal.

5. Ensure all comments received from ORP have been satisfactorily resolved and closed.

Nuclear Safety Manager

6. Submit the Annual USQD Summary Report to ORP by July 31 of each year, to include:
   
   - USQ determination number
   - USQ determination title.

4.7 **Discovery of Potential Inadequacies in the Existing Safety Analysis (PISAs)**

In general, potential for inadequate analysis arises from the following entry conditions:

- A discrepant as found condition,
- An operational event or incident, or
- New information, including discovery of an error, sometimes from an external source.

The main consideration is that the analysis does not match the current physical configuration, or the analysis is inappropriate or contains errors. The analysis might not match the facility configuration because of a discrepant as-found condition. Analytical errors might involve using incorrect input values, invalid assumptions, improper models, or calculation errors. The USQ process starts when facility management has information that gives reason to believe that there is a potential that the facility DSA might be inadequate.

Another action required for a potentially inadequate safety analysis is the preparation of a USQ determination for the situation. This should be performed in a short period of time (hours or days, not weeks) following confirmation of the PISA.

A PISA may result from situations that indicate that the safety basis may not be bounding or may be otherwise inadequate; for example, discrepant as-found conditions, operational events, or the discovery of new information. It is appropriate to allow a short period of time (hours or days but not weeks) to investigate the conditions to confirm that a safety analysis is potentially inadequate before declaring a PISA.

(7.1.2)

The discovery of a discrepant as found condition (including prior undocumented changes), an operational event or incident, or new information, including discovery of an error, is normally documented via a PER in accordance with TFC-ESHQ-Q_C-C-01.

The PRC reviews new information to determine if a PISA exists and reviews and concurs with all PISA USQ determinations (positive and negative) and recommends actions (operational restrictions) required to place or maintain the facility in a safe condition for any PISA in accordance with TFC-ENG-SB-C-09.
NOTE: The PISA Evaluation Worksheet (Attachment D) provides guidance that can be used to evaluate new information in the PISA process.

Operations Manager or Designee

1. Decide whether the (a) discovery of a discrepant as found condition (including prior undocumented changes), (b) an operational event or incident, or (c) new information, including discovery of an error, from an internal or external source or omission constitutes a PISA.

   • If a PISA exists go to step 5.
   • If a PISA evaluation will be used to aid in determining whether a PISA exists, request Nuclear Safety to perform a PISA evaluation.

Nuclear Safety Analyst

2. Perform the PISA evaluation using Attachment D, “PISA Evaluation Worksheet,” and provide the results to the Nuclear Safety Manager, when requested.

Nuclear Safety Manager

3. Notify the operations manager of the results of the PISA evaluation.

Operations Manager or Designee

4. If no PISA exists, no further action required. Exit this procedure.

5. If a PISA exists, take action (operational restrictions) required to place or maintain the facility in a safe condition and notify DOE of the situation in accordance with TFC-OPS-OPER-C-24.

6. Once a PISA is declared, ensure a PER is generated in accordance with TFC-ESHQ-Q_C-01 to track the PISA. Enter an action in the PER to process a USQ evaluation.

   a. If a PISA evaluation was completed, attach the PISA Evaluation Worksheet to the PER.

Nuclear Safety Manager

7. Upon declaration of a PISA by the operations manager or designee, request a USQ determination (Section 4.3).

4.8 Categorical Exclusions

The categorical exclusions included in this procedure (see definition in Section 5.0) have been approved by DOE, and are applicable to proposed changes that meet the criterion specified in Figures 3 through 7 for GCX-1 through GCX-5. With the exception of GCX-2, categorical exclusions require completion of a USQ screening to document the basis for each application.

5.0 DEFINITIONS

Categorical Exclusion. Another manner in which screening criteria may be applied is through categorical exclusions. A categorical exclusion is an exclusion from the requirements that USQDs be performed on proposed changes to a category of SSCs or procedures as a result of a determination that the category cannot credibly have the capability of creating a USQ if
changed… Categorical exclusions are regarded as part of the contractor’s USQ procedure and require DOE approval. (7.1.2)

A categorical exclusion is valid when answers to the seven questions... would be “no” for every credible variation within the category. Written justification for the answers would provide formal documentation of the rationale for the exclusion. (7.1.2)

**Discernible Increase (in Frequency or Consequence).** A qualitative judgment used by a USQ evaluator in answering the first four of seven questions in a USQ determination. Discernible increase relates to the bounding accidents as analyzed in the DSA and indicates a trend towards a potential increase in the frequency of a bounding accident or an increase in the toxicological or radiological consequences of a bounding accident as reported in the DSA.

A discernible increase in the probability of a bounding accident indicates the potential for the probability to increase in a positive trend that is greater than the DSA reported frequency range/level. The USQ evaluator would have to qualitatively or quantitatively determine that the positive trend increase does not have the potential to exceed the reported frequency range/level of the bounding accident to a higher frequency range/level even with consideration of cumulative events represented under the bounding accident scenario, in order to answer the applicable USQD questions as “No” for an increase in probability.

For onsite radiological and onsite and offsite toxicological consequences, a discernible increase in the consequences of a bounding accident indicates the potential for the consequences to increase in a positive trend that is greater than the DSA reported consequence range/level. For offsite radiological consequences, a discernible increase in the consequences of a bounding accident indicates the potential for the consequences to increase in a positive trend that is greater than the DSA reported consequence.

The answer to what is a discernible increase is in the rationale provided in the USQD first four of seven questions. The rule (see 10 CFR 830.3 USQ definition) does not permit a numerical margin before which an increase constitutes a USQ. The rationales for the USQ answers should be convincing to an independent reviewer that the change could result (or not result) in an increase. Site-specific quantitative guidance that allows for a numerical margin is implicitly acknowledging that they have a USQ, when that margin is used to dismiss the question.

A rationale against having such margins (independent of the fact that they are not compliant with the rule) is that with them a contractor could make many changes that individually would not violate the margins, but taken together over years could result in a massive increase in operational risk that DOE did not consciously accept and which never got documented in the safety basis.

Further, it would seem that if a contractor were to go to the extent of quantifying an increase in consequences or frequency, the contractor would have done all that would be required to prepare a USQD, and more. Therefore the contractor is not saving anything (and is likely expending more than appropriate) by invoking a margin. (7.1.2)

**Evaluation of the safety of the situation.** 10 CFR 830.203(g) requires contractors to submit an ESS [evaluation of the safety of the situation] to DOE “prior to removing any operational restrictions.” (7.1.2)
The timing of the ESS is a function of whether the USQD is positive or negative. The ESS associated with positive USQDs should be developed within a short period of time following completion of the USQD...taking into account the safety risk presented by the situation and the effectiveness of operational restrictions imposed. (7.1.2)

There is no specific time limit for submittal of an ESS for a negative PISA USQD because the condition of the facility is such that DOE approval would not have been needed (per the USQ requirements) if the facility was intentionally put in this condition. However, in accordance with 10 CFR 830.203(g), the ESS must be submitted prior to lifting any operational restrictions. Further, it is a good practice to address the cause of the PISA (e.g., correct discrepant conditions and/or update safety basis) and return the facility to normal operations (i.e., lift operational restrictions) as soon as practicable. No DOE approval of the ESS is needed for the negative PISA USQD. (7.1.2)

In situations of a positive USQD and if operations are to continue for an extended period of time (i.e., greater than a month) under the restricted conditions of other than a TSR safe MODE, then the contractor should evaluate whether further (more detailed) analysis may be appropriate to justify that continuance. This may take the form of a Justification for Continued Operation (JCO). Alternatively, it is appropriate for the contractor to update the ESS to include a more detailed analysis utilizing the outline described in Section C.6.2 taking into consideration the JCO content described in Section C.7 and to submit the updated ESS to DOE. (7.1.2)

If the PISA USQD is negative, the ESS should document the assessment of the safety of the situation, and provide evidence that the immediate controls placed on the facility or activity to ensure a safe condition are not required and can be removed. If the PISA USQD is positive, the ESS should document the assessment of the safety of the situation, and provides the basis for how the actions taken (including implementation of operational restrictions), and/or planned actions, ensure safety. (7.1.2)

Inconsequential change. Non-technical changes to existing documents that are within the scope of the GCX-2 categorical exclusion. See Figure 4 for additional details.

New information. Information that could indicate a PISA in the current facility safety basis.

Potential inadequacy in the safety analysis (PISA). [A situation of concern wherein it is found that]...the DSA may not be bounding or may be otherwise inadequate. This could be because of an error in the current safety analysis or because the facility configuration is not what was analyzed. (7.1.2)

PrHA USQD. A USQD performed for a group of inter-related proposed changes to Hazard Category 2 or 3 nuclear facilities, processes, equipment, or design impacting documents associated with a project that have been defined to be within the scope of a final PrHA (see TFC-ENG-DESIGN-C-35) and will be USQ reviewed (via a PrHA USQD as required by TFC-ENG-DESIGN-C-47) prior to operation of hazard category 2 or 3 nuclear facilities.

Exception: Project design documents that authorize facility modifications identified to be within the scope of a final PrHA require USQ review prior to installation in the facility. The facility modification (design changes and implementing work packages) USQ review is limited in scope to evaluation of the hazards associated with the installation/modification. Operation of the facility will be evaluated after ORP approval is received or as part of the PrHA USQD unless the N/A for DOE-STD-1189-2008 (N/A-7) applies. (7.1.3)
NOTE: Operation of the facility includes all activities within the scope of the PrHA (with the exception of facility modifications which require USQ evaluation prior to actual modification of the facility). For example, a PrHA was performed for the Single-Shell Tank (SST) 241-C-107 waste retrieval system (WRS) and associated transfer activities. The 241-C-107 WRS was designed to remove residual sludge and solid waste from the tank using the Mobile Arm Retrieval System (MARS) and transport it to Double-Shell Tank (DST) 241-AN-106 via hose-in-hose transfer lines. In this example, a USQD was performed to evaluate operation of the facility (i.e., retrieval of SST waste from 241-C-107 using the MARS and transfer of the waste to 241-AN-106) before operation of the facility was authorized. However, the work packages and associated design documents were USQ reviewed prior to making any physical modifications in the field.

Routine Maintenance. An activity is routine maintenance and does not require USQ evaluation under this procedure if the following criteria are met:

a. The activity is limited to calibration; refurbishment (i.e., repair or maintenance work activities performed to restore facilities or SSCs to their original condition); replacement with an exact replacement part or approved equivalent component per TFC-ENG-DESIGN-P-16; and housekeeping, including verbal direction that meets the criteria for Level 4 work in Attachment A of TFC-OPS-MAINT-C-01.

b. The activity does not involve temporary or permanent changes to procedures or the facility as described in the DSA and cannot violate a TSR.

c. The activity does not involve inserting equipment into waste; removing equipment from waste; or transfer of waste to or from waste storage tanks.

Top-Level Implementing Document. Primary or key implementing document for safety management programs described in Chapter 6 - 17 of the Tank Farms and 242-A Evaporator DSAs, or in Chaper 3 of the 222-S Laboratory DSA. The top-level implementing document is typically a management plan or program description that implements the requirements of the program. Top-level implementing documents are generally referenced in the DSA.

Unreviewed safety question. A situation where:

(1) 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;

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

(3) A margin of safety could be reduced; or

(4) The documented safety analysis may not be bounding or may be otherwise inadequate.

(7.1.1)
6.0 RECORDS

The following records are generated during the performance of this procedure and are retained for at least the full operational lifetime of the facility, including deactivation, long term surveillance and maintenance, and decommissioning, until the facility is categorized as a below Category 3 nuclear facility:

- USQ Screen
- USQ Determination
- Annual summary report.

USQ screens, USQ determinations, and the annual summary report are maintained and retrievable in Integrated Document Management System (IDMS).

The record custodian identified in the Company Level Records Inventory and Disposition Schedule (RIDS) is responsible for record retention in accordance with TFC-BSM-IRM_DC-C-02.

7.0 SOURCES

7.1 Requirements


7.2 References

1. RPP-13033, “Tank Farms Technical Safety Requirements.”


4. TFC-BSM-IRM_DC-C-02, “Records Management.”

6. TFC-ENG-DESIGN-C-35, “Process Hazard Analysis Determination and Technique Screening.”

7. TFC-ENG-DESIGN-C-47, “Process Hazard Analysis.”

8. TFC-ENG-SB-C-01, “Safety Basis Issuance and Maintenance.”

9. TFC-ENG-SB-C-09, “Plant Review Committee.”

10. TFC-ESHQ-Q_C-C-01, “Problem Evaluation Request.”

11. TFC-OPS-OPER-C-02, “Safety Basis Implementation Checklist Preparation, Review, and Approval.”


15. TFC-OPS-MAINT-C-01, “Tank Operations Contractor Work Control.”

16. TFC-ENG-DESIGN-P-16, “Equivalent Replacements.”
Figure 1. USQ Process Flowchart for Proposed Activities.

- USQ Requestor submit documents for USQ review. [Section 4.3, Step 1]
  - Does the document require USQ evaluation based on N/A criteria (N/A-1 though N/A-9), or is it listed in RPP-07155, or routine maintenance? [Sections 1.1 - 1.5]
    - Yes
      - Qualified USQ Evaluator mark applicable N/A designator on change authorization form, print names, sign, date and submit completed form to USQ Requestor or in SPF as applicable, and exit this procedure. [Section 4.3, Steps 4 and 5]
      - Documents and non-nuclear facilities listed in RPP-07155 are outside scope of the USQ process [Section 1.4]
      - Document returned to the USQ requestor if routine maintenance.
    - No
      - Can document be categorically excluded? [Section 4.4, Steps 1 & 2]
        - Yes
          - Qualified USQ Evaluator review for USQ screening. [Section 4.4, Steps 2, 3, and 5]
            - For GCX-1, GCX-3, GCX-4, and GCX-5, qualified USQ Evaluator documents basis for categorical exclusion on USQ screen form.
            - For GCX-2, USQ evaluator or designated staff marks "GCX-2" on change authorization form, prints signs, and date form. [Section 4.4, Steps 1 & 2]
          - No
            - Is the USQ screening positive? [Section 4.4, Steps 3 and 4]
              - Yes
                - Qualified USQ Evaluator review for USQ determination. [Section 4.5, Steps 1 & 4]
              - No
            - No
  - No
  - No
Figure 1. USQ Process Flowchart for Proposed Activities. (cont.)

C

Ensure the facility or operation is modified to a condition that is within the approved safety basis. [Section 4.5, Step 7]

Modify

Modify or cancel? [Section 4.5, Step 7]

Cancel

Exit USQ Process.

A

Is the USQ Determination process? [Section 4.5, Step 7]

Yes

Modify or cancel proposed activity or change? [Section 4.5, Step 7]

Yes

Prepare a safety basis change and submit to DOE for approval per TFC-ENG-SB-C-01. [Section 4.5, Step 7]

No

DOE approval obtained?

Yes

Implement the Safety Basis change per TFC-CPS-OER-C-02; Incorporate any changes to the safety basis at the next update [Section 4.5, Step 7]

No

Send completed and signed off USQ screen/determination to USQ Coordinator [Section 4.4, Step 7] [Section 4.5, Step 14]
Figure 2. USQ Process Flowchart for PISAs.
Figure 2. USQ Process Flowchart for PISAs. (cont.)

Can PISA USQ be promptly resolved (<1 month) or is facility in TSR safe mode?

Near Term (within a month)  As specified by the JCO in the longer resolution path

Submit ESS
[Section 4.5, Step 13b]

Final Evaluation of the problem. Resolution specifics of how facility has been/will be within the DSA.

DOE approval before removal of Op Restrictions. SER if DSA revision.

Incorporated into the next annual update as needed.

Submit ESS (for longer resolution path).
[Section 4.5, Step 13c]

Justification of adequacy of initial restrictions or proposed changes to restrictions.

Submit JCO or updated ESS
[Section 4.5, Step 13c]

A temporary DSA addition with justification for temporary controls.

Submit Revision to Safety Basis
[Section 4.5, Step 13a]

DOE approval required before removal of Op Restrictions.

May be addressed in or simultaneous with ESS.

DOE approval required.
Figure 3. Categorical Exclusion to Allow Procedures to be Revised to Incorporate ORP-Approved Safety Basis Changes.

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**GCX-1**

**TITLE:** Categorical Exclusion to Allow Procedures to be Revised to Incorporate the U. S. Department of Energy, Office of River Protection (ORP)-Approved Safety Basis Changes

**MINIMUM QUALIFICATION TO APPLY:** Qualified USQ Evaluator.

**CATEGORICAL EXCLUSION:** This Categorical Exclusion allows ORP-approved safety basis changes to be incorporated into Tank Operations Contractor (TOC) procedures, technical documents, administrative documents, drawings, Engineering Documents, and other supporting documents to be excluded from the USQD process.

**PREREQUISITES:** The accuracy of the proposed technical changes to TOC documents has been verified.

**CATEGORICAL EXCLUSION SCOPE AND BOUNDARIES:** This Categorical Exclusion applies only to initially implement new or revised safety basis changes as approved by the ORP, provided the changes are effective with or following the implementation of the safety basis changes.

This Categorical Exclusion does not apply to:

- Changes to documents unrelated to implementation of ORP approved safety basis changes and
- Implementation of changes to documents prior to the effective date of the safety basis changes.

**JUSTIFICATION:** The USQ process is used to determine the approval authority for changes. Changes to implementing documents resulting from ORP-approved safety basis changes are in effect ORP-approved changes, and therefore, no further USQ review is required since these activities cannot represent a USQ.
GCX-2

TITLE: Categorical Exclusion for Inconsequential Changes to Existing Documents

MINIMUM QUALIFICATION TO APPLY: Qualified USQ Evaluator or designated staff

CATEGORICAL EXCLUSION: Inconsequential Changes (as defined in the Categorical Exclusion Scope and Boundaries section) are excluded from further review in the USQ process.

PREREQUISITES: Designated staff who may apply this GCX shall be identified and approved by the Nuclear Safety Manager.

CATEGORICAL EXCLUSION SCOPE AND BOUNDARIES: Inconsequential changes to existing documents are those that:

- Correct grammatical, typographical, or spelling errors that:
  - Do not affect numbers other than page, table, figure, title numbers, or obvious and demonstrable typographical errors. Changes in decimal points, units of measure or nameplate information/equipment identification labels/data are not inconsequential changes, unless they involve obvious and demonstrable typographical errors.
  - Do not affect acceptance criteria other than obvious and demonstrable typographical errors.
  - Did not translate correctly from the original source document due to software issues.

- Update position or organization names or titles, contact information (e.g., name, email address, mailstop, phone number, building number), and access lists (e.g., user name) for software applications.
- Add, change, or delete the records section of a document, or clarify information in the records section of a document, including associated numerical changes (e.g., record index number).
- Reword phrases, sentences, and paragraphs,
- Change the format of the document (e.g., rearrange unnumbered lists of items, rescale items, move details to new sheets, pagination, table, or figure title number changes, etc.),
- Add/update/delete document references (provided changes to, or deletion of, the references have already been appropriately USQ-reviewed, as applicable), including Data Sheet numbers (e.g., ET-XXXXX, WT-XXXXX), and other non-technical information (e.g., phone numbers, building numbers, photographs, hyperlinks).
  (NOTE: Adding a previously USQ-reviewed ECN to a work order is considered a technical change for which GCX-2 cannot be applied, even if no changes to the work instructions are required.)
- Result from periodic review of documents where no changes are made to the documents other than those associated with document release (e.g., revision number, date of issue).
- Add, change, delete, or clarify notes, cautions, or warnings that do not direct operator actions,
- Undelete information (e.g, tables, steps, tables, references) unintentionally deleted in a previous change, provided the undeleted information does not direct operator actions or require a change to the DSA, or
- Delete duplicate steps that are an obvious duplication of existing steps, except where the deletion changes the sequence of work (i.e., technical change).
GCX 2 (Continued)

AND, Provided the Inconsequential Changes do not:

- Make any technical changes (changes to correct obvious and demonstrable typographical errors in decimal points, units of measure or nameplate information/equipment identification labels/data, acceptance criteria, and numerical changes in the records section of a document, are not considered technical changes),
- Change the meaning, overall scope, or purpose of the existing documents or drawings,
- Create a new procedure, document, or drawing, or
- Change a Technical Safety Requirement or its bases.

JUSTIFICATION: Inconsequential Changes under this categorical exclusion do not make technical changes to procedures or change the facility. Therefore, these changes cannot lead to a condition that could be a USQ.
Figure 5. Categorical Exclusion for Changes that are Within the Scope of a Previously Evaluated Negative USQ Determination.

**GCX-3**

**TITLE:** Categorical Exclusion for Changes that are Within the Scope of a Previously Evaluated Negative USQ Determination

**MINIMUM QUALIFICATION TO APPLY:** Qualified USQ Evaluator

**CATEGORICAL EXCLUSION:** This Categorical Exclusion allows changes that are within the scope of a previously evaluated negative USQ determination, as defined by the Categorical Exclusion Scope and Boundaries section, to be excluded from further review in the USQ process.

**PREREQUISITES:** This categorical exclusion may only be applied for changes where the original document has been previously evaluated in a negative USQ determination and the proposed change is within the scope of the USQD that was prepared for the original document.

**CATEGORICAL EXCLUSION SCOPE AND BOUNDARIES:** Proposed changes that are within the scope of a previously evaluated negative USQ determination applicable to the Tank Farms, 222-S Laboratory, or 242-A Evaporator, are within the scope of this categorical exclusion, where:

- The original document was evaluated in a negative USQD;
- The proposed change falls entirely within the scope of the previous USQD that was prepared for the original document and does not necessitate any changes be made to the previous USQD. [Exception: This categorical exclusion can be applied if the only change to the USQD is to update the revision number of the document (e.g., Rev. A-1 to A-2).]

**NOTE:** The addition of an ECN or DCN to a work order is within the scope of the GCX-3 categorical exclusion if the ECN or DCN was previously evaluated in a negative USQD and the work activities associated with implementation of the ECN or DCN are within the scope of, and require no changes to, the previous USQD prepared for the work order.

**JUSTIFICATION:** Based on the results of a negative USQ determination, changes that meet the criteria specified in the Categorical Exclusion Scope and Boundaries section cannot credibly result in a positive USQ.
Figure 6. Categorical Exclusion for 242-A Evaporator Maintenance and Operations Performed During Shutdown Mode.

**GCX-4**

**TITLE:** Categorical Exclusion for 242-A Evaporator Maintenance and Operations Performed During Shutdown Mode

**MINIMUM QUALIFICATION TO APPLY:** Qualified USQ Evaluator

**CATEGORICAL EXCLUSION:** This categorical exclusion allows certain maintenance and operational activities, and certain temporary modifications, as defined by the scope of this categorical exclusion, to be excluded from further review in the USQ process.

**PREREQUISITES:** This categorical exclusion may only be applied to activities and temporary modifications performed while the 242-A facility is in Shutdown mode, as defined in Technical Safety Requirements for the 242-A Evaporator (HNF-15279).

**CATEGORICAL EXCLUSION SCOPE AND BOUNDARIES:** The following activities, when performed while the facility is in Shutdown mode only, are in scope of this Categorical Exclusion:

- Preventive or corrective maintenance activities, including the erection of scaffolding and hot work; welding, cutting, and grinding.
- Temporary facility modifications that will be restored prior to mode change.
- Testing and troubleshooting.
- Facility systems operations, including:
  - valve manipulation,
  - pumping of water or non-radiological materials,
  - operation of building K1 and K2 ventilation systems including the chilled water and heating systems, K1 filter change out, and flow balancing activities,
  - sampling activities of water or non-radiological materials (excluding process condensate),
  - crane operations, including removal of coverblocks,
  - activation of 242-A facility steam, water, air, or antifoam systems, and
  - operation or monitoring of process instrumentation, including surveillance and troubleshooting.

Any work or operation that permanently modifies the facility is not in the scope of this Categorical Exclusion and requires a USQ evaluation. This Categorical Exclusion does not cover any interfacing activity with Tank Farms, or the control or operation of any Tank Farm equipment from the 242-A MCS. Additionally, this Categorical Exclusion does not cover activities associated with the process condensate or vessel vent systems in the 242-A Evaporator. Specifically, the following activities are not in scope of this Categorical Exclusion, and must be reviewed separately by the USQ process:

- Any permanent modification made to the facility,
- Any activity that pumps or drains water or any other material to the Tank Farms, including any activity that releases material to a floor drain in the 242-A Evaporator facility that drains to tank 241-AW-102,
- The transfer of any material from Tank Farms to the 242-A Evaporator facility,
- Any activity that adds water or any other material to the C-A-1 vessel, recirculation loop or process condensate tank TK-C-100,
- Any activity that affects the physical or chemical properties of process condensate or vessel vent gases,
Figure 6. Categorical Exclusion for 242-A Evaporator Maintenance and Operations Performed During Shutdown Mode. (cont.)

GCX-4 (Continued)

- Any activity that causes process condensate to be pumped or causes the vessel vent system to be operated or shut off,
- Any activity that breaches or alters in any way the process condensate system, including process condensate piping, tank TK-C-100, or the vent line between TK-C-100 and tank TK-C-103, or breaches or alters the vessel vent system including; the shell side of the E-C-1, E-C-2 or E-C-3 condensers, vessel vent piping, filters F-C-5-1 and F-C-5-2, deentrainer/demister unit DU-C-1, heater H-C-1, exhaust fan EX-C1, vessel vent stack or stack sampling monitoring system or ammonia monitor AM-NH3-1,
- Any activity that manipulates Tank Farm equipment from the 242-A evaporator MCS.

JUSTIFICATION: The material at risk during Shutdown Mode is insufficient for activities within the scope of this categorical exclusion to be a USQ.
Figure 7. Categorical Exclusion for All Proposed Activities Performed in the 222-S Laboratory, Except Those that Could Exceed the Radiological Inventory MAR Limit of the Facility, Exceed Flammable Gas Quantities Allowed by NFPA 45, Introduce Explosive Materials into the Facility; or Change the Configuration of Waste Transfer Pump WT-P-1, its Air Compressors, or Associated Equipment.

**GCX-5**

**TITLE:** Categorical Exclusion for All Proposed Activities Performed in the 222-S Laboratory, Except Those that Could Exceed the Radiological Inventory MAR Limit of the Facility, Exceed Flammable Gas Quantities Allowed by NFPA 45, Introduce Explosive Materials into the Facility; or Change the Configuration of Waste Transfer Pump WT-P-1, its Air Compressors, or Associated Equipment.

**MINIMUM QUALIFICATION TO APPLY:** Qualified USQ Evaluator

**CATEGORICAL EXCLUSION:** This categorical exclusion allows proposed activities performed in the 222-S Laboratory Complex, as defined by the scope of this categorical exclusion, to be excluded from further review in the USQ process.

**PREREQUISITES:** This categorical exclusion may only be applied to activities performed in the 222-S Laboratory that are within the scope of this categorical exclusion.

**CATEGORICAL EXCLUSION SCOPE AND BOUNDARIES:** All proposed activities performed in the 222-S Laboratory Complex are within the scope of this categorical exclusion, except those that could:

- Exceed the radiological inventory limit of the facility; or

- Introduce flammable gases into the 222-S laboratory that exceed allowable quantities for flammable gases per NFPA 45, "Fire Protection for Laboratories Using Chemicals," which are controlled under the facility's Fire Protection Safety Management Program. (Note: These quantities are listed in the "Flammable Gas Limits" section below.); or

- Introduce explosive (see definition below) materials into the facility; or

- Change the configuration of waste transfer pump WT-P-1 (an air-driven diaphragm pump used to transfer waste from 222-S Laboratory to the tank farms), its air compressors, or associated equipment. (Note: This does not include changes to compressed air that is used for maintenance and to operate analytical and process equipment, which are within the scope of this categorical exclusion.).

Proposed activities that could exceed the radiological inventory limit, exceed NFPA 45 allowable flammable gas quantities, introduce explosive materials into the facility; or change the configuration of waste transfer pump WT-P-1, its air compressors, or associated equipment are not within the scope of this categorical exclusion.

The following limits are applicable to this categorical exclusion.

**Radiological Inventory Limit**

As assumed in the DSA, the total radiological inventory of the 222-S Laboratory is 39.11 DE-Ci.
Figure 7. Categorical Exclusion for All Proposed Activities Performed in the 222-S Laboratory, Except Those that Could Exceed the Radiological Inventory MAR Limit of the Facility, Exceed Flammable Gas Quantities Allowed by NFPA 45, Introduce Explosive Materials into the Facility; or Change the Configuration of Waste Transfer Pump WT-P-1, its Air Compressors, or Associated Equipment. (cont.)

Flammable Gas Limits

Storage Cabinets and Laboratory Rooms. The maximum allowable quantities of flammable gases for storage cabinets and laboratory rooms are shown in the table below.

### Maximum Quantities of Flammable and Combustible Liquids and Flammable Gases in Sprinklered Laboratory Units.

<table>
<thead>
<tr>
<th>Flammable and Combustible Liquid Class (1)</th>
<th>Excluding Quantities in Storage Cabinets</th>
<th>Including Quantities in Storage Cabinets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Max per 100 ft²</td>
<td>Max per Lab Unit</td>
</tr>
<tr>
<td>I (2)</td>
<td>2 gal</td>
<td>150 gal</td>
</tr>
<tr>
<td>I (2), II, IIIA</td>
<td>4 gal</td>
<td>200 gal</td>
</tr>
</tbody>
</table>

**Notes:**

1. The following definitions from NFPA 30, “Flammable and Combustible Liquids Code” are also provided in NFPA 45:
   - Class I (flammable liquid) – Any liquid that has a closed-cup flash point below 100°F (37.8°C) and a Reid vapor pressure not exceeding 40 psia (2068.6 mm Hg) at 100°F (37.8°C) as determined by then test procedures and apparatus set forth in Section 1.7.4 of NFPA 30.
   - Class II (combustible liquid) – Any liquid that has a closed-cup flash point at or above 100°F (37.8°C) and below 140°F (60°C) as determined by then test procedures and apparatus set forth in Section 1.7.4 of NFPA 30.
   - Class IIIA (combustible liquid) – Any liquid that has a flash point at or above 140°F (60°C), but below 200°F (93°C) as determined by then test procedures and apparatus set forth in Section 1.7.4 of NFPA 30.

2. This category includes Class I flammable liquids and liquefied flammable gases.

3. The limits on flammable gases provided in this table are based on NFPA 45 allowable quantities of flammable and combustible liquids and flammable gases for a Class C (low fire hazard) sprinkled facility (Ref. Table 10.1.1 of NFPA 45)

4. There are no non-sprinklered laboratory units in the 222-S Laboratory.

Compressed and Liquefied Gases in Cylinders. The limits on allowable internal volume (water volume) for cylinders in each of the listed classifications, in the laboratory work area are:

(1) Flammable gases:
   (a) For a laboratory work area of 500 ft² or less, the internal cylinder volume limit in standard cubic ft (scf) is 6.0 ft³.
   (b) For a laboratory work area greater than 500 ft², the internal cylinder volume is 0.012 ft³ per ft² of lab work area.
Figure 7. Categorical Exclusion for All Proposed Activities Performed in the 222-S Laboratory, Except Those that Could Exceed the Radiological Inventory MAR Limit of the Facility, Exceed Flammable Gas Quantities Allowed by NFPA 45, Introduce Explosive Materials into the Facility; or Change the Configuration of Waste Transfer Pump WT-P-1, its Air Compressors, or Associated Equipment. (cont.)

### GCX-5 (continued)

(2) Oxidizing gases:
   
   (a) For a laboratory work area of 500 ft² or less, the internal cylinder volume limit in scf is 6.0 ft³.
   
   (b) For a laboratory work area greater than 500 ft², the internal cylinder volume limit is 0.012 ft³ per ft² lab work area.

(3) Liquefied flammables (i.e., propane/butane):
   
   (a) For a laboratory work area of 500 ft² or less, the internal cylinder volume limit in scf is 1.2 ft³.
   
   (b) For a laboratory work area greater than 500 ft², the internal cylinder volume limit is 0.0018 ft³ per ft² lab work area.

The number of lecture bottle cylinders in the 222-S facility shall be limited to 25.

**Explosive Materials**

The introduction of explosive materials (e.g., TNT) into the 222-S Laboratory Complex is not allowed under this categorical exclusion.

An "explosive" is defined to be any material that meets the definition of a Class 1 explosive in 49 CRF 173.50 or that has an NFPA Instability Rating of 4 as provided below:

**Class 1 Explosive:** "Any substance or article, including a device, which is designed to function by explosion (i.e., an extremely rapid release of gas and heat) or which, by chemical reaction within itself, is able to function in a similar manner even if not designed to function by explosion. The term includes pyrotechnic substances or articles..." (Ref. 49 CRF 173.50)

**Materials with an NFPA Instability Rating of 4:** "Any materials which in themselves are readily capable of detonation or of explosive decomposition or explosive reaction at normal temperatures and pressures. This degree should include materials which are sensitive to mechanical or localized thermal shock at normal temperatures and pressures." (Ref. NFPA 704)
Figure 7. Categorical Exclusion for All Proposed Activities Performed in the 222-S Laboratory, Except Those that Could Exceed the Radiological Inventory MAR Limit of the Facility, Exceed Flammable Gas Quantities Allowed by NFPA 45, Introduce Explosive Materials into the Facility; or Change the Configuration of Waste Transfer Pump WT-P-1, its Air Compressors, or Associated Equipment. (cont.)

GCX-5 (continued)

Changes in the Configuration of Waste Transfer Pump WT-P-1, its Air Compressors, or Associated Equipment

Changes in the configuration of waste transfer pump WT-P-1 (an air-driven diaphragm pump used to transfer waste from 222-S Laboratory to the tank farms), its air compressors, or associated equipment, are not allowed under this categorical exclusion. (Note: This does not include changes to compressed air that is used for maintenance and to operate analytical and process equipment, which are within the scope of this categorical exclusion.)

Waste Transfer Pump WT-P-1 is an air-driven diaphragm pump used to transfer waste from the Laboratory’s 219-S Waste Handling Facility to tank farms double shell tanks 241-SY-101 and 241-SY-103 via transfer lines SNL-5350 and SNL-5351, respectively. There are no 222-S Laboratory TSRs that control these transfers, but waste transfer leaks during waste transfers from the 222-S Laboratory to the DST 241-SY Tank Farm are encompassed by the analysis of postulated waste transfer leak accidents in the Tank Farms DSA (RPP-13033, Section 3.3.2.4.3). In the tank farms safety basis, controls to prevent or mitigate waste transfer leaks are applicable when waste transfer pump WT-P-1 is active and not under administrative lock (Ref. RPP-13033, Section 5.7.2).

JUSTIFICATION: Based on the results of a negative USQ determination, only activities that could exceed the radiological inventory limit in the facility, introduce flammable gases into the facility in quantities that exceed NFPA 45 allowable quantities, or introduce explosive materials into the facility, could result in a positive USQ in the 222-S Laboratory Complex. While proposed changes to the configuration of waste transfer pump WT-P-1, its air compressors, or associated equipment cannot impact the 222-S Laboratory safety basis, these changes require evaluation in the USQ process to ensure there are no impacts to the tank farms safety basis. Limiting the scope of this categorical exclusion to only activities that do not exceed the limits specified in the Categorical Exclusion Scope and Boundaries section ensures that activities within scope of this categorical exclusion cannot result in a positive USQ for the tank farms or 222-S Laboratory safety bases.
ATTACHMENT A – GUIDANCE FOR COMPLETING THE USQ SCREENING

NOTES:

- Italicized text indicates a direct quote from DOE G 424.1-1B Chg 1 (March 20, 2013) “Implementation Guide for Use in Addressing Unreviewed Safety Question Requirements,” unless otherwise noted.

- If the answer to any of the USQ screening questions is “Yes,” the change requires completion of a USQ determination.

- If an approved categorical exclusion applies, a response to the USQ screening questions is not required (i.e., N/A).

In this procedure, the purpose of the USQ screening is to: 1) answer the USQ screening questions; and 2) document the basis for use of DOE-approved categorical exclusions. This attachment addresses USQ screenings and categorical exclusions.

The categorical exclusions (i.e., GCX-1 through GCX-5) may be used by the TOC for activities that meet the Scope and Boundaries specified within the GCX descriptions shown in Figures 3 through 7.

NOTE: The categorical exclusion for inconsequential changes (GCX-2) does not require documentation in a USQ screening.

The following is sufficient to document the basis for use of DOE-approved categorical exclusions GCX-1, GCX-3, GCX-4, and GCX-5, and to complete USQ screenings.

Instructions for the Change Description:

The following guidance is applicable to categorical exclusions.

Enter the document number, title, and revision number of the change or activity being evaluated, as applicable.

The change description should contain a brief description of the change and documentation of the basis for use of the applicable categorical exclusion. Any limitations or exclusions identified in the categorical exclusion should be verified to be applicable to the change. At a minimum, the USQ evaluator should provide the following information in the change description.

- Brief description of the change

- Identify the categorical exclusion that is being applied to the change

- Documented basis for use of the categorical exclusion (i.e., the criteria specified in Scope and Boundaries section of the categorical exclusion are applicable to the change)

- Identify the DOE-approved SER (GCX-1 only).
ATTACHMENT A – GUIDANCE FOR COMPLETING THE USQ SCREENING (cont.)

The following guidance is applicable to USQ screenings.

Enter the document number, title, and revision number of the change or activity being evaluated, as applicable.

At a minimum, the USQ evaluator should provide the following information in the change description.

- Description of the change. Describe the change in enough detail that a qualified independent reviewer could reach the same conclusion.

- Scope of the activity. Discussion of hazards is not appropriate for a USQ screening. If there are any hazards associated with the change, a USQ determination is required.

- DSA sections applicable to the change. If there are any safety basis impacts, a USQ determination is required.

The USQ process applies to all temporary or permanent changes to such nuclear facilities unless a decision to request DOE approval already has been made, and to potential inadequacies of safety analyses. Some changes may be such that they can be screened out from a detailed USQ.

The applicability of 10 CFR 830.203 is broad. Non-safety-related SSCs are not excluded by the scope of Section 830.203 if they could affect the proper operation of equipment important to safety that is relied on in the safety basis or create the possibility of an accident or malfunction of a different type than previously evaluated in the documented safety analysis. For example, losses of certain non-safety-related systems may represent critical operational occurrences identified as initiators in the accident analysis. Therefore, changes to non-safety-related SSCs are evaluated and may be determined to involve a USQ.

Physical interactions may also fall under the purview of Section 830.203. For example, the installation of a non-seismically supported piece of equipment above a seismically qualified component designed to perform a safety function explicitly or implicitly assumed in the existing safety analyses may constitute a USQ and need to be evaluated. (7.1.2)

1. Does the proposed change represent a temporary or permanent change in the facility as described in the existing DSA?

USQ determinations should be performed on changes in nuclear facilities as described in the existing safety analysis text, drawing, or other information that is part of the facility safety basis. An SSC would be considered changed if any of the following were to be altered: (1) its function(s), (2) the method of performing those functions, or (3) its design configuration.

Although safety analyses include descriptions of many SSCs, a nuclear facility also contains many SSCs not explicitly described in the safety analyses. These can be components, subcomponents of larger components, or even entire systems.

Changes to SSCs that are not explicitly discussed in the safety analyses should not be excluded from the USQ process because changes to these SSCs may have potential to alter the function of an SSC explicitly described in the safety analysis. 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.
ATTACHMENT A – GUIDANCE FOR COMPLETING THE USQ SCREENING (cont.)

It is important to distinguish between changes and routine maintenance activities. Routine maintenance activities—except those that are not enveloped by current safety analyses or that might violate a technical safety requirement (TSR)—do not require review under 10 CFR 830.203. A TSR limitation on maintenance activities might require limiting the number of systems or components that can be taken out of service at one time, or allowable outage times. Changes to maintenance procedures would constitute changes that should be reviewed under USQ requirements as discussed in Section 2.2 [of DOE G 424.1-1B].

Routine maintenance activities include calibration, refurbishment, replacement with an equivalent component, and housekeeping. However, some maintenance activities may constitute changes, such as plant heat exchanger tube plugging where limits are not specified.

A TSR should specify allowable outage times, permissible mode conditions, and permitted reduction in redundancy for systems or components removed from service for maintenance. A USQD need not be performed for these activities.

A USQD should be completed for changes to systems or components that are included in safety analyses for a nuclear facility and for which allowed outage times are not included in the TSRs. “Change” as it applies to modes of operation or facility processes is important when, for example, a facility designed to accommodate several nuclear processes will modify equipment lineup to accommodate shifting from one of process to another. Changes performed in accordance with approved procedures and considered within the safety basis of the facility are not considered changes in the facility procedures for the purposes of 10 CFR 830.203(d)(2).

Temporary changes such as jumpers and lifted leads, temporary lead shielding on pipes and equipment, temporary blocks and bypasses, temporary supports, and equipment used on a temporary basis in a nuclear facility should be evaluated to determine whether a USQ exists unless such changes are specifically described in existing approved procedures.

The conservative approach is to provide a written USQD for any change to a nuclear facility, whether discussed in existing safety analyses or not.

The actual modification implementation process (for example, work authorization system) used in the field should be reviewed for possible development of USQs. Changes to plant configuration while work is in progress may involve a USQ relating to facility operations independent of the safety of the specific work on a modification.

For example, if work involves interrupting a water supply that a fire protection system depends on, that is not covered by a TSR, that interruption should be examined through the USQ process. Modifications that are performed in separate, distinct stages (usually for cost, schedule, or operational considerations) may leave affected SSCs in conditions not addressed by a USQD that addresses only the final modification configuration but not the interim times between stages. The work authorization system should include a step to consider these types of possibilities. (7.1.2)
ATTACHMENT A – GUIDANCE FOR COMPLETING THE USQ SCREENING (cont.)

2. Does the proposed change represent a temporary or permanent change in the procedures as described in the existing DSA?

   Procedures may be identified explicitly or implicitly in a facility DSA. If the procedure is implied directly by the nature of a topic in the safety basis (including the operational safety requirements or TSRs and their bases), that change should be considered to be to a procedure described in the DSA, so that a USQD is done when appropriate. Such implicitly described procedures include—

   • the procedures that implement a safety management program described in the safety basis,
   
   • procedures for implementing a specific administrative control, and
   
   • operating, testing, surveillance, and maintenance procedures for equipment when that equipment is identified in the DSA.

   If characteristics of a safety management program described in the safety basis remain correct, complete, and valid, the result of the USQ determination would be expected to be negative, signifying that DOE approval is not needed.

   Procedures are not limited to those specifically identified by type (for example, operating, chemistry, system, test, surveillance, and emergency planning) but could include anything described in the DSAs that defines or describes activities or control over the conduct of work. Changes to these activities or controls qualify as changes to procedures as described in the DSA and, therefore, need to be evaluated as potential USQs.

   Changes to procedures include revisions to existing procedures and developing a new procedure. For a new procedure that could not have already been described, the question is -- if a DSA were to be prepared (or updated) after the new procedure had been approved, is the new procedure of a type that would be identified in the DSA. If so a USQD should be prepared. (7.1.2)

3. Does the proposed change represent a test or experiment not described in the existing DSA?

   Written USQDs are required for tests or experiments not described in the existing safety analyses. Tests and experiments should be broadly interpreted to include new activities or operations. These activities could degrade safety margins during normal operations or anticipated transients or could degrade the ability of SSCs to prevent accidents or mitigate accident conditions.

   A USQD should be performed to ascertain whether a DOE review and approval of a new process configuration is needed. For preoperational, surveillance, functional, and startup tests performed regularly, USQDs are not needed every time a test is performed if the procedures are not changed. However, one-of-a-kind tests that measure the effectiveness of new techniques or a new system configuration will need to be evaluated before the tests can be conducted. Post modification testing should be considered and included in the USQD for the modification. (7.1.2)
NOTE: Italicized text indicates a direct quote from DOE G 424.1-1B, Chg 1 (March 20, 2013), unless otherwise noted.

Once it has been determined that a USQ determination is required, it can be approached by providing an answer to each of the seven questions identified using the USQ determination process. If any of these questions is answered “yes,” the change is considered a USQ. An appropriate justification for each answer should be recorded. (7.1.2)

Instructions for Completing the USQ Determination Form

Title:

Enter the document number, title, and revision number of the change or activity being evaluated in the USQ determination, as applicable. Document titles may be omitted as necessary (e.g., to keep from exceeding the maximum number of characters allowed by the USQ database title field).

Change Description:

The purpose of the change description section is to provide a summary of the change control review of the hazard analysis and DSA that was performed. It is important to provide sufficient information to identify that a thorough review of the hazard analysis and DSA was performed and any required changes have been developed. Consistent with the intent of Section 830.203 of 10 CFR 830, the documentation must be complete in the sense that a qualified independent reviewer could draw the same conclusion. The following information is part of the Change Description and should be sufficient to answer all seven USQ questions.

Scope:

Identify the scope of the activity. The scope needs to provide sufficient detail that the hazards associated with the activity are clear (i.e., listed). This will be the basis for performing a review against the hazard analysis.

For engineering documents released in accordance with TFC-ENG-DESIGN-C-25, document whether the change introduces new failures modes to the equipment, increases the probability of existing failure modes, requires a modification to Chapter 4 of the DSA and/or Functional Requirements and Evaluation Document (FRED) for safety-significant equipment, or requires a modification to Chapter 4 of the DSA and/or Safety Requirement Evaluation Document (SRED)/Design Analysis Report (DAR)/Safety Requirements Specification (SRS) for safety instrumented systems (SIS) or safety instrumented alarms (SIA), as documented by the responsible engineer.

Safety Basis Discussion:

Identify the section(s) of chapter 2 of the DSA where the activity/activities is/are currently addressed. If a change to Chapter 2 is required to add the activities, identify that a change was required and state it is attached. Identify chapter 3 DSA sections that are associated with DSA changes identified in the Hazard Evaluation section, as applicable. Identify chapter 4 and 5 DSA sections that are associated with DSA changes identified in the Impacts to Controls section, as applicable. Identify if changes to Chapters 6-17 are required and attach DSA change page(s) to the USQD as necessary.
ATTACHMENT B – GUIDANCE FOR COMPLETING THE USQ DETERMINATION (cont.)

To support the questions in the USQ process, identify all SSCs being modified as part of the change.

Note: A change to the configuration controlled documents, qualification documents, or evaluation documents for an SSC, even without a physical change to the SSC, is considered a modification to the SSC.

Hazard Evaluation:

The purpose is to identify that all hazards have been identified and are evaluated in the current hazard analysis (e.g., RPP-15188) or that a change to the hazard analysis has been included in the change package. To accomplish this, other than routine maintenance activities, the applicable hazards analysis events need to be identified. It is best if this is by identifying the specific entry in the tables, but can be done by identifying the applicable tables.

If there are no hazardous events associated with the activity, identify that. If a portion of the change involves routine maintenance, simply identify those as routine maintenance and state no further evaluation of those portions will be performed (identification of associated hazardous events for routine maintenance is not required).

If a hazard analysis was performed for the proposed activity, reference the hazard analysis report. The hazard analysis report will identify if all of the hazardous events are covered in the current DSA. In this case, it is not necessary to identify the applicable events, providing reference to the hazard analysis report is sufficient.

If the activity could impact a hazardous event, it may be necessary to review the supporting documents identified in the hazard analysis tables for the hazardous event to determine if there is a change to the frequency or consequence. If this was necessary, identify that the document was reviewed and either no change was required or a change is included as part of the overall change package.

If there was a modification to an SSC, the impact of that modification on the failure of the SSC (i.e., a new event or a change to an existing event) must be described. This information must be provided by the Support Engineer responsible for the SSC.

If there was a change to a hazardous event that is carried forward to Chapter 3, identify the applicable Chapter 3 sections and state either no change was required or identify that a page change is attached.

Review the change to determine if there are any changes to the defense-in-depth features captured in Chapter 3. If there are changes, identify that the changes are attached. It is not necessary to document that there are no changes.

Note: If a hazard analysis was not performed, but there are many hazards associated with proposed activity or the hazards are complex, it may be best to request that a hazard analysis be performed.
ATTACHMENT B – GUIDANCE FOR COMPLETING THE USQ DETERMINATION (cont.)

Impacts to Controls (Chapter 4 and 5 of the DSA):

If SSCs being modified by the activity are classified as safety-significant, there must be documentation to support the impact of the change in the reliability of the SSC to perform its safety-significant function. This information must be provided by the Support Engineer.

For the Tank Farms and 242-A Evaporator, the documentation must identify that the associated FRED for safety-significant equipment or SRED/DAR/SRS for safety-significant SIS/SIA, did not require a change, or a revision to the FRED or SRED/DAR/SRS must be included in the change package. The details in Chapter 4 of the DSA for SSCs are extracted from the FRED or SRED/DAR/SRS prepared by engineering.

Therefore, if the revision to the SSC does not require a change to the FRED or SRED/DAR/SRS, then the evaluation of the SSC provided in the DSA should not be impacted and the SSC will not have a new failure or a change to the current failures (i.e., more frequent). If a change to the FRED or SRED/DAR/SRS is included, then Chapter 4 needs to be reviewed to determine if a change is required.

If the activity includes a change to a specific administrative control (SAC) or a key element of an AC, the change must be reviewed to determine if a Chapter 4 or 5 change is required. If a change to Chapter 4 or 5 is required, it may result in a reduction in the reliability of the control.

Identify either there were no required changes to Chapters 4 and 5, or identify that a change was required and it is attached.

USQD Form Checkboxes:

Check the appropriate box on the USQ Determination form to identify if the change:

- Entered the USQ process as a PISA.
- Does not constitute a USQ based on a full USQ Determination.
- Constitutes a USQ.
- Safety basis change is required.
- Safety basis documents with change pages attached.
- Operations Manager (or designee) approval is required.
- ORP approval is required prior to implementation.

Safety Basis Change:

If a change to the DSA or hazard analysis is required, describe the change in the Change Description. A summary of the change will also be provided in the “Impacts to Safety Basis” section.

USQ Determination Questions:

Answer the 7 questions using the guidance provided below.

List any references used in performing the USQ evaluation.
ATTACHMENT B – GUIDANCE FOR COMPLETING THE USQ DETERMINATION (cont.)

B.1.1. Could the proposed change increase the probability of an accident previously evaluated in the facility’s existing safety analyses?

To answer this question, it is necessary to determine if there is an increase in the frequency of an accident as previously evaluated in the existing DSA. This question only applies to existing accident analyses. New accident analyses are addressed in Question 5.

The term “accident” refers to the anticipated operational transients and postulated accident scenarios considered in the DSA. (7.1.2)

Based on the above guidance, this question only refers to the accident analyses documented in Chapter 3, Sections 3.3.2.4 and 3.4.2 of RPP-13033 and HNF-14755; and Section 3.3.2.3.5 and 3.4.2 of HNF-12125.

In general, there is no quantitative frequency evaluation for the unmitigated accident (the only exception is the aircraft crash analysis). A frequency range/level is qualitatively assigned to the unmitigated accident. A discernible change in frequency would only occur if it was qualitatively determined that there was a change in frequency range/level. Even if new initiators are identified, there may not be an increase in frequency (i.e., the frequency range/level may not have changed). This is supported by the following from the guide:

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 set that are analyzed. (7.1.2)

The basis for the answer to this question should come from the change description section. If there was no change to Chapter 3, or to the supporting technical basis documents, then there could not be a change to the probability of an accident. If there was a change to the accident analysis or supporting technical basis document, then use the following to answer this question.

For the accident without controls, the answer to the question of increase in accident frequency is answered in terms of changes to the frequency range/level (i.e., “anticipated,” “unlikely,” “extremely unlikely,” “beyond extremely unlikely”) as reported in the DSA. That is, an increase is identified for this question if the frequency moves to a higher range/level (e.g., frequency moves from “unlikely” to “anticipated”). Where the frequency range remains the same or declines (e.g., frequency moves from “anticipated” to “unlikely”) there is no increase in frequency.

For the accident with controls where the controls are credited with mitigating the consequences, the rules for evaluating a potential increase in accident frequency are the same as for the accident without controls as described above.

For Tank Farms and 242-A Evaporator accidents with controls where a preventive TSR SAC is applied, the accident is identified as being prevented and no frequency with controls is reported. Thus, an increase in frequency for the accident with controls is only identified where the proposed activity diminished the effectiveness of a control as credited in the DSA. If there was no change to the Chapter 4 SAC description and SAC evaluation sections, the answer is no.
ATTACHMENT B – GUIDANCE FOR COMPLETING THE USQ DETERMINATION (cont.)

A discernible increase in the probability of a bounding accident indicates the potential for the probability to increase in a positive trend that is greater than the DSA reported frequency range/level. The USQ evaluator would have to qualitatively or quantitatively determine that the positive trend increase does not have the potential to exceed the reported frequency range/level of the bounding accident to a higher frequency range/level even with consideration of cumulative events represented under the bounding accident scenario, in order to answer the applicable USQD questions as “No” for an increase in probability.

If there were changes to the accident analysis where there was a discernible increase in frequency or if there was a change to Chapter 4 where it is identified that the effectiveness of the preventive SAC was reduced, then the response could be yes.

SSCs credited with prevention are addressed in B.1.3.

B.1.2. Could the proposed change increase the consequences of an accident previously evaluated in the facility’s existing safety analyses?

To answer this question it is necessary to determine if there is an increase in the consequence of an accident as previously evaluated and documented in the existing DSA and supporting technical safety basis documents. This question only applies to existing accident analyses. New accident analyses are addressed in Question 5.

The term “accident” refers to the anticipated operational transients and postulated accident scenarios considered in the DSA. (7.1.2)

Based on the above guidance, this question only refers to the accident analyses documented in Chapter 3, Sections 3.3.2.4 and 3.4.2 of RPP-13033 and HNF-14755; and Section 3.3.2.3.5 and 3.4.2 of HNF-12125; and the supporting consequence analyses, if applicable. The response to the question is addressed for all receptors (i.e., facility worker, co-located worker, offsite) evaluated in the accident analysis in the DSA, including those that exceeded evaluation guidelines. For instance, for the flammable gas deflagration in the Tank Farm DSA, only the facility worker consequences warranted evaluation. For this accident, the responses to this question relate to facility worker, collocated worker, and offsite consequences.

The basis for the answer to this question should come from the change description section. If there was no change to Chapter 3 or to the supporting technical basis documents, then there could not be a change to the consequence of an accident. If there was a change to the accident analysis, or technical basis document, then use the following to answer this question.

In the Tank Farm and 242-A Evaporator DSAs, the consequences (radiological and toxicological) for the accident without controls are reported and where mitigative controls are credited the consequences with controls are also reported. Thus, where mitigative controls are credited, the potential for an increase in consequences should be evaluated against the consequences with controls. Where no controls or only preventive controls are credited, the potential for an increase in consequences is evaluated against the consequences without controls.
ATTACHMENT B – GUIDANCE FOR COMPLETING THE USQ DETERMINATION (cont.)

For onsite radiological and onsite and offsite toxicological consequences, a discernible increase in the consequences of a bounding accident indicates the potential for the consequences to increase in a positive trend that is greater than the DSA reported consequence range/level. For offsite radiological consequences, a discernible increase in the consequences of a bounding accident indicates the potential for the consequences to increase in a positive trend that is greater than the DSA reported consequence.

In ORP letter 14-NSD-0015, several consequence ranges/levels are provided and are displayed in DSA Table 3.3.1.3-2, “Safety Classification Guidelines.” These ranges/levels include a range/level below which no controls need to be considered, ranges/levels that provide perspective for consideration of sufficient defense-in-depth, ranges/levels where controls are considered, and ranges/levels where controls are required. There is no discernible increase in consequence if the consequence without controls remains below the following ranges/levels from ORP Letter 14-NSD-0015: (7.1.4)

<table>
<thead>
<tr>
<th>Offsite</th>
<th>&lt;0.1 rem and &lt; PAC-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Onsite</td>
<td>&lt;5 rem and &lt; PAC-3</td>
</tr>
</tbody>
</table>

Within the following ranges:

- Offsite \( \geq 0.1 \text{ rem to } <1 \text{ rem} \)
- Offsite \( \geq 1 \text{ rem to } <5 \text{ rem} \)
- Offsite \( \geq 5 \text{ rem to } <25 \text{ rem} \)
- Onsite \( \geq 5 \text{ rem to } <100 \text{ rem} \)

There is a discernible increase in consequence if the consequence increases from one range/level to another (e.g., a proposed activity results in the offsite radiological consequence increasing from 3 rem to 7 rem). In this case, an increase in consequence is identified in the USQD.

When the consequence is already in the highest range/level (> 25 rem or > PAC-2 offsite; > 100 rem or > PAC-3 onsite), then any increase is considered a discernible increase that results in a “yes” answer. For example, if the installation of a new pump increases the onsite radiological consequence for the fine spray leak accident from 150 rem to 220 rem then an increase in consequences is identified in the USQD.

In the 222-S Laboratory DSA, radiological and toxicological consequence levels are provided in HNF-12125, Table 3-3. Consequence levels for the 222-S Laboratory DSA are shown in the table below.

<table>
<thead>
<tr>
<th>Consequence Level</th>
<th>Offsite Public</th>
<th>Onsite Worker (100 m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>&gt;25 rem TEDE or &gt;ERPG-2/TEEL-2</td>
<td>&gt;100 rem TEDE or &gt;ERPG 3/TEEL-3</td>
</tr>
<tr>
<td></td>
<td>&gt;ERPG-2/TEEL-2</td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td>&gt;1 rem TEDE or &gt;ERPG 1/TEEL-1</td>
<td>(&gt;25 rem TEDE or &gt;ERPG 2/TEEL-2)</td>
</tr>
<tr>
<td></td>
<td>&gt;ERPG 1/TEEL-1</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>&lt;1 rem TEDE or &lt;ERPG 1/TEEL-1</td>
<td>&lt;25 rem TEDE or &lt;ERPG 2/TEEL-2</td>
</tr>
<tr>
<td></td>
<td>&lt;ERPG 1/TEEL-1</td>
<td></td>
</tr>
</tbody>
</table>

Notes:
1. Radiological and toxicological consequence levels shown in this table are applicable to the 222-S Laboratory (Ref. HNF-12125, Table 3-3).
ATTACHMENT B – GUIDANCE FOR COMPLETING THE USQ DETERMINATION (cont.)

In 222-S Laboratory USQ determinations, an increase in accident consequence is answered in terms of changes to the consequence level ("low," "moderate," or "high") as reported in the DSA. That is, an increase in consequence is identified in the USQ determination if the consequence moves from a lower to a higher consequence level (e.g., from “low” to “moderate”). Where the consequence level remains the same or declines (e.g., from “moderate” to “low”), there is no increase in consequence.

For the 222-S Laboratory, the DSA does not have any controls that are credited with accident mitigation; however, it does have an SAC that protects the radiological source term assumption for the bounding accident scenario. The potential for changes to reduce the effectiveness of the control should be addressed in this question.

If there was a change to the accident analysis where there was a discernible increase in consequence, or if there was a change to Chapter 4 where it is identified that the effectiveness of the mitigative SAC was reduced, then the response could be yes.

SSCs credited with mitigation are addressed in B.1.4.

B.1.3. Could the proposed change increase the probability of a malfunction of equipment important to safety previously evaluated in the facility’s existing safety analyses?

To answer this question, it is necessary to determine if an existing SSC (not just safety-significant SSCs) could malfunction at a higher frequency than previously evaluated and documented in the existing DSA. This question only applies to malfunctions of equipment evaluated in the existing DSA. New types of equipment malfunctions are addressed in Question 6.

Equipment important to safety is understood to be any equipment whose failure could impact the risk of operation. This includes equipment:

- Whose failure is considered in the accident frequency
- That is credited as a safety-significant SSC in an accident
- Whose failure could cause the failure of a safety-significant SSC

The basis for the answer to this question should come from the change description section. If there was no change to the accident analysis in the DSA and the supporting technical basis documents, then there was no increase in failure of equipment important to safety whose failure is considered in the accident frequency. If there was no change to the Chapter 4 description and evaluation sections, then there was no increase in probability of malfunction of safety-significant SSCs or of other SSCs whose failure could cause the failure of safety-significant SSCs. In these cases, the answer is no.

If there were changes to the accident analysis where an accident became more frequent (i.e., change in frequency range) or if there was a change to Chapter 4 where it is identified that the failure probability was more frequent (the direction of change, not the magnitude of change is used for control reliability evaluations), then the response could be yes. Use the guidance from question 1 to support the determination if there was an increase in frequency.
B.1.4. Could the proposed change increase the consequence of a malfunction of equipment important to safety previously evaluated in the facility’s existing safety analyses?

To answer this question, it is necessary to determine if an existing SSC (not just safety-significant SSCs) could malfunction at a higher consequence than previously evaluated and documented in the existing DSA. This question only applies to malfunctions of equipment evaluated in the existing DSA. New types of equipment malfunctions are addressed in Question 6.

Equipment important to safety is understood to be any equipment whose failure could impact the risk of operation. This includes equipment:

- Whose failure could initiate an event
- That is credited as a safety-significant SSC in an accident
- Whose failure could cause the failure of a safety-significant SSC.

The basis for the answer to this question should come from the change description section. If there was no change to the accident analysis in the DSA and the supporting technical basis documents, then there was no increase in consequence due to failure of equipment important to safety that could initiate an event. If there was no change to the Chapter 4 description and evaluation sections, then there was no increase in consequence due to the malfunction of safety-significant SSCs or of other SSCs whose failure could cause the failure of safety-significant SSCs. In these cases, the answer is no.

If there were changes to the accident analysis or supporting technical basis documents where there was an increase in consequence or if there was a change to Chapter 4 where it is identified that the currently evaluated failure of a safety-significant SSC could result in an increase in consequence, then the response could be yes. Use the guidance from question 2 to determine if there was an increase in consequence.

This question asks whether, assuming a malfunction of equipment important to safety, the change would result in increased hazardous-material or radiological consequences. For example, consider a change that caused a valve in a safety system to fail in the closed position where previously it was assumed to fail in the open position. If this change results in an increase in consequences of an accident, it indicates the change involves a USQ. In some situations, such as a loss of a preferred failure mode, the change might not lead to an increase in the calculated consequences but should be considered within the context of a possible reduction in a margin of safety as discussed in paragraph A.1.7. (7.1.2)

B.1.5. 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 initiating event 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 set that are analyzed.
ATTACHMENT B – GUIDANCE FOR COMPLETING THE USQ DETERMINATION (cont.)

A seismic-induced failure of a component designed to appropriate seismic criteria will not cause a malfunction of a different type. However, a change that increases the probability of an accident previously thought to be beyond extremely unlikely, so that it is in the credible range, creates a possible accident of a different type.

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 two lists 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. (7.1.2)

The basis for the answer to this question should come from the change description section. If there was no change to the hazard analysis and the supporting technical basis documents (i.e., documents providing the basis for frequency and consequence), then there could not be an accident of a different type. This question is discussing two possibilities:

1. A new hazardous event is added to the hazard analysis that exceeds evaluation guidelines.

2. An existing hazardous event that previously did not exceed evaluation guidelines, but due to the change now exceeds evaluation guidelines.

The next question would be, “Was there a Change required to Chapter 3?” If there is no change to Chapter 3, then this is not an accident of a different type.

If there is a change to Chapter 3 and if the new or revised event was represented by an existing accident in Chapter 3, then the answer to this question would be no (Note: Questions 1 and 2 would apply to this case).

If the existing accidents in Chapter 3 do not cover this new or revised event, then the change to Chapter 3 was to discuss this new event, even if TSR controls are not selected. Then the answer to this question would be yes.

B.1.6. 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 two lists can provide an answer to the question. An example of a change that might create a malfunction of a different type is the relocation of equipment so that it becomes susceptible to flooding; another example is the replacement of a mechanical control system with a digital control system that could fail in a different mode. (7.1.2)

Use the guidance for questions 3 and 4 to respond to this question. The only difference is if there is a different type of failure of equipment important to safety.
B.1.7. Could the proposed change reduce a margin of safety?

There are two cases where margin of safety is introduced into the DSA and TSR.

- Margin of safety can be explicitly identified in the accident analysis provided in Chapter 3 of the DSA or in the control evaluation in Chapter 4 of the DSA.

- The margin of safety can also be implicitly identified in the case when an important contributor to defense in depth is selected as a safety-significant SSC or a Key Element of an AC.

If the change reduces the margin of safety explicitly established in the DSA or if the change reduces the qualitative reliability of a safety-significant SSC or Key Element of an AC, then the answer to this question would be yes. In all other cases, the answer would be no.

Conclusion:

Provide a conclusion identifying whether a USQ exists.

Impacts to Safety Basis:

If there are no safety basis impacts, enter “none.” If a safety basis change is required, provide a summary of the change and list the applicable safety basis document and section number.

References:

List any references used in performing the USQ determination.
## ATTACHMENT C – USQ SCREENING AND DETERMINATION FORMS

### UNREVIEWED SAFETY QUESTION (USQ) SCREENING

<table>
<thead>
<tr>
<th>Title:</th>
<th>Change Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Categorical Exclusion (If applicable, check the appropriate box and sign below)</td>
<td></td>
</tr>
<tr>
<td>[ ] GCX-1 (USQ Evaluator)</td>
<td></td>
</tr>
<tr>
<td>[ ] GCX-3 (USQ Evaluator)</td>
<td></td>
</tr>
<tr>
<td>[ ] GCX-4 (USQ Evaluator)</td>
<td></td>
</tr>
<tr>
<td>[ ] GCX-5 (USQ Evaluator)</td>
<td></td>
</tr>
</tbody>
</table>

*Note: The categorical exclusion for inconsequential changes (i.e., GCX-2) does not require documentation in a USQ screening.*

Based on this evaluation, a USQ determination is not required (i.e., the change has been screened out of the USQ process).

### SIGNATURES

<table>
<thead>
<tr>
<th>Trainee Preparer</th>
<th>[ ] N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Print name:</td>
<td></td>
</tr>
<tr>
<td>Sign:</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Preparer</th>
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<tbody>
<tr>
<td>Print name:</td>
</tr>
<tr>
<td>Sign:</td>
</tr>
<tr>
<td>(My signature below indicates that my USQ qualification is current on this date.)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reviewer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Print name:</td>
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<tr>
<td>Sign:</td>
</tr>
<tr>
<td>(My signature below indicates that my USQ qualification is current on this date.)</td>
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</table>

<table>
<thead>
<tr>
<th>Categorical Exclusion Preparer</th>
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<td>Print name:</td>
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<td>Sign:</td>
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<td>(My signature below indicates that my USQ qualification is current on this date.)</td>
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</table>
ATTACHMENT C – USQ Forms (cont.)

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<tr>
<th>UN REVIEWED SAFETY QUESTION (USQ) SCREENING</th>
<th>Page 2 of 2</th>
<th>USQ No.:</th>
<th>Rev.</th>
<th></th>
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<tbody>
<tr>
<td>USQ SCREENING</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>1. Does the proposed change represent a temporary or permanent change in the facility as described in the existing DSA?</td>
<td></td>
<td></td>
<td>[ ] Yes</td>
<td>[ ] No</td>
</tr>
<tr>
<td>Basis for No:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Does the proposed change represent a temporary or permanent change in the procedures as described in the existing DSA?</td>
<td></td>
<td></td>
<td>[ ] Yes</td>
<td>[ ] No</td>
</tr>
<tr>
<td>Basis for No:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Does the proposed change represent a test or experiment not described in the existing DSA?</td>
<td></td>
<td></td>
<td>[ ] Yes</td>
<td>[ ] No</td>
</tr>
<tr>
<td>Basis for No:</td>
<td></td>
<td></td>
<td></td>
<td></td>
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CONCLUSION:

IMPACTS:

REFERENCES:
ATTACHMENT C – USQ Forms (cont.)

<table>
<thead>
<tr>
<th>UNREVIEWED SAFETY QUESTION DETERMINATION (USQD)</th>
<th>Page 1 of 2</th>
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</thead>
<tbody>
<tr>
<td>USQ No.: D</td>
<td>Rev.</td>
</tr>
</tbody>
</table>

**Title:**

**Change Description:**

**Scope:**

**Safety Basis Discussion:**

**Hazard Evaluation:**

**Impacts to Controls:**

**Based on this evaluation, the change:**

- [ ] Entered this process as a FISA.
- [ ] Does not constitute a USQ based on a full USQ Determination.
- [ ] Constitutes a USQ
- [ ] Safety basis change is required.

*Explain in “Impacts to Safety Basis” Section. Attach redlined safety basis change pages as applicable. Safety basis documents with change pages attached:*

- [ ] RP9-13033
- [ ] RP9-13188
- [ ] HNF-14755
- [ ] RP7-48900
- [ ] HNF-12125

- [ ] Operations Manager (or designee) approval is required.
- [ ] ORP approval is required prior to implementation

**SIGNATURES**

- [ ] Trainee Preparer
  - Print name: N/A
  - Sign: 
  - Date: 
  - Phone: 

- [ ] Preparer
  - Print name: 
  - Sign: *(My signature below indicates that my USQ qualification is current on this date.)*
  - Phone: 
  - Date: 

- [ ] Reviewer
  - Print name: 
  - Sign: *(My signature below indicates that my USQ qualification is current on this date.)*
  - Phone: 
  - Date: 

- [ ] Operations Manager (or designee)
  - Print name: N/A
  - Sign: 
  - Phone: 
  - Date: 

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A-0003-583 (REV 9)
### UNREVIEWED SAFETY QUESTION DETERMINATION (USQD)

<table>
<thead>
<tr>
<th>USQ DETERMINATION</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Could the proposed change increase the probability of an accident previously</td>
<td></td>
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<tr>
<td>evaluated in the facility’s existing safety analyses?</td>
<td></td>
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<tr>
<td>Basis:</td>
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<tr>
<td>2. Could the proposed change increase the consequences of an accident previously</td>
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<tr>
<td>evaluated in the facility’s existing safety analyses?</td>
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</tr>
<tr>
<td>Basis:</td>
<td></td>
<td></td>
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<tr>
<td>3. Could the proposed change increase the probability of a malfunction of</td>
<td></td>
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<tr>
<td>equipment important to safety previously evaluated in the facility’s existing</td>
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<td>safety analyses?</td>
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<tr>
<td>Basis:</td>
<td></td>
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<tr>
<td>4. Could the proposed change increase the consequence of a malfunction of</td>
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<tr>
<td>equipment important to safety previously evaluated in the facility’s existing</td>
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<tr>
<td>safety analyses?</td>
<td></td>
<td></td>
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<tr>
<td>Basis:</td>
<td></td>
<td></td>
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<tr>
<td>5. Could the proposed change create the possibility of an accident of a different</td>
<td></td>
<td></td>
</tr>
<tr>
<td>type than previously evaluated in the facility’s existing safety analyses?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basis:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Could the proposed change create the possibility of a malfunction of</td>
<td></td>
<td></td>
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<tr>
<td>equipment important to safety of a different type than previously evaluated in</td>
<td></td>
<td></td>
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<tr>
<td>the facility’s existing analyses?</td>
<td></td>
<td></td>
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<tr>
<td>Basis:</td>
<td></td>
<td></td>
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<tr>
<td>7. Does the proposed change reduce a margin of safety?</td>
<td></td>
<td></td>
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<tr>
<td>Basis:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**CONCLUSION:**

**IMPACTS TO SAFETY BASIS:**

**REFERENCES:**
# ATTACHMENT D - PISA EVALUATION WORKSHEET

## PISA EVALUATION WORKSHEET

### Title:

### Time of Discovery by Operations Manager or Designee:

### Applicable Facilities:

### Scope:

### Description:

### Safety Basis Documentation Reviewed:

### Other References:

1. Could the discrepant as-found condition, operational event, or new information indicate that the system, structure, or component may not be fully capable of performing the safety function as described in the safety basis?
   - [ ] No
   - [ ] Yes
   **Basis:**

2. Could the discrepant as-found condition, operational event, or new information indicate that parameters used or assumed in safety basis calculations or in calculations in supporting documents referenced in the safety basis may not be conservative with respect to consequence or frequency?
   - [ ] No
   - [ ] Yes
   **Basis:**
3. Could the discrepant as-found condition, operational event, or new information indicate there is a hazardous condition not considered in the safety basis that has the potential for impact to workers, the public, or the environment?

[ ] No  [ ] Yes

Basis:

4. Could the discrepant as-found condition, operational event, or new information indicate the existing hazard controls may not provide the mitigation or prevention credit assigned to them within the safety basis?

[ ] No  [ ] Yes

Basis:

Conclusion:

[ ] The condition does not represent a PISA (Answers to above questions are No).

[ ] The condition represents a PISA (Answer to any of the above questions is Yes).