

# Status of the Proposed Revision of the DOE USQ Guide (DOE G 424.1-1B) October 2009



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# Outline

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- Summary
  - Purpose of the proposed DOE G 424.1-1B
  - Discussion
  - Scope & Status of DOE G 424.1-1B
- Summary of changes in DOE G 424.1-1B
- What's changed since RevCom



# Background/Summary of Revision

- Revision addressed concerns/confusion with application of Justifications for Continued Operation (JCO)
  - Defense Nuclear Facilities Safety Board concerns
  - General Accounting Office concerns
- Clarified guidance on use of Evaluation of Safety of the Situation (ESS)
- Consolidated JCO and ESS guidance into a single appendix that addresses the 10 CFR 830 Potential Inadequate Safety Analysis (PISA) process
- Added flow chart for the PISA process



# Summary – Discussion

- Concept of ESS derives from key step in USQ process for addressing a PISA in 10 CFR 830.203(g)
  - Variations arose regarding when and how to apply ESS
  - Previously, little specific guidance on expectations for ESS
- Terminology contributed to confusion on this topic
- Consequently, implementation varied from site to site, facility to facility, and sometimes within same facility over time
- DOE G 424.1-1B should help improve consistency and address concerns that were raised by DNFSB and GAO



# Summary of RevCom Comments

- Recommended changes to USQ Guide beyond PISA/JCO/ESS process
  - Recommendation for major overhaul
  - Correct/clarify some material
    - Discussion of TSRs
    - Maintenance activities excluded from USQ
    - Records management
    - Equipment important to safety
  - Operability Determination
  
- PISA process — add paragraph describing rationale
  
- JCO/ESS:
  - Revise flow chart to show ESS/JCO option
  - Minor revision to ESS/JCO recommended content
  - Allowed time for ESS/JCO development after PISA identified



## Status and Schedule

- Revcom comments received 9/8/09
- Draft resolutions developed/peer review 9/9/09-10/7/09
- Final version in concurrence process – Target 10/30/09
- Issue final version via RevCom – Target late CY 09/early CY 10



# Summary of Changes in the proposed DOE G 424.1-1B

- Consolidates PISA text into a single, unified section
  - Consolidated in Attachment C
  - Text remains in the body (Section 2.4) of DOE G 424.1-1B as well
  - Moved and revised text in Attachment B
- Adds new guidance:
  - Flow diagram for PISA process
  - Recommends initial confirmatory process as part of USQ procedures
  - Timeliness of an ESS
  - DOE Approval of ESS (positive USQD)
  - ESS Purpose and Content
  - Expectations for a JCO



# What's changed since RevCom

## ➤ Discovery of PISA

- Section 2.4
  - Consolidates PISA text
  - Refers to Attachment C
- Moves Attachment B.2 text to C.2
- Moves Attachment B.3 text to C.4

## ➤ ESS

- Revises Attachment B.14.3 text and moves to C.6



# Section 2.4

## ➤ Discovery of PISA

- Section 2.4

- Added the following paragraph

- “The facility DSA and the PISA requirements of 10 CFR 830 are important because the DSA defines the safety risks that DOE has accepted when authorizing operation of the facility and the PISA process provides a means to resolve inadequacies in the safety analysis. Because that analysis is the baseline of reference for the USQ process, if it were inadequate the USQ process would be compromised; that is, USQDs would be performed against a faulty baseline.”

- Deleted the words “PISA and” in the phrase “~~PISA and~~ USQ process.”



# Section 3.2

## ➤ Screening

- Section 3.2

- Added footnote

- “Even for these activities, intermediate configurations which may occur during the activity must be considered separately under the USQ process. For example, erection of scaffolding in the vicinity of seismically qualified SSCs to complete these activities should be subject to the USQ process.”



# Section 3.4 and Attachment B.12.5

## ➤ Documentation and Retention

- Section 3.4

- Added sentence to end of first paragraph pertaining to records retention
  - “As a minimum, the facility documentation should be maintained consistent with DOE Records Schedules.”

## ➤ Major Modification

- Attachment B.12.5

- Corrected grammar (deleted hanging clause at front of paragraph)



# Attachment B.13

## ➤ Operability Determinations

- Complete rewrite of section. New text reads as follows:
  - “If a SSC identified in a TSR is determined to be inoperable, then in accordance with the facility TSR, the action statement(s) in the TSR must be implemented.
  - The TSR action statement may direct the facility operator to go to a MODE in which the piece of equipment is not required or the facility operator may choose to take this action even though the TSRs do not explicitly direct it.
  - There may be situations where an SSC has been degraded such that there is a loss of quality or functional capability or a nonconforming condition may exist with the SSC or its documentation but the SSC has not be determined to be inoperable. These situations may constitute a PISA. When a degraded or nonconforming SSC is identified as a PISA, the contractor must first “take action, as appropriate, to place or maintain the facility in a safe condition” (10 CFR 830.203(g) (1)). A safe condition may include continued facility operation if, although a degraded or nonconforming SSC is not fully qualified, the impact on safe facility operations is judged to be acceptable, possibly aided by operational restrictions and the TSRs are still being met in terms of required operable equipment for the given MODE of operations and associated ACTIONS.”



# Attachment C.2

- Processing Information to Determine Whether a PISA Exists
  - Deleted confusing phrase in response to EFCOG comments
    - If it is immediately clear that a PISA exists, ~~or if the new information is judged to have significant near term potential safety impact~~, then the PISA should be declared immediately.



# Attachment C.6.1 – ESS Timing

- Processing of Evaluation of the Safety of the Situation
  - Revised wording on ESS Timeliness to read as follows:
    - ESS associated with positive USQDs should be developed within a short period of time following completion of USQD (as soon as practicable and should not take more than a month)
    - Corrected wording to match 10 CFR 830.203(g) pertaining to the ESS must be “submitted” in place of “performed”



# Attachment C.7 – JCO

## ➤ 2<sup>nd</sup> paragraph

- Rephrased “specific operational restrictions” to read “specific operational restrictions or other compensatory measures that will be maintained should be submitted to DOE for approval.”

## ➤ 3<sup>rd</sup> paragraph

- Delete “graded” so that the sentence now reads
  - “The JCO should analyze the hazards and identify controls, appropriate for the hazards associated with the PISA and the length of time the conditions which resulted in the PISA are expected to exist.”

## ➤ 5<sup>th</sup> paragraph

- Deleted last sentence in response to EFCOG comments
  - ~~“The quality of the JCO analysis should be commensurate with that of the original safety basis.”~~



# Attachment C.7 – JCO (cont'd)

## ➤ Format and content bullets

- Added a new bullet “Description of what operations are authorized to occur during the time the PISA exist (given the compensatory measures are in place).”
- Grammar correction - Added “time” to Termination of JCO bullet



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# DOE's Perspective

- DOE's perspective is that the proposed new guidance:
  - Identifies an acceptable method and even more so a best practice
  - Was provided to EFCOG and DOE sites to get their feedback prior to going into RevCom and via RevCom for formal vetting
  - Nothing in the revised Guide relieves anyone of meeting the 10 CFR 830 requirements.
- Background
  - High on DNFSB radar screen
  - Not all sites under DFNSB but would have large impacts by the proposed changes in DOE G 424.1-1B
  - Traditionally, DOE has tried to encourage proper use of the PISA process and does want NOT to provide disincentive for declaring PISAs
  - DOE expects compliance with 10 CFR 830

