



## Department of Energy

Washington, DC 20585

February 9, 2009

MEMORANDUM FOR INGRID A. C. KOLB

DIRECTOR  
OFFICE OF MANAGEMENT

THROUGH:

*Camille Pebe*  
for KEVIN T. HAGERTY  
DIRECTOR  
OFFICE OF INFORMATION RESOURCES

FROM:

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CHIEF HEALTH, SAFETY AND SECURITY OFFICER  
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SUBJECT:

Revision of DOE Order 425.1C, *Startup and Restart of Nuclear Facilities*

### PURPOSE:

This memorandum provides justification for a revision to Department of Energy (DOE) Order 425.1C, *Startup and Restart of Nuclear Facilities*. Major changes in this revision are: (1) modification of the criteria for when Readiness Reviews and Readiness Assessments are required, (2) amplification and clarification of requirements for conducting Readiness Assessments, (3) clarification of requirements for DOE oversight, and (4) clarification and movement of all contractor requirements to the Contractor Requirements Document.

### JUSTIFICATION:

The proposed revision to the Order was developed in accordance with the DOE Project Plan for Review of the HSS Safety Directives, approved in January 2008, and supports the following principles governing Department Directives defined by the Secretary's memo of September 10, 2007, and incorporated in DOE Order 251.1C, *Departmental Directives Program*:

- Improved clarity of the directive requirements, with an appropriate level of prescription, and an appropriate balance of "what" and "how" requirements;
- No duplication or inconsistencies with laws, regulations, national standards, or other directives;
- Implementability and reasonable cost impact of the directives requirements; and
- Clear applicability of the directive requirements.

The revised Order was developed using a multi-organizational directive review team with representatives from the three Under Secretaries. In addition, the proposed revision has been reviewed by a multi-organizational red-team. The directive review team reviewed each existing



safety requirement in detail and documented changes to requirements and bases for changes as well as retained requirements.

DOE Order 425.1C was originally issued on March 13, 2003, and reflects the Operational Readiness Review processes and practices developed in the 1990s. The original Order (DOE Order 5480.31, *Startup and Restart of Nuclear Facilities*, issued in September 1993) was developed to meet a Secretarial commitment in response to Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 92-6 and is considered to be an integral part of the Departmental plan to address the issues raised therein. The current Order reflects lessons learned from the startup or restart of Hazard Category 1, 2 and 3 nuclear facilities, activities, or operations when readiness was verified primarily through Operational Readiness Reviews. As a result, the current Order is focused on providing direction on the conduct of Operational Readiness Reviews, with little focus or direction on the conduct of Readiness Assessments which are lower level, more focused readiness reviews that are more applicable for lower risk nuclear activities. However, recent experience has shown that the number of new Hazard Category 1, 2, and 3 nuclear facilities has decreased, and that most readiness reviews conducted have been Readiness Assessments of facility restart activities. Lessons learned from these Readiness Assessments suggest that additional clarity in expectations for these reviews is needed.

The major changes in the revised Order include: (1) modification of the criteria for when Readiness Reviews and Readiness Assessments are required; (2) amplification and clarification of requirements for conduct of Readiness Assessments; (3) clarification of requirements for DOE oversight; and (4) clarification and movement of all contractor requirements to the Contractor Requirements Document.

The expected benefits of these changes include:

- Requirements for when Operational Readiness Reviews are needed are clearer and less open to incorrect interpretations leading to unnecessary reviews and missed reviews;
- The scope of Readiness Assessments is more clearly defined and thus can be better tailored and made more appropriate to specific startup and restart situations;
- The scope of all readiness reviews will be more consistent as a result of the clarification of the intended scope of each core requirement;
- Requirements for Readiness Review Implementation Plans are clarified which will result in better planning and give more assurance that the readiness reviews evaluate the necessary scope; and
- Increased emphasis and clarification is provided when the level of the review is determined and approved via the Startup Notification Report (SNR).

The revised Order (attachment) has successfully satisfied the process requirements in the DOE Project Plan for Review of the HSS Safety Directives, and was approved for submittal to the RevCom process by the Project Leadership Team on December 17, 2008. Given that the Order was developed using a multi-organizational team representing the three Under Secretaries, and has subsequently been reviewed by a multi-organizational red-team, a RevCom processing time of 45 days is requested, as discussed and approved at the December 17, 2008, meeting of the project Leadership Team. The requirements tracking and technical basis documentation required

by DOE Order 251.1C, *Departmental Directives Program*, is also provided (attachment). This information may be useful and made available to reviewers during the review period.

**IMPACT:**

DOE O 425.1D, *Verification of Readiness to Start Up or Restart Nuclear Facilities*, applies to a broad range of DOE operations. Once implemented, the revised scope and clarity of conduct for Operational Readiness Reviews and Readiness Assessments is anticipated to result in: (1) long-term resource savings by focusing reviews on activities and processes that have changed rather than requiring reviews of all program areas, including those that have not undergone any change; and (2) a more consistent approach that will result in an increased assurance of safety. There will be initial costs associated with implementation of the revised Order, such as costs associated with site readiness review procedure revisions and the training of personnel. The Office of Health, Safety and Security plans to work with the Program and Site Offices to support implementation of the revised Order, including assistance in the development and conduct of training, once the Order is issued.

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DECISION:

Concur: \_\_\_\_\_

Non-concur: \_\_\_\_\_

Timeframe: \_\_\_ 30 days \_\_\_ 45 days \_\_\_ 60 days

Date: \_\_\_\_\_

Attachments:

DOE O 425.1D, *Verification of Readiness to Start Up or Restart Nuclear Facilities*

DOE O 425.1D requirements tracking and technical basis documentation