DEFENSE NUCLEAR FACILITIES SAFETY BOARD

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June 6, 1996

The Honorable Thomas P. Grumbly
Under Secretary of Energy
1000 Independence Avenue, SW
Washington, DC 20585-1000

Dear Mr. Grumbly:

Since the inception of the Department of Energy's (DOE) initiative to revise DOE safety orders and issue new rules, both the Defense Nuclear Facilities Safety Board (Board) and DOE have recognized that it is necessary for DOE to prepare crosswalks which trace the fate of nuclear safety requirements from the original 51 nuclear safety orders of interest to the Board to their ultimate destination. The Board, DOE, DOE contractors, and the public need to know which requirements, if any, have been eliminated intentionally or otherwise, and which have been augmented, diminished, or left unchanged and relocated in revised DOE orders, manuals, rules, directives, standards, or guidance.

During the joint public meeting of the Department of Energy and the Board on September 20, 1995, Mr. Robert Nordhaus, DOE's General Counsel, stated that DOE needed a "crosswalk . . . that will permit any user to go from any requirement in the old orders to the comparable requirement in the new orders, or, in cases where we have dropped the requirement, to know that the requirement has been dropped." He noted that DOE had committed to have the crosswalk out and available before "actually switching over any of the existing contracts from old orders to new orders . . . ." In his letter of December 4, 1995, Mr. Charles B. Curtis, then Under Secretary of DOE, stated that "the Department has determined that contract modifications related to environment, safety and health requirements would not be made prior to the completion of crosswalks, nor would contracts be modified with respect to nuclear safety requirements in advance of an integrated safety review." Mr. Curtis attached to his letter an *Acquisition Letter*, which was circulated to DOE field elements on November 13, 1995. That document reiterated DOE's position on the crosswalks and outlined the procedures for managing the transition from old orders to revised orders and rules through the use of crosswalks and integrated safety reviews.

The Board's staff has analyzed the current status of DOE's crosswalk or "fate map" of requirements and guidance in the original 51 (4 digit) nuclear safety orders of interest to the Board to new (3 digit) orders and proposed rules. As understood from the beginning, an acceptable DOE crosswalk needs to show the final disposition of each of the requirements of an original order to new orders, manuals, rules, notices, policy statements, or other directives, not just list the transferred requirements.

The enclosed summary provides the highlights of the staff analysis of the crosswalk effort to date. Results are briefly described below:

1. For 32 of the 51 nuclear safety orders of interest to the Board (highlighted as Category A), no further action by DOE is considered necessary because either the original order is still in effect and no crosswalk is needed yet, or an acceptable crosswalk has been provided by DOE, and the Board finds that all issues involving the disposition of original order requirements have been resolved.

2. For 9 of the 51 nuclear safety orders of interest to the Board (highlighted as Category B), DOE has not provided an acceptable crosswalk. However, based upon detailed reviews by the Board's staff of the original and new directives, and after extensive discussions with DOE's staff, the Board's staff has constructed fate maps for the Board's safety evaluations. For these orders, the Board's staff find that all issues involving the disposition of original order requirements have been resolved. While there is sufficient information for the Board to make a safety evaluation, DOE may still have difficulty describing the final disposition of requirements for their own purposes. Such crosswalks, for example, should facilitate determinations by DOE field offices and contractors of the contractual and technical management implications of changes. The Board notes that portions of several of these orders transition to new orders and other portions of the same orders transition to proposed rules.

3. For 5 of the 51 nuclear safety orders of interest to the Board (highlighted as Category C), DOE has not provided an acceptable crosswalk and/or the Board's staff has further unresolved issues involving the new orders.

4. Several of the 51 nuclear safety orders of interest to the Board are being converted directly into 8 nuclear safety rules (some highlighted as Category C and others highlighted as Category B). DOE has not yet provided an acceptable crosswalk for these orders because the proposed rules are not in draft final form. The Board's staff also has unresolved issues with several of the proposed rules.

In some cases, DOE has provided crosswalks for revised orders which the Board or its staff have found deficient for substantive safety reasons. In those cases, which are indicated in the comment box on the attachment, the Board assumes that the crosswalk will be revised when a final resolution is reached on the order's content. In any case, in the interest of furthering DOE's orders revision initiative, the Board is prepared to have its staff continue to provide detailed comments on each order listed in the enclosure. The next time we meet, the Board would like a report on the status of the remaining crosswalks being developed by DOE.

Sincerely,

John T. Conway
Chairman

Enclosure

c: Mr. Mark B. Whitaker, Jr.

SUMMARY CROSSWALK DATA FOR DOE NUCLEAR SAFETY ORDER OF INTEREST TO THE BOARD

Order #	Order Title	Superseding Document	DOE Provided an Acceptable Crosswalk?	Board Staff Comments
1300.2A	Department of Energy Technical Standards Program	ORIGINAL ORDER IN EFFECT	n/a	Technology Transfer Improvements Act of 1995 (P.L. #104-113) codifies these requirements; also, DOE policy statement being developed.
1360.2B	Unclassified Computer Security Program	ORIGINAL ORDER IN EFFECT	n/a	Eventually to be subsumed under new *Information Management* Order, but no action to date.
1540.2	Hazardous Material Packaging for Transport - Administrative Procedures	DOE Order 460.1, Packaging and Transportation Safety	NO	Staff finds DOE Order 460.1 to be an improvement over the original Order. Staff has completed a crosswalk.
		DOE Order 460.2, Departmental Materials Transportation and Packaging Management	NO	Staff finds DOE Order 460.2 to be an improvement over the original Order. Staff has completed a crosswalk.
1540.3A	Base Technology for Radioactive Material Transportation Packaging System	DOE Order 460.2, Departmental Materials Transportation and Packaging Management	NO	Staff finds DOE Order 460.2 to be an improvement over the original Order. Staff has completed a crosswalk.
4330.4B	Maintenance Management Program	DOE Order 430.1, Life Cycle Asset Management [for *non-nuclear/non-defense complex* portions of original DOE Order]	n/a	
		Proposed 10 CFR 830.340, Maintenance Management [for remainder of original DOE Order]	NO	Staff has technical issues with the proposed 10 CFR 830.340.
4700.1	Project Management System	DOE Order 430.1, Life Cycle Asset Management	NO	Staff finds DOE Order 430.1 to be an improvement over the original Order. Staff suggests that crosswalk not required; Staff has technical issues with DOE Order 4700.1, and these inadequacies preclude usefulness of a crosswalk.

Order #	Order Title	Superseding Document	DOE Provided an Acceptable Crosswalk?	Board Staff Comments
5000.3B	Occurrence Reporting and Processing of Operations Information	DOE Order 232.1, Occurrence Reporting and Processing of Operations Information [*and* DOE M 232.1-1]	YES	Staff has agreed with DOE on changes to DOE Order 232.1. Final revision not published yet.
		Proposed 10 CFR 830.350, Operational Occurrence Reporting [*and* DOE M 232.1-1]	NO	Final proposed Rule has not been fully drafted.
5400.1	General Environmental Protection Program	ORIGINAL ORDER IN EFFECT	n/a	DRAFT DOE Order 450.1, General Environmental Protection Program, was withdrawn.
		DOE Order 231.1, Environment, Safety, and Health Reporting [for ¶ II.2B, II.4B, II.4C, III.2D, III.3B of original DOE Order]	YES	
5400.2A	Environmental Compliance Issue Coordination	DOE Order 231.1, Environment, Safety, and Health Reporting [for ¶ 5.a.2 and 5.a.7]	YES	
		NONE [Remainder canceled]	n/a	
5400.3	Hazardous and Radioactive Mixed Waste Program	NONE [Canceled]	n/a	
5400.4	Comprehensive Environmental Response, Compensation, and Liability Act Requirements	NONE [Canceled]	n/a	
5400.5	Radiation Protection of the Public and the Environment	DOE Order 231.1, Environment, Safety, and Health Reporting [for ¶ 1.A(3)(a) of original DOE Order]	YES	
		PROPOSED 10 CFR 834, Radiation Protection of the Public and the Environment	NO	Staff has completed a crosswalk.
5440.1E	National Environmental Policy Act Compliance Program	DOE Order 451.1, National Environmental Policy Act Compliance Program	YES	
5480.1B	Environment, Safety and Health Program for Department of Energy Operations	DOE Order 440.1, Worker Protection Management for DOE Federal and Contractor Employees	YES	

Order #	Order Title	Superseding Document	DOE Provided an Acceptable Crosswalk?	Board Staff Comments
5480.3	Safety Requirements for Packaging and Transportation of Hazardous Materials, Hazardous Substances, and Hazardous Wastes	DOE Order 460.1, Packaging and Transportation Safety	NO	Staff finds DOE Order 460.1 to be an improvement over the original Order. Staff has completed a crosswalk.
		DOE Order 231.1, Environment, Safety, and Health Reporting	YES	
5480.4	Environmental Protection, Safety and Health Protection Standards	DOE Order 210.1, Performance Indicators and Analysis of Operations Information	NO	Staff has technical issues with DOE Order 210.1.
		DOE Order 231.1, Environment, Safety, and Health Reporting	YES	
		DOE Order 420.1, Facility Safety	NO	Staff has technical issues with DOE Order 420.1. Mandatory design standards from 5480.4 need to be addressed.
		DOE Order 440.1, Worker Protection Management for DOE Federal and Contractor Employees	YES	
		DOE Order 460.1, Packaging and Transportation Safety	NO	Staff finds DOE Order 460.1 to be an improvement over the original Order. Staff has completed a crosswalk.
5480.5	Safety of Nuclear Facilities	NONE [Canceled]	n/a	
5480.6	Safety of DOE-Owned Nuclear Reactors	10 CFR 830.120, Quality Assurance Requirements [for portions of the Order]	YES	
5480.7A	Fire Protection	DOE Order 420.1, Facility Safety	YES	
		DOE Order 440.1, Worker Protection Management for DOE Federal and Contractor Employees	YES	
5480.8A	Contractor Occupational Medical Program	DOE Order 440.1, Worker Protection Management for DOE Federal and Contractor Employees	YES	

Order #	Order Title	Superseding Document	DOE Provided an Acceptable Crosswalk?	Board Staff Comments
5480.9A	Construction Project Safety and Health Management	DOE Order 210.1, Performance Indicators and Analysis of Operations Information	YES	
		DOE Order 231.1, Environment, Safety, and Health Reporting	YES	
		DOE Order 440.1, Worker Protection Management for DOE Federal and Contractor Employees	YES	
5480.10	Contractor Industrial Hygiene Program	DOE Order 440.1, Worker Protection Management for DOE Federal and Contractor Employees	YES	
5480.11	Radiation Protection for Occupational Workers	10 CFR 835, Occupational Radiation Protection	NO	Staff is discussing aspects of 10 CFR 835 with DOE.
5480.15	DOE Laboratory Accreditation Program for Personnel Dosimetry	DOE N 441.1, Radiological Protection for DOE Activities	NO	
5480.17	Site Safety Representatives	NONE [Canceled]	n/a	
5480.18B	Accreditation of Performance-Based Training for Category A Reactors and Nuclear Facilities	NONE [Canceled]	n/a	
5480.19	Conduct of Operations Requirements for DOE Facilities	PROPOSED 10 CFR 830.310, Conduct of Operations	NO	Staff has reached verbal agreement with DOE on proposed 10 CFR 830.310.
5480.20A	Personnel Selection, Qualification, Training and Staffing Requirements at DOE Reactor and Non-Reactor Nuclear Facilities	PROPOSED 10 CFR 830.330, Training and Qualification	NO	Staff is discussing changes with DOE on proposed 10 CFR 830.330.
5480.21	Unreviewed Safety Questions	PROPOSED 10 CFR 830.112, Unreviewed Safety Questions	NO	Staff is reviewing the proposed 10 CFR 830.112.
5480.22	Technical Safety Requirements	PROPOSED 10 CFR 830.320, Technical Safety Requirements	NO	Staff is reviewing the proposed 10 CFR 830.320.
5480.23	Nuclear Safety Analysis Reports	PROPOSED 10 CFR 830.110, Safety Analysis Reports	NO	Staff is reviewing the proposed 10 CFR 830.110.

Order #	Order Title	Superseding Document	DOE Provided an Acceptable Crosswalk?	Board Staff Comments
5480.24	Nuclear Criticality Safety	DOE Order 210.1, Performance Indicators and Analysis of Operations Information	YES	
		DOE Order 231.1, Environment, Safety, and Health Reporting	YES	
		DOE Order 420.1, Facility Safety	YES	
		DOE Order 440.1, Worker Protection Management for DOE Federal and Contractor Employees	YES	
5480.25	Safety of Accelerator Facilities	ORIGINAL ORDER IN EFFECT	n/a	Revision effort for this Order was not begun until FEB 96.
5480.26	Trending and Analysis of Operations Information Using Performance Indicators	DOE Order 210.1, Performance Indicators and Analysis of Operations Information	NO	Staff has technical issues with DOE Order 210.1.
		DOE Order 231.1, Environment, Safety, and Health Reporting	YES	
		DOE Order 440.1, Worker Protection Management for DOE Federal and Contractor Employees	YES	
5480.28	Natural Phenomena Hazards Mitigation	DOE Order 210.1, Performance Indicators and Analysis of Operations Information	YES	
		DOE Order 231.1, Environment, Safety, and Health Reporting	YES	
		DOE Order 420.1, Facility Safety	YES	Staff has technical issues with DOE Order 420.1 and several NPH Standards.
5480.29	Employee Concerns Management System	ORIGINAL ORDER IN EFFECT	n/a	
5480.30	Nuclear Reactor Safety Design Criteria	ORIGINAL ORDER IN EFFECT	n/a	
5480.31	Startup and Restart of Nuclear Facilities	DOE Order 425.1, Startup and Restart of Nuclear Facilities	YES	

Order #	Order Title	Superseding Document	DOE Provided an Acceptable Crosswalk?	Board Staff Comments
5481.1B	Safety Analysis and Review System	DOE Order 210.1, Performance Indicators and Analysis of Operations Information	YES	
		DOE Order 231.1, Environment, Safety, and Health Reporting	YES	
		DOE Order 440.1, Worker Protection Management for DOE Federal and Contractor Employees	YES	
5482.1B	Environment, Safety, and Health Appraisal Program	DOE Order 440.1, Worker Protection Management for DOE Federal and Contractor Employees	YES	
5483.1A	Occupational Safety and Health Program for DOE Contractor Employees at Government-Owned Contractor-Operated Facilities	DOE Order 210.1, Performance Indicators and Analysis of Operations Information	YES	
		DOE Order 231.1, Environment, Safety, and Health Reporting	YES	
		DOE Order 440.1, Worker Protection Management for DOE Federal and Contractor Employees	YES	
5484.1	Environmental Protection, Safety and Health Protection Information Reporting Requirements	DOE Order 210.1, Performance Indicators and Analysis of Operations Information	YES	
		DOE Order 225.1, Accident Investigations [for ¶ 1 to 5, 6a(1) to (10), 6f(1) to (8), second misnumbered 6f, and Chapters I and II of original DOE Order]	NO	Staff has completed a crosswalk.
		DOE Order 231.1, Environment, Safety, and Health Reporting [for ¶ II.1.E and Chapters III, IV, and V of the original DOE Order]	YES	
5500.1B	Emergency Management System	DOE Order 151.1, Comprehensive Emergency Management System	YES	
5500.2B	Emergency Categories, Classes, and Notification and Reporting Requirements	DOE Order 151.1, Comprehensive Emergency Management System	YES	

Order #	Order Title	Superseding Document	DOE Provided an Acceptable Crosswalk?	Board Staff Comments
5500.3A	Planning and Preparedness for Operational Emergencies	DOE Order 151.1, Comprehensive Emergency Management System	YES	
5500.4A	Public Affairs Policy and Planning Requirements for Emergencies	DOE Order 151.1, Comprehensive Emergency Management System	YES	
5500.7B	Emergency Operating Records Protection	DOE Order 151.1, Comprehensive Emergency Management System	YES	
5500.10	Emergency Readiness Assurance Program	DOE Order 151.1, Comprehensive Emergency Management System	YES	
5700.6C	Quality Assurance	10 CFR 830.120, Quality Assurance	YES	
5820.2A	Radioactive Waste Management	ORIGINAL ORDER IN EFFECT	n/a	DRAFT DOE Order 435.1, Radioactive Waste Management, was withdrawn pending substantial rewrite. Staff has technical issues with DOE Order 5820.2A.
6430.1A	General Design Criteria	DOE Order 420.1, Facility Safety	NO	Staff has technical issues with DOE Order 420.1 related to design guidance.
ALL Orders	Nuclear Safety Definitions included in all Orders	DOE Glossary of Terms	NO	The Glossary is missing many important safety definitions.

KEY:

(= Category A)
- An acceptable DOE Crosswalk has been completed or the original DOE Nuclear Safety Order is in effect.

(= Category B)
- An acceptable DOE Crosswalk has not been completed.
- Board staff have completed a crosswalk, and staff crosswalk issues have been resolved.
- DOE may have difficulty describing the final disposition of requirements.
- Technical issues remain with several DOE Orders and proposed Rules.

(= Category C)
- An acceptable DOE Crosswalk has not been completed and/or technical issues remain with the DOE Orders and proposed Rules.