



**Department of Energy**  
**National Nuclear Security Administration**  
Washington, DC 20585

April 23, 2002

The Honorable John T. Conway  
Chairman  
Defense Nuclear Facilities Safety Board  
625 Indiana Ave., NW  
Suite 700  
Washington, D.C. 20004

Dear Mr. Chairman:

This is in response to your letter of February 22, 2002, requesting that the Department of Energy (DOE) provide a report within 60 days that addresses the following two items:

- The status of implementation of DOE Order 420.1, *Facility Safety*, at each National Nuclear Security Administration (NNSA) site having defense nuclear facilities
- For those sites that do not use the implementation guides and standards referenced in DOE Order 420.1, a description of the alternative methods being employed

Consistent with DOE Acquisition Regulations, in performing work at NNSA sites, the contractor must comply with the requirements of those DOE directives, or parts thereof, identified in the List of Applicable Directives (List B) appended to the individual contract. As such, the identification and implementation of appropriate requirements, codes and standards is an integral part of Integrated Safety Management. In addressing the first item above, we have specifically verified that DOE Order 420.1 is in the contract at each NNSA site. The specifics for each site are provided in the enclosed table.

With respect to adopting the implementation guides associated with DOE Order 420.1, our overall expectation is that each contractor will follow the codes and standards contained in the guides or provide justification for alternative methods. In most instances, the contractor's implementing documents (such as design manuals, design requirement documents, and procedures) are not explicitly part of the contract. Additionally, consistent with the overall DOE approach for using implementation guides, we do not require that a set of technically equivalent codes and standards be mandated. Thus, we allow our local NNSA personnel to work with their respective contractors to determine what is necessary and sufficient in terms of specific design codes, standards, and requirements, and to reach agreement regarding the need for any local NNSA review and approval of such documents. To address the second item above, the enclosed table identifies the status of how each contractor implements the level of detail contained in the DOE Order 420.1 implementation guides.



As your letter correctly states, the implementation of DOE Order 420.1 and the guidance referenced by the Order is important for sites designing new facilities, particularly nuclear facilities. As NNSA has a number of mission significant nuclear facilities under design consideration, it is important that our local NNSA personnel request that each contractor develop a more complete crosswalk between the codes and standards in the implementation guide and those in the appropriate contractor documents (design manual, design criteria, procedures). Such a crosswalk will also provide for a more complete understanding of any alternative mechanisms being employed by our contractors in terms of specific codes, standards, and guides. I have requested that this effort be completed within 6 months, and will have site NNSA staff work with your staff to review these results as needed.

Should you have any questions, please contact me or have your staff contact Mr. Samuel Johnson at (301) 903-5520.

Sincerely,



Everet H. Beckner  
Deputy Administrator  
for Defense Programs

Enclosure

cc: M. Whitaker  
S-3.1

**Implementation of DOE Order 420.1, Facility Safety  
at National Nuclear Security Administration Sites**

NNSA Site DOE Order 420.1 Contract Status		Status of Implementation Guide (IG) Usage (DOE G 420.1-1)	Comments
LANL	Yes	Some codes and standards in IG listed in contract thru Work Smart Standard set. Many codes and standards in IG are included in LANL implementing documents (Laboratory Performance Requirements, Laboratory Implementation Requirements, Lab Implementation Guidance, LANL Engineering Manual).	Some exceptions to Order have been taken. Crosswalk of codes and standards in IG and LANL implementing documents under development.
LLNL	Yes	Some codes and standards in IG listed in contract thru Work Smart Standard set. Supplementary LLNL Design Criteria are also available (LLNL Engineering Design Standards and Specifications).	Some exceptions and exclusions to Order have been taken. Crosswalk of codes and standards in IG and LLNL implementing documents available.
NV	Yes	Codes and standards are contained in contractor implementing standards.	Order recently added to contract. Crosswalk of codes and standards in IG has not been completed.
Pantex	Partial	Some codes and standards in IG listed in contract thru S/RID set. Some codes and standards in IG listed in Fire Protection Design Criteria Manuals and Plant standards.	Contract does not contain DOE Order 420.1 Natural Phenomena Section (using previous DOE Order). Remaining sections of Order in contract with some exceptions, exclusions, equivalencies, or caveats. Crosswalk between IG and implementing standards for Weapon Process Equipment has not been completed.

OR-Y12	Yes	Codes and standards listed in the IG are largely included in implementing documents. Master Design Criteria under revision and will more completely map IG codes and standards.	No exclusions taken to the Order. Crosswalk of codes and standards in IG part of plan to revise Master Design Criteria.
ORNL (3019)	Yes	Currently there is no reference document that specifically implements the codes and standards in the IG. No current plans for new nuclear facilities or significant modifications.	No exclusions taken to the Order. No crosswalk has been completed to the codes and standard in the IG.
SNL	Yes	Many codes and standards in IG are included in SNL implementing documents (specifications, design manuals, design criteria documents).	Order 420.1 Change 3 under review to assess any needed contract changes. A formal crosswalk of codes and standards in IG has not been completed.
SRS-Tritium	Yes	Many codes and standards in IG part of several Functional Area S/RIDs. Site wide manuals and procedures also contain reference to codes and standards.	Some Order requirements were slightly modified and/or expanded. Crosswalk of requirements in S/RIDs and implementing manuals is complete.