

[DOE LETTERHEAD]

July 6, 1995

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

Dear Mr. Conway:

This letter is in response to your letter dated [February 3, 1995](#), regarding the proposed revision to Department of Energy (DOE) Order 4700.1, Project Management System.

Since your letter was received, members of your staff and mine have been in frequent consultation to obtain a better understanding as to how the Department is progressing toward more effective project and facilities management. Numerous meetings between the two staffs have resulted in an open dialogue to discuss the use of systems engineering principles and practices in managing projects at DOE. I believe we agree that the goals of safe, cost effective project and facilities management are mutual and that systems engineering principles and practices can contribute to those goals. Six field guides describing systems engineering principles and practices are now being developed for use by DOE field managers as a result of the dialogue that has taken place between our staffs. It is worth noting that a systems engineering study was performed, which led to the submission of a report to your staff ([Enclosure 1](#)). This report sets the direction for standard practices that are being used as the basis for developing the DOE Good Practice Guides pertaining to systems engineering.

After receiving your letter, the Department decided to embark on a further reduction of its orders to encourage efficiency in the way it carries out its business. This effort recognizes that the health and safety of contractors and the public is paramount to the Department's success and those requirements are being addressed in the appropriate orders. A Process Improvement Team was chartered to develop one order from 14 existing orders including DOE Order 4700.1 that would provide "cradle to grave" acquisition management of our assets. This team recommended that the efforts of the proposed revision to the DOE Order 4700.1, Project Management System, be included in a performance based order called the Life Cycle Asset Management Directive which is found as a final draft in [Enclosure 2](#). A systematic analysis of safety and health related referenced requirements found in DOE Order 4700.1 was performed at the request of Mr. David Lowe of your staff. This analysis, dated June 27, 1995, is provided in [Enclosure 3](#).

The current DOE Order 4700.1 will be in effect at each site until the Life Cycle Asset Management Directive is incorporated in current contracts and site-specific performance criteria and a performance measurement system have been established. The Life Cycle Asset Management Directive recognizes eleven top level project management requirements that are designed to ensure a systematic and effective; cradle to grave; approach on all the Department's facilities and engineered systems from inception through project development, maintenance and operations, and decommissioning or disposal. The final draft of DOE Order 4700.1 is being converted into a summary level good practice guide, which will provide DOE personnel with a recommended approach to project management.

The first point in your letter regarding the need for a technically sound systems engineering process to ensure an overall integrated approach to project management is well taken. Basic project requirements are included on the draft Life Cycle Asset Management Directive, including acceptance criteria after each project phase and systems engineering requirements such as maintainability, operability, life-cycle costs and configuration

integrity. The basic approach of the Life Cycle Asset Management Directive is to minimize project and facilities management requirements in recognition that specific performance objectives and measures shall be included in contracts in lieu of across-the-board requirements previously found in the Department's orders. Field managers will be empowered to select appropriate and needed tools and techniques in managing projects and facilities to ensure protection of public health and safety and cost effectiveness.

The second point in your letter suggested that the draft DOE Order 4700.1 did not specifically address an adequate management structure to ensure systems engineering requirements are properly executed. As a result, the Life Cycle Asset Management Directive will identify project management responsibilities for ensuring that good business practices are followed during the life of an operation or facility. This management structure will be further strengthened with the planned development of the good practice guide, which describes the responsibilities of organizations through a technique known as a responsibility assignment matrix. The development of the described good practice guide and the completion of Departmental qualification standards for project managers are specifically designed to address your comment involving contract technical management issues set forth in your fifth point.

Your third point relates to the promotion of standardized DOE-wide processes for process development and system management. Consistent direction for project management is a principle objective of the draft Life Cycle Asset Management Directive and the Project Management Good Practice Guide. The strategic system guidance mentioned previously will direct Secretarial Officers with Program Responsibilities and field organizations to establish lower level decision boards equivalent to the Energy Systems Acquisition Advisory Board at the Secretary level. This guidance also will include critical decision acceptance criteria and general guidelines for project decisionmaking. Factors for acceptance include systems engineering based considerations, such as technical requirements planning, trade-off analyses and test planning. The use of qualification standards now being developed which include systems engineering proficiency will be used on an individual grade and series basis to ensure field project managers are adequately qualified to perform project management functions. Also, a schedule to develop Good Practice Guides for various project management tools and techniques has been drafted to accomplish the need for describing various methods to meet the requirements in the draft revised order. Our goal is to issue the guides by December 1995.

Although I appreciate the value that rigorous systems engineering standards can have for development of large complex systems, I am advised that it might not prove to be cost effective to apply these same systems engineering standards across-the-board in the Department. The Department executes projects that range in cost from several hundred thousand to several or more billion dollars. Systems engineering standards are currently being developed for inclusion in Project Management Good Practice Guides that consider Department of Defense standards including those found in EIA-IS-632 referred to in points four and five of your letter. Evaluation of the EIA-IS-632 standard has revealed that most techniques described in the standard (approximately 26 of 38) are adaptable to the Department's projects and the 16 reviews described are largely appropriate using a graded approach. The evaluation study report was provided to you on June 19, 1995. The Department is currently forming a systems engineering guidance team to develop guides that address the applicable techniques found in EIA-IS-632. This team will describe integrated processes, engineering management methods, design/development review, test and evaluation processes, and the like.

As the Department continues to work towards more efficient and effective approaches to managing programs, projects, and capital assets, I value discussions with you and your staff as an aid to the development of management approaches that will assure success.

Sincerely,

Charles B. Curtis

Enclosures