



Department of Energy

Washington, DC 20585

June 27, 1995

Mr. David Lowe
Defense Nuclear Facilities Safety Board
625 Indiana Avenue, N.W.
Suite 700
Washington, DC 20004

Dear Mr. Lowe:

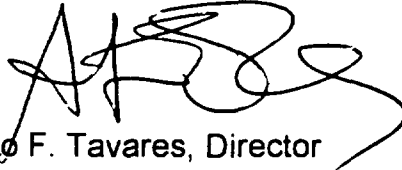
This letter is in response to your concern expressed in our April 19th meeting in which we discussed developing Department of Energy (DOE) policies regarding project and facilities management. As you recall, your concern pertained to the process taken during the project management policy revamp and how safety and health requirements referenced in existing policy were dispositioned.

A DOE process improvement team took a systematic approach to improve the DOE's project management policies and requirements. The team devised a top-down strategy for an improved Project Management Order with clear, concise requirements which will not be issued as an Order due to the development of the Life Cycle Asset Management (LCAM) Order.

In the development of the Project Management Order, 4700.1, the team determined that the best approach was to avoid reiterating requirements of other Orders, and recognized that particular Environmental, Safety & Health (ES&H) requirements should be excluded from project and facilities management policies. Enclosure 1 provides several examples of ES&H requirements in DOE 4700.1 which are not part of the Life Cycle Asset Management draft Order because they are redundant with other Orders. However, the draft LCAM Order recognizes additional requirements pertaining to ES&H which are the responsibility of the Assistant Secretary for Environment, Safety and Health to develop and maintain. The team decided that if additional clarification was necessary, it would be developed as part of the guidance documents. A synopsis of the process followed by DOE in reengineering the project management requirements is provided in Enclosure 2, and further refined as a part of the LCAM development effort.



Should you have any questions or require additional information concerning this issue, please contact Randall Wolff at 202/586-1796.

A handwritten signature in black ink, appearing to read 'AT', with a large, stylized flourish extending to the right.

Antonio F. Tavares, Director
Office of Infrastructure Acquisition Services
Office of the Associate Deputy Secretary
for Field Management

Enclosures

cc:

M. Whitaker, EH-9

ENCLOSURE 1: EXAMPLES OF REDUNDANT REQUIREMENTS

DOE Order 4700.1, Change 1	Related Orders
<p>1. <u>Chapter II, Part F, Paragraph 3.b.(2)(b): (Page II-34):</u></p> <p>"The line program organization is responsible for preparing safety analyses, obtaining an independent review of each safety analysis, and authorizing the construction operation and subsequent significant modification, including decommissioning, of each DOE operation."</p>	<p><u>DOE Order 5481.1B, Safety Analysis and Review System, Chapter I, Paragraph 2.a.(1) and (2):</u></p> <p>(1) "Require preparation of appropriate safety analysis for each DOE operation and subsequent significant modifications, including decommissioning." (2) "Ensure that an independent review of each safety analyses is performed."</p>
<p>2. <u>Chapter II, Part F, Paragraph 3.b.(2)(c): (Page II-34):</u></p> <p>"The Assistant Secretary for Environment, Safety, and Health is responsible for providing independent assurance that line program organization responsibilities are fulfilled and as a part of this responsibility, conducts independent appraisals of line program safety analysis and review system activities."</p>	<p><u>DOE Order 5481.1B, Safety Analysis and Review System, Chapter I, Paragraph 2.b.:</u></p> <p>"Assistant Secretary for Environment, Safety, and Health, is responsible for providing independent assurance that the line organization responsibilities are fulfilled in an effective and generally uniform manner."</p>
<p>3. <u>Chapter II, Part F, Paragraph 2.a.: (Page II-31):</u></p> <p>"The Assistant Secretary for Environment, Safety, and Health, in consultation with the General Counsel provides assistance and judgements concerning environmental factors that should be considered in program / planning and in the acquisition of projects."</p>	<p><u>DOE 5440.1E, National Environmental Policy Act Compliance Program, Paragraph 6.d.(1) and (8):</u></p> <p>(1) "Provide Departmental oversight and guidance on NEPA-related matters to ensure consistency in the agencywide application of NEPA." (8) "Determine, after consulting with the Office of General Counsel (GC-11), the level of NEPA review required for proposed DOE actions"</p>
<p>4. <u>Chapter II, Part F, Paragraph 4.g.: (Page II-38):</u></p> <p>"The following National Environmental Policy Act (NEPA) control milestones shall be included, as a minimum, as Level 1 Control Milestones in the project schedule baseline unless specifically excluded at KD No. 1:</p> <p>Issue Categorical Exclusion (CX); Submit Environmental Assessment (EA); Issue Finding of No Significant Impact (EIS),"</p>	<p><u>DOE 5440.1E, National Environmental Policy Act Compliance Program, Paragraph 6.d.(6):</u></p> <p>"Ensure that NEPA milestones (categorical exclusion (cx); EA, FONSI; or NOI, draft EIS, final EIS (ROD) have been incorporated into project planning documents, including those prepared under the project management system administered by the Office of Procurement, Assistance and Program Management (PR) through DOE 4700.1."</p>

ENCLOSURE 2: PROCESS SYNOPSIS

The first team meeting was devoted to studying the system and identifying associated problems. The team reviewed the system thoroughly and developed improvement objectives based on the widespread problems. The team analyzed problems, explored alternative solutions, and chose the best solution to eliminate the root causes of the problems. Part of the solution included developing two tiers of documents; a new, improved project management system Order, and a set of independent guidance documents citing good business practices in specific disciplines.

The team used a general approach that applies to almost all situations in process improvement. This approach recognizes that most system problems arise from six sources;

1. Inadequate knowledge of how a process does work.
2. Inadequate knowledge of how a process should work.
3. Errors and mistakes in executing procedures.
4. Current practices that fail to recognize the need for preventive measures.
5. Attitudes that encourage unnecessary steps and wasteful measures.
6. Variation in inputs and outputs.

To increase the likelihood of success, the team tackled problems in order of difficulty by peeling off layers of problems from the simplest to the more difficult. The first step was to understand the system—how it operates, what it is suppose to accomplish, who its customers are and what they expect. The team carefully analyzed how the existing system works, diagramed it¹, and identified key elements for managing projects.² The second step involved identifying the customer needs and concerns. The team surveyed customers and participants to focus the team on the purpose of its work.³ This data also helped define the type and frequency of problems occurring throughout the system. With this knowledge, the team developed a functional model⁴ of how the system should work through a method known as the functional analysis system technique (FAST).

Using the model as its foundation, the team began building requirements into it for an improved system. The team chose to start with a "clean sheet" perspective to avoid being confined or limited by the existing requirements. It first developed a series of broad policy statements based on basic principles derived from the FAST process. The team then expanded these into an initial set of general requirements.⁵

To be comprehensive and complete, the team cross-checked the initial requirements against the 6000 plus requirements of DOE 4700.1 and other project management-related Orders. A set of criteria⁶ was established to provide consistency in screening the large amount of information. Each statement had to meet this criteria to be considered for the new Order. This analysis also provided a means for the team to disposition the applicability of all current requirements⁷ and identify guidance topics⁸.

During the requirements definition, the team identified many requirements in the DOE 4700.1 which were redundant with those of other Orders, especially in the area of

environmental, safety, and health. The team found the cause in most cases to be attributable to what they would call "external requirements". These requirements integrate with project management, but they are part of other DOE systems and programs that do not intrinsically form the project management system (e.g. Field Budget Process—National Environmental Policy Act Compliance Program—Safety Analysis and Review System—Environmental, Safety, and Health Program).

When the team finished compiling all the relevant project management requirements, it selected and integrated the necessary and essential ones into a model system. The team completed its effort by building a detailed diagram of the new improved system and refining the requirements for content and clarity. The resulting model⁹ and set of 190 requirements¹⁰ established an integrated, systematic approach to project management that ensures effective and efficient planning, execution, control, and review all of the Departmental projects.

In a separate initiative to develop a Life Cycle Asset Management (LCAM) Order for the Department, a further refinement of the previous work yielded 11 minimum requirements for project management. These are to become part of the LCAM Order recognizing that the basic project management process will be provided in an overview guide.

Endnotes:

1. Project Management System Policy Flow Chart derived from DOE 4700.1, Change-1, dated June 2, 1992. (PIT 1 Meeting)
2. Summary of DOE 4700.1 Project Management System Key Elements (PIT 1 Meeting)
3. DOE 4700.1 Customer Survey Results (PIT 3 Meeting)
4. DOE Project Management System "To-Be" Model (PIT 1 Meeting)
5. Initial Draft Policy for DOE Project Management System (PIT 2 Meeting)
6. Requirements Criteria for Selective Analysis (PIT 3 Meeting)
7. Disposition Table of DOE 4700.1 Requirements (PIT 4 Meeting)
8. Policy-Guidance Separation Matrix (PIT 4 Meeting)
9. Improved DOE Project Management System Diagram (PIT 6 Meeting)
10. Draft DOE 4700.1A, Project Management System (PIT 7 Meeting)