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DEFENSE NUCLEAR FACILITIES SAFETY BOARD

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October 7, 1997

The Honorable **Federico F. Peña**
Secretary of Energy
1000 Independence Avenue, SW
Washington, D.C. 20585-1000

Dear **Secretary Peña**:

The Defense Nuclear Facilities Safety Board (Board) has been reviewing the Functions, Responsibilities, and Authorities Manuals (**FRAMs**) dated July 31, 1997. These FRAMs were developed by the Department of Energy (DOE) as part of the establishment of an integrated **safety** management program as recommended by the Board in its Recommendation 95-2. The Board understands that these documents are intended to capture the way DOE is presently organized for discharging its safety responsibilities.

The decision by DOE to fragment the FRAM document into an overlying Level 1 **FRAM** and a number of Level 2 FRAMs has introduced a great deal of redundancy which is superposed on apparent redundancies also inherent in the DOE safety management system. The redundancies that result from the need for Level 2 FRAMs to repeat some of the contents of the Level 1 FRAM contribute to a voluminous structure of the overall **FRAM**, which comprises a stack of paper approximately 13 centimeters high, and which substantially exceeds in size the Functions, Authorities and Responsibilities (FAR) Manual it is to replace.

The Board questions the utility to DOE of this voluminous set of documents, and even more important, the effectiveness of a safety management program whose definition requires so much volume. The documents add credence to the observation of the Institute for Defense Analysis in its 1997 Report D-3306, *Organization and Management of the Nuclear Weapons Program*, that safety management by DOE and its contractors could benefit from substantial restructuring. The Board understands that in response to a number of critiques over the past several years and because of budgetary pressures, DOE plans to reexamine the way it is managing the safety of its contractor programs.

The Board has developed some detailed comments on the **draft** FRAMs which are provided in Enclosure 1 to this letter. The Board wishes also to state some of the broader issues.

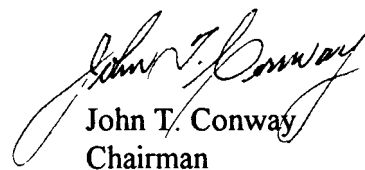
- Under the Atomic Energy Act, ultimate authority over the safety of DOE's activities rests with the Secretary of Energy. If this authority is to be delegated to the Deputy Secretary or to the Under Secretary (the latter is the choice stated in the **FRAM**), the **Board** believes certain high-level safety management **functions** should accompany that delegation. Among these would be authority to assure the discharge of commitments made by the Secretary in response to the Board's Recommendations, and resolution of

differences within DOE on issues identified by the independent Environment, Safety, and Health oversight secretarial office.

- . Every senior individual within DOE assigned safety management responsibilities should be able to discern from the **FRAM** what these responsibilities are without ambiguity. As currently formatted, **responsibilities** are distributed throughout the entire **FRAM**. As one possibility to resolve this difficulty, the Board suggests some form of computerized indexing of key **functions** and responsibilities.
- . In every large **organization**, authorities and responsibilities flow downward through the organizational structure by a process of delegation until they arrive at some individual or unit assigned the job of performing a particular **function**. An important objective of a document such as the **FRAM** is to **clarify** where that assignment rests with respect to each type of **function**. Enclosure 2 to **this** letter is a list of the major **functions** of a safety management **program**, in the form of key safety management elements. The **FRAM** will accomplish its purpose only if it unambiguously informs the reader where each assignment of **functional** responsibility rests. The Board is not convinced at this time that this purpose has been met.
- . The **FRAMs** have been characterized by DOE as describing the way DOE **functions** and not necessarily the way DOE directives require DOE to **function**. Differences between the **FRAMs** and the directives need to be identified and resolved quickly.

The Board stands ready to continue its interaction with DOE on this important matter. We expect DOE to continue to work on this issue and to provide the Board with updates of the **FRAMs** as organizational safety assignments become better defined. If you have any questions, please let me know.

Sincerely,



John T. Conway
Chairman

Enclosures

c: Mr. John Angell
Mr. Mark B. Whitaker, Jr.
Mr. Richard Crowe

Enclosure 1

Comments on the Department of Energy (DOE) Functions, Responsibilities, and Authorities Manuals (FRAMs)

1. Comprehensive Coverage of Functional Area Responsibilities in DOE Directives, Level 1 FRAM

- a. During development of the “3-digit” Orders, DOE committed to **carrying** many DOE responsibilities (e.g., criticality safety, radiological protection, Safety Analysis Reports, contractor training) over from older Orders for incorporation in the **FRAM**. However, the identification of variances between the assignment of responsibilities in the Orders and the **FRAM**, as described in the DOE forwarding letter, appears to focus only on the “recently revised DOE Orders.” This focus may miss some responsibilities in the old Orders that are not replaced by new ones **and** that also represent variances in the **FRAM**.
- b. The Level 1 **FRAM** does not **identify** the **office** of primary responsibility/interest for the various DOE directives. As one of several examples, one cannot determine from the **FRAM** who at DOE is technically responsible for policy, guidance, etc., for emergency management (see the suggested structure of responsibilities in Enclosure 2).
- c. Currently, most of the **FRAMs**, including the Level 1 (corporate) **FRAM**, list responsibilities by the five safety management **functions**. This structure will significantly complicate the search for all of an individual manager’s or organization’s assigned responsibilities. Use of a relational database, as has been done for the Rocky Flats Field **Office FRAM**, would facilitate identification and display of all assigned responsibilities for a particular organization or in a particular fictional area, such as the Unreviewed Safety Question process.

2. Comprehensive Coverage of Functional Area Responsibilities, Level 2 FRAMs

The Level 2 **FRAMs** vary widely in the extent to which they incorporate detailed responsibilities in **functional** areas from DOE safety directives. For example, the DOE Savannah River and Oakland Operations **Office FRAMs** incorporate essentially no detailed fictional area responsibilities.

3. Incorporation of Integrated Safety Management Concepts

- a. The Level 1 **FRAM** does not fully formalize the direction provided in a letter dated February 21, 1997, from the Under Secretary of Energy, concerning the protocol for review of safety management system (**SMS**) descriptions. For example, responsibilities are missing for the following: Cognizant Secretarial Officers (**CSOs**) to concur in the composition of **SMS** review teams; **CSOs** and Field Element Managers (**FEMs**) to revise Technical Qualification Program standards to include principles of integrated safety

management; CSOS and FEMs to establish a system of mentoring of review team members, including interface with the Core Technical Group; and FEMs to provide guidance to their sites on tailoring the scope, defining expectations, and scheduling for each SMS review.

- b. While the concept of “authorizing protocols” for authorizing individual scopes of work is included, there is no FEM responsibility to develop and approve such protocols.
- c. A **fundamental** principle of Integrated Safety Management is line management responsibility for safety. Over-dependence on teams for the accomplishment of safety management functions, with an associated diminishment of line management accountability, will not **fulfill** this principle. This seems to be implied in some of the FRAMs’ discussions. The ultimate discharge of responsibilities may include formation of teams with membership from different levels of management; that may foster buy-in of decisions. But the responsibilities and authorities must be assigned in a line structure.

4. Integration of Safety Management Initiatives

The Level 1 FRAM does not **identify** how the Office of the Secretary deals with cross-cutting safety issues, such as integration of safety management initiatives undertaken by secretarial offices that potentially affect a wider segment of the DOE complex. This issue was acknowledged by DOE in the letter to the Board forwarding the FRAMs.

5. Integration Among FRAMs

Integration among all the **FRAMs** needs to be significantly improved. The responsibilities assigned in the Level 1 FRAM should flow down to the appropriate organizations and individuals, but are not consistently represented in the Level 2 **FRAMs**. The interfaces between the various Level 2 FRAMs (e.g., between the **FRAMs** of the Office of Defense Programs and the Albuquerque Operations **Office**, and between the **FRAMs** of the **Office** of Environment, Safety, and Health and the **Offices** of Defense Programs and Environmental Management) are not well coordinated.

Enclosure 2

Illustration: Safety Management Responsibilities Matrix*

Key Safety Management Elements	DOE Office Responsible
<p><requirements</p> <ul style="list-style-type: none"> • Directives (policies, Rules, Orders, Standards) <p>requirement Derivatives</p> <ul style="list-style-type: none"> • DOE Acquisition Regulation Clause Responses <ul style="list-style-type: none"> Integrated Safety Management System Descriptions Applicable Requirements List Standards/Requirements Identification Document Rule Implementation Plans Order Implementation Manuals <p>Work Planning/Safety Planning</p> <ul style="list-style-type: none"> • Operations Defined • Engineering (Work Plan) • Safety Plan <ul style="list-style-type: none"> Safety Analysis/Documentation—Public, Workers, Environment Control Measures (Safety Envelope— Public, Workers, Environment) <ul style="list-style-type: none"> • Implementation <ul style="list-style-type: none"> - Operational Preparations - Organizational Structure - Procedures/Instruction Training & Qualification - Readiness Reviews <ul style="list-style-type: none"> • Work Authorization <ul style="list-style-type: none"> - Work Performance - Configuration Management - Conduct of Operations - Maintenance <ul style="list-style-type: none"> Assessment & Feedback - Site Infrastructure Support - Emergency Management 	

*Note: Illustrative, not necessarily totally comprehensive