

LOCKHEED

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Secretary, U.S. Nuclear Regulatory Commission ATTN: Rulemakings and Adjudications Staff Washington, DC 20555-0001

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COMMENTS ON PROPOSED RULE CHANGE AT 10 CFR 50.59 AND 72.48 - MLC-01-98

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Dear Sir:

Lockheed Martin Idaho Technologies Company (LMITCO) is the Department of Energy's (DOE) Management & Operating Contractor for the Idaho National Engineering & Environmental Laboratory (INEEL). The DOE is the license applicant for two licenses pursuant to 10 CFR Part 72; and LMITCO is assigned several responsibilities relating to these license applications and the expected licensed operations. Provided below are LMITCO's comments to the proposed rule change published on October 21, 1998 in the Federal Register at Vol. 63, Pages 56098-56125. The opportunity to comment on such a significant effort to improve the regulations and the consideration of such comments is appreciated.

COMMENT 1. The term "FSAR" should not be used in Part 72.

#### **Basis for Comment 1.**

Because the approval of Part 72 SARs is not a two-step process, the addition of the term "FSAR" to Part 72 could be confusing (specifically, there is no Part 72 use of the term PSAR). It is our understanding that once a site-specific ISFSI SAR is approved, changes made during design, construction, and operation require 72.48 evaluations; and the SAR must be periodically updated Discussion of an FSAR in Part 72 associated with the submittal after design and construction might imply an NRC re-review or an additional licensing action (rather than a reporting requirement to insure that an updated SAR is provided). The discussion of an FSAR could also imply that the 72.48 process is not required to evaluate changes until the licensee has an FSAR.

Spent fuel storage in an ISFSI represents a significantly lower amount of risk compared to operating a power reactor (the operations and design are far simpler and there are relatively few controversial issues). Therefore, a one step licensing procedure requiring only one application and one SAR should be retained in Part 72. If 72.48 does not apply to an approved SAR before submittal of the FSAR and if the final SAR must be submitted for approval as an FSAR, then there is less incentive to request approval of an ISFSI SAR before ISFSI construction.

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The proposed rulemaking at Section 72.70 could be interpreted as indicating the Commission intends to adopt the Part 50 two-part license application or safety analysis report expectations. Our understanding of the current rules at Part 72 are:

- Initial submittal and all updates of the SAR consider both (1) ISFSI (design and) construction and (2) ISFSI operation.
- The submittal at least 90 days before loading is not for the purposes of additional Commission review and approval but is meant to assure the Commission that the changes made during design and construction have been completely identified at least 90 days before loading.
- The license applicant may proceed with construction by assuming the risks that the Commission may not approve the originally submitted design.

Clarification is also requested concerning the format requirements in the proposed 72.70(c). It appears that by specifying replacement-page basis for FSAR updates, replacement-page basis is not expected during the semiannual SAR updates provided before preoperational testing.

#### **Basis for Comment 2.**

While the proposed rule does improve the threshold. used for objective safety and regulatory thresholds for determining when a license amendment is required, it fails to establish or even allow licensee-establishment of thresholds for the scope of the SAR subject to these evaluations. These evaluations are expensive; therefore, scope threshold is an important issue. What is recommended for consideration is a 72.48/50.59 program which allows each licensee to define the scope of the SAR subject to the 72.48/50.59 change controls. Scope definition could be included in existing licensee programs which already include implementing procedures, training, and defined roles and responsibilities. Scope definition could be implemented by establishing a process such as existing (and effective and risk-informed) licensee screening processes. Scope definition could also be implemented by defining the SAR sections which form the Bases for the Technical Specifications (in other words, by defining the SAR sections "associated with the Technical Specifications").

The willingness of NRC staff to discuss exclusion/removal of certain types of material from the SAR appears related to the concept that some information in the SAR shouldn't be covered by 72.48 or 50.59. Yet there are advantages to having the SAR as a single place for more facility information. Would it be reasonable for a licensee to define (in the SAR) (1) the licensee's 72.48 program describing the administrative controls over 72.48 and (2) which parts of the SAR are covered by 72.48? Such a program could even be made subject to "change in effectiveness evaluations" used to implement 72.44(e) and (f).

In conjunction with specifying which parts of the SAR are subject to 72.48, the licensees could specify which programs (described in the SAR or incorporated into the SAR by reference) are subject to controls comparable to 72.44(e) and (f), instead of using the 72.48 change control. Some plants do 50.59s when they change management assignments, organizational structure, or changes to programs described in the SAR. Using 72.48/50.59 to evaluate changes in programs is the least appropriate regulatory screen available: on the one hand, how could any programmatic or administrative or personnel change directly affect the configuration of the facility? So a reasonable 72.48 analysis applied to program changes should always result in the "no license amendment required" conclusion. How effective is that? Nothing in the 72.48/50.59 criteria lends itself to consideration of the contribution by programs to the "assurance" of nuclear safety because 72.48/50.59 is geared towards consideration of configuration rather than the assurance of configuration. Yet, a change in a program described in the SAR leading to an obvious decrease in effectiveness would have to be questioned by the regulator. But the basis for the regulator's complaint (in the form of a 72.48/50.59 violation) would be a stretch of the regulations and would inevitably lead to less consistent interpretation of the regulations by the several licensees and the regulator personnel.

**COMMENT 3.** Switch the order of 72.48(a)(2) and 72.48(a)(3).

## **Basis for Comment 3.**

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This change would result in the definitions for "SAR" and "facility" being in the same order in both Parts and would ease the comparison of the regulations at Part 50 and Part 72 (which could be important during discussions among licensing/compliance staff with backgrounds in Part 50 activities working on Part 72 projects, for example).

**COMMENT 4.** Upon resolution of comments and update of the statements of consideration in the publishing of the final rule change, it is requested that the information in Section II of SUPPLEMENTARY INFORMATION be used to update draft NUREG-1606. Alternatively, the Commission should expedite the resolution of comments with NEI and endorse the Institute's guidance.

### **Basis for Comment 4.**

It is noted from a review of SECY-98-171 that draft NUREG-1606 will not be made final. In light of the number of comments on the draft NUREG (and the implied interest in a consensus on the issues in the draft NUREG) it is requested that, if appropriate, the Commission reconsider maintaining this guidance document instead of beginning a new process. It is noted that much of the information in Section II of SUPPLEMENTARY INFORMATION in the proposed rule was provided in an outline similar to the draft NUREG-1606.

**COMMENT 5.** All discussion of "interdependent" changes be should deleted from the proposed rule changes. Instead, all licensees should be encouraged to link multiple changes having a net increase in safety margins for a facility; and licensees with adequate margins of safety should be allowed to link multiple changes having a net minimal increase in risk.

## **Basis for Comment 5.**

After studying the discussions provided in the SUPPLEMENTARY INFORMATION in the proposed rule and in SECY-98-171, it appears the definition of "interdependent" could be the subject of considerable confusion (considerable regulatory expense) without a corresponding safety benefit.

What is the regulatory or safety basis for restricting linkage of changes to those changes meeting the poorly defined interdependency criterion. A review of the SUPPLEMENTARY INFORMATION in the proposed rule and in SECY-98-171 did not yield the basis for such a restriction and did not yield a clear definition with which a licensee could develop implementing procedures.

With respect to linking changes and limiting the linkage of multiple changes to those considered "interdependent," consider the potential benefit of reducing total plant or facility risk. This potential benefit is less likely to be realized if a licensee is required to pursue a license amendment unless the potential benefit (cost savings) is very large. The Commission could use linking as an economic driver to accelerate improvements in higher risk facilities. Facilities meeting a low total risk threshold could link any changes while meeting a "minimal increase in risk" standard while facilities characterized by a relatively high total risk would be allowed to link changes only if there was at least a "minimal decrease in risk." Such a regulation could provide a licensee of a relatively high risk facility a real incentive to invest in the facility changes needed to achieve the Commission's risk reduction objectives.

Because ISFSIs have very low risk thresholds (compared to power reactors), ISFSIs should be permitted to link changes without restriction.

**COMMENT 6.** Resolve the issue of Cumulative Effect of several changes with minimal increase (bottom of Issue G) by requiring the linkage of changes.

## Basis for Comment 6.

The phrase "and safety analyses performed pursuant to Secs. 72.56 or Sec. 72.244" [corresponding Part wording is "and safety analyses performed pursuant to Sec. 50.90"] used in six of the license amendment criteria makes it appear that a licensee could prepare a license amendment pursuant to 72.56 or 72.244 [50.90] and use the associated safety analysis for subsequent changes permitted by 72.48 [50.59] before the license amendment is approved.

**COMMENT 7.** Adopt Option 2 for Issue J (margin of safety associated with technical specification). If Option 2 is not selected, the Commission's concept of "minimal increase" should be applied to this license amendment criterion.

### **Basis for Comment 7.**

Margins serve two purposes: (1) to simplify the analysis (reduce the cost of analysis) used to demonstrate process safety and (2) to reduce the probability or consequence of a hazard. (To clarify what is meant by the first purpose, consider that many analyses use simplifying assumptions which significantly "bound" certain conditions as a means for simplifying an analysis. This significant bounding appears to be considered by the Commission as part of the margin which the Commission appears determined to maintain.)

Where margins have been applied to the design of a process to simplify the demonstration of process safety, and a subsequent process change uses a more rigorous analysis, then this margin should be considered a reduction in safety only if this margin has also been used in the calculation of process risk. However, if this margin has not been used in the calculation of process risk, then the licensee should be allowed to spend more on additional analysis in exchange for process savings; especially if the new analysis meets published expectations in a SRP or other guidance document.

"Margin of safety" as a criterion can be safely deleted because the risk considerations implied by "margin of safety" are adequately embodied in the three risk considerations: hazard ("failure or accident of a different result or type"), probability, and consequence.

**COMMENT 8.** Much of the wording in the proposed 72.48 could be eliminated by defining "SAR" as the "current SAR maintained in accordance with 72.70." Also, repeated use of the phrases "last Final Safety Analysis Report" and the "FSAR as updated" does not appear to be needed for Part 72 licensees and might not be needed for Part 50 licensees after a phase in period (after all SARs are expected to be updated).

Basis for Comment 8. Editorial.

**COMMENT 9.** Add "significant" to the license amendment criteria at 72.48(b)(2)(v) and (vi) [corresponding changes requested to 50.59(c)(2)(v) and (vi)].

Alternatively, provide wording to allow "minimal increase in risk" associated with these license amendment criteria.

Please consider the following wording for 72.48(b)(2) [50.59(c)(2)] as a means of incorporating this comment: "A licensee shall obtain an amendment to the license pursuant to Sec. 72.56 [50.90] prior to implementing a change, test or experiment if it would result in more than a minimal increase in facility risk." Risk could be defined as the sum (for all design basis accidents and malfunctions of SSCs important to safety) of probability of occurrence times consequence. The first six license amendment criteria of this paragraph would be addressed by this suggestion.

### **Basis for Comment 9.**

It is understood that there are three aspects to risk: type of hazard (identified in license amendment criteria 72.48(b)(2)(v) and (vi)) [or 50.59(c)(2)(v) and (vi)], probability of hazard (identified in license amendment criteria 72.48(b)(2)(i) and (ii)) [or 50.59(c)(2)(i) and (ii)], and consequence of hazard (identified in license amendment criteria 72.48(b)(2)(ii) and (iv)) [or 50.59(c)(2)(ii) and (iv)]. Minimal increases in risk due to probability and consequence would be allowed in the proposed rule, but new hazards (accidents of a different type or malfunctions of a different result) with insignificant probability or consequence would require a license amendment given the wording of the proposed rule. In order to improve the risk-informed nature of the proposed rule, hazards should be deemed significant only if the risk is comparable (e.g., the same order of magnitude or greater) than the other hazards already approved.

When evaluating "minimal increase," all three aspects of risk should be considered together. Instead of specifying the "more than minimal" criterion for probability (criteria 72.48(b)(2)(i) and (ii)) and again for consequence (criteria 72.48(b)(2)(iii) and (iv)), probability times consequence should the criterion for evaluating changes requiring the burden of the license amendment. For example, an unapproved change resulting in more than a minimal increase in probability should be allowed if the change also results in a reduction in consequence such that the increase in risk would be "minimal."

**COMMENT 10.** The third part of the definition for ISFSI (72.48(a)(3)(iii)) or facility (50.59(a)(2)(iii)) should be deleted.

# Basis for Comment 10.

The licensee should be encouraged to make facility improvements, to improve analytical methods, and to improve measurements and other inputs to analyses. The inclusion of evaluations in the definition of "facility" is a hindrance to improvement without adding to safety. The appropriate licensee controls for changes to the subject evaluations are more related to design control: (1) is the analytical method valid or reasonable, (2) are the inputs to the analysis accurate or conservative, and (3) does the facility still meet the limits agreed upon (perhaps with a "minimal" increase)? The Commission has adequate regulations and guidance to inspect and enforce concerns related to design control. The inclusion of evaluations in the definition of facility also appears to be inconsistent with encouraging the transition of the regulatory environment away from an overly prescriptive environment to a risk-informed performance-based environment.

The example provided by the Commission in the second paragraph of Section II, Issue B ("consider a change being made to the basis (documented in the SAR) for demonstrating adequacy of the facility without a physical change to the facility") certainly describes information which must be included in the SAR, but should changes to this information be subject to license amendment? Perhaps this issue is related to the issue of defining the scope (in other words, which parts of the SAR are subject to the 72.48/50.59 change control).

Consider the improvements in analytical methods and capabilities we've seen in the last ten years. Why should the licensee of an older facility be hindered (by the cost of license amendment) from improving the facility analysis? Why should such a licensee be hindered from making economic improvements in a facility which could be justified by the more accurate or rigorous calculation of facility risk? Why should licensee's of older nuclear facility's be hindered from using improvements in analytical methods available to other industries? The Commission should be concerned more with the hindrance of licensees' update of analytical methods. The Commission surely recognizes that the expense of the Commission's review of new analytical methods is occasionally prohibitively expensive.

The statement by the Commission at the beginning of the third paragraph of Issue B [*If* changes to methods and assumptions were not controlled, a licensee might revise its analyses and then subsequently conclude that a later facility change did not require NRC approval because the results of the (new) analysis with this change were bounded by the previous analysis.] illustrates a significant hurdle for licensees' desire to improve their facilities. The Commission's basis for license approval or license change should be compliance with regulations (72.40). It is additionally burdensome to require the licensee's de facto site-specific regulations to include the margins (between analyzed facility risk and regulatory limits), but the above quoted statement by the Commission illustrates that the licensee's de facto site-facto site-specific regulations include the methods which the licensee used to demonstrate to

the Commission that the analyzed facility risk falls within regulatory limits. It should be enough that the licensee's method of assurance of nuclear safety be covered by nuclear quality assurance without also requiring the burden of license amendment.

Sincerely,

Michael L. Crown

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