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September 14, 1976

MEMORANDUM FOR: James A. Powers, Acting Assistant Director  
for Program Development

FROM: Thomas C. Thayer, Assistant Director  
for Operations and Evaluation

SUBJECT: REVIEW OF THE DRAFT INTERIM/COMPANION RULES

We have reviewed the draft Interim/Companion Rules and these comments include those of Dutch, Tom Carter's branch, and me.

One of the things that confused me about the document was the reference to interim rules and companion rules as though the two were separate. I presume that this is a combination which includes both of them. If so, I would clearly state that somewhere at the beginning.

Another small problem that added to my confusion was the reference to safeguarding nuclear materials on pages 1 and 2, then reference to special nuclear material on page 3, then subsequent references to strategic special nuclear material. I suggest that the reader could be helped by consistent reference to strategic special nuclear material through the document.

The basic problem we all have with the paper is the use of the term "performance criteria". We are not really sure that any performance criteria are actually presented anywhere in the paper. Bud Evans indicates that the kind of performance criteria we have in mind will not appear until the next phase. If that is so, I don't believe we should use the term performance criteria here but stick to "General Design Requirements" or something similar.

The words "performance criteria" imply a standard by which the execution of required functions can be measured. We have the impression that what is described as performance requirements in the paper is a restatement of what is already in place and which is evaluated and inspected to present day standards.

For example, requiring "entry control at all personnel portals" is a general requirement and is not a performance criterion. Another example, "measures shall be established to ensure the timely detection and

effective response to unauthorized conditions of access and unauthorized activities within protected areas, material access areas and vital areas," is also a general requirement and does not give the reader any criteria for how fast should the intruder be detected and how many minutes should it take for a response to the unauthorized intrusion. These examples are typical of the problem we have with what we expected in the way of performance criteria and what we read in the way of general requirements.

From an adequacy evaluation perspective, the criteria, as stated, appear too vague as specifications for systematically judging when a safeguards system is adequate in performance. This is readily apparent by noting that the existing systems of safeguards satisfy each of the criteria listed, in more or less degree, depending upon the performance criteria and evaluation methods applied to make the adequacy judgment. Both NRC evaluators and licensee designers will not be able to judge (any better than at present) the safeguards performance vis-a-vis the threat by using the requirements listed, but in reality will have to formulate the actual performance criteria used, as well as the evaluation methodology, in order to make such judgments. What appears to be missing from the proposed rule are statements of measurable criteria as to performance adequacy, which relate the generic features in the rule to safeguards mission performance effectiveness in some way.

As examples of the "types" of performance criteria we expected, the following are offered:

- o A minimum delay time of 10 minutes is required from the outer protected area barrier to the primary SNM vault. This minimum time would act to inhibit an intruder's penetration of barriers (fences, sensors, natural barriers, walls, etc.).
- o The maximum time for detection of an unauthorized individual in a Material Access Area is 5 minutes. This time is defined as the time from entry to being challenged or to setting off an alarm.
- o The maximum time for initiating the communication to exterior response forces is 10 seconds. This time is defined from the instant the guard attempts communications by any medium to the time when the appropriate LEA answers the call. Delivery of the detailed message may take as long as required.

Thus, our major problem with the paper is the use of the term performance criteria when the paper really (in our opinion) doesn't contain any.

We also have a series of other comments.

On the first page of the introduction, we find the statement of safeguards program objective confusing. Is it possible to clarify it? As for the last sentence, I am particularly confused by the reference to "damage to the public from other causes." I don't know what the "other" refers to.

On page 4, you say that the threat may be "determined violent assault by groups comprised, at a mininum of up to six persons . . . ." When did the minimum threat become up to six persons? I thought that six persons was close to the maximum threat we are planning against.

On page 5, you open the Safeguards Performance Criteria section by talking about "These performance criteria." We disagree with your use of performance criteria as the term to describe what follows, but my point here is that the use of "These" immediately directed this reader's attention upward to the preceding material instead of downward to the following material. I suggest that you use "below", "following", or some other term to indicate that performance criteria, or whatever they are, are yet to come.

On page 10, paragraph 5, I suggest that you want measures established to assure the timely detection and effective engagement of intruders attempting to penetrate protected areas.

Pages 7 through 13 contain identical listings to that indicated in paragraph 1(c) at the top of page 7. Perhaps a general statement in the lead-in paragraph "Safeguards Performance Criteria," page 5, could eliminate the redundancy?

In the above noted listings, the words "Safeguards Contingency Response Plans" should be used in lieu of "Response Plans" to preclude confusion with safety oriented response plans.

If you are going to include definitions, we suggest some more, and that you introduce them early in the document to clarify meanings. For example:

Performance - the execution of functions required (?)

Criteria - a standard of judging; a rule or test by which anything is tried in forming a correct judgment respecting it (?)

Requirement - necessary or essential - a required quality or course (?)

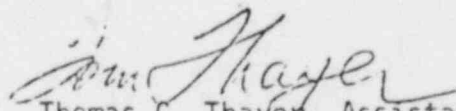
- In Transit - Includes loading and unloading ?
- Substantial Protection - (?)
- Civil Disorder - (?)
- Serious Civil Damage - (?)
- Timely - (?)
- Sabotage - get the "Safeguards definition"

We have problems with your use of the following terms:

Industrial Sabotage - This term was used in several places and is inconsistent with the NMSS charter and the Safeguards definition of sabotage.

Deadly Force - The words which follow the discussion of use of force should be consistent with those used when the letters on Deadly Force were sent out.

Other editorial suggestions are annotated throughout the draft copy attached.

  
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Enclosure:  
As stated

cc: R. G. Page  
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