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(59FR5132)

OFFICE OF SECRETARY  
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Attention: Docketing and Service Branch (RIN 3150-AE80-1)  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20855

Gentlemen:

Please consider the following responses to 59FR5132, the proposed revisions to 10CFR19 and 10CFR20. These proposals raise important issues. The detailed and thorough discussion presented in the Federal Register in support of these proposals clearly establishes problems for which solutions are needed. However, we suggest that a few changes to these proposals would result in more effective and inspectable rules resulting in better protection at less cost, both in terms of financial and personnel resources.

#### Controlled Area

1. It is unclear how deleting the explicit inclusion of the definition of *Controlled Area* in Part 20 solves any confusion among licensees when the concept itself is retained and allowed to be used, as stated in the Supplementary Information of this notice. In addition, 10CFR20 permits the licensee not to implement that definition, in which case confusion over the meaning of the term is a moot issue. Therefore, the definition *Controlled Area* is a useful construct and should be retained.
2. Some of the confusion is based on using the 2 mrem/h limitation for an unrestricted area as a boundary criteria for whether an area is a restricted area or an unrestricted area. While this is a limit for an unrestricted area, there is no requirement in 10CFR20 that an area exceeding this level must be a restricted area. It could be a controlled area. The issue of more fundamental importance in distinguishing an unrestricted area and a restricted area is the public dose limit. Even if the 2 mrem/h limit is met, the public dose limitation might still necessitate the area being a restricted area. Deleting the definition of controlled area does nothing to reinforce this fundamental issue.
3. Since this notice permits continued use of the controlled area concept, and since repeated use of the phrase "that area to which access is limited for any reason" is somewhat clumsy, **should licensees create a similar definition** (e.g., named ATWAILFAR or something more convenient like 'controlled area')? Would such a definition in licensee procedures be acceptable?
4. This proposal states in the discussion that nothing "... provides a basis for deciding whether to designate a given area as a Restricted Area or a Controlled Area." This statement in itself is confusing given the self-evident nature of the definitions of the two terms and the availability of standards' addressing this issue. If the control of an area is related in any way to radiation protection it is a restricted area, is it not? That leaves any other sort of control as a basis for identifying an area as a controlled area, while an unrestricted area would be one having no controls of any kind (or meeting the criteria of a controlled area, at the licensee's option). **Is NRC implying that there are some kinds of radiological controls that, when used in an area, does not result in that area being a restricted area?**

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5. The existence of a formal definition for Controlled Area complements and clarifies the meaning of restricted area. This is one of many examples of NRC insightfulness in the original version of the revised 10CFR20. The interpretation of what constitutes a restricted area seems to vary widely. Some regard it as just an area posted with radiation signs of some type, while others include all areas subject to surveillance, to training, or to other radiation protection program elements, and others might employ some measure between these extremes. While the definition of restricted area is deceptively simple, the underlying thrust of the NRC comments in this proposal is that there is confusion over just how that definition is intended to be interpreted. Rather than deleting the definition of *Controlled Area*, perhaps an effort should be initiated to clarify the intended application of the definition of *Restricted Area*. Should a licensee consider any area a *Restricted Area* in which some portion of the radiation protection program is used to control occupational dose, or should there be some added threshold of protection activity required before so designating an area?

Accordingly, the definition of *Controlled Area* should be retained. We further recommend that NRC consider clarifying the meaning of *Restricted Area*.

### Occupational Dose

6. The change in the definition of *Occupational Dose* is essential, as indicated in the discussion in this proposal. We would have preferred the NRC had gone further, specifically in clarifying the licensee's role in determining who is categorized as receiving occupational dose. That is, the differing interpretations of "...assigned duties involve exposure..." could be avoided simply by vesting the licensee with the responsibility to specifically identify<sup>2</sup> those subject to the occupational dose limit, and then only those persons would receive occupational dose. This has the advantage of explicitly identifying those persons subject to that limit, of avoiding the vagueness of the existing definition in this regard, and in particular of avoiding persons not known to the licensee being classified as receiving occupational dose. Separate guidance to the licensee on how to so designate individuals could incorporate the criteria of the current definition as well as more general guidance. This alternate proposal also has the advantage of being clearly inspectable.

7. The proposed and existing definitions of *occupational dose* have the possibility that persons might be classed as receiving occupational dose, but of whom the licensee has no knowledge. Such persons might never enter a restricted area and might not even have any direct contact with the licensee, but might meet the intent of "...course of employment in which the individual's assigned duties involve exposure...". This is not a problem in terms of regulatory requirements relating to such persons if the NRC definition of *occupational dose* means:

- that "employment" must be a direct relationship with that portion of the organization which administers the license, or
- the licensee must have some basis of knowledge of, and for control of, that person, or
- the only persons requiring training are those in restricted areas receiving occupational dose having given an informed consent.

8. A member-of-the-public receives *public dose*. Who receives *occupational dose*? The continuing absence of a corresponding term leads to very awkward communications, procedures, etc. Other countries use designations like *qualified worker*, with various levels of qualification based on training and experience. Some equivalent definition by NRC would be useful. This letter uses "that person who receives occupational dose" (having refrained from using TPWROD).

Accordingly, we recommend the alternative definition of occupational dose and the adoption of an identifying term for that person. At a minimum the proposed definition should be adopted.

## 10CFR19

9. Regarding the proposed change to 10CFR19, we believe that this change is inappropriate and counter productive. A variety of issues raised in this proposal are presented below. If the alternative proposal regarding the definition of occupational dose (6 above) were implemented then most of the issues presented below would be moot.

10. The current 10CFR19 applies to restricted areas, which is as it should be. By definition those are the areas to which you limit access for purposes of radiation protection. Training is a form of control for limiting exposure, and is an integral element of a radiation protection program. What is an area called where such training might be required when it is not a restricted area? This change would certainly breed confusion as to what constitutes a restricted area.

11. Past NRC guidance, and the existing 10CFR19, require training commensurate with the radiological status of the area and the individual's activities in the area. This is adequately flexible to address the needs of a member-of-the-public in a restricted area under the current rule (contrary to the discussion in the proposal). It does not seem appropriate to exempt anyone in a restricted area from this requirement, including members-of-the-public. Admittedly, the 'commensurate training' for a person whose duties do not involve exposure can be very brief (and for some licensees almost one sentence or simply an escort). But by its definition a restricted area is one that necessitates a radiation protection program of some level and it is the right of persons accessing that area to be at least minimally informed of the nature of that program. Hence the existing Part 19 is appropriate both in terms of who is targeted and of the area targeted for this training requirement.

12. The philosophical issue of whether training is an essential element of being occupationally exposed or is more related to level of exposure regardless of the exposed person's status is an interesting and important discussion topic. It is unclear that it is simply answered by a declaration in the Federal Register. More important is the issue of regulatory priorities, e.g., inspectability, and licensee implementation. Under the current 10CFR19 who is missed in terms of needed training? Under the current 10CFR19 it is crystal clear who requires training, both for inspectors and for implementation by licensees. **What is gained by the proposed revision that offsets this loss of clarity?**

13. The discussion presents an argument that a member-of-the-public does not need training because controls are applied to limit the exposure to less than 100 mrem, but a person classed as receiving occupational dose with similar controls that similarly limit exposure does require training. This argument is specious. The same exposure results in the same risk. Should not training be linked to risk? Also, this leads to the classic public misunderstanding potential and public relations nightmare associated with the uncontrolled public standing next to persons in unrestricted areas who have special requirements even though both are getting the same exposure. This would seem to be poor public policy. We recommend that this training requirement be limited to work in restricted areas.

14. Clearly, work that requires training in order for the worker to properly limit exposures should have required training regardless of the level of exposure. But this is a characteristic of the job, not of being defined as a person receiving occupational dose. Hence the training requirement is fundamentally related to the control issue, which is the underlying element of the definition of restricted area, which is the

essential element of the current 10CFR19. Hence the current rule should be retained.

15. Related to the above is the issue of persons, known or unknown to the licensee, who are classed as receiving occupational dose (by definition) but who are controlled and treated by the licensee as members-of-the-public. The revised Part 19 requires, or at least the discussion strongly implies, that these persons require some level of training. [Question: Does the proposed rule permit the licensee to designate administratively certain classes of occupationally exposed persons as not requiring any specific training, e.g., all work in unrestricted areas controlled to limit doses to less than public dose limits?] But if a person has all the attributes of a member-of-the-public, including the exposure limitation, except that s/he somehow meets the criteria of the occupational dose definition, what is the justification to single that person out for special treatment? Or more specifically, aside from philosophical issues, what is the regulatory need to require training for that person?

16. The discussion of the 'second case' in the proposed rule talks of 'employment' by a licensee or contractor and 'informed consent'. Past guidance from the NRC interpreted 'employment' very liberally. That is, it could represent almost anything resulting in benefit to the individual, not just employment in the sense of receiving salary. Hence students who gain knowledge and persons who acquire data are considered employed, and would be considered receiving occupational dose if they meet the other portions of the definition. Hence the collection of persons who might be subject to the proposed 10CFR19 requirement is substantially larger than the set of persons that might be enumerated by licensee records. And in fact this former group can include persons of whom the licensee has no direct knowledge. This problem is avoided when the rule applies only to restricted areas. Alternatively, if the NRC asserts that this rule only applies to persons classed as receiving occupational dose with whom the licensee has some direct and controlling relationship then the problem is similarly avoided (as suggested in 7 above).

17. 'Informed consent' is implied by a worker or person consenting to acquire the required training. This is easy to implement in restricted areas. It is impossible to obtain, or even to infer, such consent when all exposure takes place in unrestricted areas outside the scope of the licensee's radiation protection program. If this informed consent is an essential element of the definition of occupational dose then presumably if a licensee does not have that consent it is **not occupational dose**. That would serve to simplify some of the issues above. On the other hand, if the NRC does not consider this an element of occupational dose, then why is it an issue in justifying the special training requirement for the occupationally exposed person at less than 100 mrem vis-à-vis a member-of-the-public getting the same dose? **Is informed consent an essential element of occupational dose?**

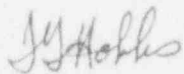
18. If informed consent is an essential element of receiving occupational dose, then should this consent be explicit, i.e., a signed form? Alternatively, is the signed acknowledgement that 10CFR19 training has been received an adequate consent?

19. The actual wording of Part 19 does not use the term occupational dose, but uses the words of the definition of occupational dose with the added word 'potential', i.e., "... duties involve the potential for exposure..." rather than "... duties involve exposure...". Since the supporting discussion is in terms of training for persons receiving occupational dose, this presumably is inclusive of that category of persons. The failure to use Part 20 terminology and the added phrase creates the impression that there is an added intent. But it is unclear from the discussion who else is intended to be included or excluded since these added words are not discussed. **What is the significance of this added qualifier? In particular, with regard to this requirement, what is NRC's intent regarding the inclusion of persons who are**

members-of-the-public or regarding the exclusion of persons that receive occupational dose?

The individual issues raised above are essential to the proper implementation of these proposals, assuming they are approved as presented in this announcement. We look forward to the NRC guidance on these points. Nevertheless, the alternative proposals suggested above are our preferred approach to the issues raised by this proposal.

Sincerely,



T. Hobbs, Chief  
Health Physics  
Occupational Health and Safety Division

Reference:

1. ANSI 15.11(1993), Radiation Protection at Research Reactor Facilities
2. Slaback, L., "Who is a Radiation Worker", Health Physics Journal 65(1) pg 104-5 (1993)