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Donald A. Cool, Chief, RPHEB, RES  
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Donald E. Hickman, Acting Chief, TPAB, AEOD

MAR 26 1991

FROM: LeMoine J. Cunningham, Chief  
Radiation Protection Branch  
Division of Radiation Protection  
and Emergency Preparedness  
Office of Nuclear Reactor Regulation

SUBJECT: DRAFT MEMORANDUM:  
"The Meaning of "...May Have Caused or Threatens  
to Cause..." in 10CFR 20.403

The subject draft memorandum is enclosed for your review.

If you have any comments on the draft, please provide them, by telephone or other informal means, within ten working days of the date of this memorandum.

If you have no comments, no response is needed.

/s/  
LeMoine J. Cunningham, Chief  
Radiation Protection Branch  
Division of Radiation Protection  
and Emergency Preparedness  
Office of Nuclear Reactor Regulation

Enclosure: As stated

Contact: John Buchanan  
49-23184

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FROM: LeMoine J. Cunningham, Chief  
Radiation Protection Branch  
Division of Radiation Protection  
and Emergency Preparedness  
Office of Nuclear Reactor Regulation

SUBJECT: THE MEANING OF "...MAY HAVE CAUSED OR  
THREATENS TO CAUSE..." IN 10 CFR 20.403

A comment on the proposed revision of 10 CFR 20.403 (55FR 19890, 5/14/90) and consideration of the applicability of 10 CFR 20.403 to one circumstance of a recent enforcement case (Hatch, Inspection Report No. 50-321/91-05) has resulted in a clarification of the meaning, with respect to exposure and releases, of the condition, "...any event involving licensed material that may have caused or threatens to cause..." in 10 CFR 20.403(a) and (b).

The words "...may have caused...[an] exposure...or...release" in 10CFR 20.403 are used in the context of the rapid assessment of the significance of an event with respect to determining whether or not the event must be reported "immediately" or "within 24 hours." Somewhat similar words, "substantial potential for an exposure or release..." are used in Supplement IV.C.4 of the NRC Enforcement Policy (10CFR Part 2 Appendix C) in the context of determining the significance of an event with respect to determining the Severity Level of a violation after it has been determined that the violation has occurred. However, the words "may have caused..." in 10CFR 20.403 do not have exactly the same meaning as the words "substantial potential..." in the Enforcement Policy. The words "may have caused" do not refer to an exposure or release

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that (at the time the need for prompt reporting is being considered) is known not to have occurred even though there was a "substantial potential" for the exposure or release.

For an example of the difference between "may have caused" and "substantial potential," consider a hypothetical event in which there was a "substantial potential" for someone entering and receiving a whole-body exposure of 5 rem or more in a particular room. If it is known, at the time the need for prompt reporting is being considered, that someone entered the room and received, or may have received, an exposure of 5 rem or more, that event is reportable under 10 CFR 20.403. However, if it is known that no one entered the room, the event is not reportable under 10 CFR 20.403 regardless of the potential that existed for someone to enter the room and receive the exposure.

Although not reported to the NRC, information on significant radiological exposures and releases at nuclear power reactors that fall below the reporting thresholds of 10 CFR 20.403 (including events that have a "substantial potential for an exposure or release...") usually is available to inspectors in the files of licensee radiological event tracking systems or as feedback from resident inspectors. These events could result in violations.

**DRAFT**

The words "may have caused" in 10 CFR 20.403 apply to a retrospective view of the event at the time prompt reporting is being considered. The words "threatens to cause" apply to a prospective view at that time. In consideration of the ordinary meanings (dictionary definitions) of "threaten," we understand "threatens to cause" in 10 CFR 20.403 to mean "probably is about to cause" or, in other words, "likely will cause soon."

The clarifications given in this memorandum have been coordinated with OE, NMSS, AEOD and RES. OGC has no legal objection.

LeMoine J. Cunningham, Chief  
Radiation Protection Branch  
Division of Radiation Protection  
and Emergency Preparedness  
Office of Nuclear Reactor Regulation

**DRAFT**

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