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RECORD #251

TITLE: Redefinition of restricted area boundaries to exclude an area to be used for residential quarters

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

JUL 06 1981

MEMORANDUM FOR: Richard W. Cooper, II, Director, DRSS, Region I
J. Philip Stohr, Director, DRSS, Region II
Charles E. Norelius, Director, DRSS, Region III
L. Joseph Callan, Director, DRSS, Region IV
Ross A. Scarano, Director, DRSS, Region V

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

SUBJECT: REDEFINITION OF RESTRICTED AREA BOUNDARIES TO
EXCLUDE AN AREA TO BE USED FOR RESIDENTIAL
QUARTERS

Enclosed for your information is a health physics position that states that a licensee, having established the boundaries of a restricted area (as defined in 10 CFR 20.3), may allow residential quarters within that area by first redefining the boundaries of the restricted area to exclude the area to be used as residential quarters and then by ensuring that the area used for residential quarters meets the regulatory requirements for an unrestricted area (as defined in 10 CFR 20.3).

Please notice that this position is limited to the definitions and requirements of the "old" Part 20 (10 CFR 20.1 to 20.601).

CONTACT:
John Buchanan
(301) 504-3184

Earlier drafts of this position were reviewed in your offices, OE, NMSS, and OGC. OGC has no legal objections to this position.

This memorandum is being placed in the NRC Public Document Room.

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

Enclosure:
As stated

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**Health Physics Position
Redefinition of Restricted Area Boundaries to Exclude
an Area to be used for Residential Quarters**

10 CFR 20.3 includes the following definitions of restricted and unrestricted areas:

Restricted area means any area access to which is controlled by the licensee for purposes of protection of individuals from exposure to radiation and radioactive materials.

"Restricted area" shall not include any areas used as residential quarters, although a separate room or rooms in a residential building may be set apart as a restricted area.

Unrestricted area means any area access to which is not controlled by the licensee for purposes of protection of individuals from exposure to radiation and radioactive materials and any area used for residential quarters.

According to these definitions, an area used for residential quarters may not be included in a restricted area.

The boundaries between restricted areas and unrestricted areas are defined by licensees. A nuclear power reactor had defined the boundaries of its restricted area in plant procedures. This restricted area was bounded by a security fence. When it appeared that some of the plant workers might go out on strike, the plant management considered moving trailers inside the fenced area for use as temporary residential quarters for managers during the strike.

Considering the definitions quoted above, there was a question as to whether this contemplated use of trailers within the fenced area would be consistent with NRC requirements. In more general terms, the question was whether a licensee, having established the boundaries of a restricted area (as defined in 10 CFR 20.3), may allow residential quarters within that area without violating the requirements of 10 CFR Part 20. The answer is that the licensee may allow residential quarters within the area in question if (a) the licensee first redefines the boundaries of the restricted area to exclude the area to be used for residential quarters and (b) the licensee ensures that the radiation levels and concentrations of radioactive material in the area used for residential quarters meet the requirements of 10 CFR 20.105 and 20.106, respectively, for unrestricted areas.

When redefining the boundaries of a restricted area to allow residential quarters within an area that previously was a restricted area, licensees need to ensure that regulatory

requirements will be met for the newly-created unrestricted area within which the residential quarters are located (e.g., by making appropriate revisions or additions to their procedures). Topics to be considered in meeting these requirements may include instructions to workers concerning the residential quarters, access control, monitoring for contamination on individuals before they enter the unrestricted area, monitoring for contamination of materials within the unrestricted area, monitoring of radiation levels within the unrestricted area, and provisions for individuals residing in the residential quarters in emergency situations.