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RECORD #14

TITLE: Access Control to High Radiation Area - Turkey Point

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MEMORANDUM FOR: J. T. Sutherland, Chief, FFMS Branch, Region II

FROM: L. B. Higginbotham, Assistant Director, FFMSI

SUBJECT: ACCESS CONTROL TO HIGH RADIATION AREAS - TURKEY POINT
(AITS F22043413)

In your memo of December 19, 1978, you requested Headquarters review of a citation made for conditions at Turkey Point and the licensee's written objection to the citation. This is in response to your request.

Specifically, the citation was against the technical specification that requires each High Radiation Area in which the intensity of radiation is greater than 1,000 mrem/hr to be provided with locked doors. The citation identified the regenerative heat exchangers and reactor cavity filters, which were both within containment, as creating high radiation areas. The reactor was shut down at this time and the containment door was unlocked and open to provide access.

The licensee responded that they did not believe the conditions cited constituted an item of noncompliance. They stated that the reactor containment was identified as a High Radiation Area, was maintained locked except during periods when access was required, and personnel access was controlled in accordance with 10 CFR 20.203(c)(2)(iii) when the door was not locked.

Additional information was obtained from review of the inspection report, correspondence between the licensee and the Region, and discussions with one of the inspectors. It was determined that the reactor containment was posted as a High Radiation Area; a security guard was positioned near the containment air lock for recording dosimeter number and readings upon entry and exit of individuals into and out of containment; and the two components within containment were barricaded and posted as High Radiation Areas.

Interpretation of present NRC regulations and Standard Technical Specification (STS) requirements is that a licensee may establish controls (i.e., locked doors, access control, and posting) at locations beyond the immediate boundaries of the pertinent radiation fields to take advantage of natural or existing barriers. This means that one locked door, or one

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control point where positive control over personnel entry is exercised may be utilized to establish control over multiple High Radiation Areas. Although the regulations refer to "each" High Radiation Area, they do not preclude the implementation of controls over a broader area that encompasses one or more High Radiation Areas. We recognize that there are limitations to the application of this "broad area control" concept; however, those limitations are rather subjective and must be evaluated in terms of the degree of access control necessary in light of the magnitude of radiation fields, accessibility to the radiation fields and other administrative or physical controls utilized within the "broader area." For example, in the case of a small room which contains components that create several discrete High Radiation Areas, barricading and posting at the entrance may be adequate without individually posting and barricading each component; in the case of a large area which includes several individual High Radiation Areas, separate barricading and posting of the individual High Radiation Areas may be necessary to provide adequate personnel protection even though the total area is posted and controlled as a High Radiation Area.

Under the current STS there are no provisions which substitute for 20.203(c)(2)(iii). Therefore, when entry is necessary the control specified in 20.203(c)(2)(iii) must be imposed. However, the positive control required for 20.203(c)(2)(iii) is not defined. Since the STS does spell out specific controls for High Radiation Areas (i.e., posting, barricading, RFP, and instrument), these controls can be used as a reasonable guide for the "positive control" which must be implemented in addition to providing access control which serves as a substitute for the locked door.

For situation where a reactor containment structure is designated as a High Radiation Area ($>1,000$ mr/hr), access control may be established at the access hatch for periods when personnel entries are necessary. The degree of access control may vary based on how and where the other controls are implemented. For example, if the individual High Radiation Areas ($>1,000$ mr/hr) within containment are readily recognizable (e.g., posted and barricaded), less stringent access control is required at the hatch than if the individual High Radiation Areas are not posted and barricaded. Also, if personnel are likely to enter radiation fields of 100 to 1,000 mr/hr while in containment, the requirement for providing individuals with a monitoring device which continuously indicates dose rate (newer versions of the STS may allow an integrating/alarm device or monitoring provided by an individual qualified in radiation protection procedures) must be imposed at the access hatch.

Based on our evaluation of the situation at Turkey Point, we do not support the Region II citation. The licensee is permitted to select the containment access door for locking in order to meet the technical specification which requires locked doors for High Radiation Areas (1,000 mr/hr); and the licensee is permitted to select the containment air lock as the point at which positive access control to a High Radiation Area is established. Since the inspection report does not document facts to show that these conditions were not being met, a citation for noncompliance is not appropriate. Although the Region appears to have had some concerns about the adequacy of the positive control exercised over personnel access to and activities within containment, this aspect was not adequately developed and the specific citation did not reflect this concern.

In light of the licensee's positive response concerning the control of radiation exposure to their workers and the corrective action which will be taken, we see no benefit in pursuing the adequacy of the licensee's access control at this time.

Having recognized that there is a need to clarify some aspects of the STS requirements, FFMSI has already initiated discussion with other groups as a preliminary effort to obtain a change to the STS.

Leo B. Higginbotham
Assistant Director, FFMSI

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IE:FFMSI IE:FFMSI:AD

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