



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

FEB 02 1978

MEMORANDUM FOR: Reactor Safeguards Licensing Branch

FROM: Robert A. Clark, Chief
Reactor Safeguards Licensing Branch

SUBJECT: PROTECTIVE MEASURES FOR CAS OR SAS USING THE EQUI-
VALENT INFORMATION CONCEPT-REVIEW GUIDELINE NUMBER 16

§73.55 requires, in part, the assessment of a threat; response to detection of a penetration or an intrusion; and a capability of observing isolation zones and the physical barrier at the perimeter of the protected area. The detection aids, communications and response requirements in §73.55 (e), (f) and (h) were intended to assist the licensee by providing him with an acceptable means of meeting these responsibilities. Paragraph (e) requires two continuously manned alarm stations so that a single act cannot remove the capability of calling for assistance or otherwise responding to an alarm; that all alarms shall annunciate in both stations; and shall indicate the type and location of each alarm. Paragraph (f) requires that both alarm stations shall have two-way voice communications as well as conventional telephone communication. Paragraph (h) requires a surveillance capability. These requirements have been interpreted to mean that the licensee must provide for the receipt and display of equivalent alarm and surveillance data plus communications capability in both alarm stations but not necessarily the same level of surveillance monitoring display.

The following are the regulatory requirements for the CAS & SAS:

- (1) Both stations shall be continuously manned.
- (2) All alarms must annunciate in both stations.
- (3) Annunciation shall indicate type and location of alarm.
- (4) Both stations must have two-way voice (wireless) as well as conventional telephone capability.
- (5) Both stations must have equivalent alarm and surveillance data.
- (6) All alarm devices and alarm transmission lines for both stations must be self-checking and tamper-indicating.

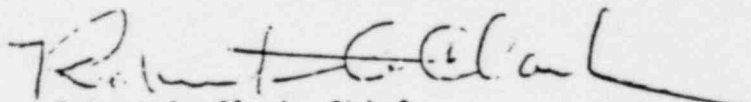
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Since §73.55 does not provide guidance on how these stations are to interact, protecting against the threat of an insider operating from either station will have to be dealt with through licensee developed procedural checks designed to insure against successful malevolent actions by either alarm station operator. However, criteria have evolved that appear essential in establishing a defensive framework against this threat. Consequently the following additional licensee implemented measures, used individually or in combination, when coupled with the regulatory requirements set forth above, are acceptable in satisfying the high assurance provisions of §73.55 (a)(2).

- (1) Random selection of CAS/SAS operators at the beginning of each shift.
- (2) Use of the two-man rule in CAS.
- (3) Each station to have independence of action to call for assistance when suspicious of the action(s) of the other station.
- (4) The secondary station must have the capability of confirming the appropriateness of the CAS operators actions in response to alarms (e.g., radio contact with responders, surveillance monitoring, etc.).
- (5) Strict control of access to the security computer software programs.
- (6) Strict control of access to either station.
- (7) Insuring that one station cannot inhibit the flow of information to the other.

The foregoing are not meant to be all inclusive. They are listed as the most desired licensee actions that when coupled with the regulatory requirements set forth above will provide the high assurance protection that is being sought.



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