FEB 25 1977

Docket No. 50-29

Yankee Atomic Electric Company
ATTN: Mr. Robert W. Groce
Licensing Engineer
20 Turnpike Road
Westboro, Massachusetts 01581

Gentlemen:

This letter is being sent to all licensees authorized to operate a nuclear power reactor and to all applicants with applications for a license to operate a power reactor (FSAR docketed) to advise you that the Nuclear Regulatory Commission has forwarded to the FEDERAL REGISTER amendments to its regulations 10 CFR Part 50, "Licensing of Production and Utilization Facilities", and 10 CFR Part 73, "Physical Protection of Plants and Materials". These new regulations identify measures to be taken for the protection of nuclear power reactors against industrial sabotage. Copies of these new requirements are enclosed. Of particular interest is the adoption of a new section 10 CFR 73.55, "Requirements for physical protection of licensed activities in nuclear power reactors against industrial sabotage". The new regulations require that you submit an amended physical security plan within 90 days of the publication of the rule in the FEDERAL REGISTER describing how you plan to comply with the requirements of 10 CFR 73.55, including schedules of implementation.

To provide additional detailed guidance on implementing the new rule, we are scheduling regional meetings to discuss the requirements of 10 CFR 73.55, to present an acceptable format and content for the required amended physical security plan and to provide preliminary acceptance criteria which the NRC staff will use to determine the acceptability of submittals. An agenda for these meetings is enclosed, including the dates and location of the meeting for each NRC Region and supplemental information related to some of the topics listed on the agenda. In order to provide a forum for effective discussion, you are requested to send no more than four representatives to the meeting. You may wish to include your A/E or security consultant within this number. Please complete the enclosed Registration Form and return it in the envelope provided.

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The Commission has under active consideration a requirement that security clearances be obtained for certain licensee employees. We will present an overview of this proposal at the meeting and will consider any comments that you wish to give.

The Commission also has under development amendments to its regulations that would require nuclear power plant licensees to develop and follow safeguards contingency plans for dealing with threats, thefts, and sabotage relating to special nuclear material and nuclear facilities. A presentation and discussion on this subject is on the meeting agenda and background information on this subject is also enclosed.

If you have any particular related topics or generic safeguards problems that you would like discussed at the meeting, please let us know. For any further information or comments, please contact James R. Miller of my staff (301/492-7014).

Sincerely,

Ben C. Rusche, Director
Office of Nuclear Reactor
Regulation

Enclosures:
1. Copy of Amended Regulations
2. Meeting Agenda
3. Registration Form and Return Envelope
4. Draft Standard Format and Content Document
5. Contingency Planning Information

cc: w/enclosures 1, 4 and 5
See next page

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NUREG-0207

INTERIM FORMAT AND CONTENT FOR A PHYSICAL SECURITY PLAN FOR NUCLEAR POWER PLANTS

DRAFT

Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission

NUREG-0207

INTERIM FORMAT AND CONTENT FOR A PHYSICAL SECURITY PLAN FOR NUCLEAR POWER PLANTS

February 1977

Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

This document serves as interim guidance to assist the licensee or applicant in the preparation of a physical security plan. It is to be used in conjunction with interim acceptance criteria for physical security programs, which will be distributed at a later date.

In using this guidance, three things should be noted:

1) This document may call for information concerning systems, equipment, or practices which the licensee or applicant does not intend to employ in his physical security program. In that case, short statements about the non-applicability of such sections are appropriate. Appropriateness of physical security features, and thus, their descriptions, is driven by the acceptance criteria and not by this document.

2) Where information in a section is identical to that in a previous section, it is permissable to simply reference the appropriate information in that previous section.

3) This document calls for supporting drawings or diagramatic material in many places. The licensee is free to arrange and combine drawings at his discretion, and reference them where the information is asked for. Drawings must be clear and uncluttered.

Definitions of some of the terms used in this document are as follows:

Design Criteria - The information used by the designer in the development of a security system or component. The information may be derived from rules, regulatory guides, acceptance criteria, industry standards, and standard security practice. Discussions of systems involving statements of design criteria should include discussions of the effectiveness of the design of the system in performing its designed function and verification of that degree of effectiveness.

Fixed Post - An assigned post at a fixed duty station, such as a guard house, access point, etc.

Mobile Post - An assigned post involving patrol duties.

Outage - Any failure or reduction in effectiveness below designed levels of security related structure, component, equipment, or system.

Plant Security Force - A subset of the security organization which comprises guards, watchmen, or other armed response force personnel.

Security Organization - Any plant employee assigned a duty or responsibility of a security related nature. Such responsibility can be either routine or only for response to security contingencies. In addition, off-site response agencies are part of the security organization.

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PART I OF THE PHYSICAL SECURITY PLAN

CHAPTER 1 - SECURITY ORGANIZATION

1.1 MANAGEMENT ORGANIZATION

Describe the relation of the facility security organization to facility and corporate management.

Provide an organization chart and job descriptions of personnel for management of the facility, including the individual directly responsible for managing the security organization.

1.2 SECURITY ORGANIZATION

Identify the positions responsible for the management of the security program and for the supervision of the onsite security force. State the degree of authority of the security supervisor to direct response activities independent of higher management. Discuss the interface between the licensee and any security force contract organization regarding the authority over, and administration and supervision of, contract security personnel.

Provide an organization chart of the security organization, both for administration and for a typical shift security force organization.

1.3 FACILITY PERSONNEL

1.3.1 Personnel Reliability

State the minimum qualifications for employment at the facility, including requirements for age, education, and physical condition. State employment policies regarding conviction records and psychological characteristics. Describe the methods used to verify applicant qualifications and to assure that applicants have adequate qualifications. In particular, describe the policies and procedures for verifying an applicant's employment, military, fingerprint, and conviction records and for ascertaining his character.

Alternatively, a commitment to employee screening procedures outlined in ANSI 18.17 is an adequate presentation of information for this paragraph.

1.3.2 Personnel Orientation in Security Practices

Describe the program for orienting all personnel to provide them with an understanding of security procedures applicable to all employees (e.g., access controls and escorts) and of their role in response to security contingencies (e.g., receiving of bomb threats and sighting of intruders, unidentified individuals, and suspected sabotage devices). Include the content of the program by topic, and indicate the time spent on each topic. Describe the system for testing, evaluating, and documenting the employee's knowledge of security practices. State the criteria for satisfactorily completing the orientation course.

State in general terms the scope and frequency of reorientation courses for familiarizing personnel in new procedures or equipment.

1.4 PLANT SECURITY PERSONNEL

1.4.1 Qualifications for Employment in Security

State any qualifications for employment in security (including those for assignment to guard/watchman duties) which exceed those required for general employment at the facility. In particular, address requirements for age, education, physical condition (including vision and hearing requirements), and experience.

1.4.2 Screening

Describe the methods used (if different from those described in 1.3.1) to verify the qualifications of applicants for employment in security and to assure that applicants have adequate qualifications.

1.4.3 Training

Describe the program for training plant security personnel to provide them with an understanding of security operating procedures and the ability to perform assigned duties. Include a description of guard and response force personnel training in defensive tactics and use of firearms. State the scope of the program, and provide an outline or list of topics covered along with a brief description of the subject

matter and time allotted for each topic. Describe the system for evaluating and documenting the employee's knowledge. State the criteria for satisfactorily completion of the training.

1.4.4 Retraining

Describe any differences between the retraining program and the training program described in 1.4.3. State the minimum frequency of the retraining program.

1.4.5 Security Equipment

List and describe in detail the number, type, make, and performance of the equipment provided to the guards and watchmen. Include descriptions of uniforms, portable communications equipment, weapons, and other items provided to protect guards, watchmen, or the facility. Provide the basis for which the equipment was selected. Discuss the storage and custodial arrangements for the equipment.

List and describe the number, make, and performance of vehicles and related equipment assigned for use by the security organization. Discuss the custodial arrangements for the vehicles.

1.4.6 Authority Of Guards To Use Weapons

Discuss the authority of guards to use weapons to protect themselves and company property as dictated by company policies and applicable state and federal laws.

1.4.7 Security Force Composition

State the number of guards and other armed response force personnel that are employed on each shift, and for each shift state who in the security organization acts as the member who has the authority to direct the physical security activities of the security organization.

1.5 LOCAL AND OTHER LAW ENFORCEMENT AGENCIES

Identify the local, municipal, county, state, and federal law enforcement organizations with which arrangements have been established to provide assistance in dealing with security contingencies at the facility. Describe the jurisdictional authority of each organization.

For each organization, describe the manpower available for response on weekdays, weekends, and nights. List equipment and weapons normally issued to, and carried by, law enforcement personnel and the type and number of vehicles available to the law enforcement organization.

For each law enforcement organization, list points of contact and describe command and control arrangements, such as law enforcement organization notification channels and procedures, coordination with facility security upon arrival, access authorization, authority to assume command, and communication and tactical coordination with onsite security personnel while on site.

Discuss arrangements for orientation sessions and plant tours for law enforcement personnel which will ensure that responding law enforcement

personnel will be sufficiently familiar with the plant layout, security operations, and the radiation control program.

Provide a map or diagram showing the locations of the law enforcement organizations in relation to the site and showing in detail the avenues of approach to the plant.

Provide a copy of a letter of understanding or other documentation from each law enforcement organization which confirms the response arrangements.

1.6 ACCESS AUTHORIZATIONS

State the criteria (e.g. employee/non-employees, need to work, needed material, harmless material, etc.) for authorizing access of material and personnel to the protected area, to vital areas, and to the isolation zone. Discuss procedures for verifying that non-employees and incoming packages meet the criteria for access authorization. Identify the organizational components and position title of the persons authorized to approve access of employees, non-employees, and vehicles into each area.

CHAPTER 2 - FACILITY AND ENVIRONS

2.1 GENERAL SITE AND AREA ARRANGEMENT

Provide one or more large scale drawings of the general area in which the site is located which shows nearby towns and roadways to the facility.

Provide a scale drawing of the owner-controlled area which shows elevations, bodies of water, streams, swamps, landscaping, paved areas, roadways, parking areas, railroad lines, protected area perimeter(s) and property boundary lines.

2.2 FIXED AND MOBILE SECURITY POSTS IN THE OWNER-CONTROLLED AREA

Describe the function of any security fixed and mobile posts in the owner-controlled area. State the manpower requirements of any fixed posts, the frequency of patrols, and the number of people on each patrol. Describe any structures that support fixed posts. Designate each fixed and mobile post with a number.

Provide a plan view map of the owner control area indicating the locations and designated number of each fixed post and the patrol routes.

CHAPTER 2 - FACILITY AND ENVIRONS

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Provide a scale drawing of the owner-controlled area which shows elevations, bodies of water, streams, swamps, landscaping, paved areas, roadways, parking areas, railroad lines, protected area perimeter(s) and property boundary lines.

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Provide a plan view map of the owner control area indicating the locations and designated number of each fixed post and the patrol routes.

CHAPTER 3 - PROTECTED AREA PERIMETERS

3.1 PERIMETER BARRIER AND ISOLATION ZONE

3.1.1 Layout

Provide plan view scale drawings of each protected area perimeter, indicating isolation zones, physical barriers, buildings, and other structures at the perimeter or within the isolation zones. Indicate the location and type of any openings, such as gates, tunnels, storm and waste sewers, water intake and discharge conduits, ducts, culverts, creeks, and canals.

3.1.2 Physical Barrier Descriptions

Provide the design criteria upon which the protected area barriers were developed. Include the physical specifications that assure that the walls, fences, gates, doors and other structures that form the protected area barriers provide a common minimum degree of integrity. Confirm that penetrations and other openings within the barriers are protected with materials that equal the integrity of the overall barrier. Security hardware such as hinges and locks, being part of the barrier should also be described in the manner requested above. Identify the emergency gates and doors and other opening barriers that are alarmed.

requirements (specify guards or watchmen) when in use. State the responsibilities of each individual posted. Describe the communications systems to be used at the post. Describe compensatory measures to be taken in the event of an outage of the communication system used at the post.

State the minimum frequency and manpower requirements (specifying guards or watchmen) of any patrols of the perimeter and isolation zones, and designate a number to each mobile post.

Provide floor plans of each fixed security post, indicating on each drawing the designated number of the post.

Provide plan view scale drawings of the isolation zone which indicate the location of the security posts and the route of each patrol and which identify the fixed and mobile posts their by designated numbers.

3.2 PROTECTED AREA PORTALS

3.2.1 Personnel Access Portals and Posts

3.2.1.1 Layout - Provide a floor plan of the protected area personnel access control building. Indicate in the floor plan the location of personnel and package search areas, personnel identification areas, the hardened access control station, badge exchange points, and the door, turnstile, or other point of access to the protected area.

3.2.1.2 Physical Structures - State the design criteria for the personnel access control building including criteria for building location, barriers, and access and egress doors.

3.2.1.3 Locks - State the design criteria for locks used in securing personnel portals at the protected area perimeter.

Describe the system for issuance and control of combinations and keys. State the position titles of persons authorized to approve the issuance of combinations and keys, and state the criteria for authorization. State the criteria for changing locks, and describe the procedures for performing the change.

3.2.1.4 Security Posts - State the periods of use of the portal and the manpower requirements (specifying guards and watchmen) for each shift. State the responsibilities for each individual posted, and describe in general terms the procedures used to search and clear personnel and material through the portal.

3.2.1.5 Access Control Hardware

State the design criteria for each type of hardware used to detect weapons, explosives, or incindiary devices on individuals or in incoming packages. Describe the compensatory measures to be taken in the event of an outage of any of the hardware.

3.2.1.6 Picture Badge System - Provide a general description of the picture badge system used to identify and authorize (1) employees and (2) non-employees for entry into the protected area. Describe the different types of badges issued and the tamper-resistant features of their construction. State the requirements for displaying badges while within the protected area. Describe the system for issuance, accountability, and control of badges. Describe the provisions for lost badges.

3.2.1.7 Communications - Describe the communications system at the protected area access building. State where these units are located, and who has ready access to them.

3.2.2 Vehicle and Cargo Access Portals and Posts

3.2.2.1 Layout - Provide a plan view scale drawing of the vehicle access control area. Indicate on the drawing the location of cargo off-loading and search areas and vehicle search areas, gates, vehicle barriers, and area boundary barriers.

3.2.2.2 Physical Structures - State the design criteria of the boundary structures of the vehicle access control area. State the design criteria of the gates through which vehicles enter the protected area.

3.2.2.3 Locks - Provide a discussion of vehicle portal locks and the key control system for those locks based on the guidance in 3.2.1.3.

3.2.2.4 Security Posts - State the periods of use of the vehicle portal and the manpower requirements (specifying guards and watchmen) for each shift. State the responsibilities for each individual posted, and describe in general terms the procedures used to search cargo and vehicles and to verify authorization for vehicle entry into the protected area. Describe the procedure for admitting vehicles through the gate into and out of the protected area. Identify the vehicles that are exempt from any searches and the procedure for granting this authorization.

3.2.2.5 Vehicle and Cargo Search Hardware - Provide a discussion of the vehicle and cargo search hardware based on the guidance in 3.2.1.5.

3.2.2.6 Communications - Describe the communications system at the vehicle access portal, including portable and nonportable units. State where the units are located and who has ready access to them.

CHAPTER 4 - PROTECTED AREAS

4.1 LAYOUT

Provide plan view scale drawings of the protected area, outlining the isolation zone and perimeter and vital structures, and showing nonvital buildings, barriers, and structures that stand in the protected area.

4.2 PHYSICAL STRUCTURES

State the design criteria for all nonvital buildings, barriers, and structures (except those used as security posts) that stand in the protected area.

4.3 ILLUMINATION AND SURVEILLANCE

Provide a discussion and supporting drawings of the illumination and surveillance systems for all exterior areas within the protected area based on the guidance in 3.1.3.

4.4 SECURITY POSTS (FIXED AND MOBILE)

State the design criteria for the construction (including entrances, windows, gun portals, etc.) of any physical structures which are located in the protected area and which are used as security posts. State the periods of use of each post and the manpower requirements (specifying guards and watchmen) of the post. State the responsibilities of each individual posted. Describe the communications system to be used at the post, and

describe compensatory measures to be taken in the event of an outage of communications equipment used at the post.

State the minimum frequency and manpower requirements (specifying guards and watchmen) of any patrols of the protected area, and designate a number to each mobile post.

Provide floor plans of each fixed security post, indicating on each drawing the designated number of the post.

Provide plan view scale drawings of the protected area which show the location of fixed posts. Identify them by number and indicate their fields of view and fields of fire. Also, show the routes of security patrols and identify each mobile post by its number.

4.5 ESCORTS

Describe the escort system for the protected area. Identify the individuals who are authorized to perform escort duties, and state the manpower requirements (specifying guards, watchmen, or other employees) for escorting (1) employees, (2) nonemployees, and (3) vehicles in the protected areas. State the maximum number of persons or vehicles in each category that are allowed to be under the cognizance of a single escort. Describe the communications arrangements used by the escorts. Describe in general terms the procedures for escorting personnel and vehicles in the protected area.

Describe compensatory measures to be taken in the event that escorts are unavailable.

CHAPTER 5 - VITAL AREA PERIMETERS

5.1 LAYOUT

List and number of all equipment considered to be vital equipment. State the criteria for including or excluding plant equipment from this list.

List and number all structures, areas, and buildings that constitute vital areas.

Provide a scale drawing of each vital area, showing its location, position of vital equipment, and all points of personnel access and egress.

5.2 PHYSICAL BARRIERS

5.2.1 Barrier Descriptions

For each vital area listed above, provide a discussion of the design criteria for the construction of vital area barriers, other than personnel access and egress points, based on guidance in 3.1.2.

5.2.2 Intrusion Dectection Hardware

Provide a discussion and supporting drawings of intrusion detection equipment for vital area barriers based on guidance in 3.1.4.

5.3 VITAL AREA PORTALS

5.3.1 Personnel Access Portals and Posts

5.3.1.1 Layout - Provide a floor plan of the access portal for each vital area. Indicate in the floor plan the location of personnel and package search areas, personnel identification areas, the hardened access control station, badge exchange points, and the door, turnstile, or other point of access to the vital area.

5.3.1.2 Physical Structures - State the design criteria for the vital area personnel access portals based on guidance in 3.2.1.2.

5.3.1.3 Locks - Provide a discussion of locks and the key control system for vital area portals based on guidance in 3.2.1.3.

5.3.1.4 Security Posts-State the periods of use of each portal and the manpower requirements (specifying guards and watchmen) for each portal for each shift. State the responsibilities for each individual posted, and describe in general terms the procedures used to search and clear personnel and material through the portal.

5.3.1.5 Access Control Hardware

Provide a discussion of vital area access control hardware based on guidance in 3.2.1.5.

5.3.1.6 Coded Picture Badge System-Provided a general description of the picture badge system used to identify and authorize (1) employees and (2) non-employees for entry into vital areas. Explain the badge code that indicates the vital areas to which access is authorized.

5.3.1.7 Communications - Describe the communication system used at each vital area portal. State where these units are located and who has ready access to them. Describe compensatory measures to be taken in the even of an outage of any unit.

5.3.2 Vehicle Access Portals and Posts

5.3.2.1 Physical Structures - Provide a discussion of the design criteria of each vehicle access portal into a vital area based on guidance in 3.2.2.2, as applicable.

5.3.2.2 Security Posts - State the periods of use of each vital area vehicle access portal and the manpower requirements (specifying guards and watchmen) for the period of use. State the responsibilities for each individual posted, and describe in general terms the procedures used to verify authorization for vehicle entry into the vital area. Describe the procedure for admitting the vehicle into and out of the vital area.

5.3 VITAL AREA PORTALS

5.3.1 Personnel Access Portals and Posts

5.3.1.1 Layout - Provide a floor plan of the access portal for each vital area. Indicate in the floor plan the location of personnel and package search areas, personnel identification areas, the hardened access control station, badge exchange points, and the door, turnstile, or other point of access to the vital area.

5.3.1.2 Physical Structures - State the design criteria for the vital area personnel access portals based on guidance in 3.2.1.2.

5.3.1.3 Locks - Provide a discussion of locks and the key control system for vital area portals based on guidance in 3.2.1.3.

5.3.1.4 Security Posts-State the periods of use of each portal and the manpower requirements (specifying guards and watchmen) for each portal for each shift. State the responsibilities for each individual posted, and describe in general terms the procedures used to search and clear personnel and material through the portal.

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5.3.1.6 Coded Picture Badge System-Provided a general description of the picture badge system used to identify and authorize (1) employees and (2) non-employees for entry into vital areas. Explain the badge code that indicates the vital areas to which access is authorized.

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5.3.2.2 Security Posts - State the periods of use of each vital area vehicle access portal and the manpower requirements (specifying guards and watchmen) for the period of use. State the responsibilities for each individual posted, and describe in general terms the procedures used to verify authorization for vehicle entry into the vital area. Describe the procedure for admitting the vehicle into and out of the vital area.

5.3.2.3 Communications - Describe the communications system at the vehicle access portal, including portable and non-portable units. State where the units are located and who has ready access to them.

CHAPTER 6 - VITAL AREAS

6.1 CENTRAL ALARM STATION

6.1.1 Location and Layout

Provide a scale drawing of the layout of the Central Alarm Station showing the location of doors, windows, and other openings and alarm, surveillance, and commucation equipment. Show that the interior of the Central Alarm Station is not visible from the perimeter of the protected area.

6.1.2 Physical Structures

State the design criteria for the walls, floor, ceiling, doors, windows, and other openings which enclose the Central Alarm Station, including bullet resistant features.

6.1.3 Alarm and Surveillance Monitoring Hardware

State the design criteria of the alarm annunciation and surveillance monitoring equipment, including those features that indicate the location and type of alarm. Describe compensatory measures to be taken in the event of an outage of all or part of the system.

6.1.4 Manning

State the manpower requirements for the Central Alarm Station. State the responsibilities for each individual posted, including any non-security functions.

6.1.5 Communications

State the design criteria of the communications equipment used in the Central Alarm Station. Describe the emergency power provisions. Describe compensatory measures to be taken in the event of an outage.

6.2 SECONDARY ALARM STATION

Describe the Secondary Alarm Station as you did the primary alarm station.

6.3 OTHER VITAL AREAS

6.3.1 Surveillance Hardware

Provide a discussion of vital area surveillance based on the guidance in 3.1.3.

6.3.2 Security Posts and Patrol

Describe the design criteria for the construction (including entrances, windows, gun portals, etc.) of any physical structures located in vital areas which are used as fixed security posts. State the periods of use of each post and the manpower requirements (specifying guards and watchman) of the post. State the responsibilities of each individual posted. Describe the communications system to be used at the post, and describe compensatory measures to be taken in the event of an outage of that system. Designate each security post with a number.

State the minimum frequency and manpower requirements (specifying guards and watchman) of any patrols of vital areas. Designate a number to each patrol route.

Provide floor plans of each fixed security post, indicating on each drawing the designated number of the post.

Provide scale drawings of vital areas showing the routes of patrols and identifying each by its designated number.

6.3.3 Escorts

Describe the escort system for vital areas. Identify the individuals that are authorized to perform escort duties and state the manpower requirements (specifying guards, watchman, or other employees) for escorting (1) employees, (2) non-employees, and (3) vehicles into vital areas. State the maximum number of persons or vehicles allowed to be under the cognizance of a single escort. Describe the communications arrangements used by the escorts. Describe in general terms the procedures for escorting personnel and vehicles in vital areas. Describe compensatory measures to be taken in the event that escorts are unavailable.

CHAPTER 7 - CENTRAL COMMUNICATIONS SYSTEMS

7.1 TELEPHONE SYSTEM

Describe the telephone system at the facility. Identify how many trunk lines and how many different telephone exchanges are directly connected to the facility telephone service. Describe the facility telephone switchboard system and any physical protection provided for the telephone system.

7.2 INTERCOM AND PUBLIC ADDRESS SYSTEM

If the intercom and public address system is used for security purposes describe how access is gained to it, the location of central signal processing units, physical protection of central units, and emergency power provisions.

7.3 OTHER CENTRAL COMMUNICATION SYSTEMS

If other communication systems are used for security purposes, state where units of these systems are located and the arrangements made for access to those systems by members of the security organization.

CHAPTER 8 - RESPONSE TO SECURITY CONTINGENCES

8.1 RESPONSE FORCE AVAILABILITY

Provide charts which list security posts and patrols by shift and by number, and indicate which security force members are available for armed response.

8.2 ASSIGNMENT OF RESPONSIBILITIES

For each of the security contingencies delineated below:

a) State the objective(s) to be reached in response to the contingency.

b) Describe the general decisions and actions to be taken in response to the contingency. This description should clearly show how the plant security organization assesses the contingency, localizes it within the plant, and neutralizes it.

c) Discuss situational factors and criteria that affect the making of each decision and the taking of each action.

d) Describe the types of data that are needed to make each decision and take each action.

e) For each decision and action, designate a member, post or unit, of the facility organization that has responsibility for performing that duty. This designation of responsibilities should clearly show how sufficient forces are brought to bear in a timely manner to neutralize the contingency, and how responding off-site forces are coordinated on arrival.

f) Describe the nature, size, and timing of law enforcement response (if they are notified), and the role that they play in neutralizing the contingency.

Organize this discussion by using the following structure:

8.2.1 Guard Strike or Other Unavailability of the Security Force.

8.2.2 Disruption of Internal Order

- 8.2.2.1 Fire or Explosion
- 8.2.2.2 Site Evacuation
- 8.2.2.3 Personnel Disturbance

8.2.3 Stated or Perceived Threat to Sabotage

8.2.4 Civil Disturbance

8.2.5 Suspected or Confirmed Intrusion or Sabotage Attempt

- 8.2.5.1 Alarm Annunciation
- 8.2.5.2 Discovery of Breached Barrier

8.2.5.3 Discovery of Unidentified Person in Protected or Vital Areas

8.2.5.4 Discovery of Suspected Sabotage or Sabotage Device

8.2.5.5 Multiple Loss of On-Site or Off-Site Communications.

CHAPTER 9 - SPECIAL SECURITY MEASURES DURING REFUELING OPERATIONS

Describe the physical security measures to be taken to handle the increased personnel and material presence in vital areas during refueling. Describe in detail the special provisions for access control, surveillance, and inspections of vital areas subsequent to refueling operations.

CHAPTER 10 - SPECIAL SECURITY MEASURES DURING CONSTRUCTION OPERATIONS

If construction operations are underway at an adjacent unit, give detailed descriptions of security measures to be taken where the two units interface. If the implementation of the security system at the second unit is phased, describe in detail the plans to implement each phase. Physical barriers, access controls, surveillance, intrusion detection, and security force size should be specifically addressed in these discussions, and the discussions should show how overall facility security is not degraded by construction activities.

CHAPTER 11 - OVERALL PHYSICAL SECURITY PROGRAM PERFORMANCE

This chapter is in preparation.

PART II OF THE PHYSICAL SECURITY PLAN

This part of the Physical Security Plan should describe the tests, inspections, records, and other means established by the applicant for demonstrating compliance with the physical protection requirements for security related equipment.

CHAPTER 12 - TESTS AND INSPECTIONS

Provide information on the tests and inspections that are conducted to ensure the continuity of the integrity of barriers and of the operability of security equipment.

12.1 PHYSICAL BARRIERS AND ACCESS POINTS

Describe the tests, inspections, and administrative procedures that are used to ascertain whether all physical barriers and points of access are intact and operable. State the frequency of routine and special tests and inspections.

12.2 ALARMS AND ANNUNCIATORS

Describe the program used to test the operability and to verify the functional performance of security alarms, annunciators, sensors, and transmission lines to the two alarm stations. State the frequency of routine and special tests, including tests following maintenance work.

12.3 SPECIAL PURPOSE DETECTORS

Describe the method of calibration and standardization used for each type of metal and explosive detector. Identify the standard test equipment and the procedures employed for calibration and control programs. State the frequency of calibration and control tests.

12.4 COMMUNICATIONS EQUIPMENT

Describe the type and frequency of tests used to monitor operability on a routine basis. Indicate the type and frequency of tests used to verify the functional performance of all communications equipment.

12.5 SECURITY PERSONNEL EQUIPMENT

Discuss the test and inspection programs used to maintain the operability of other security personnel equipment identified in 1.4.5.

12.6 QUALITY ASSURANCE

Describe the quality assurance program that is established to ensure that structures, systems, components, and equipment important to the physical protection of the reactor facility against acts of sabotage are designed, fabricated, erected, and tested to perform satisfactorily while in service.

Provide a description of the quality assurance program for system operation activities that will govern the quality of the physical protection system during operation. These activities include operating, maintaining, repairing and modifying (if necessary) the security system after the pre-operational phase.

CHAPTER 13 - SECURITY RECORDS

Provide information on the security records that are maintained to meet the requirements of 10 CFR Part 73.70.

13.1 SECURITY TOURS, INSPECTIONS, AND TESTS

Describe the system for documenting the results of all routine security tours and inspections, and of all tests and inspections performed on physical barriers, intrusion alarms, communications equipment, and other security equipment.

13.2 MAINTENANCE

Identify and characterize the records that are kept of all maintenance performed on physical barriers, intrusion alarms, communications equipment, and other security equipment

13.3 ALARM ANNUNCIATIONS

Describe the records system for documenting all alarm annunciations, including false alarms and alarm checks. Also describe the system for identifying the type of alarm, location, date, and time of each occurrence.

13.4 SECURITY RESPONSE

Indicate the records that are kept of acknowledgement and response by facility guards and watchmen to each alarm (including nuisance alarms), intrusion or other security incident.

13.5 AUTHORIZED INDIVIDUALS

Describe the system for maintaining a record of each individual who has authorized access to the facility. Indicate whether the record includes the name and badge number of each person designated, the date of the authorization, its expiration date, and the name of the approval authority.

13.6 ACCESS TO VITAL AREAS

Describe the system for maintaining a record of each individual who is authorized to have access to a vital area, with the record showing the vital area(s) to which access is authorized, authorization limits, individual's name, address, and badge number; the date of authorization; its expiration date; and the name of the approval authority.

13.7 NONEMPLOYEE ACCESS

Describe the system for maintaining a record of each visitor, vendor and other individual who is not an employee of the licensee, with the record showing: the individual's name; the date, time, and purpose of the visit; the individual's employment affiliation and citizenship; and the name of the person who authorized the visit. Describe the system for maintaining a list of designated escorts.

CHAPTER 14 - SECURITY AUDITS

Provide a description of the audit program established to review periodically the applicability and adequacy of the existing security plan and to assess the degree of compliance of current performance with existing security requirements.

14.1 PROGRAM AUDIT

Describe the scope, extent, and frequency of planned periodic management audits to review the physical security program of the facility for continued acceptabilty and effectiveness. Identify by organizational title the persons assigned responsibility for conducting the audits. Affirm that written audit reports will be prepared and submitted to facility management.

14.2 COMPLIANCE AUDITS

Describe the monitoring program established to ensure compliance with existing regulations. Identify by organization title the persons assigned responsibility for conducting audits. Affirm that written audit reports will be prepared and submitted to facility management.

Enclosure 1

Title 10—Energy

CHAPTER I—NUCLEAR REGULATORY COMMISSION

PART 50—LICENSING OF PRODUCTION AND UTILIZATION FACILITIES

PART 73—PHYSICAL PROTECTION OF PLANTS AND MATERIALS

Requirements for the Physical Protection of Nuclear Power Reactors

On November 13, 1974, the Atomic Energy Commission published in the FEDERAL REGISTER (39 FR 40038) proposed amendments to its regulations in 10 CFR Part 73, "Physical Protection of Plants and Materials," which, in the interest of the common defense and security and the public health and safety, would identify measures to be taken for the protection of nuclear power reactors against industrial sabotage.

Interested parties were invited to submit comments and suggestions in connection with the proposed amendments within 60 days after publication in the FEDERAL REGISTER. Upon consideration of the comments received, and other factors involved, the Nuclear Regulatory Commission has adopted the proposed amendments, with certain modifications as set forth below.

Significant differences from the proposed amendments published for comments are: (1) Addition of a general performance requirement; (2) clarification of the requirements for multiunit sites; (3) clarifying the number and response requirements of onsite security personnel; (4) rewording of the requirement to have a security supervisor on shift at all times; (5) specification of the level of illumination to be provided for monitoring and observation requirements; (6) replacement of the term "bullet penetration resistance" with a new term "bullet-resisting"; (7) changes to permit off loading of cargo inside of the protected area; (8) a change to require escort for all vehicles in the protected area, except designated licensee vehicles, instead of requiring cleared drivers or licensee employee drivers; (9) a change to permit certain Commission approved delivery and inspection activities to be carried out in protected or vital areas; (10) deletion of the requirement for additional barriers to obstruct ready access to vital areas; (11) changes to permit additional licensee vehicles necessary to the conduct of the official plant functions into the protected area; (12) an addition to require upon termination of employment of any employee that certain keys, locks, combinations, and other related equipment be changed; (13) changes to require the implementation of the new rules on a graded basis; and (14) changes in the protected area access control provision to delete the requirement for progression of search functions and to define physical protection in terms of a bullet-resisting structure. Editorial changes also were made, as appropriate. This includes eliminating an obsolete provision in § 50.54. In addition, § 73.55 (b)(2), (b)(3), and (b)(4) (physical barriers) and § 73.55 (c)(3) and (c)(8) (access requirements) have been clarified and reorganized into § 73.55 (c)(2), (c)(3), (c)(4), (c)(5) and (d)(3), (d)(4), respectively.

The following discussion pertains to items (1) through (14) above:

(1) Although performance objectives were considered in the development of the proposed rule, the rule itself did not specify the level of performance that the physical protection system and security organization are to achieve. Many of the comments indicated that inclusion of a general performance requirement would aid in the implementation of the rule and more explicitly indicate the level of protection required. A paragraph has been added to the amendment which addresses these general performance requirements for the physical protection system and the security organization. On the basis of intelligence and other relevant information available to the NRC there are no known groups in this country having the combination of motivation, skill, and resources to attack either a fuel facility or a nuclear power reactor. In addition, studies have indicated that the generic characteristics (i.e., the "defense-in-depth" concept of reactor plant design) of commercial power reactors make the releasing of radioactivity by acts of sabotage difficult. Furthermore, the potential consequences of a reactor sabotage are judged to be less than the extreme consequences which could be associated with the successful detonation of an illicit nuclear explosive device. Having considered these factors, the Commission has concluded that the level of protection specified in § 73.55 is adequate and prudent at this time. The kind and degree of threat and the vulnerabilities to such threats will continue to be reviewed by the Commission. Should such reviews show changes that would dictate different levels of protection, the Commission would consider changes to meet the changed conditions.

Compliance with the detailed requirements should essentially satisfy the general performance requirements stated in the rule in § 73.55(a). However, there may be instances for some plants where additional requirements will have to be imposed so that the general performance requirements can be met. In these cases, such requirements will be specified by the Commission's staff. In any event all licensees subject to the rule must comply with the general performance require-

ments. Nothing herein should be construed as precluding licensees from providing the Commission's staff with suggested other equivalent detailed measures that the licensee determines to be necessary to meet the general performance requirements.

It also should be noted that to reduce the vulnerability of operating facilities from the threat of an insider, the Commission is considering a program to require personnel security clearances for individuals employed in sensitive work activities who have access to or control over special nuclear material. However, applicants and licensees should continue to use the employee screening guidance from the American National Standard, ANSI N18.17, "Industrial Security for Nuclear Power Plants." Should the continuing review of such internal threats by the Commission show changes that would dictate different levels of protection, future changes to meet these new conditions would be forthcoming.

(2) In adopting these amendments the Commission considered the special case of the physical security interfaces of an operating reactor on a site at which another reactor is under construction. Specifically, consideration was given to the need for special access procedures, barriers, or guards at the security boundaries common to the two units. It was determined that these amendments require a level of protection along a protected area boundary, i.e., monitored physical barriers, isolation zones, and surveillance, which is independent of the activity outside or inside the protected area. While the specific protective measures will vary according to what is adjacent to a protected area boundary, e.g., a river, a parking lot, or a reactor under construction, the level of protection and its functional requirements will not vary. However, to clarify the requirements on these and other special cases of physical security interfaces of operating power reactors, a specific mention is made of the case of adjacent reactor facilities.

(3) Guard force duties have been the subject of review by the Commission in connection with fuel cycle facilities. A specification of those duties, appropriate to licensed power reactors, has been included in § 73.55(h)(3).[1]

In addition, minimum and nominal numbers of armed response personnel have been specified in § 73.55(h)(2). The number of such armed response personnel required at a given facility could be more or less than the nominal number depending on factors such as the following to be considered during evaluation of a licensee's physical security plan, not necessarily in order of importance:

(a) Selection, training and motivation of response force.

(b) Availability and construction of defensive positions.

(c) Availability and knowledge of weapons and other equipment.

(d) Individual site considerations, including size, topography, configuration, geography, weather, and number of nuclear power plant units.

(e) Location and reliability of initial detection devices.

(f) Consideration of Local Law Enforcement Agencies response.

(g) Vital area hardening, including plant design, location of and access control to vital areas.

(h) Design and construction of protected area barriers.

(i) Redundancy of security systems.

(j) Initial clearance and continuing reliability assessment of personnel.

(k) Security and contingency procedures.

It also should be noted that, to increase the effectiveness of security organizations, the Commission is considering a regulation concerning guards and other security personnel qualifications and training. The regulation could take the for of an amendment to 10 CFR Part 73 and include performance criteria for use by licensees in developing and applying detailed personnel qualifications, basic training, and tactical training plans to be used in conjunction with security plans.

(4) The proposed rule would have required that a supervisor of the security organization be onsite at all times. Comments indicated that the responsibility of the security supervisor had been confused with that of the shift supervisor. To clarify its intent, the rule set forth below was reworded to require that one full time member of the security organization who is authorized to direct the activities of all other members of the security organization be onsite at all times.

(5) The proposed rule did not specify a level of illumination. Comments indicated that a level of illumination should be specified. The rule set forth below specifies a level of illumination which is sufficient for the monitoring and observation requirements.

(6) The proposed rule used the term "bullet penetration resistance." Comments indicated a need for a clear meaning. Since the meaning of "bullet penetration resistance" was covered in the term "bullet-resisting" defined and used by the Underwriters' Laboratories (UL) Standard UL-752, the rule set forth below was changed to use the term "bullet-resisting" and a new definition has been added in § 73.2 to correspond to the definition of "bullet-resisting" used by the Standard UL-752.

(7) The proposed rule would have required that cargo be off loaded outside the protected area. On the basis of public comments, it was determined that off loading outside the protected area may not be cost effective. The rule set forth below provides for off loading inside the protected area under appropriate security conditions and, to the extent practicable, at a specifically designated materials receiving area that is not adjacent to a vital area.

(8) The proposed rule would have required that either the driver of a vehicle permitted access into the protected area possess an AEC personnel security clearance, or the vehicle be driven by an employee of the licensee while in the protected area. Based upon the comments received and the attendant increase in traffic that would result from item (7) above, regarding off loading, the rule has been revised to require that all vehicles, except designated licensee vehicles, requiring entry into the protected area shall be escorted by a member of the security organization while within the protected area.

(9) The proposed rule would have required that all packages be searched prior to entry into the protected area. The rule set forth below has been changed to permit certain Commission approved delivery and inspection activities to be conducted within protected or vital areas for reasons of safety, security or operational necessity.

(10) The proposed rule would have required appropriate barriers to obstruct ready access to vital areas by ground vehicles. The Commission has decided on the basis of studies in progress that this proposed provision as it applies to vehicles should not be included in the regulations at this time. This proposed amendment has been deleted from the rule set forth below, although physical barriers are required for protection against attempts at unauthorized access of the character described in the general performance requirements.

(11) The proposed rule would have limited the admission of vehicles designed primarily for carrying passengers within the protected area to only those designated as emergency or security vehicles except under emergency conditions. Based on comments received the Commission has concluded that additional transportation, other than for emergency and security purposes, is required to perform necessary plant functions. Therefore, the rule set forth below has been modified to permit designated licensee vehicles necessary to perform official plant functions within the protected area but with certain necessary controls.

(12) The proposed amendments specified that locks, keys, combinations, and other related equipment used to control access to protected and vital areas be controlled to reduce the probability of compromise and be changed whenever there is evidence that they may have been compromised. An additional requirement to change upon termination of employment of any employee, keys, locks, combinations, and related equipment to which that employee has access, has been included.

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[1] The Commission has published for comment, proposed amendments to 10 CFR 73.50 (g) that correspond to the response requirements contained in § 73.55(h)(3). While the proposed change to 10 CFR 73.50(g) is a separate rulemaking from this proceeding, persons with an interest in the response requirements in § 73.55(h)(3) may comment on the proposed amendment to § 73.50(g) before April 11, 1977. Any changes resulting from comments on § 73.50(g) will also be considered with respect to the present rule, § 73.55(h)(3).

(13) The proposed amendments specified that the new rules be implemented by licensees by 180 days from the date of Commission approval of the physical security plan. Comments received showed a need for additional time for implementation of certain features. It appears that additional time could be provided for compliance with some features of the rule without prejudice to the public health and safety and common defense and security. Other features can be more promptly implemented. The Commission has therefore concluded that a graded program for implementation is desirable. The rule has been changed to permit additional time for construction and installation requirements and to require the procedural aspects in the organization, access, communications, and response provisions to be implemented by May 25, 1977.

(14) The proposed amendments would have required that access control to the protected area proceed progressively from the detection of firearms and explosives to identification and admission, that the function for the detection of firearms and explosives be physically separate from the function of identification, and that individuals performing the identification and controlling admittance be housed in a structure capable of providing physical protection to the occupants to assure their ability to respond and summon assistance. On further consideration, these provisions appear to be unduly restrictive. The important factor in preventing a compromise of such an access control function is to protect the ability of the guards to respond and to summon assistance. Accordingly, the progression and physical separation provisions discussed above have been deleted from the amendments and a requirement added for isolation of the individual(s) responsible for the last access control function within a bullet-resisting structure to assure his ability to respond and communicate.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, and Section 552 and 553 of title 5 of the United States Code, the following amendments to Title 10, Chapter I, Code of Federal Regulations, Part 73 are published as a document subject to codification.

1. Section 50.54 is changed by amending paragraph (p) and deleting paragraph (q) to read as follows:

§ 50.54 Conditions of licenses.

* * * * *

(p) The licensee shall make no change which would decrease the effectiveness of a security plan prepared pursuant to § 50.34(c) or Part 73 of this chapter without the prior approval of the Commission. A licensee desiring to make such a change shall submit an application for an amendment to his license pursuant to § 50.90. The licensee shall maintain records of changes to the plan made without prior Commission approval for a period of two years from the date of the change, and shall furnish to the Director of Nuclear Reactor Regulation, Nuclear Regulatory Commission, Washington, D.C. 20555, with a copy to the appropriate NRC Regional Office specified in Appendix D of Part 20 of this chapter, a report containing a description of each change within two months after the change is made.

* * * * *

2. Section 73.2 is amended by adding a new paragraph (q) to read as follows:

§ 73.2 Definitions.

* * * * *

(q) "Bullet-resisting" means protection against complete penetration, passage of fragments of projectiles, and spalling (fragmentation) of the protective material that could cause injury to a person standing directly behind the bullet-resisting barrier.

* * * * *

3. Section 73.4 is revised to read as follows:

§ 73.4 Communications.

Except where otherwise specified, all communications and reports concerning the regulations in this part should be addressed to the Director of Nuclear Materials Safety and Safeguards or the Director of Nuclear Reactor Regulation, as appropriate, Nuclear Regulatory Commission, Washington, D.C. 20555, or may be delivered in person at the Commission offices at 1717 H Street, N.W., Washington, D.C.; or at 7920 Norfolk Avenue, Bethesda, Maryland.

4. The introductory language of § 73.50 is amended to read as follows:

§ 73.50 Requirements for physical protection of licensed activities.

In addition to any other requirements of this part, each licensee who is authorized to operate a fuel reprocessing plant pursuant to Part 50 of this chapter or who possesses or uses uranium-235 (contained in uranium enriched to 20 percent or more in the U-235 isotope), uranium-233, or plutonium alone or in any combination in a quantity of 5,000 grams or more computed by the formula, grams=(grams contained U-235)+2.5 (grams U-233+grams plutonium), including licensees who are authorized to operate a nuclear reactor pursuant to Part 50 of this chapter who possess or store such material shall comply with the following requirements. The requirements of this section do not apply to such reactor licensees who possess such material only when it is located in the core of a nuclear reactor and/or who possess or store such material only when it is contained in irradiated fuel elements removed from the reactor core.

* * * * *

5. A new § 73.55 is added to read as follows:

§ 73.55 Requirements for physical protection of licensed activities in nuclear power reactors against industrial sabotage.

Each licensee who is authorized on February 24, 1977, to operate a nuclear power reactor pursuant to Part 50 of this chapter shall comply with the requirements of paragraphs (b), (d), (f), (g), and (h) of this section, except for any requirement involving construction and installation of equipment not already in place expressed in paragraphs (d)(1), (d)(7), (d)(8), (f)(3) and (h)(4)), by May 25, 1977. The licensee shall submit by May 25, 1977, an amended physical security plan describing how the licensee will comply with all of the requirements of this section including schedules of implementation. The licensee shall implement his plan and comply with all of the provisions of this section as soon as practicable after NRR approval of his plan but no later than August 24, 1978. Each applicant for a license to operate a nuclear power reactor pursuant to Part 50 of this chapter whose application was submitted prior to February 24, 1977 shall submit by May 25, 1977, an amended physical security plan describing how the applicant plans to comply with the requirements of this section including schedules of implementation. If such applicant receives an operating license after February 24, 1977 he shall comply with the requirements of paragraphs (b), (d), (f), (g), and (h) of this section, except for construction and installation not already in place pursuant to paragraphs (d)(1), (d)(7), (d)(8), (f)(3) and (h)(4), by May 25, 1977, or on the date of receipt of the operating license, whichever is later, and implement his plan and comply with all of the requirements of this section by August 24, 1978 or on the date of receipt of the operating license whichever is later. Each applicant for a license to operate a nuclear power reactor pursuant to Part 50 of this chapter whose application is submitted after February 24, 1977, shall include in the physical security plan required by § 50.34(c) the information identified in paragraphs (a) through (h) of this section and if such applicant receives an operating license, shall comply with the provisions of this section on receipt of the operating license.

(a) *General performance requirements.* The licensee shall establish and maintain an onsite physical protection system and security organization which will provide protection with high assurance against successful industrial sabotage by both of the following:

(1) A determined violent external assault, attack by stealth, or deceptive actions, of several persons with the following attributes, assistance and equipment: (i) Well-trained (including military training and skills) and dedicated individuals, (ii) inside assistance which may include a knowledgeable individual who attempts to participate in both a passive role (e.g., provide information) and an active role (e.g., facilitate entrance and exit, disable alarms and communications participate in violent attack), (iii) suitable weapons, up to and including hand-held automatic weapons, equipped with silencers and having effective long range accuracy, (iv) hand-carried equipment, including incapacitating agents and explosives for

use as tools of entry or otherwise destroying the reactor integrity, and

(2) An internal threat of an insider, including an employee (in any position).

In meeting these general performance requirements, the onsite physical protection system and security organization shall include, but not necessarily be limited to, the capabilities to meet the specific requirements contained in paragraphs (b) through (h) of this section. The Commission may authorize an applicant or licensee to provide measures for protection against industrial sabotage other than those required by this section if the applicant or licensee demonstrates that the overall level of system performance provides protection against industrial sabotage equivalent to that which would be provided by paragraphs (b)–(h) of this section and meets the general performance requirements of paragraph (a) of this section. Specifically, in the special cases of [illegible] operating reactors with adjacent reactor power plants under construction, the licensee shall provide and maintain a level of physical protection of the operating reactor against industrial sabotage equivalent to the requirements of this section.

(b) *Physical security organization.* (1) The licensee shall establish a security organization, including guards, to protect his facility against industrial sabotage.

(2) At least one full time member of the security organization who has the authority to direct the physical security activities of the security organization shall be onsite at all times.

(3) The licensee shall establish, maintain and follow written security procedures which document the structure of the security organization and which detail the duties of guards, watchmen, and other individuals responsible for security.

(4) The licensee shall not permit an individual to act as a guard, watchman or armed response individual unless such individual has been properly trained and qualified and has demonstrated: (i) An understanding of the licensee's security procedures, and (ii) the ability to execute all duties required of him by such procedures. Each guard, watchman, and armed response individual shall be requalified at least annually. Such requalification shall be documented.

(c) *Physical barriers.* (1) The licensee shall locate vital equipment only within a vital area, which in turn, shall be located within a protected area such that access to vital equipment requires passage through at least two physical barriers of sufficient strength to meet the performance requirements of paragraph (a) of this section. More than one vital area may be located within a single protected area.

(2) The physical barriers at the perimeter of the protected area shall be separated from any other barrier designated as a physical barrier for a vital area within the protected area.

(3) Isolation zones shall be maintained in outdoor areas adjacent to the physical barrier at the perimeter of the protected area and shall be of sufficient size to permit observation of the activities of people on either side of that barrier in the event of its penetration. If parking facilities are provided for employees or visitors, they shall be located outside the isolation zone and exterior to the protected area barrier.

(4) Detection of penetration or attempted penetration of the protected area or the isolation zone adjacent to the protected area barrier shall assure that adequate response by the security organization can be initiated. All exterior areas within the protected area shall be periodically checked to detect the presence of unauthorized persons, vehicles, or materials.

(5) Isolation zones and all exterior areas within the protected area shall be provided with illumination sufficient for the monitoring and observation requirements of paragraphs (c)(3), (c)(4), and (h)(4) of this section, but not less than 0.2 footcandle measured horizontally at ground level.

(6) The walls, doors, ceiling, floor, and any windows in the walls and in the doors of the reactor control room shall be bullet-resisting.

(d) *Access requirements.* (1) The licensee shall control all points of personnel and vehicle access into a protected area. Identification and search of all individuals shall be made and authorization shall be checked at such points. The search function for detection of firearms, explosives, and incendiary devices shall be conducted either by a physical search or by use of equipment capable of detecting such devices. The individual responsible for the last access control function (controlling admission to the protected area) shall be isolated within a bullet-resisting structure as described in paragraph (c)(6) of this section to assure their ability to respond or to summon assistance.

(2) At the point of personnel and vehicle access into a protected area, all hand-carried packages shall be searched for devices such as firearms, explosives, and incendiary devices, or other items which could be used for industrial sabotage.

(3) All packages and material for delivery into the protected area shall be checked for proper identification and authorization and searched for devices such as firearms, explosives and incendiary devices or other items which could be used for industrial sabotage, prior to admittance into the protected area, except those Commission approved delivery and inspection activities specifically designated by the licensee to be carried out within vital or protected areas for reasons of safety, security or operational necessity.

(4) All vehicles, except under emergency conditions, shall be searched for items which could be used for sabotage purposes prior to entry into the protected area. Vehicle areas to be searched shall include the cab, engine compartment, undercarriage, and cargo area. All vehicles, except designated licensee vehicles, requiring entry into the protected area shall be escorted by a member of the security organization while within the protected area and, to the extent practicable, shall be off loaded in the protected area at a specific designated materials receiving area that is not adjacent to a vital area. Designated licensee vehicles shall be limited in their use to onsite plant functions and shall remain in the protected area except for operational, maintenance, repair security and emergency purposes. The licensee shall exercise positive control over all such designated vehicles to assure that they are used only by authorized persons and for authorized purposes.

(5) A numbered picture badge identification system shall be used for all individuals who are authorized access to protected areas without escort. An individual not employed by the licensee but who requires frequent and extended access to protected and vital areas may be authorized access to such areas without escort provided that he receives a picture badge upon entrance into the protected area which must be returned upon exit from the protected area and which indicates (i) Non-employee-no escort required; (ii) areas to which access is authorized and (iii) the period for which access has been authorized. Badges shall be displayed by all individuals while inside the protected area.

(6) Individuals not authorized by the licensee to enter protected areas without escort shall be escorted by a watchman, or other individual designated by the licensee, while in a protected area and shall be badged to indicate that an escort is required. In addition, each such individual shall be required to register his name, date, time, purpose of visit and employment affiliation, citizenship, and name of the individual to be visited.

(7) The licensee shall positively control all points of personnel and vehicle access into vital areas. Access to vital areas shall be limited to individuals who are authorized access to vital equipment and who require such access to perform their duties. Authorization for such individuals shall be provided by the issuance of specially coded numbered badges indicating vital areas to which access is authorized. Access to vital areas for the purpose of general familiarization and other non-work-related activities shall not be authorized except for good cause shown to the licensee. Unoccupied vital areas shall be locked and protected by an active intrusion alarm system.

(8) Access to the reactor containment shall be through doors or hatches which shall be alarmed and have locks of substantial construction to offer penetration resistance and impede both surreptitious and forced entry. Any time frequent access is permitted to containment such as during refueling or major maintenance, positive access control to assure that only authorized personnel and materials are permitted into the containment shall be exercised by the licensee, with a guard or watchman.

(9) All keys, locks, combinations, and related equipment used to control access to protected and vital areas shall be controlled to reduce the probability of com-

promise. Whenever there is evidence that any key, lock, combination, or related equipment may have been compromised it shall be changed. Upon termination of employment of any employee, keys, locks, combinations, and related equipment to which that employee had access, shall be changed.

(e) *Detection aids.* (1) All alarms required pursuant to this part shall annunciate in a continuously manned central alarm station located within the protected area and in at least one other continuously manned station, not necessarily onsite, such that a single act cannot remove the capability of calling for assistance or otherwise responding to an alarm. The onsite central alarm station shall be considered a vital area and its walls, doors, ceiling, floor, and any windows in the walls and in the doors shall be bullet-resisting. The onsite central alarm station shall be located within a building such that the interior of the central alarm station is not visible from the perimeter of the protected area. This station shall not contain any operational activities that would interfere with the execution of the alarm response function.

(2) All alarm devices including transmission lines to annunciators shall be tamper indicating and self-checking e.g., an automatic indication is provided when failure of the alarm system or a component occurs, or when the system is on standby power. The annunciation of an alarm at the alarm stations shall indicate the type of alarm (e.g., intrusion alarm, emergency exit alarm, etc.) and location.

(3) All emergency exits in each protected area and each vital area shall be alarmed.

(f) *Communication requirements.* (1) Each guard, watchman or armed response individual on duty shall be capable of maintaining continuous communication with an individual in each continuously manned alarm station required by paragraph (e)(1) of this section, who shall be capable of calling for assistance from other guards, watchmen, and armed response personnel and from local law enforcement authorities.

(2) The alarm stations required by paragraph (e)(1) of this section shall have conventional telephone service for communication with the law enforcement authorities as described in paragraph (f)(1) of this section.

(3) To provide the capability of continuous communication, radio or microwave transmitted two-way voice communication, either directly or through an intermediary, shall be established, in addition to conventional telephone service, between local law enforcement authorities and the facility and shall terminate in each continuously manned alarm station required by paragraph (e)(1) of this section.

(4) Non-portable communications equipment controlled by the licensee and required by this section shall remain operable from independent power sources in the event of the loss of normal power.

(g) *Testing and maintenance.* Each licensee shall test and maintain intrusion alarms, emergency alarms, communications equipment, physical barriers, and other security related devices or equipment utilized pursuant to this section as follows:

(1) All alarms, communication equipment, physical barriers, and other security related devices or equipment shall be maintained in operable condition. The licensee shall develop and employ compensatory measures including equipment, additional security personnel and specific procedures to assure that the effectiveness of the security system is not reduced by failure or other contingencies affecting the operation of the security related equipment or structures.

(2) Each intrusion alarm shall be tested for performance at the beginning and end of any period that it is used for security. If the period of continuous use is longer than seven days, the intrusion alarm shall also be tested at least once every seven (7) days.

(3) Communications equipment required for communications onsite shall be tested for performance not less frequently than once at the beginning of each security personnel work shift. Communications equipment required for communications offsite shall be tested for performance not less than once a day.

(h) *Response requirement.* (1) The licensee shall establish and document liaison with local law enforcement authorities.

(2) The total number of guards, and armed, trained personnel immediately available at the facility to fulfill these response requirements shall nominally be ten (10), unless specifically required otherwise on a case by case basis by the Commission; however, this number may not be reduced to less than five (5) guards.

(3) Upon detection of abnormal presence of activity of persons or vehicles within an isolation zone, a protected area, or a vital area, or upon evidence of intrusion into a protected area or a vital area, the facility security organization shall:

(i) Determine whether or not a threat exists,

(ii) Assess the extent of the threat, if any,

(iii) Inform local law enforcement agencies of the threat and request assistance, if necessary,

(iv) Require guards or other armed response personnel to interpose themselves between vital areas and any adversary attempting entry for purposes of industrial sabotage, and

(v) Instruct guards or other armed response personnel to prevent or delay an act of industrial sabotage by applying a sufficient degree of force to counter that degree of force directed at them, including the use of deadly force when there is a reasonable belief it is necessary in self-defense or in the defense of others.

(4) To facilitate initial response to detection of penetration of the protected area and assessment of the existence of a threat, a capability of observing the isolation zones and the physical barrier at the perimeter of the protected area shall be provided, preferably by means of closed circuit television or by other suitable means which limit exposure of responding personnel to possible attack.

6. The prefatory language of § 73.70 and paragraph (c) of § 73.70 are revised to read as follows:

§ 73.70 Records.

Each licensee subject to the provisions of §§ 73.30 through 73.36 and/or § 73.50 and/or § 73.55 and/or § 73.60 shall keep the following records:

* * * * *

(c) A register of visitors, vendors, and other individuals not employed by the licensee pursuant to § 73.50(c)(5) and § 73.55(d)(6).

* * * * *

Effective date: The foregoing amendments become effective March 28, 1977.

(Sec. 1611., Pub. L. 83-703, 68 Stat. 948, Pub. L. 93-377, 88 Stat. 475; Sec. 201, Pub. L. 93-438, 88 Stat. 1243 (42 U.S.C. 2201, 5841).)

Dated at Washington, D.C., this 18th day of February 1977.

For the Nuclear Regulatory Commission.

SAMUEL J. CHILK,
Secretary of the Commission.

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