

10 CFR 50.90

RS-03-040

March 31, 2003

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D. C. 20555Subject: LaSalle County Station, Units 1 and 2  
Facility Operating License Nos. NPF-11 and NPF-18  
NRC Docket Nos. 50-373 and 50-374Request for Amendment to Technical Specifications  
Section 5.7, "High Radiation Area"

In accordance with 10 CFR 50.90, Exelon Generation Company (EGC), LLC, hereby requests the following amendment to Appendix A, Technical Specifications (TS), of Facility Operating License Nos. NPF-11 and NPF-18. Specifically, the proposed change will modify TS 5.7, "High Radiation Area," by incorporating the wording and requirements from NUREG- 1434, "Standard Technical Specifications General Electric Plants, BWR/6," Revision 2, dated June 2001.

The information supporting the proposed TS change is subdivided as follows.

- Attachment 1 is the notarized affidavit.
- Attachment 2 provides our evaluation supporting the proposed changes.
- Attachment 3 contains the copies of the marked up TS pages.
- Attachment 4 provides the retyped TS pages.

The proposed TS change has been reviewed by the LaSalle County Station Plant Operations Review Committee (PORC) and approved by the Nuclear Safety Review Board (NSRB) in accordance with the Quality Assurance Program.

EGC is notifying the State of Illinois of this application for amendment by transmitting a copy of this letter and its attachments to the designated State Official.

We request approval of the proposed change by March 1, 2004 with an implementation period of 60 days.

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U. S. Nuclear Regulatory Commission  
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Should you have any questions concerning this submittal, please contact Mr. T. W. Simpkin at (630) 657-2821.

Sincerely,



*for*

Keith R. Jury  
Director-Licensing  
Mid-West Regional Operating Group

Attachments:

- Attachment 1. Affidavit
- Attachment 2. Evaluation of Proposed Change
- Attachment 3. Markup of Proposed Technical Specification Page Change
- Attachment 4. Retyped Pages for Technical Specification Change

cc: Regional Administrator – NRC Region III  
NRC Project Manager – NRC NRR  
NRC Senior Resident Inspector – LaSalle County Station  
Office of Nuclear Facility Safety – Illinois Department of Nuclear Safety

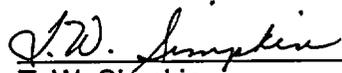
ATTACHMENT 1  
Affidavit

STATE OF ILLINOIS )  
COUNTY OF DUPAGE )  
IN THE MATTER OF: )  
EXELON GENERATION COMPANY (EGC), LLC ) Docket Numbers  
LASALLE COUNTY STATION - UNIT 1 and UNIT 2 ) 50-373 and 50-374

SUBJECT: Request for Amendment to Technical Specifications  
Section 5.7, "High Radiation Area"

AFFIDAVIT

I affirm that the content of this transmittal is true and correct to the best of my knowledge, information, and belief.

  
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T. W. Simpkin  
Manager-Licensing  
Mid-West Regional Operating Group

Subscribed and sworn to before me, a Notary Public in and

for the State above named, this 31<sup>st</sup> day of

March, 2003

  
\_\_\_\_\_  
Notary Public



**ATTACHMENT 2**  
**Evaluation of Proposed Changes**  
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- 1.0 INTRODUCTION
- 2.0 DESCRIPTION OF PROPOSED AMENDMENT
- 3.0 BACKGROUND
- 4.0 REGULATORY REQUIREMENTS & GUIDANCE
- 5.0 TECHNICAL ANALYSIS
- 6.0 REGULATORY ANALYSIS
- 7.0 NO SIGNIFICANT HAZARDS CONSIDERATION (NSHC)
- 8.0 ENVIRONMENTAL CONSIDERATION
- 9.0 PRECEDENT

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**Evaluation of Proposed Changes**  
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**1.0 INTRODUCTION**

In accordance with 10 CFR 50.90, Exelon Generation Company (EGC), LLC, hereby requests the following amendment to Appendix A, Technical Specifications (TS), of Facility Operating License Nos. NPF-11 and NPF-18. Specifically, the proposed change will modify TS 5.7, "High Radiation Area," by incorporating the corresponding wording and requirements from NUREG- 1434, "Standard Technical Specifications General Electric Plants, BWR/6," Revision 2, dated June 2001.

**2.0 DESCRIPTION OF PROPOSED AMENDMENT**

The proposed changes will replace the current LaSalle County Station (LSCS) TS 5.7 with the corresponding wording and requirements from NUREG- 1434, Revision 2. The marked up and retyped TS pages are contained in Attachments 3 and 4.

**3.0 BACKGROUND**

TS 5.7 describe the LSCS program to control access to areas within the plant that have radiation levels that exceed 100 millirem per hour (mrem/hr). The current TS 5.7.1 and TS 5.7.3 describe the requirements for access into high radiation areas that have radiation levels that exceed 100 mrem/hr but are less than or equal to 1000 mrem/hr. The current TS 5.7.2, 5.7.3 and 5.7.4 describes the requirements for access into high-radiation areas that have radiation levels that exceed 1000 mrem/hr. For those areas where locking is not practical, current TS 5.7.2 and TS 5.7.4 both require the area to be barricaded, conspicuously posted, and have an activated flashing light.

**4.0 REGULATORY REQUIREMENTS & GUIDANCE**

10 CFR 50.36(c)(5), "Administrative controls.", requires that provisions relating to organization and management, procedures, recording keeping, review and audit, and reporting necessary to assure operation of the facility in a safe manner must be included in a licensee's TS.

**5.0 TECHNICAL ANALYSIS**

**5.1 Design Bases**

The proposed change incorporates corresponding wording and requirements from NUREG- 1434, into the LSCS TS. The LSCS evaluation of the proposed change concluded the following.

- Both the proposed and current TS 5.7.1 describe the requirements for access into areas that have radiation levels that exceed 100 mrem/hr but are

**ATTACHMENT 2**  
**Evaluation of Proposed Changes**  
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less than or equal to 1000 mrem/hr. The proposed and current TS 5.7.1 are considered to have equivalent level access controls as both contain the need to provide a barricade, conspicuously post the area and issue an RWP to control entrance to the area.

- Proposed TS 5.7.2 and current TS 5.7.4 describe the requirements for access into areas that have radiation levels that exceed 1000 mrem/hr. Proposed TS 5.7.2 and current TS 5.7.4 are considered to have equivalent level access controls as both require these areas to be locked. For those areas where locking is not practical, proposed TS 5.7.2 and current TS 5.7.4 both require the area to be barricaded, conspicuously posted, and have an activated flashing light.
- The proposed change includes the deletion of the use of computer controlled doors in current TS 5.7.2. This description is being removed as computer controlled doors are no longer utilized at LSCS. Rather, manual locking mechanisms are used on doors providing an equivalent level of control.
- Current TS 5.7.4 also discusses “high-high” radiation areas. The term “high-high” radiation area is a legacy term that is being deleted from the proposed TS. This is an administrative change only to remove an outdated term.

Therefore, LSCS has determined that the proposed change provides an equivalent level of protection as that currently provided.

## 5.2 Risk Information

This submittal is not based on risk informed decision making.

## 6.0 REGULATORY ANALYSIS

TS 5.7 describes the LSCS program to control access to areas within the plant that have radiation levels that exceed 100 mrem/hr. These administrative controls provide provisions relating to the control of radiation exposure to individuals and thus in accordance with 10 CFR 50.36(c)(5) must be included in the TS.

## 7.0 NO SIGNIFICANT HAZARDS CONSIDERATION

EGC has evaluated the proposed change to the TS for LaSalle County Station, Unit 1 and Unit 2, and has determined that the proposed change does not involve a significant hazards consideration and is providing the following information to support a finding of no significant hazards consideration.

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**Evaluation of Proposed Changes**  
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**Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?**

Response: No

The proposed change will modify LaSalle County Station (LSCS) Technical Specification (TS) 5.7, "High Radiation Area," by incorporating into the TS the corresponding wording and requirements from NUREG- 1434, "Standard Technical Specifications General Electric Plants, BWR/6," Revision 2, dated June 2001. TS 5.7 establishes the administrative controls on entry into high radiation areas. High radiation area administrative controls are not a precursor to accidents previously evaluated. Thus, the proposed change does not have any affect on the probability of an accident previously evaluated.

The proposed change in administrative controls on entry into a radiation area does not affect the ability of LSCS to successfully respond to previously evaluated accidents and does not affect radiological assumptions used in the evaluations. Thus, the radiological consequences of any accident previously evaluated are not increased.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

**Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?**

Response: No

The proposed change does not affect the control parameters governing unit operation or the response of plant equipment to transient conditions. The proposed change does not introduce any new equipment, modes of system operation or failure mechanisms.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

**Does the change involve a significant reduction in a margin of safety?**

Response: No

The proposed change incorporates corresponding wording and requirements from NUREG- 1434, into the LSCS TS. The LSCS evaluation of the proposed change concluded the following.

- Both the proposed and current TS 5.7.1 describe the requirements for

**ATTACHMENT 2**  
**Evaluation of Proposed Changes**  
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access into areas that have radiation levels that exceed 100 mrem/hr but are less than or equal to 1000 mrem/hr. The proposed and current TS 5.7.1 are considered to have equivalent level access controls as both contain the need to provide a barricade, conspicuously post the area and issue an RWP to control entrance to the area.

- Proposed TS 5.7.2 and current TS 5.7.4 describe the requirements for access into areas that have radiation levels that exceed 1000 mrem/hr. Proposed TS 5.7.2 and current TS 5.7.4 are considered to have equivalent level access controls as both require these areas to be locked. For those areas where locking is not practical, proposed TS 5.7.2 and current TS 5.7.4 both require the area to be barricaded, conspicuously posted, and have an activated flashing light.
- The proposed change includes the deletion of the use of computer controlled doors in current TS 5.7.2. This description is being removed as computer controlled doors are no longer utilized at LSCS. Rather, manual locking mechanisms are used on doors providing an equivalent level of control.
- Current TS 5.7.4 also discusses "high-high" radiation areas. The term "high-high" radiation area is a legacy term that is being deleted from the proposed TS. This is an administrative change only to remove an outdated term.

Therefore, LSCS has determined that the proposed change provides an equivalent level of protection as that currently provided.

Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

Based upon the above, EGC concludes that the proposed amendment presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

## 8.0 ENVIRONMENTAL CONSIDERATION

A review has determined that the proposed amendment would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. However, the proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

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**Evaluation of Proposed Changes**  
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9.0 PRECEDENT

The proposed amendment incorporates into the LSCS a change that is specific to LSCS to incorporate the wording and intent of NUREG-1434, Rev. 2, into TS 5.7, and therefore, this proposed amendment does not rely upon the issuance of amendments to other licensees.

**ATTACHMENT 3**

**MARKUP OF PROPOSED TECHNICAL SPECIFICATION PAGE CHANGE**

Revised TS Pages

5.0 ADMINISTRATIVE CONTROLS

5.7 High Radiation Area

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5.7.1 Pursuant to 10 CFR 20, paragraph 20.1601(c), in lieu of the requirements of 10 CFR 20.1601, each high radiation area, as defined in 10 CFR 20, in which the intensity of radiation is  $> 100$  mrem/hr but  $< 1000$  mrem/hr, shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit (RWP). Individuals qualified in radiation protection procedures or personnel continuously escorted by such individuals may be exempt from the RWP issuance requirement during the performance of their assigned duties in high radiation areas with exposure rates  $> 100$  mrem/hr and  $\leq 1000$  mrem/hr, provided they are otherwise following plant radiation protection procedures for entry into such high radiation areas.

Any individual or group of individuals permitted to enter such areas shall be provided with or accompanied by one or more of the following:

- a. A radiation monitoring device that continuously indicates the radiation dose rate in the area.
- b. A radiation monitoring device that continuously integrates the radiation dose rate in the area and alarms when a preset integrated dose is received. Entry into such areas with this monitoring device may be made after the dose rate levels in the area have been established and personnel are aware of them.
- c. An individual qualified in radiation protection procedures with a radiation dose rate monitoring device, who is responsible for providing positive control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified by the radiation protection manager in the RWP.

5.7.2 In addition to the requirements of Specification 5.7.1 for areas accessible to personnel with radiation levels such that a major portion of the body could receive in one hour a dose greater than 1000 mrem, the computer shall be programmed to permit entry through locked doors for any individual requiring access to any such high-high radiation areas for the time that access is required.

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5.7 High Radiation Area

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5.7.3 ~~Keys to manually open computer controlled high radiation area doors and high-high radiation area doors shall be maintained under the administrative control of the shift manager on duty or the radiation protection manager.~~

5.7.4 ~~High-high radiation areas, as defined in Specification 5.7.2, not equipped with the computerized card readers shall be maintained in accordance with 10 CFR 20.1601(a)(3), locked except during periods when access to the area is required with positive control over each individual entry, or in the case of a high radiation area established for a period of 30 days or less, direct surveillance to prevent unauthorized entry may be substituted. Doors shall remain locked except during periods of access by personnel under an approved RWP which shall specify the dose rate levels in the immediate work area and the maximum allowable stay time for individuals in that area. For individual areas accessible to personnel with radiation levels such that a major portion of the body could receive in one hour a dose in excess of 1000 mrem that are located within large areas, such as the containment, where no enclosure exists for purposes of locking, and no enclosure can be reasonably constructed around the individual areas, then that area shall be roped off, conspicuously posted and a flashing light shall be activated as a warning device. In lieu of the stay time specification of the RWP, direct or remote, such as use of closed circuit TV cameras, continuous surveillance may be made by personnel qualified in radiation protection procedures to provide positive exposure control over the activities within the area.~~

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5.0 ADMINISTRATIVE CONTROLS

5.7 High Radiation Area

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As provided in paragraph 20.1601(c) of 10 CFR Part 20, the following controls shall be applied to high radiation areas in place of the controls required by paragraph 20.1601(a) and (b) of 10 CFR Part 20:

5.7.1 High Radiation Areas with Dose Rates Not Exceeding 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation

- a. Each entryway to such an area shall be barricaded and conspicuously posted as a high radiation area. Such barricades may be opened as necessary to permit entry or exit of personnel or equipment.
- b. Access to, and activities in, each such area shall be controlled by means of Radiation Work Permit (RWP) or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures.
- c. Individuals qualified in radiation protection procedures and personnel continuously escorted by such individuals may be exempted from the requirement for an RWP or equivalent while performing their assigned duties provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas.
- d. Each individual or group entering such an area shall possess:
  1. A radiation monitoring device that continuously displays radiation dose rates in the area; or
  2. A radiation monitoring device that continuously integrates the radiation dose rates in the area and alarms when the device's dose alarm setpoint is reached, with an appropriate alarm setpoint, or
  3. A radiation monitoring device that continuously transmits dose rate and cumulative dose information to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area, or

(continued)

5.7 High Radiation Area

5.7.1 High Radiation Areas with Dose Rates Not Exceeding 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation (continued)

4. A self-reading dosimeter (e.g., pocket ionization chamber or electronic dosimeter) and,

(i) Be under the surveillance, as specified in the RWP or equivalent, while in the area, of an individual qualified in radiation protection procedures, equipped with a radiation monitoring device that continuously displays radiation dose rates in the area; who is responsible for controlling personnel exposure with the area, or

(ii) Be under the surveillance, as specified in the RWP or equivalent, while in the area, by means of closed circuit television, of personnel qualified in radiation protection procedures, responsible for controlling personnel radiation exposure in the area, and with the means to communicate with individuals in the area who are covered by such surveillance.

e. Except for individuals qualified in radiation protection procedures, or personnel continuously escorted by such individuals, entry into such areas shall be made only after dose rates in the area have been determined and entry personnel are knowledgeable of them. These continuously escorted personnel will receive a pre-job briefing prior to entry into such areas. This dose rate determination, knowledge, and pre-job briefing does not require documentation prior to initial entry.

5.7.2 High Radiation Areas with Dose Rates Greater than 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation, but less than 500 rads/hour at 1 Meter from the Radiation Source or from any Surface Penetrated by the Radiation

a. Each entryway to such an area shall be conspicuously posted as a high radiation area and shall be provided with a locked

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5.7 High Radiation Area

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5.7.2 High Radiation Areas with Dose Rates Greater than 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation, but less than 500 rads/hour at 1 Meter from the Radiation Source or from any Surface Penetrated by the Radiation (continued)

or continuously guarded door or gate that prevents unauthorized entry, and, in addition:

1. All such door and gate keys shall be maintained under the administrative control of the shift supervisor, radiation protection manager, or his or her designee.
  2. Doors and gates shall remain locked except during periods of personnel or equipment entry or exit.
- b. Access to, and activities in, each such area shall be controlled by means of an RWP or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures.
- c. Individuals qualified in radiation protection procedures may be exempted from the requirement for an RWP or equivalent while performing radiation surveys in such areas provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas.
- d. Each individual or group entering such an area shall possess one of the following:
1. A radiation monitoring device that continuously integrates the radiation rates in the area and alarms when the device's dose alarm setpoint is reached, with an appropriate alarm setpoint, or
  2. A radiation monitoring device that continuously transmits dose rate and cumulative dose information to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area with the means to communicate with and control every individual in the area, or

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5.7 High Radiation Area

5.7.2 High Radiation Areas with Dose Rates Greater than 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation, but less than 500 rads/hour at 1 Meter from the Radiation Source or from any Surface Penetrated by the Radiation (continued)

3. A self-reading dosimeter (e.g., pocket ionization chamber or electronic dosimeter) and,
  - (i) Be under the surveillance, as specified in the RWP or equivalent, while in the area, of an individual qualified in radiation protection procedures, equipped with a radiation monitoring device that continuously displays radiation dose rates in the area; who is responsible for controlling personnel exposure within the area, or
  - (ii) Be under the surveillance, as specified in the RWP or equivalent, while in the area, by means of closed circuit television, of personnel qualified in radiation protection procedures, responsible for controlling personnel radiation exposure in the area, and with the means to communicate with and control every individual in the area.
4. In those cases where options (2) and (3), above, are impractical or determined to be inconsistent with the "As Low As is Reasonably Achievable" principle, a radiation monitoring device that continuously displays radiation dose rates in the area.
- e. Except for individuals qualified in radiation protection procedures, or personnel continuously escorted by such individuals, entry into such areas shall be made only after dose rates in the area have been determined and entry personnel are knowledgeable of them. These continuously escorted personnel will receive a pre-job briefing prior to entry into such areas. This dose rate determination, knowledge, and pre-job briefing does not require documentation prior to initial entry.

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5.7 High Radiation Area

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5.7.2 High Radiation Areas with Dose Rates Greater than 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation, but less than 500 rads/hour at 1 Meter from the Radiation Source or from any Surface Penetrated by the Radiation (continued)

- f. Such individual areas that are within a larger area where no enclosure exists for the purpose of locking and where no enclosure can reasonably be constructed around the individual area need not be controlled by a locked door or gate, nor continuously guarded, but shall be barricaded, conspicuously posted, and a clearly visible flashing light shall be activated at the area as a warning device.
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**ATTACHMENT 4**

**RETYPED PAGES  
FOR  
TECHNICAL SPECIFICATION CHANGE**

5.0 ADMINISTRATIVE CONTROLS

5.7 High Radiation Area

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As provided in paragraph 20.1601(c) of 10 CFR Part 20, the following controls shall be applied to high radiation areas in place of the controls required by paragraph 20.1601(a) and (b) of 10 CFR Part 20:

5.7.1 High Radiation Areas with Dose Rates Not Exceeding 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation

- a. Each entryway to such an area shall be barricaded and conspicuously posted as a high radiation area. Such barricades may be opened as necessary to permit entry or exit of personnel or equipment.
- b. Access to, and activities in, each such area shall be controlled by means of Radiation Work Permit (RWP) or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures.
- c. Individuals qualified in radiation protection procedures and personnel continuously escorted by such individuals may be exempted from the requirement for an RWP or equivalent while performing their assigned duties provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas.
- d. Each individual or group entering such an area shall possess:
  1. A radiation monitoring device that continuously displays radiation dose rates in the area; or
  2. A radiation monitoring device that continuously integrates the radiation dose rates in the area and alarms when the device's dose alarm setpoint is reached, with an appropriate alarm setpoint, or
  3. A radiation monitoring device that continuously transmits dose rate and cumulative dose information to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area, or

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5.7 High Radiation Area

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5.7.1 High Radiation Areas with Dose Rates Not Exceeding 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation (continued)

4. A self-reading dosimeter (e.g., pocket ionization chamber or electronic dosimeter) and,

(i) Be under the surveillance, as specified in the RWP or equivalent, while in the area, of an individual qualified in radiation protection procedures, equipped with a radiation monitoring device that continuously displays radiation dose rates in the area; who is responsible for controlling personnel exposure with the area, or

(ii) Be under the surveillance, as specified in the RWP or equivalent, while in the area, by means of closed circuit television, of personnel qualified in radiation protection procedures, responsible for controlling personnel radiation exposure in the area, and with the means to communicate with individuals in the area who are covered by such surveillance.

e. Except for individuals qualified in radiation protection procedures, or personnel continuously escorted by such individuals, entry into such areas shall be made only after dose rates in the area have been determined and entry personnel are knowledgeable of them. These continuously escorted personnel will receive a pre-job briefing prior to entry into such areas. This dose rate determination, knowledge, and pre-job briefing does not require documentation prior to initial entry.

5.7.2 High Radiation Areas with Dose Rates Greater than 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation, but less than 500 rads/hour at 1 Meter from the Radiation Source or from any Surface Penetrated by the Radiation

a. Each entryway to such an area shall be conspicuously posted as a high radiation area and shall be provided with a locked

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5.7 High Radiation Area

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5.7.2 High Radiation Areas with Dose Rates Greater than 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation, but less than 500 rads/hour at 1 Meter from the Radiation Source or from any Surface Penetrated by the Radiation (continued)

or continuously guarded door or gate that prevents unauthorized entry, and, in addition:

1. All such door and gate keys shall be maintained under the administrative control of the shift supervisor, radiation protection manager, or his or her designee.
  2. Doors and gates shall remain locked except during periods of personnel or equipment entry or exit.
- b. Access to, and activities in, each such area shall be controlled by means of an RWP or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures.
- c. Individuals qualified in radiation protection procedures may be exempted from the requirement for an RWP or equivalent while performing radiation surveys in such areas provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas.
- d. Each individual or group entering such an area shall possess one of the following:
1. A radiation monitoring device that continuously integrates the radiation rates in the area and alarms when the device's dose alarm setpoint is reached, with an appropriate alarm setpoint, or
  2. A radiation monitoring device that continuously transmits dose rate and cumulative dose information to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area with the means to communicate with and control every individual in the area, or

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5.7 High Radiation Area

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5.7.2 High Radiation Areas with Dose Rates Greater than 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation, but less than 500 rads/hour at 1 Meter from the Radiation Source or from any Surface Penetrated by the Radiation (continued)

3. A self-reading dosimeter (e.g., pocket ionization chamber or electronic dosimeter) and,
  - (i) Be under the surveillance, as specified in the RWP or equivalent, while in the area, of an individual qualified in radiation protection procedures, equipped with a radiation monitoring device that continuously displays radiation dose rates in the area; who is responsible for controlling personnel exposure within the area, or
  - (ii) Be under the surveillance, as specified in the RWP or equivalent, while in the area, by means of closed circuit television, of personnel qualified in radiation protection procedures, responsible for controlling personnel radiation exposure in the area, and with the means to communicate with and control every individual in the area.
4. In those cases where options (2) and (3), above, are impractical or determined to be inconsistent with the "As Low As is Reasonably Achievable" principle, a radiation monitoring device that continuously displays radiation dose rates in the area.
- e. Except for individuals qualified in radiation protection procedures, or personnel continuously escorted by such individuals, entry into such areas shall be made only after dose rates in the area have been determined and entry personnel are knowledgeable of them. These continuously escorted personnel will receive a pre-job briefing prior to entry into such areas. This dose rate determination, knowledge, and pre-job briefing does not require documentation prior to initial entry.

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5.7 High Radiation Area

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5.7.2 High Radiation Areas with Dose Rates Greater than 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation, but less than 500 rads/hour at 1 Meter from the Radiation Source or from any Surface Penetrated by the Radiation (continued)

- f. Such individual areas that are within a larger area where no enclosure exists for the purpose of locking and where no enclosure can reasonably be constructed around the individual area need not be controlled by a locked door or gate, nor continuously guarded, but shall be barricaded, conspicuously posted, and a clearly visible flashing light shall be activated at the area as a warning device.
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