



**Pacific Gas and  
Electric Company®**

**John S. Keenan**  
Senior Vice President  
Generation & Chief Nuclear Officer

77 Beale Street, Mailcode B32  
San Francisco, CA 94105

*Mailing Address*  
Mail Code B32, Room 3235  
P. O. Box 770000  
San Francisco, CA 94177

415.973.4684  
Internal: 223.4684  
Fax: 415.973.2313

November 5, 2007

PG&E Letter HBL-07-016

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555

Docket No. 50-133 OL-DPR-7  
Humboldt Bay Power Plant, Unit 3  
License Amendment Request 07-02  
Deletion and Relocation of Operational and Administrative Requirements from the  
Technical Specifications

Dear Commissioners and Staff:

In accordance with 10 CFR 50.90, enclosed is an application for an amendment to Facility Operating License No. DPR-7 for Humboldt Bay Power Plant (HBPP), Unit 3. The enclosed License Amendment Request (LAR) proposes revisions of Technical Specifications (TS) to delete many operational and administrative requirements upon transfer of spent nuclear fuel assemblies and fuel fragment containers (hereafter referred to as "spent fuel") from the Spent Fuel Pool (SFP) to the Humboldt Bay (HB) Independent Spent Fuel Storage Installation (ISFSI). Some TS requirements will be relocated to the HBPP Quality Assurance Plan.

Enclosure 1 provides the evaluation of the changes proposed in this LAR. Enclosure 2 provides a markup of the HBPP Unit 3 TS showing the proposed changes. Enclosure 3 provides a retyped (clean) version of the HBPP Unit 3 TS incorporating the proposed changes.

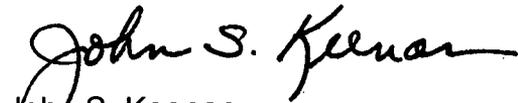
The changes proposed in this LAR are not required to address an immediate safety concern. However, the spent fuel is expected to be transferred from the SFP into the HB ISFSI by June 2008. Therefore, PG&E requests the NRC process this LAR within six months. PG&E also requests that the license amendment be made effective after the spent fuel has been transferred into the HB ISFSI, and that the license amendment will be implemented within 60 days of the effective date.

1145501  
NRR

I state under penalty of perjury that the foregoing is true and correct.

Executed on November 5, 2007.

Sincerely,

A handwritten signature in black ink that reads "John S. Keenan". The signature is written in a cursive style with a large, looping initial "J".

John S. Keenan  
*Senior Vice President – Generation and Chief Nuclear Officer*

cc: Gary W. Butner, Department of Public Health  
Elmo E. Collins, Jr., NRC Region IV  
John B. Hickman, NRC  
PG Fossil Gen HBPP Humboldt Distribution

Enclosures

## EVALUATION

### 1.0 DESCRIPTION

Pacific Gas and Electric Company (PG&E) requests to amend Operating License No. DPR-7 for Humboldt Bay Power Plant (HBPP) Unit 3.

The proposed changes would modify the Technical Specifications (TS) to delete many operational and administrative requirements upon transfer of spent nuclear fuel assemblies and fuel fragment containers (hereafter referred to as "spent fuel") from the Spent Fuel Pool (SFP) to the Humboldt Bay (HB) Independent Spent Fuel Storage Installation (ISFSI). Some TS requirements will be relocated to the HBPP Quality Assurance Plan (QAP).

### 2.0 PROPOSED CHANGES

This License Amendment Request (LAR) proposes to revise the HBPP Unit 3 TS in anticipation of transferring the spent fuel in the SFP to the HB ISFSI. TS sections proposed to be deleted will either no longer be necessary because spent fuel will not be stored in the SFP, or the information will be relocated to the HBPP QAP when appropriate. The proposed TS changes are summarized as follows:

1. Modify TS 1.0, "Use and Application," as follows to reflect spent fuel not being stored in the SFP:
  - 1.1, "Definitions" – delete those definitions no longer contained in the TS
  - 1.2, "Logical Connectors" – delete entirely as these terms will no longer be contained in the TS
  - 1.3, "Completion Times" – revise Background section to reflect that spent fuel will no longer be stored in the SFP, but the SFP may be contaminated with radioactive materials
2. Modify TS 3.1, "Defueled Systems," to delete the following sections because spent fuel will no longer be stored in the SFP:
  - 3.1.1, "Fuel Storage Pool Water Level"
  - 3.1.2, "Spent Fuel Pool Load Restrictions"
3. Modify TS 3.1.3, "Fuel Storage Pool Liner Water Level," APPLICABILITY statement, to reflect that spent fuel will no longer be stored in the SFP

4. Modify TS 4.2, "Fuel Storage," to reflect the relocation of spent fuel from the SFP into the ISFSI
5. Modify TS 5.0, "Administrative Controls," to revise or delete the following sections:
  - TS 5.1, "Responsibility" – information to be relocated to the QAP
  - TS 5.2, "Organization" – information to be deleted because spent fuel will no longer be stored in the SFP
  - TS 5.3, "Facility Staff Qualifications" – information to be relocated to the QAP
  - TS 5.4, "Training" – to be deleted because spent fuel will no longer be stored in the SFP
  - TS 5.5, "Procedures" – procedures related to spent fuel storage and handling to be deleted because spent fuel will no longer be stored in the SFP
  - TS 5.6, "Programs and Manuals" – information to be relocated to the QAP for the following sections:
    - TS 5.6.1, "Offsite Dose Calculation Manual (ODCM)"
    - TS 5.6.4, "Radioactive Effluent Controls Program (RECP)"
  - TS 5.6, "Programs and Manuals" – information to be deleted because spent fuel will no longer be stored in the SFP
    - TS 5.6.3, "Fuel Storage Pool Water Chemistry Program"
    - TS 5.6.5, "Neutron Absorber Surveillance Program"
  - TS 5.7, "Reporting Requirements" – information to be relocated to the QAP

The proposed changes to the TS are noted in the marked-up copy of the applicable TS sections provided in Enclosure 2.

### 3.0 BACKGROUND

On July 2, 1976, HBPP Unit 3 was shut down for annual refueling and to conduct seismic modifications. In December 1980, it became apparent that the cost of completing required upgrades made the possibility of restarting Unit 3 uneconomical. Work was suspended at that time awaiting further guidance regarding modification requirements. In 1983, updated economic analyses indicated that restarting Unit 3 would probably not be cost-effective, and in June 1983, PG&E announced its intention to decommission the unit. On July 16, 1985, the NRC issued Amendment No. 19 to the HBPP Unit 3 Operating License to change the status to possess-but-not-operate, and the plant was placed into a SAFSTOR status.

PG&E received NRC approval for the HBPP Unit 3 SAFSTOR Decommissioning Plan (SDP) in July 1988. Pursuant to the 1996 NRC decommissioning rule, 10 CFR 50.82, and subsequent discussions with the NRC, the HBPP SDP was converted into a Defueled Safety Analysis Report (DSAR) and a Post Shutdown Decommissioning Activities Report (PSDAR). This is explained in PG&E Letter HBL-97-003 to the NRC, dated February 20, 1997 (Reference 1). The DSAR is updated every two years in accordance with 10 CFR 50.71. The plant is currently in SAFSTOR with incremental decommissioning activities ongoing.

PG&E received NRC approval on November 17, 2005, to construct an ISFSI onsite. PG&E is preparing to transfer spent nuclear fuel assemblies and fuel fragment containers (hereafter referred to as "spent fuel") currently in the SFP to the ISFSI in 2008, thus allowing increased decommissioning activities to proceed in Unit 3.

Upon completion of the transfer of spent fuel from the SFP to the ISFSI, many of the requirements of the current TS will no longer be applicable. Therefore, the changes identified in Section 2.0 of this enclosure are being proposed.

As stated in NRC's Safety Evaluation related to Amendment No. 129 to the Rancho Seco Facility Operating License No. DPR-54, "The particular controls to be included in the TS, therefore, are the provisions that the Commission deems essential for the safe operation of the facility that are not already covered by other regulations. Accordingly, the staff determined that administrative control requirements that are not specifically required under 10 CFR 50.36(c)(5), and are not otherwise necessary to obviate the possibility of abnormal situation or event giving rise to an immediate threat to the public health and safety, may be relocated to more appropriate documents (e.g., Quality Assurance (QA)

Program, Security Plan (PSP), or Emergency Plan (EP)), which are subject to regulatory controls," (Reference 2).

NRC Administrative Letter 95-06 "Relocation of Technical Specification Administrative Controls Related to Quality Assurance," provides guidance to licensees requesting amendments that relocate administrative controls to NRC-approved quality assurance programs where changes are controlled in accordance with 10 CFR 50.54(a). Relocation of the administrative controls to the HBPP QAP is acceptable because of the controls imposed by 10 CFR 50 Appendix B, and the established quality assurance program change control process in 10 CFR 50.54(a). The relocation of administrative controls to the QAP proposed in this LAR is consistent with the content of NRC Administrative Letter 95-06.

Based on the information contained in this enclosure, the changes in the proposed LAR, and operation of the facility in the proposed manner, will not endanger the health and safety of the public or plant workers.

#### **4.0 TECHNICAL ANALYSIS**

- 4.1 TS 1.1, "Definitions," currently contains definitions for ACTIONS, CERTIFIED FUEL HANDLER, ELEVATION, and OPERABLE-OPERABILITY. It is proposed to delete the definition for CERTIFIED FUEL HANDLER because the TS sections that use that term (TS 5.2, "Organization" and TS 5.4, "Training") are proposed for deletion because they are not applicable to a facility with the spent fuel stored in an ISFSI. It is also proposed to delete the definition for OPERABLE-OPERABILITY because that term is currently not used in the TS, and no important-to-safety systems are required to be operable with spent fuel removed from the SFP.
- 4.2 TS 1.2, "Logical Connectors," currently describes how logical connectors are used in the TS to discriminate between, and yet connect, discrete Conditions, Required Actions, Completion Times, Surveillances, and Frequencies. Logical Connectors are currently used in TS 3.1.1, "Fuel Storage Pool Water Level," and TS 3.1.2, "Spent Fuel Pool Load Restriction," but TS 3.1.1 and TS 3.1.2 are proposed for deletion because they are not applicable to a facility with the spent fuel stored in an ISFSI. Therefore, TS 1.2 is also proposed to be deleted.
- 4.3 TS 1.3, "Completion Times," establishes the Completion Time convention and provides guidance for its use. Completion Time is used in TS 3.1.3, "Fuel Storage Pool Liner Water Level." After spent fuel has been removed from the SFP, the SFP liner may still be contaminated with radioactive material. Therefore, it is proposed to revise the Background section of TS

- 1.3 to replace “for ensuring the safe storage of irradiated fuel” with “when water in the Spent Fuel Storage Pool or liner is contaminated with radioactive materials.”
- 4.4 TS 1.4, “Frequency,” defines the proper use and application of Frequency requirements. The term “Frequency” is used in TS 3.1.3, “Fuel Storage Pool Liner Water Level.” Therefore, no changes to TS 1.4 are proposed.
- 4.5 TS 2.0, “SAFETY LIMITS,” are not currently applicable since HBPP Unit 3 is permanently defueled.
- 4.6 TS 3.0, “Limiting Condition for Operation (LCO) Applicability” will remain as is because TS 3.1.3 “Fuel Storage Pool Liner Water Level” has a LCO.
- 4.7 TS 3.0, “Surveillance Requirement (SR) Applicability” will remain as is because TS 3.1.3 “Fuel Storage Pool Liner Water Level” has an SR.
- 4.8 TS 3.1.1, “Fuel Storage Pool Water Level,” currently specifies the SFP water level shall be at an ELEVATION greater than or equal to 10.5 feet. TS 3.1.1 is proposed for deletion because this section is not applicable to a facility with the spent fuel stored in an ISFSI.
- 4.9 TS 3.1.2, “Spent Fuel Pool Load Restrictions,” currently specifies loads carried over the fuel in the SFP racks shall be limited to a weight of no greater than 330 pounds. TS 3.1.2 is proposed for deletion because this section is not applicable to a facility with the spent fuel stored in an ISFSI.
- 4.10 TS 3.1.3, “Fuel Storage Pool Liner Water Level,” currently specifies the SFP Liner Water Level shall be at an ELEVATION less than plus 9 inches. It is proposed to delete the phrase: “Whenever irradiated fuel is stored in the Fuel Storage Pool, or” from the APPLICABILITY statement of TS 3.1.3 since spent fuel will no longer be stored in the SFP. The proposed revision to TS 4.2.1 will require that spent fuel assemblies shall not be stored in the Spent Fuel Storage Pool. The proposed revision to TS 3.1.3 will still retain the APPLICABILITY statement: “when the water in the pool or liner is contaminated with radioactive material.”
- 4.11 TS 4.2.1, under “Fuel Storage,” currently specifies the  $K_{eff}$  of the Spent Fuel Storage Pool shall be less than or equal to 0.95 for any configuration. This  $K_{eff}$  value is satisfied by storing all fuel assemblies, except for a maximum of three at any time, in containers made with neutron absorbing material. Fuel fragments totaling less than one fuel assembly, and fuel assembly UD-6N, may be considered as two assemblies that are not required to be stored in containers made with neutron absorbing material. One additional fuel assembly may be removed from the neutron absorbing

container to perform fuel handling activities. These specifications are proposed for deletion since spent fuel will no longer be stored in the SFP. Also, it is proposed to replace these specifications with a new one stating: "Fuel assemblies shall not be stored in the Spent Fuel Storage Pool. Fuel assemblies previously stored in the Spent Fuel Storage Pool are now stored in dry casks in the ISFSI."

- 4.12 TS 4.2.2, under "Fuel Storage" currently specifies the number of fuel assemblies stored in the SFP shall not exceed 390. TS 4.2.2 is proposed for deletion because this section is not applicable to a facility with spent fuel assemblies stored in an ISFSI.
- 4.13 TS 4.2.3, under "Fuel Storage" currently specifies fuel stored in the SFP shall have an average of U-235 enrichment of 2.5 weight percent or less. TS 4.2.3 is proposed for deletion because this section is not applicable to a facility with the spent fuel stored in an ISFSI.
- 4.14 TS 5.1, "Responsibility," currently specifies the responsibilities of the Plant Manager and the Shift Forman. These responsibilities are proposed to be relocated to the HBPP QAP in accordance with NRC Administrative Letter 95-06.
- 4.15 TS 5.2, "Organization," currently specifies the onsite and offsite organizations and positions for activities affecting the safe storage of irradiated fuel. TS 5.2 is proposed for deletion because this section is not applicable to a facility with the spent fuel stored in an ISFSI.
- 4.16 TS 5.3, "Facility Staff Qualifications," currently specifies the minimum qualifications for each member of the facility staff. These qualifications are proposed to be relocated to the HBPP QAP in accordance with NRC Administrative Letter 95-06.
- 4.17 TS 5.4, "Training," currently specifies that an NRC-approved training and retraining program for the CERTIFIED FUEL HANDLERS shall be maintained. TS 5.4 is proposed for deletion because this section is not applicable to a facility with the spent fuel stored in an ISFSI.
- 4.18 TS 5.5, "Procedures," currently specifies the written procedures that shall be established, implemented, and maintained. The procedures related to spent fuel storage and handling are proposed for deletion because they are not applicable to a facility with the spent fuel stored in an ISFSI. The other procedures listed in TS 5.5 will remain as is.
- 4.19 TS 5.6.1, "Offsite Dose Calculation Manual (ODCM)," currently specifies the requirements for an ODCM. These requirements are proposed to be

relocated to the HBPP QAP in accordance with NRC Administrative Letter 95-06.

- 4.20 TS 5.6.2, "Technical Specification (TS) Bases Control Program," currently specifies the means for processing changes to the Bases of the TS. Bases will need to remain for TS 3.1.3, "Fuel Storage Pool Liner Water Level." Therefore, no changes to TS 5.6.2 are proposed.
- 4.21 TS 5.6.3, "Fuel Storage Pool Water Chemistry Program," currently specifies controls for monitoring fuel storage pool water chemistry to minimize the potential effects of corrosion which could affect the safe storage of irradiated fuel, and to minimize the potential dose to the public due to release of fuel storage pool water to groundwater. TS 5.6.3 is proposed for deletion because this section is not applicable to a facility with the spent fuel stored in an ISFSI.
- 4.22 TS 5.6.4, "Radioactive Effluent Controls Program (RECP)," currently specifies the program to conform with 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to members of the public from radioactive effluents As Low As Reasonably Achievable (ALARA). These requirements are proposed to be relocated to the HBPP QAP in accordance with NRC Administrative Letter 95-06.
- 4.23 TS 5.6.5, "Neutron Absorber Surveillance Program," currently specifies that samples of the neutron-absorbing material used to fabricate the spent fuel assembly containers shall be suspended in the Spent Fuel Storage Pool in the vicinity of the spent fuel assemblies. TS 5.6.5 is proposed for deletion because this section is not applicable to a facility with the spent fuel assemblies stored in an ISFSI.
- 4.24 TS 5.7, "Reporting Requirements," currently specifies the requirements for an Occupational Radiation Exposure Report, an Annual Radiological Environmental Monitoring Report, and an Annual Radioactive Effluent Release Report. These requirements are proposed to be relocated to the HBPP QAP in accordance with NRC Administrative Letter 95-06.
- 4.25 TS 5.8, "High Radiation Area," currently specifies the controls that 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. Because these TS requirements are different from the Part 20 requirements, this TS section will remain as is.

## 5.0 REGULATORY ANALYSIS

### 5.1 No Significant Hazards Consideration

PG&E has evaluated the no significant hazards consideration involved with the proposed amendment, focusing on the three standards set forth in 10 CFR 50.92(c) as quoted below:

"The Commission may make a final determination, under the procedures in §50.91, that a proposed amendment to an operating license or a combined license for a facility or reactor licensed under §§50.21(b) or 50.22, or for a testing facility involves no significant hazards consideration, if operation of the facility in accordance with the proposed amendment would not:

- (1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or
- (2) Create the possibility of a new or different kind of accident from any accident previously evaluated; or
- (3) Involve a significant reduction in a margin of safety."

The following evaluation is provided for the no significant hazards consideration standards:

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The proposed changes reflect the transfer of spent fuel from the Spent Fuel Pool (SFP) to the Humboldt Bay (HB) Independent Spent Fuel Storage Installation (ISFSI). Design basis accidents related to the SFP are discussed in the Humboldt Bay Power Plant (HBPP) Unit 3 Defueled Safety Analysis Report (DSAR). These postulated accidents are predicated on spent fuel being stored in the SFP. With the removal of the spent fuel from the SFP, there are no important-to-safety systems, structures or components required to function or to be monitored. In addition, there are no remaining credible accidents involving spent fuel or the SFP that require actions of a Certified Fuel Handler or Noncertified Fuel Handler to prevent occurrence or to mitigate consequences.

The proposed change to the Design Features section of the Technical Specifications (TS) clarifies that the spent fuel is being stored in dry casks within an ISFSI. The probability or consequences of accidents at the ISFSI are evaluated in the HB ISFSI Final Safety Analysis Report (FSAR) and are independent of the accidents evaluated in the HBPP Unit 3 DSAR.

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

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

Response: No

The proposed changes reflect the reduced operational risks as a result of the spent fuel being transferred to dry casks within an ISFSI. The proposed changes do not modify any systems, structures or components. The plant conditions for which the HBPP Unit 3 DSAR design basis accidents relating to spent fuel and the SFP have been evaluated are no longer applicable. The aforementioned proposed changes do not affect any of the parameters or conditions that could contribute to the initiation of an accident. Design basis accidents associated with the dry cask storage of spent fuel are already considered in the HB ISFSI FSAR. No new accident scenarios are created as a result of deleting nonapplicable operational and administrative requirements. Therefore, the proposed changes will not create the possibility of a new or different kind of accident from those previously evaluated.

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

Response: No

The proposed changes reflect the reduced operational risks as a result of the spent fuel being transferred to dry casks within an ISFSI. The design basis and accident assumptions within the HBPP Unit 3 DSAR and the TS relating to spent fuel are no longer applicable. The proposed changes do not affect remaining plant operations, nor structures, systems, or components supporting decommissioning activities. In addition, the proposed changes do not result in a change in initial conditions, system response time, or

in any other parameter affecting the course of a decommissioning activity accident analysis. Therefore, the proposed changes will not involve a significant reduction in the margin of safety.

Based on these considerations, it is concluded that the proposed changes will not endanger the public health and safety.

## 5.2 Applicable Regulatory Requirements/Criteria

The proposed changes have no effect on any plant systems or on maintaining the plant in a safe condition. Therefore, the proposed changes are not considered to have any adverse safety significance. The administrative controls are proposed to be relocated to a 10 CFR 50.54(a) controlled and NRC-approved quality assurance program, consistent with NRC Administrative Letter 95-06. HBPP would continue to satisfy applicable regulatory and safety criteria.

In conclusion, based on the considerations above:

- (1) There is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner;
- (2) Such activities will be conducted in compliance with the Commission's regulations; and
- (3) The issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

## 6.0 ENVIRONMENTAL CONSIDERATION

PG&E has evaluated the proposed changes and determined that the changes do not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. The amendment changes requested are changes to administrative requirements. Accordingly, the proposed changes meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(10)(ii). Therefore, pursuant to 10 CFR 51.22(b), an environmental impact statement or environmental assessment of the proposed changes is not required.

## 7.0 REFERENCES

1. PG&E Letter HBL-97-003, to NRC, Commissioners and Staff, "Application of New Decommissioning Rule," dated February 20, 1997
2. NRC Letter to Sacramento Municipal Utility District, Mr. Steve J. Redeker, "Rancho Seco Nuclear Generating Station - Issuance of Amendment re: Deletion of Operations Requirements (TAC No. MB2054)," dated February 5, 2002

**Proposed Revision to HBPP**  
**Technical Specifications**

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**Technical Specifications**  
**Humboldt Bay Power Plant**  
**Unit 3**  
**Eureka, California**

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## 1.0 USE AND APPLICATION

## 1.1 Definitions

## -----NOTE-----

The defined terms of this section appear in capitalized type and are applicable throughout these Technical Specifications and Bases.

| <u>Term</u>                       | <u>Definition</u>   |
|-----------------------------------|---|
| ACTIONS                           | ACTIONS shall be that part of a Specification that prescribes Required Actions to be taken under designated Conditions within specified Completion Times.   |
| <del>CERTIFIED FUEL HANDLER</del> | <del>A CERTIFIED FUEL HANDLER is an individual who complies with provisions of the CERTIFIED FUEL HANDLER training program required by Technical Specification 5.4.1.</del>   |
| ELEVATION                         | All elevations shall apply to a datum of mean lower low water (MLLW) level except where noted.  |
| <del>OPERABLE OPERABILITY</del>   | <del>A system, subsystem, train, component or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified safety function(s) and when all necessary attendant instrumentation, controls, normal or emergency electrical power, cooling and seal water, lubrication, and other auxiliary equipment that are required for the system, subsystem, train, component or device to perform its specified safety function(s) are also capable of performing their related support function(s).</del> |

1.0 USE AND APPLICATION

1.2 Logical Connectors

This section is not applicable to a facility with all of the spent nuclear fuel stored in an Independent Spent Fuel Storage Installation (ISFSI). (Page 1.2-2 has been deleted).

**PURPOSE** The purpose of this section is to explain the meaning of logical connectors.

Logical connectors are used in Technical Specifications (TS) to discriminate between, and yet connect, discrete Conditions, Required Actions, Completion Times, Surveillances, and Frequencies. The only logical connectors that appear in TS are AND and OR. The physical arrangement of these connectors constitutes logical conventions with specific meanings.

**BACKGROUND** Several levels of logic may be used to state Required Actions. These levels are identified by the placement (or nesting) of the logical connectors and by the number assigned to each Required Action. The first level of logic is identified by the first digit of the number assigned to a Required Action and the placement of the logical connector in the first level of nesting (i.e., left justified with the number of the Required Action). The successive levels of logic are identified by additional digits of the Required Action number and by successive indentations of the logical connectors.

When logical connectors are used to state a Condition, Completion Time, Surveillance, or Frequency, only the first level of logic is used, and the logical connector is left justified with the statement of the Condition, Completion Time, Surveillance, or Frequency.

**EXAMPLES** The following examples illustrate the use of logical connectors.

EXAMPLE 1.2-1

ACTIONS

| CONDITION       | REQUIRED ACTION                         | COMPLETION TIME |
|-----------------|---|-----------------|
| A. LCO not met. | A.1 Verify<br><u>AND</u><br>A.2 Restore |                 |

In this example the logical connector AND is used to indicate that when in Condition A, both Required Actions A.1 and A.2 must be completed.

(continued)

1.2 Logical Connectors

EXAMPLES  
(continued)

EXAMPLE 1.2-2

ACTIONS

| CONDITION       | REQUIRED ACTION   | COMPLETION TIME |
|-----------------|---|-----------------|
| A. LCO not met. | A.1 Trip<br><u>OR</u><br>A.2.1 Verify<br><u>AND</u><br>A.2.2 Reduce |                 |

This example represents a more complicated use of logical connectors. Required Actions A.1 and A.2 are alternative choices, only one of which must be performed as indicated by the use of the logical connector OR and the left justified placement. Either of the Actions may be chosen. If A.2 is chosen, then both A.2.1 and A.2.2 must be performed as indicated by the logical connector AND.

1.0 USE AND APPLICATION

1.3 Completion Times

---

**PURPOSE** The purpose of this section is to establish the Completion Time convention and to provide guidance for its use.

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**BACKGROUND** Limiting Conditions for Operation (LCOs) specify minimum requirements when water in the Spent Fuel Storage Pool or liner is contaminated with radioactive materials ~~for ensuring the safe storage of irradiated fuel~~. The ACTIONS associated with an LCO state Conditions that typically describe the ways in which the requirements of the LCO can fail to be met. Specified with each stated Condition are Required Action(s) and Completion Times(s).

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**DESCRIPTION** The Completion Time is the amount of time allowed for completing a Required Action. It is referenced to the time of discovery of a situation (e.g., variable not within limits) that requires entering an ACTIONS Condition unless otherwise specified, providing the unit is in a MODE or specified condition stated in the Applicability of the LCO. Required Actions must be completed prior to the expiration of the specified Completion Time. An ACTIONS Condition remains in effect and the Required Actions apply until the Condition no longer exists or the unit is not within the LCO Applicability.

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**EXAMPLES** The following examples illustrate the use of Completion Times with different types of Conditions.

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(continued)

1.3 Completion Times

EXAMPLES  
(continued)

EXAMPLE 1.3-1

ACTIONS

| CONDITION  | REQUIRED ACTION           | COMPLETION TIME |
|--|---------------------------|-----------------|
| A. Required Action and associated Completion Time not met. | A.1 Verify.....           | 6 hours         |
|  | <u>AND</u><br>A.2 Restore | 36 hours        |

Condition A has two Required Actions. Each Required Action has its own separate Completion Time. Each Completion Time is referenced to the time that Condition A is entered. The Required Actions of Condition A are to perform the verification required by ACTION A.1 within 6 hours and to perform the restoration required by ACTION A.2 within 36 hours. A total of 6 hours is allowed for performing ACTION A.1 and a total of 36 hours (not 42 hours) is allowed for performing ACTION A.2 from the time that Condition A was entered. If ACTION A.1 is completed within 3 hours, the time allowed completing ACTION A.2 is the next 33 hours because the total time allowed for completing ACTION A.2 is 36 hours.

IMMEDIATE  
COMPLETION  
TIME

When "Immediately" is used as a Completion Time, the Required Action should be pursued without delay and in a controlled manner.

1.0 USE AND APPLICATION

1.4 Frequency

|             |   |
|-------------|---|
| PURPOSE     | The purpose of this section is to define the proper use and application of Frequency requirements.  |
| DESCRIPTION | <p>Each Surveillance Requirement (SR) has a specified frequency in which the surveillance must be met in order to meet the associated LCO. An understanding of the correct application of the specified Frequency is necessary for compliance with the SR.</p> <p>The "Specified Frequency" is referred to throughout this section and each of the Specifications of Section 3.0, "Surveillance Requirement (SR) Applicability." The "Specified Frequency" consists of the requirements of the frequency column of each SR, as well as certain Notes in the surveillance column that modify performance requirements.</p> |
| EXAMPLES    | <p>The following examples illustrate the various ways that frequencies are specified. In these examples, the applicability of the LCO (LCO not shown) is when irradiated fuel is stored in the fuel pool.</p>   |

EXAMPLE 1.4.1

SURVEILLANCE REQUIREMENTS

| SURVEILLANCE                      | FREQUENCY |
|-----------------------------------|-----------|
| Verify parameter is within limits | 12 hours  |

Example 1.4-1 contains the type of SR most often encountered in the TS. The frequency specifies an interval (12 hours) during which the associated Surveillance must be performed at least one time. Performance of the surveillance initiates the subsequent interval. Although the frequency is stated as 12 hours, an extension of the time interval to 1.25 times the interval specified in the Frequency is allowed by SR 3.0.2 for operational flexibility. The measurement of this interval continues at all times, even when the SR is not required to be met per SR 3.0.1 (such as when a variable is outside specified limits, or the unit is outside the applicability of the LCO). If the interval specified by SR 3.0.2 is exceeded while the unit is in the specified condition in the applicability of the LCO, and the performance of the surveillance is not otherwise modified, then SR 3.0.3 becomes applicable.

(continued)

1.4 Frequency

EXAMPLES  
(continued)

EXAMPLE 1.4-2

SURVEILLANCE REQUIREMENTS

| SURVEILLANCE                      | FREQUENCY   |
|-----------------------------------|---|
| Verify parameter is within limits | Within 24 hours<br>prior to moving<br>irradiated fuel<br><br><u>AND</u><br>24 hours<br>thereafter |

Example 1.4-2 has two Frequencies. The first is a one time performance Frequency, and the second is of the type shown in Example 1.4-1. The logical connector "AND" indicates that both Frequency requirements must be met. The use of "prior to" indicates that the surveillance must be performed once before the initiation of fuel handling activities. This type of Frequency does not qualify for the extension allowed by SR 3.0.2. "Thereafter" indicates future performances must be established per SR 3.0.2, but only after a specified condition is first met (i.e., the "prior to" performance in this example).

## 2.0 SAFETY LIMITS

This section is not applicable since Humboldt Bay Power Plant (HBPP) Unit 3 is permanently defueled.

3.0 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY

---

|           |   |
|-----------|---|
| LCO 3.0.1 | LCOs shall be met during the specified conditions in the Applicability, except as provided in LCO 3.0.2.  |
| LCO 3.0.2 | Upon discovery of the failure to meet an LCO, the required actions of the associated Conditions shall be met.<br><br>If the LCO is met or is no longer applicable prior to expiration of the specified Completion Time(s), completion of the required action is not required unless otherwise stated. |

---

---

### 3.0 SURVEILLANCE REQUIREMENT (SR) APPLICABILITY

---

SR 3.0.1 SRs shall be met during specific conditions in the Applicability for individual LCOs unless otherwise stated in the SR. Failure to meet a Surveillance, whether such failure is experienced during the performance of the Surveillance or between performances of the Surveillance, shall be failure to meet the LCO. Failure to perform a Surveillance within the specified Frequency shall be failure to meet the LCO except as provided in SR 3.0.3. Surveillances do not have to be performed on inoperable equipment or variables outside specified limits.

---

SR 3.0.2 The specified Frequency for each SR is met if the Surveillance is performed within 1.25 times the interval specified in the Frequency, as measured from the previous performance or as measured from the time a specified condition of the frequency is met.

---

SR 3.0.3 If it is discovered that a Surveillance was not performed within its specified frequency, then compliance with the requirement to declare the LCO not met may be delayed from the time of discovery up to 24 hours or up to the limit of the specified frequency, whichever is less. This delay period is permitted to allow performance of the surveillance.

If the Surveillance is not performed within the delay period, the LCO must immediately be declared not met and the applicable Condition(s) must be entered. The Completion Times of the Required Actions begin immediately upon expiration of the delay period.

When the Surveillance is performed within the delay period and the Surveillance is not met, the LCO must immediately be declared not met and the applicable Condition(s) must be entered. The Completion Times of the Required Actions begin immediately upon failure to meet the Surveillance.

---

3.1 DEFUELED SYSTEMS

3.1.1 Fuel Storage Pool Water Level

This section is not applicable to a facility with all of the spent nuclear fuel stored in an ISFSI.

LCO 3.1.1 The Fuel Storage Pool Water Level shall be at an ELEVATION greater than or equal to 10.5 feet.

APPLICABILITY: Whenever irradiated fuel is stored in the Fuel Storage Pool.

ACTIONS

| CONDITION  | REQUIRED ACTION   | COMPLETION TIME |
|--|---|-----------------|
| A. Fuel Storage Pool Water Level not within limit. | A.1 Suspend all Fuel Handling Operations.                                 | Immediately     |
|  | <u>AND</u><br>A.2 Restore Fuel Storage Pool Water Level to within limits. | Immediately     |

SURVEILLANCE REQUIREMENTS

| SURVEILLANCE   | FREQUENCY |
|--|-----------|
| SR 3.1.1.1 Verify the Fuel Storage Pool Water Level is at an ELEVATION greater than or equal to 10.5 feet. | 24 hours  |

3.1 DEFUELED SYSTEMS

3.1.2 Spent Fuel Pool Load Restrictions

This section is not applicable to a facility with all of the spent nuclear fuel stored in an ISFSI

~~LCO 3.1.2 — Loads carried over the fuel in the spent fuel pool racks shall be limited to a weight of no greater than 330 pounds.~~

~~APPLICABILITY: Whenever irradiated fuel assemblies are stored in the spent fuel pool.~~

**ACTIONS**

| CONDITION                                   | REQUIRED ACTION                                   | COMPLETION TIME        |
|---|---|------------------------|
| <del>A. Load weight not within limit.</del> | <del>A.1 Place the load in a safe position.</del> | <del>Immediately</del> |

**SURVEILLANCE REQUIREMENTS**

| SURVEILLANCE   | FREQUENCY   |
|--|---|
| <del>SR 3.1.2.1 — Verify the load weight <math>\leq</math> 330 pounds.</del> | <del>Prior to moving each load over storage racks containing irradiated fuel.</del> |

3.1 DEFUELED SYSTEMS

3.1.3 Fuel Storage Pool Liner Water Level

LCO 3.1.3            The Fuel Storage Pool Liner Water Level shall be at an ELEVATION less than + 9 inches.

APPLICABILITY:    ~~Whenever irradiated fuel is stored in the Fuel Storage Pool, or w~~When the water in the pool or liner is contaminated with radioactive materials.

ACTIONS

| CONDITION |   | REQUIRED ACTION  | COMPLETION TIME |
|-----------|---|--|-----------------|
| A.        | Fuel Storage Pool Liner Water Level not within limit. | A.1    Restore Fuel Storage Pool Liner Water Level to within limits. | Immediately     |

SURVEILLANCE REQUIREMENTS

| SURVEILLANCE |   | FREQUENCY |
|--------------|---|-----------|
| SR 3.1.3.1.  | Verify the Fuel Storage Pool Liner Water Level is at an ELEVATION less than + 9 inches. | 24 hours  |

## 4.0 DESIGN FEATURES

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HBPP Unit 3 is located in Humboldt County, California, approximately 4 miles southwest of the center of the city of Eureka, on a site owned and controlled by Pacific Gas & Electric Company.

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### 4.2 Fuel Storage

4.2.1 Fuel assemblies shall not be stored in the Spent Fuel Storage Pool. Fuel assemblies previously stored in the Spent Fuel Storage Pool are now stored in dry casks in the ISFSI. ~~The  $K_{\text{eff}}$  of the spent fuel storage pool shall be less than or equal to 0.95 for any configuration. This  $K_{\text{eff}}$  value is satisfied by storing all fuel assemblies, except for a maximum of three at any time, in containers made with neutron absorbing material.~~

~~Fuel fragments totaling less than one fuel assembly, and fuel assembly UD-6N may be considered as two assemblies that are not required to be stored in containers made with neutron absorbing material. One additional fuel assembly may be removed from the neutron absorbing container to perform fuel handling activities.~~

4.2.2 ~~The number of fuel assemblies stored in the spent fuel storage pool shall not exceed 390.~~

4.2.3 ~~Fuel stored in the spent fuel storage pool shall have an average of U-235 enrichment of 2.5 weight percent or less.~~

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---

## 5.0 ADMINISTRATIVE CONTROLS

### 5.1 Responsibility

---

~~5.1.1 The Plant Manager shall have the overall onsite responsibility for activities associated with Unit 3. He shall be accountable for adherence to the operating limits and requirements contained in these Technical Specifications. He shall delegate these responsibilities to other specified members of the plant staff during his absence.~~

~~5.1.2 The Shift Foreman shall be responsible for the operational command function. He shall delegate these responsibilities to other specified members of the plant staff during his absence.~~

~~5.1.3 The technical specification titles for members of the staff are generic titles. Unit-specific titles for the functions and responsibilities associated with these generic titles are Personnel responsibilities are identified in the Quality Assurance Plan.~~

---

## 5.0 ADMINISTRATIVE CONTROLS

### 5.2 Organization

---

This section is not applicable to a facility with all of the spent nuclear fuel stored in an ISFSI. (Pages 5.0-3 and 5.0-4 have been deleted).

#### ~~5.2.1 Onsite and Offsite Organizations~~

~~Onsite and offsite organizations shall be established for unit operation and corporate management, respectively. The onsite and offsite organizations shall include the positions for activities affecting the safe storage of irradiated fuel.~~

- ~~a. Lines of authority, responsibility, and communication shall be established and defined for the highest management levels through intermediate levels to and including all operating organization positions. These relationships shall be documented and updated, as appropriate, in the form of organization charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements shall be documented in the Quality Assurance Plan and plant procedures.~~
- ~~b. The Designated Manager shall be responsible for overall unit safe operation and shall have control over those onsite activities and resources necessary for maintenance and storage of irradiated fuel in a safe condition.~~
- ~~c. The Designated Officer shall have corporate responsibility for overall plant nuclear safety and shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining, and providing technical support to ensure the safe storage of irradiated fuel.~~
- ~~d. The individuals who train the CERTIFIED FUEL HANDLERS and those who carry out radiation protection functions or perform quality assurance functions may report to the appropriate onsite manager; however, they shall have sufficient organizational freedom to ensure their ability to perform their assigned functions.~~

#### ~~5.2.2 Facility Staff~~

- ~~a. Each on duty shift shall be composed of at least the minimum shift crew composition shown in Table 5.2-1.~~
- ~~b. At least one Certified Fuel Handler shall be onsite when fuel is in the spent fuel storage pool.~~

## 5.2 Organization

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### 5.2.2 Facility Staff (continued)

- c. ~~The Unit 3 control room shall be continuously manned or, as an alternative, audible and visual annunciation of all alarms in Unit 3 shall be provided at a continuously manned control station in Units 1 or 2, considered to be the entire +27 foot elevation operating deck. A common annunciator may be used for all such alarms. However, should an emergency situation arise in which action is immediately necessary to protect worker health and safety, the Unit 3 control room (and concurrently the control station in Units 1 or 2) may be left unmanned for such time as is necessary to ensure worker health and safety is protected.~~
  - d. ~~An individual qualified in radiation protection procedures shall be onsite during fuel handling operations.~~
  - e. ~~All fuel handling operations shall be directly supervised by a qualified individual.~~
  - f. ~~Administrative procedures shall be developed and implemented to limit the working hours of unit staff who perform functions important to the safe storage of irradiated fuel assemblies. These procedures should follow the general guidance of the NRC Policy Statement on working hours (Generic Letter No. 82-12).~~
  - g. ~~The Shift Foreman shall be a CERTIFIED FUEL HANDLER.~~
-

TABLE 5.2-1

MINIMUM SHIFT CREW COMPOSITION (1)

| <b>POSITION</b>            | <b>NUMBER OF INDIVIDUALS REQUIRED TO FILL POSITION</b> |
|----------------------------|--|
| Certified Fuel Handler     | 4  |
| Non-Certified Operator (2) | 4  |

(1) — The actual shift crew composition may be less than the minimum requirements for a period of time not to exceed 2 hours in order to accommodate unexpected absences provided expeditious actions are taken to fill the required positions.

(2) — Non-Certified Operator must be at least an Auxiliary Operator.

5.0 ADMINISTRATIVE CONTROLS

5.3 Facility Staff Qualifications

---

Facility staff qualifications are identified in the Quality Assurance Plan.

~~5.3.1 Each member of the facility staff shall meet or exceed the minimum qualifications of ANSI N18.1-1971 for comparable positions, except for:~~

~~5.3.1.1 The Operations Manager shall be a CERTIFIED FUEL HANDLER.~~

~~5.3.1.2 The Radiation Protection Manager shall meet or exceed the qualifications of Regulatory Guide 1.8, Revision 2, April 1987.~~

---

5.0 ADMINISTRATIVE CONTROLS

5.4 Training

---

This section is not applicable to a facility with all of the spent nuclear fuel stored in an ISFSI.

~~5.4.1 An NRC approved training and retraining program for the CERTIFIED FUEL HANDLERS shall be maintained.~~

---

## 5.0 ADMINISTRATIVE CONTROLS

### 5.5 Procedures

---

5.5.1 Written procedures shall be established, implemented, and maintained covering the following activities:

- a. ~~The procedures applicable to the safe storage of irradiated fuel recommended in Appendix "A" of Regulatory Guide 1.33, February 1978;(Deleted)~~
  - b. Fire Protection Program implementation;
  - c. Quality assurance for radiological effluent and environmental monitoring;
  - d. ~~Fuel handling operations (including removal and reinstallation of the spent fuel pool cover);(Deleted)~~
  - e. All programs specified in Specification 5.6.
-

## 5.0 ADMINISTRATIVE CONTROLS

5.6 Programs and Manuals

---

The following programs shall be established, implemented and maintained.

5.6.1 Offsite Dose Calculation Manual (ODCM)

ODCM requirements are described in the Quality Assurance Plan.

- a. ~~The ODCM shall contain the methodology and parameters used in the calculation of offsite doses resulting from radioactive gaseous and liquid effluents, in the calculation of gaseous and liquid effluent monitoring alarm and trip setpoints, and in the conduct of the radiological environmental monitoring program; and~~
- b. ~~The ODCM shall also contain the radioactive effluent controls and radiological environmental monitoring activities and descriptions of the information that should be included in the Annual Radiological Environmental Monitoring Report, and Annual Radioactive Effluent Release Report, required by Specification 5.7.2 and Specification 5.7.3, respectively.~~
- e. ~~Licensee initiated changes to the ODCM:~~
  1. ~~Shall be documented and records of reviews performed shall be retained. This documentation shall contain:
    - i) ~~sufficient information to support the change(s) together with the appropriate analyses or evaluations justifying the change(s), and~~
    - ii) ~~a determination that the change(s) will maintain the level of radioactive effluent control required by 10CFR 20.1302, 40CFR Part 190, 10CFR 50.36a and Appendix I to 10CFR 50, and not adversely impact the accuracy or reliability of effluent, dose, or setpoint calculations;~~~~
  2. ~~Shall become effective after review and acceptance by the Plant Staff Review Committee and approval of the Plant Manager; and~~
  3. ~~Shall be submitted to the Commission in the form of a complete, legible copy of the entire ODCM as a part of or concurrent with the Radioactive Effluent Release Report for the period of the report in which any change in the ODCM was made. Each change shall be identified by markings in the margin of the affected pages, clearly indicating the area of the page that was changed, and shall indicate the date (i.e., month and year) the change was implemented.~~

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(continued)

## 5.6 Programs and Manuals

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### 5.6.2 Technical Specification (TS) Bases Control Program

This program provides a means for processing changes to the Bases of these Technical Specifications.

- a. Changes to the Bases of the TS shall be made under appropriate administrative controls and reviews.
- b. Licensees may make changes to Bases without prior NRC approval provided the changes do not involve either of the following:
  1. a change in the TS incorporated in the license; or
  2. a change to the updated DSAR or Bases that requires prior NRC approval as defined in 10CFR 50.59.
- c. The Bases Control Program shall contain provisions to ensure that the Bases are maintained consistent with the DSAR.
- d. Proposed changes that meet the criteria of Specification 5.6.2b above shall be reviewed and approved by the NRC prior to implementation. Changes to the Bases implemented without prior NRC approval shall be provided to the NRC on a frequency consistent with 10CFR 50.71(e).

### 5.6.3 Fuel Storage Pool Water Chemistry Program

This section is not applicable to a facility with all of the spent nuclear fuel stored in an ISFSI.

~~This program provides controls for monitoring fuel storage pool water chemistry to minimize the potential effects of corrosion which could affect the safe storage of irradiated fuel, and to minimize the potential dose to the public due to release of fuel storage pool water to groundwater. The program shall include identification of critical variables and control points for these variables. The program shall include sampling frequencies and define corrective actions to be taken for off control point chemistry conditions. The NRC will be notified prior to elimination or changes to the acceptance criteria for critical variables monitored.~~

### 5.6.4 Radioactive Effluent Controls Program (RECP)

RECP requirements are described in the Quality Assurance Plan.

~~This program conforms with 10CFR 50.36a for the control of radioactive effluents and for maintaining the doses to members of the public from radioactive effluents as low as reasonably achievable (ALARA). The program (1) shall be contained in the ODCM, (2) shall be implemented by operating procedures, and (3) shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:~~

- ~~1. Limitations on the operability of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and setpoint determination in accordance with the methodology in the ODCM;~~

(continued)

## 5.6 Programs and Manuals

~~5.6.4 Radioactive Effluent Controls Program (continued)~~

- ~~2. Limitations on the instantaneous (average over a one-hour period) concentrations of radioactive material released in liquid effluents to Humboldt Bay conforming to ten times the effluent concentration limits of 10CFR Part 20, Appendix B, Table 2, Column 2,~~
- ~~3. Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents in accordance with 10CFR 20.1302 and with the methodology and parameters in the ODCM,~~
- ~~4. Limitations on the annual and quarterly doses or dose commitment to a member of the public from radioactive materials in liquid effluents released to Humboldt Bay conforming to the dose design objectives of Appendix I to 10CFR Part 50,~~
- ~~5. Determination of cumulative and projected dose contributions from radioactive effluents for the current calendar quarter and current calendar year in accordance with the methodology and parameters in the ODCM at least every 31 days,~~
- ~~6. Limitations on the operability and use of the liquid effluent treatment systems to ensure that the appropriate portions of these systems are used to reduce releases of radioactivity when the projected doses in a 31-day period would exceed 2 percent of the guidelines for the annual dose or dose commitment conforming to the dose design objectives of Appendix I to 10CFR Part 50,~~
- ~~7. Limitations on the dose rate resulting from radioactive material released in gaseous effluents to areas beyond the site boundary shall be established as follows:
  - ~~a. For noble gases: less than or equal to an instantaneous dose rate (average over a one-hour period) of less than or equal to 500 mrem/yr to the total body and less than or equal to 3000 mrem/yr to the skin, and~~
  - ~~b. For tritium and radionuclides in particulate form with half-lives greater than 8 days: less than or equal to a dose rate (averaged over a one-week period) of 1500 mrem/yr to any organ.~~~~
- ~~8. Limitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from each unit to areas beyond the site boundary conforming to Appendix I to 10CFR Part 50,~~
- ~~9. Limitation on the annual and quarterly doses to a member of the public from tritium and all radionuclides in particulate form with half-lives greater than 8 days in gaseous effluents released to areas beyond the site boundary conforming to the dose design objectives of Appendix I to 10CFR Part 50, and~~
- ~~10. Limitations on the annual dose or dose commitment to any member of the public due to releases of radioactivity and to radiation from uranium fuel cycle sources conforming to 40CFR Part 190.~~

(continued)

5.6 Programs and Manuals

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5.6.5 Neutron Absorber Surveillance Program

This section is not applicable to a facility with all of the spent nuclear fuel stored in an ISFSI.

~~Samples of the neutron absorbing material used to fabricate the spent fuel assembly containers shall be suspended in the spent fuel storage pool in the vicinity of the spent fuel assemblies. The Neutron Absorber Surveillance Program removes representative samples at specified intervals for examination and analysis to verify that the Boron-10 loading is greater than 0.005 grams per square centimeter.~~

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5.0 ADMINISTRATIVE CONTROLS

5.7 Reporting Requirements

---

Reporting requirements are described in the Quality Assurance Plan.

The following reports shall be submitted in accordance with 10CFR 50.4.

~~5.7.1 Occupational Radiation Exposure Report~~

~~An annual report shall be made of personnel exposure, in accordance with the requirements of 10CFR Part 20.2206. The report shall be submitted by April 30 of each year.~~

~~5.7.2 Annual Radiological Environmental Monitoring Report~~

~~The Annual Radiological Environmental Monitoring Report covering the operation of the unit during the previous calendar year shall be submitted by May 1 of each year. The report shall include summaries, interpretations, and analyses of trends of the results of the Radiological Environmental Monitoring Program for the reporting period. The material provided shall be consistent with the objectives outlined in the ODCM, and in 10CFR 50, Appendix I, Sections IV.B.2, IV.B.3, and IV.C.~~

~~The Annual Radiological Environmental Monitoring Report shall include the results of analyses of radiological environmental samples and of environmental radiation measurements taken during the period pursuant to the quality related locations specified in the table and figures in the ODCM, as well as summarized and tabulated results of these analyses and measurements. In the event that some individual results are not available for inclusion with the report, the report shall be submitted noting and explaining the reasons for the missing results. The missing data shall be submitted in the next annual report.~~

~~5.7.3 Annual Radioactive Effluent Release Report~~

~~The Annual Radioactive Effluent Release Report covering the activities of the unit in the previous year shall be submitted prior to April 1 of each year in accordance with 10CFR 50.36a. The report shall include a summary of the quantities of radioactive liquid and gaseous effluents and solid waste released from the unit. The material provided shall be consistent with the objectives outlined in the ODCM and in conformance with 10CFR 50.36a and 10CFR Part 50, Appendix I, Section IV.B.1.~~

(continued)

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## 5.0 ADMINISTRATIVE CONTROLS

### 5.8 High Radiation Area

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As provided in paragraph 20.1601(c) of 10CFR 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 10CFR Part 20:

#### 5.8.1 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 a 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
  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 within the area, or

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(continued)

5.8 High Radiation Area

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5.8.1 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):

- (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.

5.8.2 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 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 foreman, 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:
  - 1. 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

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(continued)

5.8 High Radiation Area

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5.8.2 High Radiation Areas with Dose Rates Greater than 1.0 rem/hour at 30 Centimeters from 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)

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
  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, or
  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.
- f. Such individual areas that are within a large area, such as the refueling building, 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.
-

**RETYPE (CLEAN) VERSION OF PROPOSED CHANGES  
TO THE HBPP UNIT 3 TECHNICAL SPECIFICATIONS**

**Remove Page**

**All**

**Insert Page**

**All**

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**Technical Specifications**  
**Humboldt Bay Power Plant**  
**Unit 3**  
**Eureka, California**

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## 1.0 USE AND APPLICATION

## 1.1 Definitions

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-----NOTE-----

The defined terms of this section appear in capitalized type and are applicable throughout these Technical Specifications and Bases.

---

| <u>Term</u> | <u>Definition</u>   |
|-------------|---|
| ACTIONS     | ACTIONS shall be that part of a Specification that prescribes Required Actions to be taken under designated Conditions within specified Completion Times. |
| ELEVATION   | All elevations shall apply to a datum of mean lower low water (MLLW) level except where noted.  |

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1.0 USE AND APPLICATION

1.2 Logical Connectors

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This section is not applicable to a facility with all of the spent nuclear fuel stored in an Independent Spent Fuel Storage Installation (ISFSI). (Page 1.2-2 has been deleted).

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## 1.0 USE AND APPLICATION

## 1.3 Completion Times

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|             |   |
|-------------|---|
| PURPOSE     | The purpose of this section is to establish the Completion Time convention and to provide guidance for its use.   |
| BACKGROUND  | Limiting Conditions for Operation (LCOs) specify minimum requirements when water in the Spent Fuel Storage Pool or liner is contaminated with radioactive materials. The ACTIONS associated with an LCO state Conditions that typically describe the ways in which the requirements of the LCO can fail to be met. Specified with each stated Condition are Required Action(s) and Completion Times(s).   |
| DESCRIPTION | The Completion Time is the amount of time allowed for completing a Required Action. It is referenced to the time of discovery of a situation (e.g., variable not within limits) that requires entering an ACTIONS Condition unless otherwise specified, providing the unit is in a MODE or specified condition stated in the Applicability of the LCO. Required Actions must be completed prior to the expiration of the specified Completion Time. An ACTIONS Condition remains in effect and the Required Actions apply until the Condition no longer exists or the unit is not within the LCO Applicability. |
| EXAMPLES    | The following examples illustrate the use of Completion Times with different types of Conditions.   |

---

(continued)

1.3 Completion Times

EXAMPLES  
(continued)

EXAMPLE 1.3-1

ACTIONS

| CONDITION  | REQUIRED ACTION           | COMPLETION TIME |
|--|---------------------------|-----------------|
| A. Required Action and associated Completion Time not met. | A.1 Verify.....           | 6 hours         |
|  | <u>AND</u><br>A.2 Restore | 36 hours        |

Condition A has two Required Actions. Each Required Action has its own separate Completion Time. Each Completion Time is referenced to the time that Condition A is entered. The Required Actions of Condition A are to perform the verification required by ACTION A.1 within 6 hours and to perform the restoration required by ACTION A.2 within 36 hours. A total of 6 hours is allowed for performing ACTION A.1 and a total of 36 hours (not 42 hours) is allowed for performing ACTION A.2 from the time that Condition A was entered. If ACTION A.1 is completed within 3 hours, the time allowed completing ACTION A.2 is the next 33 hours because the total time allowed for completing ACTION A.2 is 36 hours.

IMMEDIATE  
COMPLETION  
TIME

When "Immediately" is used as a Completion Time, the Required Action should be pursued without delay and in a controlled manner.

1.0 USE AND APPLICATION

1.4 Frequency

|             |   |
|-------------|---|
| PURPOSE     | The purpose of this section is to define the proper use and application of Frequency requirements.  |
| DESCRIPTION | <p>Each Surveillance Requirement (SR) has a specified frequency in which the surveillance must be met in order to meet the associated LCO. An understanding of the correct application of the specified Frequency is necessary for compliance with the SR.</p> <p>The "Specified Frequency" is referred to throughout this section and each of the Specifications of Section 3.0, "Surveillance Requirement (SR) Applicability." The "Specified Frequency" consists of the requirements of the frequency column of each SR, as well as certain Notes in the surveillance column that modify performance requirements.</p> |
| EXAMPLES    | <p>The following examples illustrate the various ways that frequencies are specified. In these examples, the applicability of the LCO (LCO not shown) is when irradiated fuel is stored in the fuel pool.</p>   |

EXAMPLE 1.4.1

SURVEILLANCE REQUIREMENTS

| SURVEILLANCE                      | FREQUENCY |
|-----------------------------------|-----------|
| Verify parameter is within limits | 12 hours  |

Example 1.4-1 contains the type of SR most often encountered in the TS. The frequency specifies an interval (12 hours) during which the associated Surveillance must be performed at least one time. Performance of the surveillance initiates the subsequent interval. Although the frequency is stated as 12 hours, an extension of the time interval to 1.25 times the interval specified in the Frequency is allowed by SR 3.0.2 for operational flexibility. The measurement of this interval continues at all times, even when the SR is not required to be met per SR 3.0.1 (such as when a variable is outside specified limits, or the unit is outside the applicability of the LCO). If the interval specified by SR 3.0.2 is exceeded while the unit is in the specified condition in the applicability of the LCO, and the performance of the surveillance is not otherwise modified, then SR 3.0.3 becomes applicable.

(continued)

1.4 Frequency

EXAMPLES  
(continued)

EXAMPLE 1.4-2

SURVEILLANCE REQUIREMENTS

| SURVEILLANCE                      | FREQUENCY   |
|-----------------------------------|---|
| Verify parameter is within limits | Within 24 hours<br>prior to moving<br>irradiated fuel<br><br><u>AND</u><br>24 hours<br>thereafter |

Example 1.4-2 has two Frequencies. The first is a one time performance Frequency, and the second is of the type shown in Example 1.4-1. The logical connector "AND" indicates that both Frequency requirements must be met. The use of "prior to" indicates that the surveillance must be performed once before the initiation of fuel handling activities. This type of Frequency does not qualify for the extension allowed by SR 3.0.2. "Thereafter" indicates future performances must be established per SR 3.0.2, but only after a specified condition is first met (i.e., the "prior to" performance in this example).

## 2.0 SAFETY LIMITS

This section is not applicable since Humboldt Bay Power Plant (HBPP) Unit 3 is permanently defueled.

**3.0 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY**

---

|           |   |
|-----------|---|
| LCO 3.0.1 | LCOs shall be met during the specified conditions in the Applicability, except as provided in LCO 3.0.2.  |
| LCO 3.0.2 | Upon discovery of the failure to meet an LCO, the required actions of the associated Conditions shall be met.<br><br>If the LCO is met or is no longer applicable prior to expiration of the specified Completion Time(s), completion of the required action is not required unless otherwise stated. |

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### 3.0 SURVEILLANCE REQUIREMENT (SR) APPLICABILITY

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- SR 3.0.1            SRs shall be met during specific conditions in the Applicability for individual LCOs unless otherwise stated in the SR. Failure to meet a Surveillance, whether such failure is experienced during the performance of the Surveillance or between performances of the Surveillance, shall be failure to meet the LCO. Failure to perform a Surveillance within the specified Frequency shall be failure to meet the LCO except as provided in SR 3.0.3. Surveillances do not have to be performed on inoperable equipment or variables outside specified limits.
- 
- SR 3.0.2            The specified Frequency for each SR is met if the Surveillance is performed within 1.25 times the interval specified in the Frequency, as measured from the previous performance or as measured from the time a specified condition of the frequency is met.
- 
- SR 3.0.3            If it is discovered that a Surveillance was not performed within its specified frequency, then compliance with the requirement to declare the LCO not met may be delayed from the time of discovery up to 24 hours or up to the limit of the specified frequency, whichever is less. This delay period is permitted to allow performance of the surveillance.
- If the Surveillance is not performed within the delay period, the LCO must immediately be declared not met and the applicable Condition(s) must be entered. The Completion Times of the Required Actions begin immediately upon expiration of the delay period.
- When the Surveillance is performed within the delay period and the Surveillance is not met, the LCO must immediately be declared not met and the applicable Condition(s) must be entered. The Completion Times of the Required Actions begin immediately upon failure to meet the Surveillance.
-

3.1 DEFUELED SYSTEMS

3.1.1 Fuel Storage Pool Water Level

---

This section is not applicable to a facility with all of the spent nuclear fuel stored in an ISFSI.

### 3.1 DEFUELED SYSTEMS

#### 3.1.2 Spent Fuel Pool Load Restrictions

---

This section is not applicable to a facility with all of the spent nuclear fuel stored in an ISFSI

3.1 DEFUELED SYSTEMS

3.1.3 Fuel Storage Pool Liner Water Level

LCO 3.1.3 The Fuel Storage Pool Liner Water Level shall be at an ELEVATION less than + 9 inches.

APPLICABILITY: When the water in the pool or liner is contaminated with radioactive materials.

ACTIONS

| CONDITION |   | REQUIRED ACTION |   | COMPLETION TIME |
|-----------|---|-----------------|---|-----------------|
| A.        | Fuel Storage Pool Liner Water Level not within limit. | A.1             | Restore Fuel Storage Pool Liner Water Level to within limits. | Immediately     |

SURVEILLANCE REQUIREMENTS

| SURVEILLANCE |   | FREQUENCY |
|--------------|---|-----------|
| SR 3.1.3.1   | Verify the Fuel Storage Pool Liner Water Level is at an ELEVATION less than + 9 inches. | 24 hours  |

## 4.0 DESIGN FEATURES

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HBPP Unit 3 is located in Humboldt County, California, approximately 4 miles southwest of the center of the city of Eureka, on a site owned and controlled by Pacific Gas & Electric Company.

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### 4.2 Fuel Storage

4.2.1 Fuel assemblies shall not be stored in the Spent Fuel Storage Pool. Fuel assemblies previously stored in the Spent Fuel Storage Pool are now stored in dry casks in the ISFSI.

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5.0 ADMINISTRATIVE CONTROLS

5.1 Responsibility

---

Personnel responsibilities are identified in the Quality Assurance Plan.

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5.0 ADMINISTRATIVE CONTROLS

5.2 Organization

---

This section is not applicable to a facility with all of the spent nuclear fuel stored in an ISFSI.  
(Pages 5.0-3 and 5.0-4 have been deleted).

5.0 ADMINISTRATIVE CONTROLS

5.3 Facility Staff Qualifications

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Facility staff qualifications are identified in the Quality Assurance Plan.

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5.0 ADMINISTRATIVE CONTROLS

5.4 Training

---

This section is not applicable to a facility with all of the spent nuclear fuel stored in an ISFSI.

---

5.0 ADMINISTRATIVE CONTROLS

5.5 Procedures

---

5.5.1 Written procedures shall be established, implemented, and maintained covering the following activities:

- a. (Deleted)
  - b. Fire Protection Program implementation;
  - c. Quality assurance for radiological effluent and environmental monitoring;
  - d. (Deleted)
  - e. All programs specified in Specification 5.6.
-

5.0 ADMINISTRATIVE CONTROLS

5.6 Programs and Manuals

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The following programs shall be established, implemented and maintained.

5.6.1 Offsite Dose Calculation Manual (ODCM)

ODCM requirements are described in the Quality Assurance Plan.

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(Continued)

5.6 Programs and Manuals

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5.6.2 Technical Specification (TS) Bases Control Program

This program provides a means for processing changes to the Bases of these Technical Specifications.

- a. Changes to the Bases of the TS shall be made under appropriate administrative controls and reviews.
- b. Licensees may make changes to Bases without prior NRC approval provided the changes do not involve either of the following:
  1. a change in the TS incorporated in the license; or
  2. a change to the updated DSAR or Bases that requires prior NRC approval as defined in 10CFR 50.59.
- c. The Bases Control Program shall contain provisions to ensure that the Bases are maintained consistent with the DSAR.
- d. Proposed changes that meet the criteria of Specification 5.6.2b above shall be reviewed and approved by the NRC prior to implementation. Changes to the Bases implemented without prior NRC approval shall be provided to the NRC on a frequency consistent with 10CFR 50.71(e).

5.6.3 Fuel Storage Pool Water Chemistry Program

This section is not applicable to a facility with all of the spent nuclear fuel stored in an ISFSI.

5.6.4 Radioactive Effluent Controls Program (RECP)

RECP requirements are described in the Quality Assurance Plan.

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(Continued)

5.6 Programs and Manuals

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5.6 Programs and Manuals

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5.6.5 Neutron Absorber Surveillance Program

This section is not applicable to a facility with all of the spent nuclear fuel stored in an ISFSI.

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5.0 ADMINISTRATIVE CONTROLS

5.7 Reporting Requirements

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Reporting requirements are described in the Quality Assurance Plan.

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5.0 ADMINISTRATIVE CONTROLS

5.8 High Radiation Area

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As provided in paragraph 20.1601(c) of 10CFR 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 10CFR Part 20:

5.8.1 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 a 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
  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 within the area, or

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(continued)

5.8 High Radiation Area

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5.8.1 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):

- (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.

5.8.2 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 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 foreman, 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:
  - 1. 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

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(continued)

5.8 High Radiation Area

---

5.8.2 High Radiation Areas with Dose Rates Greater than 1.0 rem/hour at 30 Centimeters from 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)

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
  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, or
  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.
- f. Such individual areas that are within a large area, such as the refueling building, 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.
-