

ATTACHMENT 3 TO TXX-94045

AFFECTED TECHNICAL SPECIFICATION PAGES  
(NUREG-1468) REVISED BY ALL APPROVED  
LICENSE AMENDMENTS

Note: Numbers in page margin correspond to the proposed changes as identified in Section II of Attachment 2, "Description of Technical Specification Change Request". These numbers are provided only as an aid to the reviewer in matching the description and analysis discussion with the affected pages. The numbers are not part of the proposed changes.

DEFINITIONS

MEMBER(S) OF THE PUBLIC

See Attached

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1.18 MEMBER(S) OF THE PUBLIC shall include all persons who are not occupationally associated with the plant. This category does not include employees of the licensee, its contractors, or vendors. Also excluded from this category are persons who enter the site to service equipment or to make deliveries. This category does include persons who use portions of the site for recreational, occupational, or other purposes not associated with the plant.

OFFSITE DOSE CALCULATION MANUAL

1.19 The OFFSITE DOSE CALCULATION MANUAL (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/Trip Setpoints, and in the conduct of the Environmental Radiological Monitoring Program. The ODCM shall also contain (1) the Radioactive Effluent Controls and Radiological Environmental Monitoring Programs required by Section 6.8.3 and (2) descriptions of the information that should be included in the Annual Radiological Environmental Operating and Semi-annual Radioactive Effluent Release Reports required by Specifications 6.9.1.3 and 6.9.1.4.

OPERABLE - OPERABILITY

1.20 A system, subsystem, train, component or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified function(s), and when all necessary attendant instrumentation, controls, electrical power, cooling or seal water, lubrication or other auxiliary equipment that are required for the system, subsystem, train, component, or device to perform its function(s) are also capable of performing their related support function(s).

OPERATIONAL MODE - MODE

1.21 An OPERATIONAL MODE (i.e., MODE) shall correspond to any one inclusive combination of core reactivity condition, power level, and average reactor coolant temperature specified in Table 1.2.

PHYSICS TESTS

1.22 PHYSICS TESTS shall be those tests performed to measure the fundamental nuclear characteristics of the reactor core and related instrumentation: (1) described in Chapter 14.0 of the FSAR, (2) authorized under the provisions of 10 CFR 50.59, or (3) otherwise approved by the Commission.

PRESSURE BOUNDARY LEAKAGE

1.23 PRESSURE BOUNDARY LEAKAGE shall be leakage (except steam generator tube leakage) through a nonisolable fault in a Reactor Coolant System component body, pipe wall, or vessel wall.

MEMBER(S) OF THE PUBLIC

1.18 MEMBER(S) OF THE PUBLIC means an individual in a controlled or UNRESTRICTED AREA. However, an individual is not a member of the public during any period in which the individual receives an occupational dose.

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3/4.11 RADIOACTIVE EFFLUENTS

BASES

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3/4.11.1 LIQUID EFFLUENTS

3/4.11.1 LIQUID HOLDUP TANKS

The tanks listed in this specification include all those unprotected outdoor tanks both permanent and temporary that are not surrounded by liners, dikes, or walls capable of holding the tank contents and that do not have tank overflows and surrounding area drains connected to the Liquid Radwaste Treatment System.

Restricting the quantity of radioactive material contained in the specified tanks provides assurance that in the event of an uncontrolled release of the tank's contents, the resulting concentrations would be less than the ~~limits of 10 CFR 20, Appendix B, Table II, Column 2,~~ at the nearest potable water supply and the nearest surface water supply in an UNRESTRICTED AREA.

3/4.11.2 GASEOUS EFFLUENTS

3/4.11.2.1 EXPLOSIVE GAS MIXTURE

This specification is provided to ensure that the concentration of potentially explosive gas mixtures contained in the WASTE GAS HOLDUP SYSTEM is maintained below the flammability limits of hydrogen and oxygen. Automatic control features are included in the system to prevent the hydrogen and oxygen concentrations from reaching these flammability limits. These automatic control features include isolation of the source of hydrogen and/or oxygen. Maintaining the concentration of hydrogen and oxygen below their flammability limits provides assurance that the releases of radioactive materials will be controlled in conformance with the requirements of General Design Criterion 60 of 10 CFR Part 50 Appendix A.

3/4.11.2.2 GAS STORAGE TANKS

The tanks included in this specification are those tanks for which the quantity of radioactivity contained is not limited directly or indirectly by another Technical Specification. Restricting the quantity of radioactivity contained in each gas storage tank provides assurance that in the event of an uncontrolled release of the tank's contents, the resulting whole body exposure to a MEMBER OF THE PUBLIC at the nearest SITE BOUNDARY will not exceed 0.5 rem. This is consistent with Standard Review Plan 11.3, Branch Technical Position ETSB 11-5, "Postulated Radioactive Releases Due to a Waste Gas System Leak or Failure," in NUREG-0800, July 1981.

Values given in Appendix B, Table 2, Column 2,  
to 10 CFR 20.1001-20.2402,

5.0 DESIGN FEATURES

5.1 SITE

EXCLUSION AREA

5.1.1 The Exclusion Area shall be as shown in Figure 5.1-1.

LOW POPULATION ZONE

5.1.2 The Low Population Zone shall be as shown in Figure 5.1-2.

MAP DEFINING UNRESTRICTED AREAS AND SITE BOUNDARY FOR RADIOACTIVE GASEOUS AND LIQUID EFFLUENTS

5.1.3 Information regarding radioactive gaseous and liquid effluents, which will allow identification of structures and release points as well as definition of UNRESTRICTED AREAS within the SITE BOUNDARY that are accessible to MEMBERS OF THE PUBLIC, shall be as shown in Figure 5.1-3.

The definition of UNRESTRICTED AREA used in implementing these Technical Specifications has been expanded over that in 10 CFR ~~20.3(a)(17)~~ <sup>20.1003</sup>. The UNRESTRICTED AREA boundary may coincide with the Exclusion Area Boundary, as defined in 10 CFR 100.3(a), but the UNRESTRICTED AREA does not include areas over water bodies. The concept of UNRESTRICTED AREAS, established at or beyond the SITE BOUNDARY, is utilized in the Limiting Conditions for Operation to keep levels of radioactive materials in liquid and gaseous effluents as low as is reasonably achievable, pursuant to 10 CFR 50.36a.

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5.2 CONTAINMENT

CONFIGURATION

5.2.1 The containment building is a steel-lined, reinforced concrete building of cylindrical shape, with a dome roof and having the following design features:

- a. Nominal inside diameter = 135 feet.
- b. Nominal inside height = 192.5 feet. (Dome = 67.5 feet; total = 260 feet)
- c. Nominal thickness of concrete walls = 4.5 feet.
- d. Nominal thickness of concrete roof = 2.5 feet.
- e. Nominal thickness of base mat = 12.0 feet.
- f. Nominal thickness of steel liner wall = 3/8 inch. (Dome = 1/2 inch, Base Mat = 1/4 inch), and
- g. Net free volume = 2,985,000 cubic feet.

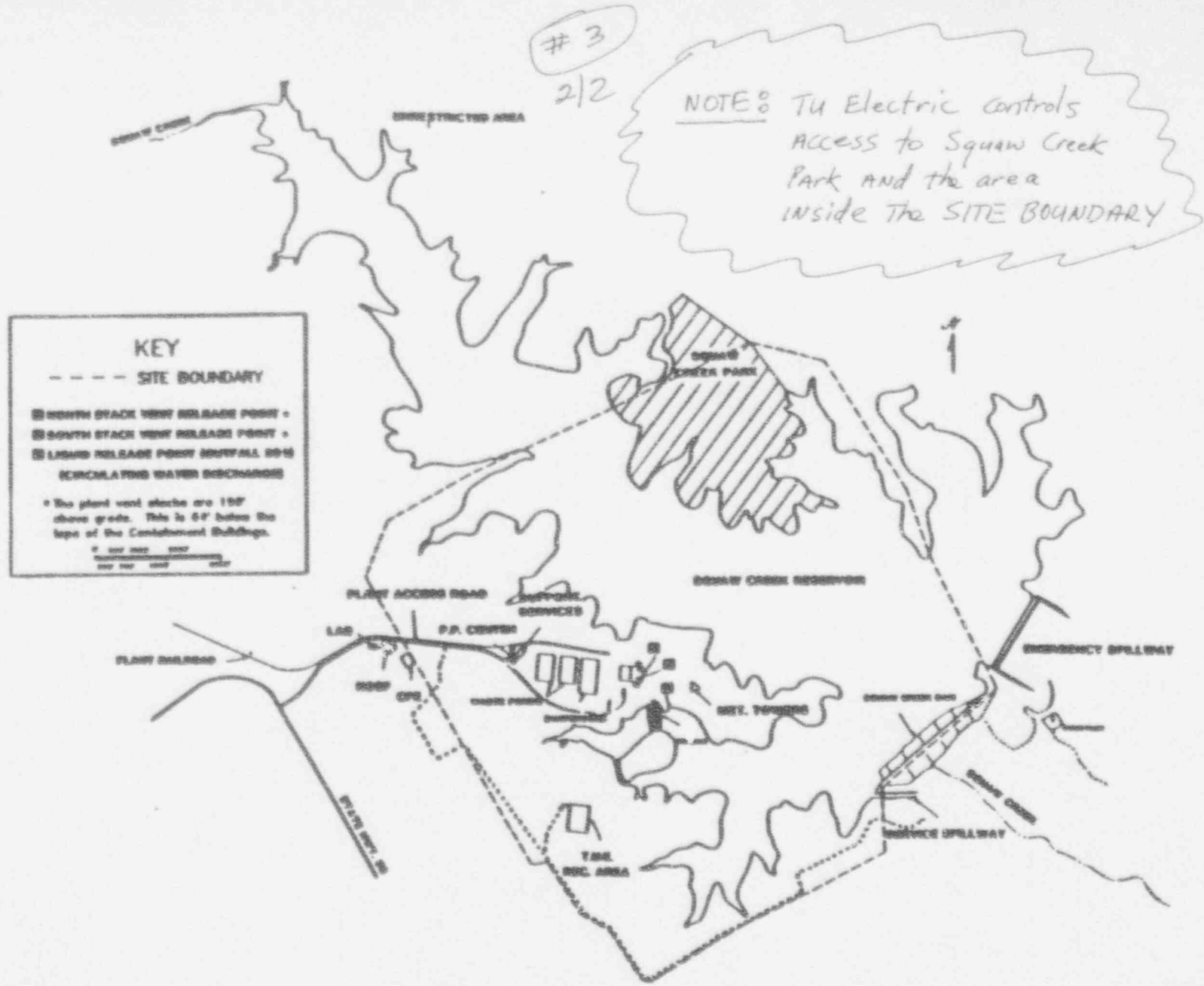


FIGURE 5.1-3

UNRESTRICTED AREA AND SITE BOUNDARY FOR RADIOACTIVE GASEOUS AND LIQUID EFFLUENTS

ADMINISTRATIVE CONTROLS

No Changes to this Page

PROCEDURES AND PROGRAMS (Continued)

b. In-Plant Radiation Monitoring (Continued)

- 2) Procedures for monitoring, and
- 3) Provisions for maintenance of sampling and analysis equipment.

c. Secondary Water Chemistry

A program for monitoring of secondary water chemistry to inhibit steam generator tube degradation and low pressure turbine disc stress corrosion cracking. This program shall include:

- 1) Identification of a sampling schedule for the critical variables and control points for these variables,
- 2) Identification of the procedures used to measure the values of the critical variables,
- 3) Identification of process sampling points, which shall include monitoring the discharge of the condensate pumps for evidence of condenser in-leakage,
- 4) Procedures for the recording and management of data,
- 5) Procedures defining corrective actions for all off-control point chemistry conditions, and
- 6) A procedure identifying: (a) the authority responsible for the interpretation of the data, and (b) the sequence and timing of administrative events required to initiate corrective action.

d. Post-Accident Sampling

A program which will ensure the capability to obtain and analyze reactor coolant, radioactive iodines and particulates in plant gaseous effluents, and containment atmosphere samples under accident conditions. The program shall include the following:

- 1) Training of personnel,
- 2) Procedures for sampling and analysis, and
- 3) Provisions for maintenance of sampling and analysis equipment.

e. Radioactive Effluent Controls Program

A program shall be provided conforming 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. The program (1) shall be contained in the ODCM, (2) shall

ADMINISTRATIVE CONTROLS

PROCEDURES AND PROGRAMS (Continued)

e. Radioactive Effluent Controls Program (Continued)

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 set-point determination in accordance with the methodology in the ODCM,
- 2) Limitations on the concentrations of radioactive material released in liquid effluents to UNRESTRICTED AREAS conforming to 10 CFR 20, Appendix B, Table II, Column 2,
- 3) Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents in accordance with 10 CFR 20.106 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 from each unit to UNRESTRICTED AREAS conforming to Appendix I to 10 CFR 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 and gaseous 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 Appendix I to 10 CFR 50,
- 7) Limitations on the dose rate resulting from radioactive material released in gaseous effluents to areas beyond the SITE BOUNDARY conforming to the doses associated with 10 CFR 20, Appendix B, Table II, Column 1, following:  
(SEE ATTACHED)
- 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 10 CFR 50,
- 9) Limitations on the annual and quarterly doses to a MEMBER OF THE PUBLIC from Iodine-131, Iodine-133, tritium, and all radio-nuclides in particulate form with half-lives greater than 8 days in gaseous effluents released from each unit to areas beyond the SITE BOUNDARY conforming to Appendix I to 10 CFR 50, and

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10 times the concentration values in Appendix B, Table 2, Column 2, to 10 CFR 20.1001-20.2402,

20.1302

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TS 6.8.3e.7) (continued)

- a. For noble gases: Less than or equal to a dose rate of 500 mrem/yr to the total body and less than or equal to a dose rate of 3000 mrem/yr to the skin, and
- b. For Iodine-131, for Iodine-133, for tritium, and for all radionuclides in particulate form with half-lives greater than 8 days: Less than or equal to a dose rate of 1500 mrem/yr to any organ.

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STARTUP REPORT (Continued)

The initial Startup Report shall address each of the startup tests identified in Chapter 14 of the Final Safety Analysis Report and shall include a description of the measured values of the operating conditions or characteristics obtained during the test program and a comparison of these values with design predictions and specifications. Any corrective actions that were required to obtain satisfactory operation shall also be described. Any additional specific details required in license conditions based on other commitments shall be included in this report. Subsequent Startup Reports shall address startup tests that are necessary to demonstrate the acceptability of changes and/or modifications.

Startup Reports shall be submitted within: (1) 90 days following completion of the Startup Test Program, (2) 90 days following resumption or commencement of commercial power operation, or (3) 9 months following initial criticality, whichever is earliest. If the Startup Report does not cover all three events (i.e., initial criticality, completion of Startup Test Program, and resumption or commencement of commercial operation), supplementary reports shall be submitted at least every 3 months until all three events have been completed.

ANNUAL REPORTS\*

6.9.1.2 Annual Reports covering the activities of the unit as described below for the previous calendar year shall be submitted prior to March 1 of each year. The initial report shall be submitted prior to March 1 of the year following initial criticality.

Reports required on an annual basis shall include:

- a. A tabulation on an annual basis of the number of station, utility, and other personnel (including contractors) receiving exposures greater than 100 mrem/yr and their associated man-rem exposure according to work and job functions\*\* e.g., reactor operations and surveillance, inservice inspection, routine maintenance, special maintenance (describe maintenance), waste processing, and refueling. The dose assignments to various duty functions may be estimated based on pocket dosimeter, thermoluminescent dosimeter (TLD), or film badge measurements. Small exposures totalling less than 20% of the individual total dose need not be accounted for. In the aggregate, at least 80% of the total whole-body dose received from external sources should be assigned to specific major work functions;

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individuals for whom monitoring was required  
AN Annual deep dose equivalent

deep dose equivalent

collective deep dose equivalent (reported in person-rem)

\*A single submittal may be made for a multiple unit station. The submittal should combine those sections that are common to all units at the station.

\*\*This tabulation supplements the requirements of 10 CFR 20.407.

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ADMINISTRATIVE CONTROLS

SPECIAL REPORTS

6.9.2 In addition to the applicable reporting requirements of Title 10, Code of Federal Regulations, special reports shall be submitted to the Regional Administrator of the Regional Office of the NRC within the time period specified for each report.

6.10 RECORD RETENTION

6.10.1 In addition to the applicable record retention requirements of Title 10, Code of Federal Regulations, the following records shall be retained for at least the minimum period indicated.

6.10.2 The following records shall be retained for at least 5 years:

- a. Records and logs of unit operation covering time interval at each power level;
- b. Records and logs of principal maintenance activities, inspections, repair, and replacement of principal items of equipment related to nuclear safety;
- c. ALL REPORTABLE EVENTS;
- d. Records of surveillance activities, inspections, and calibrations required by the Technical Specifications, Technical Requirements Manual, and Fire Protection Report, except as explicitly covered in Specification 6.10.3;
- e. Records of changes made to the procedures required by Specification 6.8.1;
- f. ~~Records of radioactive shipments;~~
- g. Records of sealed source and fission detector leak tests and results; and
- h. Records of annual physical inventory of all sealed source material of record.

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Deleted

6.10.3 The following records shall be retained for the duration of the unit Operating License:

- a. Records and drawing changes reflecting unit design modifications made to systems and equipment described in the Final Safety Analysis Report;
- b. Records of new and irradiated fuel inventory, fuel transfers, and assembly burnup histories;
- c. Records of ~~radiation exposure for all individuals entering radiation control areas;~~ <sup>doses received by</sup> <sup>for whom</sup> <sub>monitoring was required</sub>
- d. Records of gaseous and liquid radioactive material released to the environs;

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ADMINISTRATIVE CONTROLS

RECORD RETENTION (Continued)

- e. Records of transient or operational cycles for those unit components identified in Table 5.7-1;
- f. Records of reactor tests and experiments;
- g. Records of training and qualification for current members of the unit staff;
- h. Records of inservice inspections performed pursuant to these Technical Specifications;
- i. Records of quality assurance activities required by the Quality Assurance Manual;
- j. Records of reviews performed for changes made to procedures or equipment or reviews of tests and experiments pursuant to 10 CFR 50.59;
- k. Records of meetings of the SORC and the ORC;
- l. Records of the service lives of all hydraulic and mechanical snubbers required by the Technical Requirements Manual including the date at which the service life commences and associated installation and maintenance records;
- m. Records of secondary water sampling and water quality;
- n. Records of analyses required by the Radiological Environmental Monitoring Program that would permit evaluation of the accuracy of the analysis at a later date. This should include procedures effective at specified times and QA records showing that these procedures were followed; and
- o. Records of reviews performed for changes made to the OFFSITE DOSE CALCULATION MANUAL and the PROCESS CONTROL PROGRAM.

p. Records of radioactive shipments.

6.11 RADIATION PROTECTION PROGRAM

6.11.1 Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR 20 and shall be approved, maintained, and adhered to for all operations involving personnel radiation exposure.

6.12 HIGH RADIATION AREA

6.12.1 Pursuant to paragraph 10 CFR ~~20.203(c)(5)~~, in lieu of the "control device" or "alarm signal" required by paragraph 10 CFR ~~20.203(c)~~, each high radiation area, as defined in 10 CFR 20, in which the intensity of radiation is equal to or less than 1000 ~~mR/h at 45 cm (18 in.)~~ from the radiation source or from any surface which the radiation penetrates shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be

20.1601(c)

20.1601(a)

mrem/h at 30 cm (12 inches)

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ADMINISTRATIVE CONTROLS

6.12 HIGH RADIATION AREA (Continued)

controlled by requiring issuance of a Radiation Work Permit (RWP). Individuals qualified in radiation protection procedures (e.g., Radiation Protection Technician) 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 equal to or less than 1000 mrem/h, 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 which continuously indicates the radiation dose rate in the area; or
- b. A radiation monitoring device which 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 have been made knowledgeable of them; or
- 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 RWP.

6.12.2 In addition to the requirements of Specification 6.12.1, areas accessible to personnel with radiation levels greater than 1000 mrem/h at 45 cm (18 in.) from the radiation source or from any surface which the radiation penetrates shall be provided with locked doors to prevent unauthorized entry, and the keys shall be maintained under the administrative control of the Shift Supervisor on duty and/or radiation protection supervision. 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 areas and the maximum allowable stay time for individuals in that area. In lieu of the stay time specification of the RWP, direct or remote (such as closed circuit TV cameras) continuous surveillance may be made by personnel qualified in radiation protection procedures to provide positive exposure control over the activities being performed within the area.

For isolated individual high radiation areas accessible to personnel with radiation levels of greater than 1000 mrem/h that are located within large areas, such as PWR containment, where no enclosure exists for purposes of locking, and where no enclosure can be reasonably constructed around the individual area, that individual area shall be barricaded, conspicuously posted, and a flashing light shall be activated as a warning device.

mrem/h at 30 cm but less than 500 rads in one hour at ONE meter

mrem/h at 30 cm (12 in.) but less than 500 rads in one hour at one meter

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ADMINISTRATIVE CONTROLS

6.13 PROCESS CONTROL PROGRAM (PCP)

Changes to the PCP:

- a. Shall be documented and records of reviews performed shall be retained as required by Specification 6.10.30. This documentation shall contain:
  - 1) Sufficient information to support the change together with the appropriate analyses or evaluations justifying the change(s) and
  - 2) A determination that the change will maintain the overall conformance of the solidified waste product to existing requirements of Federal, State, or other applicable regulations.
- b. Shall become effective after review and acceptance by the SORC and the approval of the Vice President, Nuclear Operations.

6.14 OFFSITE DOSE CALCULATION MANUAL (ODCM)

Changes to the ODCM:

- a. Shall be documented and records of reviews performed shall be retained as required by Specification 6.10.30. This documentation shall contain:
  - 1) Sufficient information to support the change together with the appropriate analyses or evaluations justifying the change(s) and
  - 2) A determination that the change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50 and not adversely impact the accuracy or reliability of effluent, dose, or setpoint calculations.
- b. Shall become effective after review and acceptance by the SORC and the approval of the Vice President, Nuclear Operations.
- c. 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 Semiannual Radioactive Effluent Release Report for the period of the report in which any change to 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 (e.g., month/year) the change was implemented.

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