

ATTACHMENT 2

TO

Letter from C. R. Steinhardt (WPSC)

to

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Affected TS Pages

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# TECHNICAL SPECIFICATIONS AND BASES

## 1.0 DEFINITIONS

The following terms are defined for uniform interpretation of the specifications.

a. QUADRANT-TO-AVERAGE POWER TILT RATIO

The QUADRANT-TO-AVERAGE POWER TILT RATIO is defined as the ratio of maximum-to-average of the upper excore detector currents or that of the lower excore detector currents, whichever is greater. If one excore detector is out of service, the three in-service units are used in computing the average.

b. SAFETY LIMITS

SAFETY LIMITS are the necessary quantitative restrictions placed upon those process variables that must be controlled in order to reasonably protect the integrity of certain of the physical barriers which guard against the uncontrolled release of radioactivity.

c. LIMITING SAFETY SYSTEM SETTINGS

LIMITING SAFETY SYSTEM SETTINGS are setpoints for automatic protective devices responsive to the variables on which SAFETY LIMITS have been placed. These setpoints are so chosen that automatic protective actions will correct the most severe, anticipated abnormal situation so that a SAFETY LIMIT is not exceeded.

d. LIMITING CONDITIONS FOR OPERATION

LIMITING CONDITIONS FOR OPERATION are those restrictions on reactor operation, resulting from equipment performance capability, that must be enforced to ensure safe operation of the facility.



e. OPERABLE-OPERABILITY

A system or component is OPERABLE or has OPERABILITY when it is capable of performing its intended function within the required range. The system or component shall be considered to have this capability when: (1) it satisfies the LIMITING CONDITIONS FOR OPERATION defined in TS 3.0; and (2) it has been tested periodically in accordance with TS 4.0 and has met its performance requirements.

Implicit in this definition shall be the assumption that all necessary attendant instrumentation, controls, normal and emergency electrical power sources, cooling or seal water, lubrication or other auxiliary equipment that is required for the system or component to perform its intended function is also capable of performing their related support functions.

f. OPERATING

A system or component is considered to be OPERATING when it is performing the intended function in the intended manner.

g. CONTAINMENT SYSTEM INTEGRITY

CONTAINMENT SYSTEM INTEGRITY is defined to exist when:

1. The nonautomatic Containment System isolation valves and blind flanges are closed as required.
2. The Reactor Containment Vessel and Shield Building equipment hatches are properly closed.
3. At least ONE door in both the personnel and the emergency airlocks is properly closed.
4. The required automatic Containment System isolation valves are OPERABLE or are deactivated in the closed position or at least one valve in each line having an inoperable valve is closed.
5. All requirements of TS 4.4 with regard to Containment System leakage and test frequency are satisfied.
6. The Shield Building Ventilation System and the Auxiliary Building Special Ventilation System satisfy the requirements of TS 3.6.b.

h. PROTECTIVE INSTRUMENTATION LOGIC

1. PROTECTION SYSTEM CHANNEL

A PROTECTION SYSTEM CHANNEL is an arrangement of components and modules as required to generate a single protective action signal when required by a plant condition. The channel loses its identity where single action signals are combined.

2. LOGIC CHANNEL

A LOGIC CHANNEL is a matrix of relay contacts which operate in response to PROTECTIVE SYSTEM CHANNEL signals to generate a protective action signal.

3. DEGREE OF REDUNDANCY

DEGREE OF REDUNDANCY is defined as the difference between the number of OPERATING channels and the minimum number of channels which, when tripped, will cause an automatic shutdown.

4. PROTECTION SYSTEM

The PROTECTION SYSTEM consists of both the Reactor PROTECTION SYSTEM and the Engineered Safety Features System. The PROTECTION SYSTEM encompasses all electric and mechanical devices and circuitry (from sensors through actuated device) which are required to operate in order to produce the required protective function. Tests of PROTECTION SYSTEM will be considered acceptable when tests are run in part and it can be shown that all parts satisfy the requirements of the system.

i. INSTRUMENTATION SURVEILLANCE

1. CHANNEL CHECK

CHANNEL CHECK is a qualitative determination of acceptable OPERABILITY by observation of channel behavior during operation. This determination shall include, where possible, comparison of the channel indication with other indications derived from independent channels measuring the same variable.

2. CHANNEL FUNCTIONAL TEST

A CHANNEL FUNCTIONAL TEST consists of injecting a simulated signal into the channel as close to the primary sensor as practicable to verify that it is OPERABLE, including alarm and/or trip initiating action.

### 3. CHANNEL CALIBRATION

CHANNEL CALIBRATION consists of the adjustment of channel output such that it responds, with acceptable range and accuracy, to known values of the parameter which the channel monitors. Calibration shall encompass the entire channel, including alarm and/or trip, and shall be deemed to include the CHANNEL FUNCTIONAL TEST.

### 4. SOURCE CHECK

A SOURCE CHECK shall be the qualitative assessment of channel response when the channel sensor is exposed to a source of increased radioactivity.

### j. MODES

MODE	REACTIVITY $\Delta k/k$	COOLANT TEMP $T_{avg}$ °F	FISSION POWER %
REFUELING	$\leq -5\%$	$\leq 140$	$\sim 0$
COLD SHUTDOWN	$\leq -1\%$	$\leq 200$	$\sim 0$
INTERMEDIATE SHUTDOWN	(1)	$> 200 < 540$	$\sim 0$
HOT SHUTDOWN	(1)	$\geq 540$	$\sim 0$
HOT STANDBY	$< 0.25\%$	$\sim T_{oper}$	$< 2$
OPERATING	$< 0.25\%$	$\sim T_{oper}$	$\geq 2$
LOW POWER PHYSICS TESTING	(To be specified by specific tests)		

(1) Refer to Figure TS 3.10-1

### k. REACTOR CRITICAL

The reactor is said to be critical when the neutron chain reaction is self-sustaining.

### l. REFUELING OPERATION

REFUELING OPERATION is any operation involving movement of reactor vessel internal components (those that could affect the reactivity of the core) within the containment when the vessel head is unbolted or removed.

### m. RATED POWER

RATED POWER is the steady-state reactor core output of 1,650 Mwt.

n. REPORTABLE EVENT

A REPORTABLE EVENT is defined as any of those conditions specified in 10 CFR 50.73.

o. RADIOLOGICAL EFFLUENTS

1. MEMBER(S) OF THE PUBLIC

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 utility, 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.

2. OFF-SITE DOSE CALCULATION MANUAL (ODCM)

The ODCM shall contain the current methodology and parameters used in the calculation of off-site doses due to radioactive gaseous and liquid effluents, and in the calculation of gaseous and liquid effluent monitoring alarm/trip setpoints, and in the conduct of the Radiological Environmental Monitoring Program. The ODCM shall also contain (1) the Radioactive Effluent Controls and Radiological Environmental Monitoring Programs required by TS 6.16.b, and (2) descriptions of the information that should be included in the Annual Radiological Environmental Operating and Semiannual Radioactive Effluent Release Reports required by TS 6.9.b.1 and TS 6.9.b.2.

3. PROCESS CONTROL PROGRAM (PCP)

The PCP shall contain the current formulae, sampling, analyses, tests, and determinations to be made to ensure that the processing and packaging of solid radioactive wastes, based on demonstrated processing of actual or simulated wet solid wastes, will be accomplished in such a way as to assure compliance with 10 CFR Part 20, 10 CFR Part 61, 10 CFR Part 71, federal and state regulations, burial ground requirements, and other requirements governing the disposal of the radioactive waste.

4. SITE BOUNDARY

The SITE BOUNDARY shall be that line beyond which the land is neither owned, nor leased, nor otherwise controlled by the licensee.

## 5. UNRESTRICTED AREA

An UNRESTRICTED AREA shall be any area at or beyond the SITE BOUNDARY access to which is not controlled by the licensee for purposes of protection of individuals from exposure to radiation and radioactive materials, or any area within the SITE BOUNDARY used for residential quarters or for industrial, commercial, institutional, and/or recreational purposes.

### p. STANDARD SHUTDOWN SEQUENCE

When a LIMITING CONDITION FOR OPERATION is not met, and a plant shutdown is required except as provided in the associated action requirements, within one hour action shall be initiated to place the unit in a MODE in which the Specification does not apply by placing it, as applicable, in:

1. At least HOT STANDBY within the next 6 hours,
2. At least HOT SHUTDOWN within the following 6 hours, and
3. At least COLD SHUTDOWN within the subsequent 36 hours.

Where corrective measures are completed that permit operation under the action requirements, the action may be taken in accordance with the specified time limits as measured from the time of determination of the failure to meet the LIMITING CONDITION FOR OPERATION. Exceptions to these requirements are stated in the individual Specifications.

This Specification is not applicable when the plant is in COLD or REFUELING SHUTDOWN.

## 6.9 REPORTING REQUIREMENTS

In addition to the applicable reporting requirements of Title 10, Code of Federal Regulations, the following identified reports shall be submitted to the Director of the appropriate Regional Office of Inspection and Enforcement unless otherwise noted.

### a. Routine Reports

#### 1. Startup Report

A summary report of plant startup and power escalation testing shall be submitted following (1) receipt of an operating license, (2) amendment to the license involving a planned increase in power level, (3) installation of fuel that has a different design or has been manufactured by a different fuel supplier, and (4) modifications that may have significantly altered the nuclear, thermal, or hydraulic performance of the plant. The report shall address each of the tests identified in the USAR and shall in general 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.

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 power operation), supplementary reports shall be submitted at least every three months until all three events have been completed.

#### 2. Annual Reporting Requirements

Routine operating reports covering the operation of the unit during the previous calendar year shall be submitted prior to March 1 of each year. Items reported in this category include:

- A. Report of facility changes, tests or experiments required pursuant to 10 CFR 50.59(b).

B. A tabulation on an annual basis of the number of station, utility, and other personnel (including contractors) receiving exposures > 100 mrem/yr and their associated man rem exposure according to work and job functions,<sup>(1)</sup> e.g., reactor operations and surveillance, in-service inspection, routine maintenance, special maintenance (describe maintenance), waste processing, and REFUELING. The dose assignment to various duty functions may be estimates based on pocket dosimeter, TLD, or film badge measurements. Small exposures totaling < 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 shall be assigned to specific major work functions.

C. Challenges to and failures of the pressurizer power operated relief valves and safety valves.<sup>(2)</sup>

3. Monthly Operating Report

Routine reports of operating statistics and shutdown experience shall be submitted on a monthly basis to the Document Control Desk, U.S. Nuclear Regulatory Commission, Washington, D.C., 20555, with a copy to the appropriate Regional Office, to be submitted by the fifteenth of each month following the calendar month covered by the report.

b. Unique Reporting Requirements

1. Annual Radiological Environmental Monitoring Report

A. Routine Radiological Environmental Monitoring Reports covering the operation of the unit during the previous calendar year shall be submitted prior to May 1 of each year. The report shall include summaries, interpretations, and analysis of trends of the results of the Radiological Environmental Monitoring Program for the reporting period. The material provided shall be consistent with the ODCM and Sections IV.B.2, IV.B.3, and IV.C of Appendix I to 10 CFR Part 50.

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<sup>(1)</sup>This tabulation supplements the requirements of Section 20.407 of 10 CFR Part 20.

<sup>(2)</sup>Letter from E. R. Mathews (WPSC) to D. G. Eisenhut (U.S. NRC) dated January 5, 1981.

2. Semiannual Radioactive Effluent Release Report .

- A. Routine Radioactive Effluent Release Reports covering the operation of the unit during the previous 6 months of operation shall be submitted within 60 days after January 1 and July 1 of each year. 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 the PCP, and in conformance with 10 CFR 50.36a and Section IV.B.1 of Appendix I to 10 CFR Part 50.

3. Special Reports

- A. Special reports may be required covering inspections, test and maintenance activities. These special reports are determined on an individual basis for each unit and their preparation and submittal are designated in the Technical Specifications.
- (1) Special reports shall be submitted to the Director of the NRC Regional Office listed in Appendix D, 10 CFR Part 20, with a copy to the Director, Office of Inspection and Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 within the time period specified for each report.



## 6.10 RECORD RETENTION

- a. The following records shall be retained for at least five years:
  1. Records and logs of plant operation, including power levels and periods of operation at each power level.
  2. Records and logs of principal maintenance activities, inspections, repair and replacement of principal items of equipment pertaining to nuclear safety.
  3. Reports of all REPORTABLE EVENTS.
  4. Records of periodic checks, inspections, and calibrations required by these Technical Specifications.
  5. Records of nuclear safety-related tests or experiments.
  6. Records of radioactive shipments.
  7. Records of changes to operating procedures.
  8. Records of sealed source leak tests and results.
  9. Records of annual physical inventory of all source material of record.
  10. Records of Quality Assurance activities required by the Operational Quality Assurance Program (OQAP) except where it is determined that the records should be maintained for a longer period of time.
- b. The following records shall be retained for the duration of the Plant Operating License.
  1. Records of a complete set of as-built drawings for the plant as originally licensed and all print changes showing modifications made to the plant.
  2. Records of new and spent fuel inventory, fuel transfers, and assembly burnup histories.
  3. Records of plant radiation and contamination surveys.
  4. Records of radiation exposure of all plant personnel, and others who enter radiation control areas.
  5. Records of radioactivity in liquid and gaseous wastes released to the environment.

6. Records of transient or operational cycles for these facility components.
7. Records of training and qualification for current members of the plant staff.
8. Records of in-service inspections performed pursuant to these Technical Specifications.
9. Records of meetings of the NSRAC and PORC.
10. Records for Environmental Qualification.
11. Records of reviews performed for changes made to the ODCM and the PCP.

## 6.16 RADIOLOGICAL EFFLUENTS

- a. Written procedures shall be established, implemented and maintained covering the activities referenced below:
  1. PCP implementation.
  2. ODCM implementation.
  3. Quality Assurance Program for effluent and environmental monitoring.
- b. The following programs shall be established, implemented, and maintained:
  1. 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 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:

- (a) 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.
- (b) Limitations on the concentrations of radioactive material released in liquid effluents to UNRESTRICTED AREAS conforming to 10 CFR Part 20, Appendix B, Table II, Column 2.
- (c) 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.
- (d) 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 Part 50.
- (e) 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.

- (f) 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% of the guidelines for the annual dose or dose commitment conforming to Appendix I to 10 CFR Part 50.
- (g) 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 Part 20, Appendix B, Table II, Column 1.
- (h) 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 Part 50.
- (i) Limitations on the annual and quarterly doses to a MEMBER OF THE PUBLIC from Iodine-131, Iodine-133, tritium, and all radionuclides 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 Part 50.
- (j) 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 40 CFR Part 190.

## 2. Radiological Environmental Monitoring Program

A program shall be provided to monitor the radiation and radionuclides in the environs of the plant. The program shall provide (1) representative measurement of radioactivity in the highest potential exposure pathways, and (2) verification of the accuracy of the effluent monitoring program and modeling of environmental exposure pathways. The program shall (1) be contained in the ODCM, (2) conform to the guidance of Appendix I to 10 CFR Part 50, and (3) include the following:

- (a) Monitoring, sampling, analysis, and reporting of radiation and radionuclides in the environment in accordance with the methodology and parameters in the ODCM.
- (b) A Land Use Census to ensure that changes in the use of areas at and beyond the SITE BOUNDARY are identified and that modifications to the monitoring program are made if required by the results of this census, and

(c) Participation in an Interlaboratory Comparison Program to ensure that independent checks on the precision and accuracy of the measurements of radioactive materials in environmental sample matrices are performed as part of the quality assurance program for environmental monitoring.

6.17 PROCESS CONTROL PROGRAM (PCP)

- a. The PCP shall be approved by the Commission prior to implementation.
- b. Licensee initiated changes to the PCP:

1. Shall be documented and records of reviews performed shall be retained as required by TS 6.10.b.11. The documentation shall contain:

- (a) Sufficient information to support the change together with the appropriate analyses or evaluations justifying the change(s), and

- (b) 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.

2. Shall become effective upon review and acceptance by the PORC.

6.18 OFF-SITE DOSE CALCULATION MANUAL (ODCM)

- a. The ODCM shall be approved by the Commission prior to implementation.
- b. Licensee initiated changes to the ODCM:
  1. Shall be documented and records of reviews performed shall be retained as required by TS 6.10.b.11. This documentation shall contain:
    - (a) Sufficient information to support the change together with the appropriate analyses or evaluations justifying the change(s), and
    - (b) A determination that the change will maintain the level of radioactive effluent control required by 10 CFR 20.106, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR Part 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 PORC.
  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 to the ODCM was made. The date the changes were made shall be indicated. In addition, a method such as redlining should be used to clearly identify the changes.

**SECTION 7/8 AND ALL SECTION 7/8 TABLES HAVE BEEN DELETED**

Proposed Amendment No. 114  
05/04/93