



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20566

OMAHA PUBLIC POWER DISTRICT

DOCKET NO. 50-285

FORT CALHOUN STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 145  
License No. DPR-4C

The Nuclear Regulatory Commission (the Commission) has found that:

- A. The application for amendment by the Omaha Public Power District (the licensee) dated January 9, 1992, as supplemented March 23, 1992, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
- B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
- C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
- D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public; and
- E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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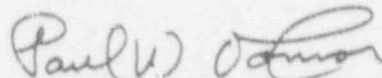
2. Accordingly, Facility Operating License No. DPR-40 is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B. of Facility Operating License No. DPR-40 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 145, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. The license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

  
for John T. Larkins, Director  
Project Directorate IV-1  
Division of Reactor Projects - III/IV/V  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: April 23, 1992

ATTACHMENT TO LICENSE AMENDMENT NO. 145

FACILITY OPERATING LICENSE NO. DPR-40

DUCKET NO. 50-285

Revise Appendix "A" Technical Specifications as indicated below. The revised pages are identified by amendment number and contain vertical lines indicating the area of change.

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### 3.0 SURVEILLANCE REQUIREMENTS

#### 3.14 Shock Suppressors (Snubbers)

##### Applicability

This specification applies to all safety-related snubbers.

##### Specifications

- (1) All hydraulic snubbers shall be visually inspected. As used in this specification, "type of snubber" shall mean snubbers of the same design and manufacturer, irrespective of capacity. This inspection shall include, but not necessarily be limited to, inspection of the hydraulic fluid reservoir, fluid connections, and linkage connections to the piping and anchor to verify snubber operability. In those locations where snubber movement can be manually induced without disconnecting the snubber, verify that the snubber has freedom of movement and is not frozen up. Snubbers which appear inoperable as a result of visual inspections shall be classified as unacceptable and may be reclassified acceptable for the purpose of establishing the next visual inspection interval, provided that (1) the cause of the rejection is clearly established and remedied for that particular snubber and for other snubbers irrespective of type that may be generically susceptible; and (2) the affected snubber is functionally tested in the as-found condition and determined OPERABLE per functional testing acceptance criteria. All snubbers found connected to an inoperable common hydraulic fluid reservoir shall be counted as unacceptable for determining the next inspection interval. A review and evaluation shall be performed and documented to justify continued operation with an unacceptable snubber. If continued operation cannot be justified, the snubber shall be declared inoperable and the ACTION requirements shall be met. Visual inspections shall be performed in accordance with Table 3-14.
- (2) At least once per 18 months during shutdown and subject to the conditions below:
  - (a) A representative sample (88) of hydraulic snubbers shall be functionally tested either in-place or in a bench test.

3.0 **SURVEILLANCE REQUIREMENTS**  
3.14 **Shock Suppressors (Snubbers) (Continued)**

If any snubber selected for functional testing either fails to lockup or fails to move, i.e., is frozen in place, the cause will be evaluated. If the cause is a manufacturer or design deficiency, appropriate action shall be taken for snubbers of the same design subject to the same defect to determine if any more defects exist. This testing requirement shall be independent of the requirements stated above for snubbers not meeting the functional test acceptance criteria.

For any snubber(s) found locked up during normal operation or found inoperable following a seismic event, an engineering evaluation shall be performed on the components which are supported by the snubber(s). The purpose of this engineering evaluation shall be to determine if the components supported by the snubber(s) were adversely affected by the inoperability of the snubber(s) in order to ensure that the supported component remains capable of meeting the designed service. If the engineering evaluation shows the components to be capable of meeting the designed service without the failed snubber, that snubber may be deleted from service per Specification 2.18(4).

(3) Snubber Service Life Monitoring

A record of the service life of each snubber, the date at which the designated service life commences and the installation and maintenance records on which the designated service life is based shall be maintained as required by Specification 5.10.2.m. At least once per 18 months the installation and maintenance record for each snubber shall be reviewed to verify that the indicated service life has not been exceeded or will not be exceeded prior to the next scheduled snubber service life review. If the indicated service life will be exceeded prior to the next scheduled snubber service life review, the snubber service life shall be re-evaluated or the snubber shall be replaced or reconditioned so as to extend its service life beyond the date of the next scheduled service life review. This re-evaluation, replacement or reconditioning shall be indicated in the records.

Basis

All safety snubbers shall be operable to ensure that the structural integrity of the reactor coolant system and all other safety-related systems is maintained during and following a seismic or other event initiating dynamic loads. Snubbers excluded from this inspection program are those installed on non-safety-related systems and then only if their failure or failure of the system on which they are installed would have no adverse effect on any safety-related system.

The visual inspection frequency is based upon maintaining a constant level of snubber protection to systems. The required inspection interval will be based on Table 3-14.

### 3.0 SURVEILLANCE REQUIREMENTS

#### 3.14 Shock Suppressors (Snubbers) (Continued)

When a snubber is found locked up or frozen in place or when a snubber has been inoperable during a seismic event, an engineering evaluation shall be performed, in addition to the determination of the snubber mode of failure. The purpose of the engineering evaluation is to determine if any safety-related component or system has been adversely affected by the inoperability of the snubber. The engineering evaluation shall determine whether or not the snubber mode of failure has imparted a significant effect or degradation on the supported component or system.

To provide assurance of snubber functional reliability, a representative sample of the installed snubbers will be functionally tested during plant shutdowns at 18 month intervals. Selection of a representative sample of hydraulic snubbers according to the expression  $35(1+c/2)$  provides a confidence level of approximately 95% that 90% to 100% of the snubbers in the plant will be operable within acceptance limits. The District selected the value of c to be 3. Observed failures of these sample snubbers shall require functional testing of additional units. For each number of snubbers above c which does not meet the functional test acceptance criteria, an additional sample selected according to the expression  $35(1+c/2)(2/(c+1))^2(a-c)$  will be functionally tested, where a is the total number of snubbers found inoperable during the functional testing of the representative sample. Functional testing will continue according to the expression  $35(1+c/2)(2/(c+1))^2$  where b is the number of snubbers found inoperable in the previous resample, until no additional inoperable snubbers are found within a sample or until all snubbers have been functionally tested.

A "10%" criterion is utilized for mechanical snubbers because of the considerably smaller number of mechanical snubbers.

Hydraulic snubbers and mechanical snubbers will each be treated as a different entity for the above surveillance programs.

The service life of a snubber is evaluated via manufacturer input and information through consideration of the snubber service conditions and associated installation and maintenance records (e.g. newly installed snubber, seal replaced, spring replaced, in high radiation area, in high temperature area, etc.). The requirement to monitor the snubber service life is included to ensure that the snubbers periodically undergo a performance evaluation in view of their age and operating conditions. These records will provide statistical bases for future consideration of snubber service life. The requirements for the maintenance of records and the snubber service life review are not intended to affect plant operation.



TABLE 3-14  
SNUBBER VISUAL INSPECTION INTERVAL  
NUMBER OF UNACCEPTABLE SNUBBERS

<u>Population</u> (Notes 1 and 2)	<u>Column A</u> <u>Extend Interval</u> (Note 3)	<u>Column B</u> <u>Repeat Interval</u> (Note 4)	<u>Column C</u> <u>Reduce Interval</u> (Note 5)
1	0	0	1
80	0	0	2
100	0	1	4
150	0	3	8
200	2	5	13
300	5	12	25
400	8	18	36
500	12	24	48
750	20	40	78

Note 1: The next visual inspection interval for a snubber population shall be determined based upon the previous inspection interval and the number of unacceptable snubbers found during that interval. The first inspection interval determined using this criteria shall be based upon the previous inspection interval as established by the requirements in effect before amendment. Snubbers may be categorized, based upon their accessibility during power operation, as accessible or inaccessible. These categories may be examined separately or jointly. However, the licensee must make and document that decision before any inspection and shall use that decision as the basis upon which to determine the next inspection interval for that category.

Note 2: Interpolation between population or category sizes and the number of unacceptable snubbers is permissible. Use next lower integer for the value of the limit for Columns A, B, or C if that integer includes a fractional value of unacceptable snubbers as determined by interpolation.

Note 3: If the number of unacceptable snubbers is equal to or less than the number in Column A, the next inspection interval may be twice the previous interval up to a 48 month interval.

Note 4: If the number of unacceptable snubbers is equal to or less than the number in Column B but greater than the number in Column A, the next inspection interval shall be the same as the previous interval.

Note 5: If the number of unacceptable snubbers is equal to or greater than the number in Column C, the next inspection interval shall be two-thirds of the previous interval. However, if the number of unacceptable snubbers is less than the number in Column C but greater than the number in Column B, the next interval shall be reduced proportionally by interpolation, that is, the previous interval shall be reduced by a factor that is one-third of the ratio of the difference between the number of unacceptable snubbers found during the previous interval and the number in Column B to the difference in the numbers in Columns B and C.