



Nebraska Public Power District

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NLS2009039
May 28, 2009

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555-0001

Subject: Response to Request for Additional Information for License Renewal Application
– Balance-of-Plant Scoping and Screening
Cooper Nuclear Station, Docket No. 50-298, DPR-46

- References:**
1. Letter from Tam Tran, U.S. Nuclear Regulatory Commission, to Stewart B. Minahan, Nebraska Public Power District, dated May 1, 2009, "Request for Additional Information for the Review of the Cooper Nuclear Station License Renewal Application (TAC No. MD9763 and MD9737)."
 2. Letter from Stewart B. Minahan, Nebraska Public Power District, to U.S. Nuclear Regulatory Commission, dated September 24, 2008, "License Renewal Application."

Dear Sir or Madam:

The purpose of this letter is for the Nebraska Public Power District to respond to Section B.1 of the Nuclear Regulatory Commission Request for Additional Information (RAI) (Reference 1) related to License Renewal Application (LRA) Balance-of-Plant Scoping and Screening. These responses are provided in the Attachment. No changes to the LRA (Reference 2) were required to reflect these RAI responses. The balance of the RAI responses are scheduled for submittal within the 45-day response period.

Should you have any questions regarding this submittal, please contact David Bremer, Licensing Renewal Project Manager, at (402) 825-5673.

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

Executed on 28 May 2009
(Date)

Sincerely,



Stewart B. Minahan
Vice President – Nuclear and
Chief Nuclear Officer

/wv

Attachment

cc: Regional Administrator w/ attachment
USNRC - Region IV

Cooper Project Manager w/ attachment
USNRC - NRR Project Directorate IV-1

Senior Resident Inspector w/ attachment
USNRC - CNS

Nebraska Health and Human Services w/ attachment
Department of Regulation and Licensure

NPG Distribution w/o attachment

CNS Records w/ attachment

Attachment

Response to Request for Additional Information for License Renewal Application – Balance-of-Plant Scoping and Screening Cooper Nuclear Station, Docket No. 50-298, DPR-46

The Nuclear Regulatory Commission (NRC) Request for Additional Information (RAI) regarding the License Renewal Application Scoping and Screening of Balance-of-Plant structures, systems, and components (SSCs) are shown in italics. The Nebraska Public Power District's (NPPD) response to each question is shown in block font.

NRC RAI 2.2-1

Auxiliary condensate (AC) system is a system identified in LRA Table 2.2-2 as not within scope of license renewal in accordance with 10 CFR 54.4. The licensee identifies the reactor building auxiliary condensate supply system as the water supply for each emergency core cooling system pump discharge line in Chapter VI, Section 3.0, of the USAR. On LRA drawing 2049 sheet 03, components in the reactor building auxiliary condensate system are highlighted as within scope for 10 CFR 54.4 (a)(2). The staff requests the applicant to justify the exclusion of the AC system from the scope for license renewal (LRA Table 2.2-2). In addition, the staff requests that the licensee provides a detailed description and function of the auxiliary condensate system and the components within scope of license renewal.

NPPD Response

The component tag numbers shown on LRA Drawing 2049 Sheet 3 have the prefix 'CM' which is the system code for the condensate makeup (CM) system. As shown on LRA Table 2.2-1-A, the CM system is within the scope of License Renewal. LRA section 2.3.4.2 provides a description of the CM System and its function. Table 2.3.4.2-C provides the License Renewal drawing numbers that describe the specific CM components within the scope of license renewal. A point of confusion appears to be Updated Safety Analysis Report (USAR) Section VI-3.0, which refers to portions of the CM system as the "Reactor Building Auxiliary Condensate Supply System." It should be noted that the nomenclature used in the USAR does not always match the system descriptors used within CNS configuration management.

LRA Table 2.2-2 addresses the collection of components within specific system codes in the site equipment database. The AC system code in the equipment database includes components collectively known as the auxiliary condensate (AC) system. The AC system is described in USAR Section X-10.1.1, "Steam Heating System." The AC system is a nonsafety-related system whose only function is to provide condensate to the auxiliary steam boilers for conversion to auxiliary steam used for station heating. The passive mechanical components assigned to the AC system are nonsafety-related, not required for any regulated event, and

located in the boiler room, which contains no components that perform a safety function. As such, failure of AC system components cannot prevent accomplishment of a safety function. Therefore, the AC system components have no intended functions for 10 CFR 54.4(a)(1), (a)(2), or (a)(3), and the system is not in the scope of license renewal.

NRC RAI 2.2-2

LRA Table 2.2-3 identifies the turbine building as within scope for license renewal in accordance with (iaw) 10 CFR 54.4 (a)(2) because it contains Structures and Components (SCs) that are safety-related and are within scope of license renewal iaw 10 CFR 54.4 (a)(1). The seal oil system for the main generator is located in the turbine building but is not listed as within scope for license renewal. In accordance with 10 CFR 54.4 (a)(2), the applicant is required to put SCs within scope of license renewal if the nonsafety-related SCs has the potential to affect the function of SCs identified under 10 CFR 54.4 (a)(1), i.e. safety-related. The staff requests the applicant to justify the exclusion of the main generator seal oil system from the scope of license renewal.

NPPD Response

Table 2.2-2, Mechanical Systems Not within the Scope of License Renewal, does not list the seal oil system for the main generator. Components supplying seal oil to the main generator are assigned to the turbine generator lube oil – mechanical system (LO). Per LRA Table 2.2-1-A, the LO system is in scope for 10 CFR 54.4(a)(2). Component types associated with the seal oil portion of the LO system are subject to aging management review and listed in LRA Table 2.3.4-2-6 with aging management review results shown in Table 3.4.2-2-6.

NRC RAI 2.2-3

In the Cooper USAR, Chapter XII, Section 2.1, the applicant provides a definition of Class I structures and equipment applicable to structural design requirements, followed by a list of Class I structures and equipment. In the preceding USAR section, the applicant states that Class I structures and components (SCs) are required for safe shutdown and isolation of the reactor. In this USAR section, the applicant lists several structures and equipment as Class I; however, the applicant does not identify these structures and equipment in the LRA as within scope under 10 CFR 54.4 (a)(1). The definition of Class I in the USAR as noted above and in Appendix A, Section 2.2.2, includes components whose failure could cause significant release of radioactivity or vital to a safe shutdown. This definition aligns with components defined as required to be within scope of license renewal under 10 CFR 54.4 (a)(1).

These components may not be identified as safety-related in the applicant's current licensing basis. In accordance with NEI 95-10, if an applicant's definition of safety-related may not match that of 10 CFR 54.4(a)(1), then the applicant should apply the 10 CFR 54.4(a)(1)

definition for purposes of identifying the systems, structures, and components that are within scope of license renewal. In LRA, the applicant identifies the following structures and equipment as Class I: the radwaste building (below grade), radwaste storage tanks, reactor water cleanup phase separators, and reactor building floor drain sump pumps.

The staff requests the applicant to justify the exclusion of those SCs identified as Class I in the USAR from inclusion as within scope of license renewal in accordance with 10 CFR 54.4(a)(1).

NPPD Response

The USAR Section XII-2.1 discussion of Class I does not align with the definition of safety-related. In fact, Section 2.1.2 of Chapter XII explicitly states that some Class I structures and equipment are not safety-related. A structure or equipment may be designed and constructed to Class I requirements, but yet not have any license renewal intended function for 10 CFR 54.4(a)(1). Safety-related SSCs must be designed and constructed to Class I requirements; however, not every SSC designed and constructed to Class I requirements is safety-related with an intended function that meets the criteria of 10 CFR 54.4(a)(1). Scoping for license renewal was based on assessment of the functions of equipment against the criteria of 10 CFR 54.4 rather than on the seismic qualifications applied to the equipment design.

Radwaste Building (below grade)

The radwaste building is designed to Class I requirements below grade; however, it houses no safety-related SSCs nor does the structure itself perform any safety function. Therefore, the radwaste building does not meet the criteria of 10 CFR 54.4(a)(1).

Radwaste Storage Tanks

The radwaste storage tanks are located in the basement of the radwaste building. Although the tanks were constructed in accordance with Class I standards, the tanks do not have a safety function, and are therefore not safety-related.

They are not necessary to shut down the reactor or to maintain it in a safe shutdown condition, nor are they required to prevent or mitigate the consequences of accidents which could result in potential offsite exposures comparable to those referred to in 10 CFR 50.34(a)(1), 10 CFR 50.67(b)(2), or 10 CFR 100.11. Therefore, the radwaste storage tanks do not meet the criteria of 10 CFR 54.4(a)(1).

Reactor Water Cleanup Phase Separators

The reactor water cleanup (RWCU) phase separators are located in the reactor building. USAR Section IX-3.3.2.1.1 states the purpose of the phase separators, which is to process backwash

discharge from the RWCU filter demineralizers. USAR Section IV-9.0 describes the RWCU system. The system has no safety function. Although the RWCU phase separators are designed to seismic Class I standards, the phase separators have no intended function for 10 CFR 54.4(a)(1). The RWCU system is in scope for 10 CFR 54.4(a)(2), and the phase separators are subject to aging management review.

Reactor Building Floor Drain Sump Pumps

The reactor building floor drain sump pumps, discussed in USAR Section X-14.5.3, have no safety function (USAR Sections X-14.1 and X-14.2). They are designed to Class I standards, but they do not meet the criteria of 10 CFR 54.4(a)(1). The radwaste system is in scope for 10 CFR 54.4(a)(2), and the reactor building floor drain sump pumps are subject to aging management review.

NRC RAI 2.2-4

In the Cooper USAR, Chapter XII, Section 2.1, the applicant definition of Class II structures and equipment applicable to structural design requirements states that Class II designated items shall not degrade the integrity of any items designated Class I. In USAR Chapter 12, Section 2.1.3.1, the applicant identifies the turbine building and circulation water system structure among the list of Class II structures; however, in LRA Table 2.2-4, the applicant includes the discharge structure (seal well) in the list of structures of not within scope of license renewal. The staff noted that the safety-related service water systems utilize the discharge structure as its flow path to the river; LRA drawing 2006 sheet 3 does not show the discharge structure to be within scope of license renewal. The applicant has identified safety-related components in the turbine building, a class II structure; hence, their identification of Class II structures aligns with structures and components in scope under 10 CFR 54.4(a)(2).

According to 10 CFR 54.4 (a)(2), the applicant is required to specify SCs within scope of license renewal if the nonsafety-related SCs has the potential to affect a function of a system identified under 10 CFR 54.4(a)(1). The staff requests the applicant to justify the exclusion of the discharge structure and other Class II structures and equipment from the scope of license renewal, in accordance with 10 CFR 54.4 (a)(2).

NPPD Response

Regardless of a structure's classification in the USAR, the structure is determined in scope of license renewal if it meets any of the 10 CFR 54.4(a) criteria. The USAR Section XII-2.1 statement, "A Class II designated item shall not degrade the integrity of any item designated Class I," means that Class II design requirements are acceptable for structures whose failure will not degrade the integrity of any item designated Class I. By this definition, Class II structures do not meet the scoping criterion of 10 CFR 54.4(a)(2). However, buildings that provide support and protection to in-scope equipment are in scope for that function. As described in LRA

Section 2.4.3, these include the Class II turbine building, the off-gas filter and fan building, and the radwaste building. The turbine building is in scope because it houses a small number of safety-related components and supports a safety-related power source to the Z sump. The off-gas filter and fan building provides support and protection to off-gas filter pits and the off-gas dilution fans and equipment supporting the Z Sump system. The radwaste building provides shelter and protection for components in plant drains and the fire protection system. The railroad airlock is in scope as part of the reactor building that provides secondary containment.

Class II Structures that Do Not Have a 10 CFR 54.4(a)(2) Function

Discharge Structure (Seal Well)

The discharge structure (seal well) is located south of the turbine building and discharges water into a discharge flume and then into the Missouri River. USAR Section XI-6.0 describes the circulating water system as having the power generation objective of conducting service water system returns back to the river. This function is not a safety function. There is no safety-related equipment located at the discharge structure (safety-related service water discharges downstream of the discharge structure in the discharge canal). Failure of the discharge structure will not prevent satisfactory accomplishment of a safety function. Therefore, the discharge structure does not meet the criterion of 10 CFR 54.4(a)(2). The service water pipe slab is in scope and subject to aging management review as indicated in LRA Table 2.4-2.

Optimum Water Chemistry Gas Generator (OWCGG) Building

The optimum water chemistry gas generator (OWCGG) building is located along the north wall of the turbine building. The OWCGG building contains four separate rooms: the hydrogen room, the oxygen room, the rectifier room, and the OWC control room.

Since the OWCGG building does not contain any equipment that is in scope for license renewal, it does not provide shelter or protection to equipment within the scope of license renewal. Failure of the structure will not prevent satisfactory accomplishment of a safety function. Therefore, the OWCGG building does not have a function that meets the criteria of 10 CFR 54.4(a)(2).

Augmented Radwaste Building (ARB)

The ARB houses various components of the augmented radwaste system. CNS no longer uses the augmented radwaste system to process liquid radwaste. The building contains no safety-related components and therefore does not house any components within the scope of license renewal based on the criterion of 10 CFR 54.4(a)(2). The failure of the structure would not prevent the satisfactory accomplishment of a safety function. Therefore, the ARB does not have a function that meets the criterion in 10 CFR 54.4(a)(2). The ARB is within the scope of license

renewal for 10 CFR 54.4(a)(3) based on its function of providing shelter or protection to components credited for fire protection (10 CFR 50.48).

Multi-Purpose Facility (MPF)

The MPF houses fire protection equipment used to meet 10 CFR 50.48 requirements for fire protection and other support equipment used in the maintenance and repair of plant components. A seismic isolation joint between the MPF and the control building and radwaste building prevents interaction during seismic events. The MPF does not house safety-related equipment and therefore does not provide shelter or protection to 10 CFR 54.4 (a)(1) or (a)(2) equipment. Class I buildings located next to the MPF are separated by the seismic isolation joint, so failure of the MPF will not affect Class I buildings. Therefore, the MPF does not have a function that meets the criterion of 10 CFR 54.4(a)(2).

Office Building

The office building, also known as the administration building, provides office facilities for station personnel. The structure contains no safety-related components and therefore contains no equipment in scope for 10 CFR 54.4(a)(2). Failure of the structure will not affect a safety function. Therefore, the office building does not have a function that meets the criterion of 10 CFR 54.4(a)(2).

Class II Equipment that Does Not Have a 10 CFR 54.4(a)(2) Function

Only one system listed in USAR Section XII-2.1.3.2 is not in scope: the augmented off-gas treatment system.

The purpose of the augmented off gas (AOG) system is to delay the radioactive gases in the off-gas stream, reducing the activity level prior to venting to the atmosphere. The passive mechanical components in this system contain only dry air or gas and are not required for structural support of safety-related equipment. Therefore, the AOG system is not in scope.

One other item is listed: "Other piping and equipment not listed under Class I." Systems containing components in this category are in scope for 10 CFR 54.4(a)(2) if a system function meets the criterion for 54.4(a)(2). See LRA Sections 2.1.1.2 and 2.1.2:1.2 for a discussion of scoping and screening for the 10 CFR 54.4(a)(2) criterion.

ATTACHMENT 3 LIST OF REGULATORY COMMITMENTS⁴

ATTACHMENT 3 LIST OF REGULATORY COMMITMENTS⁴

Correspondence Number: NLS2009039

The following table identifies those actions committed to by Nebraska Public Power District (NPPD) in this document. Any other actions discussed in the submittal represent intended or planned actions by NPPD. They are described for information only and are not regulatory commitments. Please notify the Licensing Manager at Cooper Nuclear Station of any questions regarding this document or any associated regulatory commitments.

COMMITMENT	COMMITMENT NUMBER	COMMITTED DATE OR OUTAGE
None		