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Point Beach Nuclear Plant, Units 1 and 2
Dockets 50-266 and 50-301
License Nos. DPR-24 and DPR-27

Response to Request for Additional Information
Regarding the Point Beach Nuclear Plant License Renewal Application
(TAC Nos. MC2099 and MC2100)

By letter dated February 25, 2004, Nuclear Management Company, LLC (NMC), submitted the Point Beach Nuclear Plant (PBNP) Units 1 and 2 License Renewal Application (LRA). On November 10, 2004, the Nuclear Regulatory Commission (NRC) requested additional information regarding Auxiliary Systems (Section 2.3.3 of the LRA). The enclosure to this letter contains NMC's response to the staff's questions.

Should you have any questions concerning this submittal, please contact Mr. James E. Knorr at (920) 755-6863.

Summary of Commitments

This letter makes the following new commitment:

NMC will add line items to Table 3.3.2-2 to include stainless steel under the Component Type, "Piping and Fittings" to address the flexible tubing as part of the License Renewal Application annual update.

I declare under penalty of perjury that the forgoing is true and correct. Executed on December 14, 2004.



Dennis L. Koehl
Site Vice-President, Point Beach Nuclear Plant
Nuclear Management Company, LLC

Enclosure

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cc: Administrator, Region III, USNRC
Project Manager, Point Beach Nuclear Plant, USNRC
Resident Inspector, Point Beach Nuclear Plant, USNRC
PSCW

ENCLOSURE

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION REGARDING POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2 LICENSE RENEWAL APPLICATION (LRA)

The following information is provided in response to the Nuclear Regulatory Commission (NRC) staff's request for additional information (RAI) regarding the Point Beach Nuclear Plant (PBNP) License Renewal Application.

The NRC staff's questions are restated below, with the Nuclear Management Company (NMC) response following.

Section 2.3.3 Auxiliary Systems

2.3.3.2 Component Cooling Water System Requests for Additional Information

NRC Question RAI 2.3.3.2-1:

The Point Beach Updated Final Safety Analysis Report (PBNP UFSAR) Section 9.1 states that the CCW system removes heat from the Reactor Coolant Pump (RCP) thermal barrier cooling coils to ensure RCS integrity. License renewal drawing LR-110E029 Sheet 2 (in quadrants B-5 and B-8) Note 3 and drawing LR-110E018 Sheet 2 (quadrants B-5 and B-8) Note 6 indicate a Swagelock 1-1/4" Dia. S.S. Flexible Metal Hose is used as a piping component on the inlet and outlet of the RCPs. This flexible metal hose is shown on the drawings as within the scope of license renewal. If these hoses have been screened in and included as passive components then Table 3.3.2-2 Auxiliary Systems - Component Cooling Water System - Summary of Aging Management Evaluation should have included an entry for stainless steel piping and fittings in this environment. No such entry could be found. Therefore, it is not clear if these flexible metal hose connectors are included in Table 2.3.3-2 as part of the piping and fittings component group. A degraded flexible metal hose connector could adversely impact the pressure boundary function of the CCW system. Provide additional clarification on these flexible metal hose connectors as to whether they are included in Table 2.3.3-2 as part of the piping and fittings component group and are considered to be in-scope for license renewal and subject to an AMR.

NMC Response:

Since these flexible metal hoses did not have a unique component ID, the components were not included during the initial reviews for License Renewal. These flexible metal hoses are in-scope and subject to aging management. NMC will add line items to Table 3.3.2-2 to include the material stainless steel under the Component Type, "Piping and Fittings," to address this flexible tubing as part of the LRA annual update. The

flexible hose will be age-managed similar to other stainless steel components in the Component Cooling Water system, via a combination of the Closed Cycle Cooling Water Program and the One-Time Inspection Program.

2.3.3.3 Spent Fuel Pool Cooling System RAIs

NRC Question RAI 2.3.3.3-1:

The PBNP UFSAR Section 9.9.2 System Design and Operation (Paragraph 2) states, "The spent fuel pool cooling system piping and service water system piping supplying the spent fuel pool heat exchangers are classified Safety-Related, Seismic Class I." The spent fuel pool license renewal drawing LR-110E018 Sheet 4 (quadrant H-5) shows the service water discharge piping from the spent fuel pool cooling heat exchangers (HX-13A and HX-13B) downstream of the flow control valves as out-of-scope. This is inconsistent with the Service Water license renewal drawing LR-M-207, Sheet 3 that shows the piping downstream of the discharge flow control valves as in-scope. Clarify whether this section of service water piping at the boundaries of the Spent Fuel Pool Cooling system is in-scope or not. If this section of piping is not in-scope, provide justification for exclusion.

NMC Response:

This was a high-lighting error on license renewal drawing LR-110E018, Sheet 4 (quadrant H-5). The Service Water piping downstream of the discharge flow control valves is in-scope (as shown on drawing LR-M-207, Sheet 3) and subject to aging management. License renewal drawing LR-110E018, Sheet 4 was revised and the error is being tracked in the corrective action program.

NRC Question RAI 2.3.3-2

The spent fuel pool cooling piping network downstream of the heat exchanger has a branch going to out-of-scope piping and components leading from the skimmer pump. The license renewal drawing LR-110E018 Sheet 4 in quadrant F-2 shows the in-scope boundary stopping in the middle of a piping run and not including the skimmer pump discharge isolation valve 793A. Other branch lines leading off of the Spent Fuel Pool System include at least one isolation valve in-scope. Failure of the out-of-scope piping or the out-of-scope skimmer pump system may affect the pressure boundary integrity intended function of this piping segment. Justify your determination to exclude the piping up to and including the 793A isolation valve body from the scope of license renewal.

NMC Response:

This branch connection does have an isolation valve (valve # 28 in LR-110E018, Sheet 4, location G-3), which is also the SR boundary valve for this system. Valve #28

can be shut to ensure maintaining the intended functions of the Spent Fuel Pool system (pumps, HXs, etc.), should leakage develop in either the skimmer pump branch piping or the demineralizer return branch piping. Portions of these branch connections were included in-scope for 10 CFR 54.4(a)(2), due to the potential for leakage or spray to affect the SR Spent Fuel Pool pumps. (See LRA Table 2.1.2.1-1, p. 2-28, third line item from top.) Although difficult to show on a drawing, the in-scope portions of these non-SR branch connections were determined during plant walkdowns, and transitions are shown at the points where the branch lines exited the room/area. Therefore, the scoping boundary may appear in the middle of a piping run and not at an isolation valve. Failure of the out-of-scope piping or skimmer pump sub-system will have no effect on the license renewal intended functions of the Spent Fuel Pool system. For these reasons, the scoping depicted on the drawing is correct as shown.

2.3.3.5 Service Water System RAIs

NRC Question RAI 2.3.3.5-1:

The PBNP UFSAR Section 9.6 states that the Service Water (SW) system shall provide sufficient flow to support the heat removal requirements of components required to mitigate the consequences of a Loss of Coolant Accident (LOCA) in one unit, while supporting the normal flow of the unaffected unit. License renewal drawing LR-M-207 sheet 1A shows three pipe stubs without isolation valves off the SW pressure boundary (listed below) as not in-scope for license renewal. License renewal application section 2.3.3.5 states that the SW piping and fittings are in-scope as a pressure boundary. Failure of these sections of piping could affect the pressure boundary function of the SW system. Justify that the three piping areas listed below are out-of-scope for license renewal and subject to an AMR.

- a. Cap on 4"-JB-2 piping, location G-5.
- b. Pipe stub and cap downstream of valve SW-48, location C-4.
- c. Pipe stub and cap downstream of valve SW-57, location D-4.

NMC Response:

These three instances identified are all high-lighting errors on license renewal drawing LR-M-207, Sheet 1A. The identified components were already considered to be in-scope and are subject to aging management. These three instances are represented in Table 3.3.2-5 under the "Piping and Fittings" Component Type and are managed by the Open Cycle Cooling Water System Surveillance Program. License renewal drawing LR-M-207, Sheet 1A was revised and the errors are being tracked in the corrective action program.

NRC Question RAI 2.3.3.5-2

The PBNP UFSAR Section 9.6.1 states that the SW system shall provide sufficient flow to support the heat removal requirements of components required to mitigate the consequences of a Loss of Coolant Accident (LOCA) in one unit, while supporting the normal flow of the unaffected unit. License renewal drawing LR-M-207 Sheets 1, 2 & 3 show seven valve actuators (listed below) as out-of-scope for license renewal. License renewal application Section 2.3.3.5 states that the SW valve bodies are in-scope as a pressure boundary. The seven valve actuators are not shown in a manner that is consistent with other similar valves in the SW system. Clarify which portions of these valves (depicted below) have pressure boundary functions, and should be in-scope for license renewal and subject to an AMR.

- a. LR-M-207 Sheet 1- Actuator for BS-2911, location G-3.
- b. LR-M-207 Sheet 2- Actuator for valve SW-1-401G, location F-7.
- c. LR-M-207 Sheet 2- Actuator for strainer Z-104A, location G-6.
- d. LR-M-207 Sheet 3- Actuator for valve SW-12A, location E-9.
- e. LR-M-207 Sheet 3- Actuator for valve TCV-12B, location E-7.
- f. LR-M-207 Sheet 3- Actuator for valve TCV-12C, location E-7.
- g. LR-M-207 Sheet 3- Actuator for valve SW-12D, location E-6.

NMC Response:

For all of the above identified components, the pressure boundary portion (valve body or strainer body) was already considered to be in-scope and is being age-managed as noted in the applicable line items of Table 3.3.2-5. These actuators were originally shown to be out-of-scope based on their current licensing basis (CLB) functions. It was determined that the actuators would not affect the pressure boundary function of these components. Additional details for each item are included below.

a.) BS-2911 and BS-2912 are Zurn strainers on the main SW discharge header. Originally, these motor operators were considered to be out-of-scope based on PBNP Q-list information. Should this change in the future to be in-scope (which is currently being evaluated), no aging management would be required for the motor operators since these are active components. The bodies of these strainers were originally included in-scope, and are represented in Table 3.3.2-5 by the "Filters/Strainers" Component Type, which have both a "Pressure Boundary" and a "Provide Filtration" component intended function.

b. and c.) These two components are associated with the non-SR Zurn strainer that supplies non-essential SW to the U1 Turbine Hall loads. These components were shown in-scope due to 10 CFR 54.4(a)(2) because of their location in the Auxiliary Feedwater pump room (potential to affect SR equipment in this room via leakage, spray or flooding). The only LR intended function therefore is pressure boundary, which is addressed in Table 3.3.2-5 under the "Filters/Strainers" and "Valve Bodies" Component

Types. The actuators have no affect on the pressure boundary, and are therefore out-of-scope and not subject to an AMR.

d. through g.) These four components are flow control valves that are used to control temperature on the Component Cooling Water HXs. All of these actuators are fail-open actuators, and were determined not to have the potential to affect the pressure boundary of the valve body. Even if the actuators were considered in-scope, they would be active components and no aging management would be required. The pressure boundary portion (valve bodies) for all four of these valves are already in-scope, and are addressed in the "Valve Bodies" Component Type in Table 3.3.2-5.

NRC Question RAI 2.3.3.5-3

The PBNP UFSAR Section 9.6.2 states that the SW system, serving both units, supplies cooling water to equipment in the steam plant, to the containment ventilation coolers and to reactor auxiliary systems. Nonessential services in each unit receive water from their respective header (North or South). License renewal drawing LR-M-207 Sheet 2 shows equipment around strainer Z-104A as in-scope for license renewal. License renewal application Section 2.3.3.5 states portions of the SW system contain components subject to an AMR extend from pump bays to the Circulating Water discharge, including connections to the suction of the Auxiliary Feedwater pumps, or the Fire Protection system, including pumps, heat exchangers, strainers, piping and valves. The transition location from out-of-scope to in-scope is not clearly marked for the following two locations:

- a. LR-M-207 Sheet 2, 3" - JB-1, location F-6
- b. LR-M-207 Sheet 2, 6" - JB-1, location F-7

Provide additional information to clarify the exact locations of these two transitions and which sections are in-scope and which are out-of-scope for license renewal.

NMC Response:

The piping sections identified above are associated with the non-SR Zurn strainer that supplies non-essential SW to the Unit 1 Turbine Hall loads. These piping sections were shown in-scope due to 10 CFR 54.4(a)(2) because of their location in the Auxiliary Feedwater pump room and their potential to affect SR equipment in this room via leakage, spray or flooding (see LRA Table 2.1.2.1-1, p. 2-27, second line item from bottom). Although difficult to show on a drawing, the in-scope portions of these non-SR piping sections were determined during plant walkdowns and transitions are shown at the points where the piping exited the room. Therefore, the scoping boundary may appear in the middle of a piping run and not at an isolation valve. The scoping depiction on the drawing is correct as shown.

See similar arrangement on LR-M-2207, Sheet 1 for Z-104B. This drawing more clearly indicates Control Building (CB) to Turbine Building (TB) boundary, where the piping would exit the room, and the transition from in-scope to out-of-scope is made.

NRC Question RAI 2.3.3.5-4:

The PBNP UFSAR Section 9.6.1 states that the SW system shall provide sufficient flow to the spent fuel pool heat exchangers to provide adequate heat removal of spent fuel decay heat. On license renewal drawing LR-M-207 Sheet 3, the piping downstream of SW-750 valve, at location C-7, the marking is not legible as to whether this piping is in-scope or out-of-scope. Provide additional information for this section of piping to clearly show which sections are in-scope and which are out-of-scope for license renewal.

NMC Response:

The piping components downstream of SW-750 are a pipe stub and cap. SW-750 is a normally closed valve, and the downstream pipe stub and cap are not in scope, as they have no license renewal intended function. This configuration is similar to many other normally closed vent or drain valves shown on this drawing in the immediate vicinity of SW-750.

NRC Question RAI 2.3.3.5-5

The PBNP UFSAR Section 9.6 states that return from the SW system is directed to the return line of the Circulating Water system. License renewal drawing LR-M-207 Sheet 1 shows SW system piping 20"-JB-2 returning to the Circulating Water system as in-scope for license renewal. License renewal application Section 2.3.3.5 states much of the SW return header is not safety related, but was included in-scope up to manual isolation valves, per 10 CFR 54.4(a)(2) Criterion 2. The transition location from in-scope (Service Water) to out-of-scope (Circulating Water) is not clearly marked at the following two locations:

- a. LR-M-212 Sheet 1, 20"-JB-2, location F-8.
- b. LR-M-2212, 20"-JB-2, location A-7.

Provide additional information to clarify the exact locations of these two transitions to clearly show which sections are in-scope and which are out-of-scope for license renewal.

NMC Response:

This was a high-lighting error on license renewal drawings LR-M-212, Sheet 1, and LR-M-2212. This was correctly shown on LR-M-207, Sheet 1, but this transition was not correctly identified on LR-M-212, Sheet 1, and LR-M-2212. The SW return header is

in-scope up to the circulating water return header. This transition is not at a valve, since the CW header is buried. The statement regarding "including non-SR portions of the SW return header up to isolation valves" was intended for above-ground piping components where there could be leakage, spray, or flooding effects. License renewal drawings LR-M-212, Sheet 1, and LR-M-2212 were revised and the errors are being tracked in the corrective action program.

The circulating water return header is out-of-scope due to the large size difference between it and SW return header (96" dia. vs. 20" dia., approximately 23 times more flow area) and that there is no credible age related failure of the circulating water return header that could affect the SW system.

2.3.3.7 Heating Steam System RAIs

NRC Question RAI 2.3.3.7-1:

As described in the LRA, the Heating Steam system does not perform any SR functions. However, certain portions of the Heating Steam system are in-scope for License Renewal in accordance with 10 CFR 54.4(a)(2). Portions of the non-safety-related Heating Steam system in the PAB have the potential to affect the function of SR equipment.

License renewal drawing LR-M-214 Sheet 1 depicts heat exchangers HX-97A, HX-97B, HX-86A, HX-86B, HX-35A, HX-35B, 1HX-77A and 1HX-77B as within the scope of license renewal. However, Table 2.3.3-7 does not indicate that Heating Steam system heat exchangers are components requiring an AMR. If the Heating Steam system heat exchangers are within the scope of license renewal as shown on the license renewal drawings, provide additional information or explain the reason for not including these heat exchangers in Table 2.3.3-7 and/or in Table 3.3.2-15.

NMC Response:

All of these Heating Steam heat exchangers are simple industrial area heaters, which consist of a fan blowing across an open coil. These components are in-scope and subject to aging management, and are represented under the "Heaters/Coolers" Component Type in Table 2.3.3-7 and Table 3.3.2-15.

2.3.3.11 Treated Water System RAIs

NRC Question RAI 2.3.3.11-1

The PBNP LRA Section 2.3.3.11 states the shear gate valves in the G01 and G02 rooms' oily sumps are within scope. In addition, the PBNP LRA states these are NSR SSC whose failure has an affect on the function of SR equipment and are therefore within scope. The PBNP LRA drawing LR-M-223, Sheet 3, at location F-2 indicates

STP-15 and 14 are in the G02 room and are within scope. The shear gate valves for Room G01 could not be located on the license renewal drawings. Identify and/or provide additional information concerning the location of the shear gate valves associated with Room G01 that are called out in the PBNP LRA as within scope and subject to AMR in accordance with 10 CFR 54.21(a)(1).

NMC Response:

There is a plant drawing error on the referenced drawing, where G02 is referenced next to each of these valves. In reality, STP-14 is in the G01 room and STP-15 is in the G02 room. The plant drawing has been updated to correct this error. Note that both valves are in-scope as shown on the drawing.

NRC Question RAI 2.3.3.11-2

The PBNP LRA states all non-safety-related systems, structures, and components whose failure could prevent satisfactory accomplishment of any of the functions identified within 10 CFR 54.4(a)(1) (i), (ii), or (iii) shall be considered within scope of the LRA. Inconsistencies within the waste disposal system license renewal drawings were identified as follows: Piping segments identified on PBNP LRA drawing LR-PBM-231, Sheet 2, at locations 8-3, D-4, and B-9; drawing LR-M-223, Sheet 3, at locations E-8 and H-8; and drawing LR-PBM-231, Sheet 1, at location B-3 are designated to be within scope; however, the basis for these determinations is not explained. If these piping segments can adversely impact the function of safety-related SSCs, identify these safety-related SSCs that could be impacted by these piping segments, and provide additional information and the drawing LR-PBM-231, Sheet 2, to allow verification that they have been properly identified to be within the scope of license renewal and subject to AMR in accordance with 10 CFR 54.21(a)(1).

NMC Response:

The PBNP 10 CFR 54.4(a)(2) license renewal application preparation process included doing plant walkdowns to identify non-SR components that could potentially affect SR components. This is discussed in LRA Section 2.1.2.1.2. Table 2.1.2.1-1 in the LRA displays the results of the walkdowns conducted and provides a brief description of the non-SR SSCs that were added to the scope of License Renewal. Although difficult to show on a drawing, the in-scope portions of these non-SR piping sections were determined during plant walkdowns and transitions are shown at the points where the piping exited the room. Therefore, the scoping boundary may appear in the middle of a piping run and not at an isolation valve.

For LRA Drawing LR-PBM-231 Sheet 2, the three instances identified above are all represented in Table 2.1.2.1-1, p. 2-28, in the third line item from the bottom. The Safety Related (SR) equipment that was potentially affected includes the Containment

Spray pumps, the Spent Fuel Pool pumps, and other SR equipment near pipeways #2 and #3, and near the Charging Pump cubicles.

For LRA Drawing LR-M-223 Sheet 3, the two instances identified above are both represented in Table 2.1.2.1-1, p. 2-27, in the first line item. The SR equipment that was potentially affected includes the Safety Injection pumps and the Component Cooling Water pumps.

For LRA Drawing LR-PBM-231 Sheet 1, the one instance identified above is represented in Table 2.1.2.1-1, p. 2-27, in the third line item from the top. The SR equipment that was potentially affected includes the Safety Injection pumps, the Containment Spray pumps, the Component Cooling Water pumps, and other SR equipment near the Charging Pump cubicles.

2.3.3.12 Circulating Water System RAIs

NRC Question RAI 2.3.3.12-1

The PBNP LRA Section 2.3.3.12 states that portions of the Circulating Water system are considered to be in-scope per 10 CFR 54.4(a)(2) Criterion 2 due to the potential for flooding or spray to affect the function of the safety related Service Water (SW) pumps. The Criterion 2 scoping results for portions of the Circulating Water system that are in-scope for license renewal are identified on drawing LR-PBM-232 at location D5. This drawing indicates that the chlorination piping to the SW pump pits to the suction of Circulating Pumps 2P-30A and 30B are in-scope; however, the same line to Circulating Pumps 1P-30A and 30B are shown as out-of-scope. Provide the basis for not considering chlorination piping between isolation valves CD-46 and 47 to the suction of Circulating Pumps 1P-30A and 30B in-scope for license renewal.

NMC Response:

Based on plant walkdown the physical location of the chlorination system with relation to the Circulating Water pumps, the Unit 1 chlorination piping does not cross the safety-related SW pump room as the Unit 2 chlorination lines do. A failure of the Unit 2 chlorination lines has the potential to affect the safety-related SW pumps via leakage or spray, and therefore these lines are in-scope. Unit 1 chlorination lines do not have the potential to affect any SR equipment, and therefore are out-of-scope.

NRC Question RAI 2.3.3.12-2

The PBNP LRA Section 2.3.3.12 states that portions of the Circulating Water system are considered to be in-scope per 10 CFR 54.4(a)(2) Criterion 2 due to the potential for flooding or spray to affect the function of the SR Service Water (SW) pumps. Drawings LR-M-212, Sheet 1 and LR-M-2212 show the portions of the Circulating Water system that are in-scope for license renewal. The scoping review in the LRA state that the

pumps, discharge valves, expansion joints and associated piping within the CW pump house structure are in-scope; however, pressure taps (1PI3503 and 3504, and 1PI3503 and 3504) on the discharge of circulating water pumps 1-P30A and 30B and 2-P30A and 30B are not included in-scope. Provide additional information and technical justification for omitting the pressure taps (1PI3503 and 3504, and 1PI3503 and 3504) on the discharge of circulating water pumps 1-P30A and 30B and 2-P30A and 30B from the scope of license renewal.

NMC Response:

The Circulating Water pumps, piping, valves, and expansion joints are in-scope only for 10 CFR 54.4 (a)(2) flooding potential due to the very large volume of water that they move/carry. In the event of a failure of one of these components, that volume would exceed the draining capacity of the structure, which could thereby affect the SR pumps within the structure. The small bore pressure taps were not included in-scope as a failure of such a tap could not exceed the draining capacity of the structure, and would not affect the safety-related SW pumps. Therefore, the pressure taps are out-of-scope, as they do not meet the scoping criteria for License Renewal.