February 5, 2004

Mr. Joseph Solymossy
Site Vice-President
Prairie Island Nuclear Generating Plant
Nuclear Management Company, LLC
1717 Wakonade Drive East
Welch, MN 55089

SUBJECT: RESPONSE TO AN ADDITIONAL POST EXAMINATION COMMENT FROM SEPTEMBER 18, 2003 INITIAL LICENSE EXAMINATION

Dear Mr. Solymossy:

This letter is in response to your letter dated November 19, 2003, requesting additional review and deletion of question 14 from the Senior Reactor Operator initial licensing written examination administered on September 18, 2003. Our review and response to your previous post examination comments are documented in Operator Licensing Examination Report 50-282/03-301(DRS); 50-306/03-301(DRS). Through our review, we have determined that question 14 from the Senior Reactor Operator initial licensing written examination and the answer to that question, as given to the license candidates, was satisfactory and will not be deleted from the examination.

Enclosed is a detailed explanation of our reason for this decision. If you have any questions regarding our decision, please contact me at (630) 829-9631.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public

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Sincerely,

/RA/

Roger Lanksbury, Chief
Operator Licensing Branch
Division of Reactor Safety

Docket Nos. 50-282; 50-306
License Nos. DPR-42; DPR-60

Enclosure: Post Exam Comment and Resolution

cc w/encl: Craig G. Anderson, Senior Vice President, Group Operations
John Paul Cowan, Executive Vice President and Chief Nuclear Officer
Manager, Regulatory Affairs
Jonathan Rogoff, Esquire, Vice President, Counsel & Secretary
Nuclear Asset Manager
Tribal Council, Prairie Island Indian Community
Administrator, Goodhue County Courthouse
Commissioner, Minnesota Department
of Commerce
Manager, Environmental Protection Division
Office of the Attorney General of Minnesota

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Post Examination Comments and Resolution

Written Examination Question #14 on the Senior Reactor Operator (SRO) Examination:

Question 14 on the SRO examination reads:

The Engineered Safety Feature Actuation System (ESFAS) automatic logic for AFW [auxiliary feedwater] actuation is required to be OPERABLE in Modes 1,2, and 3. However, the auto-start from undervoltage (UV) on the associated 4KV buses is only required to be OPERABLE in MODES 1 and 2. Why?

A. In MODE 3, the thermal power is limited to decay heat only so the UV auto-start is not needed.

B. RCP UV trip is blocked below P-7 and this auto-start exists to promote NC when the RCPs trip.

C. This auto-start anticipates the loss of both MFW [main feedwater] pumps, which are not required in MODE 3.

D. The UV start is associated with the TDAFW pump, which is NOT required in MODE 3.

The correct answer stated in the examination answer key is C.

Licensee Comment:

In summary, the licensee's comment is that there is no correct answer to this question. This conclusion is partially based on the wording of the question. First, the licensee states that because the term "automatic logic for AFW actuation" is not a direct quote from the Technical Specification that it is ambiguous. Second, the licensee states that it is too difficult to determine what question is being asked. The licensee states that the reader cannot determine which of the following three questions was actually asked.

Why is the ESFAS automatic logic for AFW actuation required to be operable in MODES 1,2, and 3? Or,

Why is the auto start from UV on the associated 4KV buses only required to be operable in MODES 1 and 2? Or,

Why does the auto start from UV on the associated 4KV buses have different mode requirements from one or more of the other features listed under Function 6 (of Technical Specification Limiting Condition for Operation 3.3.2)?

Finally, the licensee specifically stated for each answer choice why it was not a correct answer. Specifically, the licensee asserts that the use of the word "required" in correct answer choice C implies a Technical Specification requirement and that MFW pumps are neither required in MODE 2 or MODE 3. The licensee stated that simply changing from one mode of operation that does not require MFW pumps to another mode of operation that does not require MFW

pumps is not a reason for the UV auto start to be operable in one mode and not another. This is the reason answer choice C is correct.

NRC Resolution:

The NRC concluded that the question and answer are correct as written.

First, to address the statement that the question was confusing, the examiners reviewed the list of questions asked by the candidates during the exam. Prior to the examination the applicants were briefed on the "Policies and Guidelines for Taking NRC Examinations" (NUREG-1021, Appendix E). Part B, item 7, of the "Policies" states "[if] you have any questions concerning the intent or initial conditions of a question, do *not* hesitate asking them before answering the question." The applicants could have resolved any confusion regarding the meaning of answer choice C's wording -- "not required in MODE 3" -- by asking the facility proctor. None of the applicants asked for any clarification regarding question #14 or any of its answer choices.

In addition, correct answer choice C does not state that the MFW pumps "are not required by *Technical Specifications* (TS) in MODE 3." The applicant, when evaluating answer choice C, should not have limited consideration of whether the MFW pumps were not required in MODE 3 to only TS requirements. In other words, the *exact* wording of answer choice C, and meaning of "not required in MODE 3," encompassed all TS and procedural requirements. Thus, answer choice C is not rendered meaningless and incorrect simply because MFW pumps are not required by TS in MODE 3.

The fact that the term "automatic logic for AFW actuation" is not a direct quote from the TS does not make it ambiguous as to its meaning. Technical Specification Table 3.3.2-1 is entitled "Engineered Safety Feature Actuation System Instrumentation." Function 6.a of Table 3.3.2-1, is Automatic Actuation Relay Logic, which is required to be operable in MODES 1,2, and 3.

The licensee also assumed that the question could be read any of three ways. The first, "why is the ESFAS automatic logic for AFW actuation required to be operable in MODES 1,2, and 3," is not a logical assumption based on the wording of the question. If this were the intent of the question, the second sentence would not have been included in the stem. Therefore, this is not considered to be a valid interpretation of this question. Similarly, the second of the licensee's interpretations, "Why is the auto start from UV on the associated 4KV buses only required to be operable in MODES 1 and 2" is also based on a partial reading of the question. The third, "Why does the auto start from UV on the associated 4KV buses have different mode requirements from one or more of the other features listed under Function 6," is not logical because the auto start from UV does not have different mode requirements from all of the other auto starts listed under Function 6. The auto start based on the trip of both main feedwater (MFW) pumps is also only applicable in MODES 1 and 2. The question is, why must the auto start from UV on the associated 4 KV buses be operable in MODES 1 and 2, but not in MODE 3.

Distractors A, B, and D do not answer why the auto start from UV on the associated 4KV buses must be operable in MODES 1 and 2, but not in MODE 3. Correct answer choice C, however, does correctly answer this question. Technical Specification Bases B 3.3.2, states on page B 3.3.2-28 and 29, that the basis for AFW Undervoltage start is that a loss of power on the buses that provide power to the MFW pumps provides indication of a pending loss of main feedwater

flow. In MODES 3, 4, and 5, the MFW pumps may be normally shut down, and thus neither the pump trip or bus undervoltage are indicative of a condition requiring automatic AFW initiation. The MFW pumps are not required, or needed, by Technical Specification in MODE 3. However, procedure 1C1.2, “Unit 1 Startup Procedure,” Revision 27, Step 5.10 directs the operators to start up the MFW system immediately after entering MODE 2, making the reactor critical, and raising power to between .5 and 1 percent. Therefore, the undervoltage start of the turbine driven AFW pump must be operable prior to the startup of the feedwater system. Similarly, facility operating procedure 1C1.3, “Unit 1 Shutdown,” in Step 5.4 *allows* transfer from MFW to AFW after entry into MODE 3. Consequently, although operation of MFW pumps is not required before entry to MODE 2, the MFW pumps are required by procedure while in MODE 2 and not required by procedure in MODE 3, albeit their operation is allowed in MODE 3.

Finally, the licensee asserted that the word “not” was not capitalized in correct answer choice C, but was capitalized in distractor D and that this distorted the meaning of the word “required” in both distractors. The capitalization of the word “not” is an attempt to make the word easier to read so that it is not missed by an applicant who is reading rapidly. The capitalization of a word is not meant, in any question, to apply any special meaning or connotation.