

From: Sikhindra Mitra
To: Stewart, Roger
Date: 5/16/03 3:38PM
Subject: Clarification of RAI response

Roger,

Following are the additional response items. Some of the items are already part of P, but reviewer added some more clarification items at the end.

SK

Q. 1. RNP Response to RAI B.3.9-2, page 432 of 504, first paragraph. The applicant stated that "...An impressed current cathodic protection system is credited with protecting the external surface of tank bottoms..." If the cathodic protection system is credited in terms of LRA, the applicant needs to demonstrate that the cathodic system components are qualified as nuclear graded material with stringent NRC requirements. The staff does not believe the cathodic protection systems in the nuclear plants are nuclear grade. The staff believes that the cathodic protection system will be beneficial in protecting buried piping but there is no NRC requirement for the cathodic system to be nuclear graded. Clarify whether the cathodic protection system in RNP is nuclear graded.

2. RNP Response to RAI B.3.12-4B, page 459. The applicant responded to Part B of the RAI question by referencing its response to RAI.B.3.10-10. However, upon examining the applicant's response to RAI B.3.10-10 (do you mean Response to RAI B.3.10-1), the staff is not clear regarding the identification of all buried pipes that are covered in the buried piping inspection program. Please identify all the buried pipes in the buried piping inspection program.

3. RNP Response to RAI B.3.8-1. Page 420. (A) clarify the last paragraph on page 420. The staff assumes that IC Turbine fuel oil storage tanks and EDG fuel oil storage tanks are covered in the buried piping surveillance program. (B) The staff assumes that the 4 pipe lines that the applicant provided on page 420 are a part of the fuel oil system that connects the fuel oil storage tanks to the diesel generators in the EDG and DSD systems (as shown on page 439, RNP Response to RAI B.3.10-1).

4. RNP Response to RAI B.3.8-5, page 425. Please spell out the following acronyms: AWG, HMWPE, CD (Durichlor).

5. RNP Response to RAI 3.1.2.1-3, pages 143 and 144. On top of page 144, the applicant states that loss of pre-load due to stress relaxation is not an aging effect, but on page 143, the applicant states that it uses EPRI guideline on bolting and torque program on bolts. The statements on pages 143 and 144 seem to be contradicting to each other. Clarify.

6. RNP Response to RAI 3.1.2.4.6-2 In the RAI, the staff asked whether the applicant will inspect the following steam generator components: steam generator feedwater nozzle thermal sleeves, secondary side manway and handhole covers, secondary side shell penetration nozzles, tube bundle wrappers, tubeplate and associated cladding, steam flow limiters, and lower head divider plates.

(A) The applicant referenced the One-time Inspection Program in LRA B.4.4. The steam generator related areas that the one-time inspection program covers are feedwater system, auxiliary feedwater system, and steam generator blowdown system. Confirm that this inspection will cover steam generator feedwater nozzle thermal sleeves.

(B) The applicant referenced item 32 in Table 3.1-1 which prescribes inservice inspection for steam generator upper and lower head, tubesheet, and primary nozzles and safe ends. Clarify if this inspection includes steam flow limiters inside of the steam nozzles or steam lines.

(C) Clarify whether the following components will be inspected: secondary side manway and handhole covers, secondary side shell penetration nozzles (other than feedwater or steam lines), tube bundle wrappers, and lower head divider plates.

7. RNP Response to RAI B.3.8-2 Part B., Page 422. (A) Spell out the acronym "SFPS" (B) the applicant stated that leak testing is not specified for the service water system because it has a high flow rate and moderate pressure. The staff is not clear the reason for not performing periodic leak testing unless any leak in the SWS piping can be detected readily. Clarify (C) the applicant stated that the fluid inventory in the DSD system is monitored periodically. Clarify how often the fluid inventory is monitored.

8. Generic question on buried pipes (Reference: RNP Response to RAI B.3.8-4, page 424.) Describe the coating (e.g., material used) on all the buried piping covered in the buried piping surveillance and inspection program

9 RNP Response to RAI B.3.9-4A. The applicant stated that it will perform walkdown inspection of the above ground tanks. Discuss how often a walkdown is performed.

10. RNP Response to RAI B.3.12-3, page 463, first paragraph, 5th line down. Should the "jacket water system" be "Jockey water system"?

11. RNP Response to RAI B.3.12-4. The applicant did not respond to Parts A, B, C of the RAI question satisfactorily. As for Part E, the applicant needs to specify the inspection frequency of the cathodic protection system.

12. RNP Response to RAI B.3.12-5. (A) The applicant discussed the potential catastrophic failure based on operating experience with leakage in the service water system (SWS). The staff is not clear whether the experience in SWS is applicable to the buried fuel oil piping because of different fluid medium and pressure conditions. The staff is not clear if a leak in the buried fuel oil piping will be detected readily as in the SWS. Clarify

(B) The applicant did not respond to Part B of the RAI question satisfactorily. The applicant need to show that the operators have been trained and that there are operating procedures and guidance to shutdown the plant safely should a leak or rupture occurred in any of the buried piping.

(C) In its response to Part C of the RAI question, the applicant did not assess the potential catastrophic failure of the fuel oil system nor SWS covered under LRA B.3.12. The applicant responded that failure of the SWS is extremely unlikely given the plant operating history. The thrust of the question is not whether the catastrophic failure has a low probability of occurrence, but rather for a given catastrophic pipe failure, what are the operator actions to mitigate the impact of the pipe failure to assure a safe shutdown. The applicant needs to discuss operating

procedures and instructions to mitigate a catastrophic failure of the buried piping. The applicant also need to discuss the consequence of pipe failure in the SWS and fuel oil system.

CC: Clements, Talmage; Kozyra, Jan

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