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SUBJECT: Application for amend to license DPR-18, submitting changes to TS instrumentation requirements & conversion to improved TS.

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ROBERT C. MECREDDY
Vice President
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November 20, 1995

U.S. Nuclear Regulatory Commission
Document Control Desk
Attn: Allen R. Johnson
Project Directorate I-3
Washington, D.C. 20555

Subject: Changes to Technical Specification Instrumentation Requirements
Conversion to Improved Technical Specifications (TAC No. M93579)
Rochester Gas & Electric Corporation
R.E. Ginna Nuclear Power Plant
Docket No. 50-244

Reference: (a) Letter from R.C. Mecreddy, RG&E, to A.R. Johnson, NRC, Subject: *Changes to Technical Specification Instrumentation Requirements, Conversion to Improved Technical Specifications*, dated August 31, 1995.

Dear Mr. Johnson,

By Reference (a), RG&E proposed to implement WCAP-10271 with respect to the Reactor Trip System (RTS) and Engineered Safety Features Actuation System (ESFAS). Based on NRC review of this submittal, several questions and comments were generated. As such, enclosed please find a "redlined" version of those pages from Reference (a) which require changes. All other pages of this submittal are not affected. Please contact Mark Flaherty at (716) 724-8512 if you have any further questions.

Very truly yours,

Robert C. Mecreddy

Subscribed and sworn to before me
on this 20th day of November 1995.

Notary Public

MARIE C. VILLENEUVE
Notary Public, State of New York
Monroe County
Commission Expires October 31, 1996

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Attachments

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Ginna Senior Resident Inspector

Attachment I Changes

13. Allow an inoperable ESFAS channel to be bypassed for up to 4 hours to perform surveillance testing of the remaining channels when no bypass capability was previously allowed:
- a. Safety Injection - High Containment Pressure
 - b. Safety Injection - Steam Line Pressure Low
 - c. Safety Injection - Pressurizer Pressure Low
 - d. Containment Spray - High High Containment Pressure
 - e. Auxiliary Feedwater - Steam Generator Level - Low Low
 - f. Auxiliary Feedwater - Loss of 4kV Voltage
 - ~~g. Auxiliary Feedwater - Trip of Both MPW Pumps~~
 - h. Steam Line Isolation - High High Steam Flow with Safety Injection (SI)
 - i. Steam Line Isolation - High Steam Flow with Low T_{avg} and SI
 - j. Steam Line Isolation - Containment Pressure
 - k. Feedwater Line Isolation - Steam Generator Level - High

This change affects CTS Table 3.5-2, Action Statement 9 which will now apply to all of the above ESFAS functions with the exception of Safety Injection - High Containment Pressure and Containment Spray - High High Containment Pressure which use Action Statement 11.

14. Revise the Applicability for the Safety Injection - High Containment Pressure function from "above 350°F" to "above Cold Shutdown." As such, Action Statement 11 now applies to this function with an inoperable channel.
15. Revise the Completion Time from 1 hour to 6 hours for placing an inoperable channel in trip for the Loss of Voltage - 480 V Safeguards Bus and Degraded Voltage - 480 V Safeguards Bus functions listed in CTS Table 3.5-1. Also, allow the inoperable channel to be bypassed for surveillance testing of the remaining channels for up to ~~24~~ 48 hours. The allowance to energize the affected bus with a diesel generator if the existing Completion Times are not met was also deleted.
16. Revise the testing of the following ESFAS functions from monthly to quarterly:
- a. Safety Injection - High Containment Pressure
 - b. Safety Injection - Steam Line Pressure Low
 - c. Safety Injection - Pressurizer Pressure Low
 - d. Containment Spray - High High Containment Pressure
 - e. Auxiliary Feedwater - Steam Generator Level - Low Low
 - f. Steam Line Isolation - High High Steam Flow with Safety Injection (SI)
 - g. Steam Line Isolation - High Steam Flow with Low T_{avg} and SI
 - h. Steam Line Isolation - High Containment Pressure
 - i. Feedwater Line Isolation - High Steam Generator Level

This affects CTS Table 4.1-1, Functional Units #7, 11, 17, 25, 26, 32, and 33.

17. Surveillances were added for the following ESFAS functions where surveillances previously did not exist in the CTS consistent with WCAP-10271:
 - a. Safety Injection - Manual Initiation
 - b. Containment Spray - Manual Initiation
 - c. Auxiliary Feedwater - Manual Initiation
 - d. Containment Isolation - Manual Initiation
 - e. Containment Ventilation Isolation - Manual Initiation
 - f. Steam Line Isolation - Manual Initiation
 - g. Feedwater Line Isolation - Manual Initiation
 - h. Auxiliary Feedwater - Loss of 4 kV Voltage

This affects CTS ~~Table 4.1-1, Functional Unit #8 and~~ Table 4.1-2, Functional Unit #9.

18. Revise the Completion Time for restoring an inoperable Auxiliary Feedwater - Trip of Both MFW Pumps channel from 1 hour to 48 hours.

B. JUSTIFICATION OF CHANGES

This section provides the justification for all changes described in Section A above. These justifications are mainly based on the conditions which the NRC required licensees to address in order to implement WCAP-10271. These conditions are documented in the NRC Safety Evaluation Reports and summarized in the NRC approved versions of WCAP-10271 including its supplements.

1. Changes #1 through #10 as discussed in Section A are consistent with the technical specifications provided in WCAP-10271, Supplement 1. These ten changes include both those changes which are justified within the WCAP (and therefore approved by the NRC) and those changes to the CTS which provide consistency with the standard technical specifications provided in the WCAP. To implement the changes specifically justified by the WCAP (Changes #1, 2, 3, and 6), the NRC requires licensees to address five issues as documented within the letter from the Westinghouse Owner's Group to the NRC dated September 3, 1985 (Reference 5). These conditions, and their resolution, are provided below. The remaining changes which provide consistency with standard technical specifications (i.e., Changes #4, 5, 7, 8, 9, and 10) are discussed separately.

- a. Condition 1 - The RTS functions which are being changed from monthly ~~(or bi-weekly)~~ to quarterly test frequencies must be tested on a STAGGERED TEST basis. For example, with a four channel RTS function, one channel must be tested every three weeks such that all channels are tested each quarter. One channel of a three channel RTS function must be tested every month while one channel of a two channel RTS function must be tested every 6 weeks.

Response - This condition was withdrawn by the NRC by Reference 6 and is no longer applicable.

- b. Condition 2 - The licensee must have procedures in place to require a common mode evaluation of failures in the RTS channels which are to be tested on a quarterly basis. That is, since channels may be tested on a staggered basis, if the channel being tested fails due to a potential common mode failure, the remaining channels should be tested or otherwise confirmed with respect to their continued operability.

Response - These procedures will be developed prior to the implementation of the improved technical specifications for Ginna Station currently scheduled for February 1996. These procedures will follow the general guidance provided in Reference 5 as to when this common cause failure evaluation is required (e.g., instrument drift issues do not require this assessment).

- c. Condition 3 - Routine testing of the RTS analog channels in the bypass condition by use of temporary jumpers or by lifting leads is unacceptable due to the potential for human errors. Therefore, plants without installed bypass capability cannot use this option

Response - Ginna Station currently does not have installed bypass capability such that routinely bypassing channels in order to perform surveillance testing of the remaining channels is not allowed. As such, RG&E has selected the Required Actions which only allow the inoperable channel to be bypassed for testing of the remaining channels. The Required Actions which allow bypassing a channel provided that the inoperable channel was placed in the tripped condition was not selected. Therefore, routine use of bypass for testing purposes is not allowed in the proposed technical specifications.

- 6: Change #10 of Section A deletes the shift channel check of the Turbine First Stage Pressure function and increases the channel test surveillance interval from monthly to refueling. This function is only related to P-7 which is used to block certain reactor trips during startup and low power operations. The standard technical specifications included in WCAP-10271, Supplement 1 do not have a shift channel check requirement for any permissives since these are not directly related to the protecting the reactor core. In addition, the time frame in which P-7 is actually used to block certain reactor trips is expected to be very small such that the channel check is not required for safety reasons. The WCAP proposed to delete P-7 since it is derived from P-13 and P-10 interlocks and has no analog channels at a standard Westinghouse plant. Ginna Station does not have a P-13 such that this justification is not applicable. However, the WCAP specifically evaluated the increased STI for all permissives (including P-13 which the Turbine First Stage Pressure function acts as) and found the change in STI from monthly to ~~quarterly~~ ~~refueling~~ to be acceptable. Since RG&E provided justification to meet the conditions for implementing WCAP-10271, Supplement 1 in item #1 above, this less restrictive change is considered acceptable.
7. Changes #11 through #18 as discussed in Section A are consistent with the technical specifications provided in WCAP-10271, Supplement 2, Revision 1. These eight changes include both those changes which are justified within this WCAP (and therefore approved by the NRC) and those changes to the CTS which provide consistency with the standard technical specifications provided in the WCAP. To implement the changes justified by the WCAP (Changes #12, 13, 15, and 16), the NRC Safety Evaluation Report (References 6 and 7) requires licensees to address two issues. These conditions, and their resolution, are provided below. The remaining changes which provide consistency with the standard technical specifications (Changes #11, 14, 17, and 18) are discussed separately.
- a. Condition 1 - The licensee must confirm the applicability of the generic analysis to the implementing plant.

Response - The design assumptions and modeling assumptions presented in Sections 2 and 3 of WCAP-10271, Supplement 2, Revision 1 were reviewed with respect to the Ginna Station ESFAS design and operational practices. The WCAP information is equivalent or more bounding with respect to Ginna Station except as follows:



11. Change #12 of Section A revises the Completion Time for placing an inoperable Steam Line Isolation - High Containment Pressure channel in trip from 1 hour to 6 hours. However, the standard technical specifications included in WCAP-10271, Supplement 2, do not require placing the channel in trip. Instead, the inoperable channel may be placed in bypass provided that the minimum number of required channels is OPERABLE. The standard technical specifications identify a 2/4 logic for this function while Ginna Station utilizes 2/3 logic. The WCAP did consider both 2/4 and 2/3 logic such that the WCAP is considered bounding with respect to the Ginna Station design. However, RG&E considers it prudent to place the inoperable channel in trip and rely on 1/2 logic versus bypassing the affected channel and relying on 2/2 logic. The Completion Time of 6 hours to place the channel in trip is consistent with other ESFAS functions. Therefore, RG&E considers this less restrictive change acceptable.

12. Change #18 of Section A revises the ~~Completion Time~~action for placing an inoperable channel of the Auxiliary Feedwater - Loss of 4kV Voltage function in trip from ~~within~~ 1 hour to ~~requiring the channel to be restored within~~ 48 hours. This Auxiliary Feedwater actuation function is secondary to the Steam Generator Low Low and Safety Injection actuation signals and is not specifically credited in the accident analyses. As such, if this function were to fail, the Steam Generator Low Low actuation function would eventually start the turbine driven pump within the time limits assumed in the accident analysis. Also, this ~~action and~~ Completion Time is consistent with the initial technical specification assumptions used in WCAP-10271. Therefore, this less restrictive change is considered acceptable.

In addition to the justifications provided above, RG&E has evaluated the differences between the proposed technical specifications contained in Attachment II and the standard technical specifications included in WCAP-10271. This evaluation is presented in Attachment V. As shown in this attachment, the proposed technical specifications are equivalent to the standard technical specifications except as follows:

- a. In those cases where technical differences exist, the reason for the differences is due to less restrictive CTS requirements and not due to other changes being proposed. The only exception to this is with respect to the Containment Spray - High High Containment Pressure and Steam Line Isolation - High Containment Pressure functions which are discussed in items #10 and #11 above, respectively.

- b. In those cases where both the CTS and proposed new technical specifications are less restrictive, the issue is either addressed in the conversion to improved standard technical specifications (Ref. 8), discussed above, or due to inconsequential design differences (e.g., Ginna Station does not organize containment isolation into Phase A and Phase B functions).

C. SIGNIFICANT HAZARDS CONSIDERATION EVALUATION

The proposed changes to the Ginna Station Technical Specifications as identified in Section A and justified in Section B have been evaluated with respect to 10 CFR 50.92(c) and shown to not involve a significant hazards consideration as described below. This evaluation is organized into 3 sections related to: (1) changes specifically evaluated by WCAP-10271 and its associated supplements, (2) other less restrictive changes which are being proposed, and (3) more restrictive changes which are being proposed.

C.1 Evaluation of WCAP-10271 Justified Changes

The following less restrictive changes specifically evaluated by WCAP-10271 and its associated supplements are being proposed:

- a. Increase the surveillance interval for RTS analog channel operational tests from monthly ~~(or bi-weekly)~~ to quarterly.
- b. Increase the Completion Time to place an inoperable RTS analog channel in trip from 1 hour to 6 hours.
- c. Allow an inoperable RTS analog channel to be bypassed for up to 4 hours to perform surveillance testing of the remaining channels.
- d. Increase the surveillance interval for ESFAS analog channel operational tests from monthly to quarterly.
- e. Increase the Completion Time to place an inoperable ESFAS analog channel in trip from 1 hour to 6 hours.
- f. Allow an inoperable ESFAS analog channel to be bypassed for up to 4 hours to perform surveillance testing of the remaining channels (~~note—the 480V Bus Loss of Voltage and Degraded Voltage functions are only allowed to be bypassed for 2 hours~~).

These proposed changes do not involve a significant hazards consideration as discussed below:

- c. creating the potential for more effective monitoring and control of plant operations by operating crews due to less frequent instrumentation testing distractions.

Based upon the above, it has been determined that the proposed less restrictive changes to the Ginna Station Technical Specifications do not involve a significant increase in the probability or consequences of an accident previously evaluated, does not create the possibility of a new or different kind of accident previously evaluated, and does not involve a significant reduction in a margin of safety. Therefore, it is concluded that the proposed changes meet the requirements of 10 CFR 50.92(c) and do not involve a significant hazards consideration.

C.2 Evaluation of Other Less Restrictive Changes

The following less restrictive changes, which are consistent with WCAP-10271 and its associated supplements but not specifically part of the original instrumentation program, are being proposed:

- a. Separate the CTS requirement of "Automatic Trip Logic Including Reactor Trip Breakers" into two separate requirements with additional time allowed to restore inoperable trains before requiring a plant shutdown.
- b. Revise the testing frequency of the RTS Turbine Trip function from monthly to once prior to startup if it has not been performed within the last 31 days.
- c. Define "prior to startup" to be "within 31 days prior to startup" versus "within the previous week" for testing of the following RTS functions: Nuclear Flux Power Range - Low Setting, Nuclear Flux Intermediate Range, and Nuclear Flux Source Range.
- d. Revise the testing requirements of the Turbine First Stage Pressure to remove the shift channel check and increase the testing interval from monthly to refueling.
- e. Increase the Completion Time to place an inoperable Containment Spray - Containment Pressure High High and Steam Line Isolation - High Containment Pressure channel in trip from 1 hour to 6 hours and allow the inoperable channel to be bypassed for up to 4 hours for surveillance testing of the remaining channels.
- f. ~~Increase the Completion Time~~ ~~Revise the action~~ to place an inoperable Auxiliary Feedwater - Trip of Both MFW Pumps channel in trip from ~~within~~ 1 hour to ~~restore the channel within~~ 48 hours.

These proposed changes do not involve a significant hazards consideration as discussed

below:

1. Operation of Ginna Station in accordance with the proposed changes does not involve a significant increase in the probability or consequences of an accident previously evaluated. The proposed changes are all consistent with the plant design and operating practices assumed in the evaluations provided in WCAP-10271 and standard technical specifications. These changes, in combination with the changes discussed in Section C.1 above, result in only a minor increase in core damage probability due to the reduced testing requirements. The proposed changes also do not increase the severity or consequences of an accident previously evaluated. While implementation of the proposed changes affects the probability of failure of the RTS and ESFAS, it does not alter the manner in which protection is provided nor the manner in which limiting criteria are established. Therefore, these changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.
2. Operation of Ginna Station in accordance with the proposed changes does not create the possibility of a new or different kind of accident from any accident previously evaluated. The proposed changes do not involve a physical alteration of the plant (i.e., no new or different type of equipment will be installed) nor alter the function of the RTS and ESFAS. The changes only provide for additional time to restore inoperable equipment and increase the surveillance testing interval for certain instrumentation. Thus, these changes do not create the possibility of a new or different kind of accident from any previously evaluated.
3. Operation of Ginna Station in accordance with the proposed changes does not involve a significant reduction in a margin of safety. The proposed changes do not alter the manner in which safety limits, limiting safety system setpoints, or limiting conditions for operation are determined. Instead, the changes are expected to result in an overall improvement to safety by reducing inadvertent reactor trips and allow time to perform appropriate repairs to inoperable equipment. Therefore, these changes do not involve a significant reduction in a margin of safety.

Based upon the above, it has been determined that the proposed less restrictive changes to the Ginna Station Technical Specifications do not involve a significant increase in the probability or consequences of an accident previously evaluated, does not create the possibility of a new or different kind of accident previously evaluated, and does not involve a significant reduction in a margin of safety. Therefore, it is concluded that the proposed changes meet the requirements of 10 CFR 50.92(c) and do not involve a significant hazards consideration.

Attachment II Changes