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SUBJECT: Forwards application for Amends 86 & 36 to Licenses NPF-14 & NPF-22, respectively, revising Tech Specs to reduce number of required ddiesel generator starts when plant in action statement, per Generic Ltr 84-15.

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AUG 29 1986

Director of Nuclear Reactor Regulation
Attention: Ms. E. Adensam, Project Director
BWR Project Directorate No. 3
Division of BWR Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUSQUEHANNA STEAM ELECTRIC STATION
REVISION TO PROPOSED AMENDMENTS 83
AND 36 TO NPF-14 AND NPF-22
DIESEL GENERATOR RELIABILITY
TECHNICAL SPECIFICATION CHANGES
PLA-2710 FILE R41-2,S024,A17-2

Docket Nos. 50-387
and 50-388

References: PLA-2633 dated April 23, 1986
PLA-2684 dated July 17, 1986

Dear Ms. Adensam:

The referenced letters requested changes to Technical Specification 3.8.1.1 which would reduce the number of required diesel generator starts when in an action statement or during the 18 month surveillance tests. Comments from your Staff necessitated revisions to those proposed changes and we are once again modifying the technical specification in response to your Staff's concerns. All proposed changes are provided in this letter which is intended to supersede our previous submittals.

These proposed changes are consistent with NRC Generic Letter 84-15 and do not reduce the ability of the diesel generators to mitigate the consequences of an accident but are intended to increase the diesel's reliability by reduced testing. FSAR Sections 9.5.4.8, 8.3.1.4.7 and SER Section 8.3.1 have been reviewed and there is no conflict between those sections and the proposed changes. A description of each change, including a justification is provided below.

Footnote #

This footnote is being deleted since all work associated with tying in the new "E" diesel generator has been completed and therefore this footnote is no longer required. This proposed change is an administrative change.

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Proposed 3.8.1.1 Action Statement a.

This action statement covers the responses when declaring one offsite circuit inoperable. Making this a separate action statement from the existing action statement is an administrative change. There are also three technical items included within this proposed action statement.

The performance of Surveillance Requirement 4.8.1.1.2.a.4, demonstration of diesel operability, will be done:

1) Within 24 hours of declaring the offsite circuit inoperable,

2) The diesel will not be started if successfully tested in the previous 24 hours.

3) If Surveillance Requirement 4.8.1.1.2.a.4 was not performed in the previous 24 hours it will be performed once on each remaining diesel for this action statement within 24 hours.

Basis:

The reason to perform diesel operability tests following the loss of one offsite circuit is to ensure that the backup power source will be available and capable of starting as designed. The present action statement requires verification of diesel starting within four hours and then once every eight hours thereafter. Demonstration of diesel starting capability within four hours of a loss of an offsite power source and subsequent testing every eight hours thereafter is both excessive and unwarranted. The diesel manufacturer, Cooper Energy Services, agrees that starting them every eight hours does not demonstrate reliability and does not recommend starting the diesels this frequently. Starting the diesels once in 24 hours without retesting is consistent with Generic Letter 84-15.

If the diesel has been tested in the previous 24 hours there is adequate assurance that the diesel will start. The diesel reliability is not suspect due to a loss of an offsite circuit.

Proposed 3.8.1.1 Action Statement b.

This action statement covers the appropriate responses when declaring one emergency diesel generator inoperable. Making this a separate action statement for an inoperable diesel generator is merely an administrative change. There are also two technical items included within this proposed action statement:

The performance of Surveillance Requirement 4.8.1.1.2.a.4, demonstration of diesel operability, will be done:

1) If the remaining operable diesels must be started they will be started within 24 hours.

2) If the diesels are to be started within 24 hours they will only be started once to demonstrate operability.

Basis:

The reason to perform a diesel operability test following the loss of another diesel, is to ensure that the remaining diesel will be available and capable of starting as designed. Specifically, an operability test of the remaining diesel provides assurance that the remaining operable diesels are not subject to the same failure (i.e., common mode failure). Rather than relying on previous surveillance testing, operability testing within 24 hours is proposed consistent with Generic Letter 84-15.

As discussed in Item 3.8.1.1.a above, repetitive operability testing every eight hours following the initial confirmation of diesel availability is unwarranted and counterproductive. To be consistent with the philosophy of reducing excessive testing and thereby enhancing diesel reliability, only one operability start is proposed as confirmation of the remaining diesels' availability.

Proposed 3.8.1.1 Action Statement c

This action statement covers the appropriate responses when declaring one offsite circuit and one diesel generator inoperable. In the existing Technical Specifications this is action statement b. The proposed action statement has two technical changes:

The performance of Surveillance Requirement 4.8.1.1.2.a.4, demonstration of diesel operability, will be done:

1) If the remaining operable diesels must be started they will be started within 8 hours.

2) If the diesels are to be started within 8 hours, they will only be started once to demonstrate operability.

The present requirement is to perform Surveillance Requirement 4.8.1.1.2.a.4 within three hours and at least once per 8 hours thereafter.

Basis:

The proposed changes are consistent with the changes to action statement b. These changes are also consistent with Generic Letter 84-15.

Proposed 3.8.1.1 Action Statement d

This action statement covers the verification to be performed when a diesel generator is inoperable. This statement currently refers back to ACTION a or b, this is changed to ACTION b or c. This change is needed since old ACTION a was split into ACTION a & b, and b is the applicable reference for the subject statement. Old ACTION b is now ACTION c, hence the change to b & c. This is not a technical change.

Proposed 3.8.1.1 Action Statement e

This action statement covers the appropriate responses when declaring both offsite circuits inoperable. The proposed action statement has one technical change and one clarification. The performance of Surveillance Requirement 4.8.1.1.2.a.4, demonstration of diesel operability, will be performed 8 hours after a loss of both offsite circuits. The present requirement is to perform Surveillance Requirement 4.8.1.1.2.a.4 within 4 hours.

Basis:

The proposed change is consistent with those made for action statements a, b, and c above. As previously noted, loss of an offsite circuit does not suggest that the diesels have become less reliable. This change is also consistent with Generic Letter 84-15.

Proposed 3.8.1.1 Action Statement f

The action statement covers the appropriate responses when two diesel generators are declared inoperable. The proposed action statement has one technical change.

The performance of Surveillance Requirement 4.8.1.1.1.a, verification of breaker alignment, will be performed within one hour after entering the action statement and at least once per 8 hours thereafter.

Basis:

The proposed change is consistent with action statements a, b & c above. This change is also consistent with Generic Letter 84-15.

4.8.1.1.2.d.3 Surveillance Requirement

This surveillance indicates generator voltage shall not exceed 4360 volts. The number "4360" is a typographical error which was made when NRC issued Amendment No. 36. The correct value is 4560. This is an administrative change.

Proposed 4.8.1.1.2.d.7 Surveillance Requirement

This surveillance requires a 24 hour load test to be performed and a hot restart within five minutes of this load test.

The proposed surveillance requirement deletes the restart of the engine within 5 minutes after the completion of the 24-hour test and deletes the asterisked note associated with this section. Additionally wording has been incorporated to indicate the 24 hour run will be performed with at least 1 unit in Operational Condition 4 or 5.

Basis:

This is essentially an administrative change in that the restart test is being deleted from the 24 hour load run section, however, the restart test will be required in the next test, Surveillance Requirement 4.8.1.1.2.d.6. The effect of this change is to allow the restart test to be performed within 5 minutes of completing a 1-hour 4000 KW run or within 5 minutes of reaching stable operating temperatures.

Proposed 4.8.1.1.2.d.8 Surveillance Requirement

This surveillance requirement is part of present 4.8.1.1.2.d.7 and describes the restart test of the diesel generator.

The proposed change has the same requirements as prescribed in the existing Technical Specification however, it removes it from the 24-hour load run test.

Basis:

The basis for this change is consistent with that of Surveillance Requirement 4.8.1.1.2.d.7.

4.8.1.1.2.d.11 (existing)

The requirement to verify the fuel transfer pump transfers fuel from each tank to the engine mounted day tank of each diesel generator has been deleted.

Basis:

Regulatory Guide 1.108 recommends this surveillance if the practice is part of normal operating procedures. At Susquehanna, this transferring is not part of normal operating procedures and should not be verified in the Technical Specifications. Fuel transfer from the fuel oil tank to the corresponding diesel generator day tank is tested every 31 days. There is no impact on safety since no credit is taken for this capability in any safety analyses.

Proposed 4.8.1.1.2.d.13 Surveillance Requirement

This surveillance requires verification that the listed diesel generator lockout features prevent diesel generator starting and/or operation only when required. The proposed surveillance is a rewrite of the existing surveillance which more accurately reflects how the lockout features are verified.

Basis:

This change is administrative.

Proposed Change 4.8.1.1.3 - Reports

This section requires all diesel failures, valid or non-valid, to be reported to the Commission. The proposed change revises the method for determining the number of failures in the last 100 valid tests from a per nuclear unit basis to a per diesel generator basis.

Basis:

Consistent with criteria established for Table 4.8.1.1.2-1 (See justification for that Table).

Proposed Change to Table 4.8.1.1.2-1

The subject table lists the frequency of diesel tests as a function of failures. The proposed change, changes the valid tests per nuclear unit basis to a per diesel generator basis.

Basis:

The current test frequency is determined on a per nuclear unit basis. This requires that all the diesel be tested even if one has been unreliable. This unnecessarily tests the reliable diesels more frequently than would normally be required. The change to a per diesel basis would demand that the less reliable diesels be tested to prove reliability. This change is consistent with Generic Letter 84-15.

The proposed changes do not:

(1) involve an increase in the probability or consequences of an accident previously evaluated. The proposed changes reduce test frequencies and modify loading requirements consistent with manufacturer's recommendations. These changes are expected to enhance diesel reliability by minimizing severe test conditions and required number of starts. In this regard there is no increase in the probability of an accident. The consequences of any previously evaluated accident

are not increased since the changes only involve diesel loadings and test frequencies. There are no physical modifications to the diesel generators as a result of these changes. Therefore the limiting accident is the failure of one diesel generator which has been evaluated in Section 8.3 of the Final Safety Analysis Report.

(2) create the possibility of a new or different kind of accident from any accident previously evaluated. As stated in Part I, the proposed changes are intended to enhance diesel reliability. Any accident created as a result of these changes would be no worse than the failure of a diesel generator which has been evaluated.

(3) involve a reduction in a margin of safety. The margin of safety has been determined acceptable assuming the loss of one diesel generator. The proposed changes will enhance diesel reliability thereby reducing the probability of a loss of a diesel generator.

We request these amendments be approved and made effective on September 1, 1986.

If you have any questions, please contact D. J. Walters.

Very truly yours,

H. W. Keiser
Vice President-Nuclear Operations

cc: M. J. Campagnone NRC
L. R. Plisco NRC