Commonwealth Edison
72 West Adams Street, Chicago, Illinois
Address Reply to: Post Office Box 767
Chicago, Illinois 60690

OG-152

June 14, 1985

Mr. Harold R. Denton, Director
Office of Nuclear Regulatory Regulation
U.S. Nuclear Regulatory Commission
Phillips Bldg.
Washington, DC 20555

Westinghouse Owners Group
Short Term Technical Specification
Improvement Efforts

Dear Mr. Denton:

As you are aware, the Westinghouse Owners Group (WOG) is actively participating in the AIF Subcommittee on Technical Specification Improvements. The AIF Subcommittee has as an objective the development and implementation of rulemaking to improve the present technical specification environment. It is the consensus of the WOG that rulemaking will be required if all of the desired technical specification improvements are to be achieved. Along with our participation in the Subcommittee effort, the WOG has determined that it is also appropriate to pursue other technical specification improvement efforts with the purpose of achieving technical specification improvements that are allowed by existing regulations and review procedures and that can be accomplished in a relatively short time frame. It is the belief of the WOG that many technical specification problem areas can be remedied without long term review, new elaborate methodologies or rulemaking. Examples of such items are: removal of equipment listings, elimination of inconsistencies and ambiguities, revision of the applicability requirements, removal of cycle dependent specifications and elimination of excessive and unnecessary detail. It is the objective of the WOG to identify such short term improvement candidates and meet with the NRC by July 1, 1985 to discuss the identified candidates for change and the process by which appropriate technical specification improvements can be implemented. This objective is consistent with objectives of the Technical Specification Improvement Project (TSIP) of the NRC and it is the intent of the WOG to work with the TSIP, as well as the Technical Specification Review Group, in pursuing these short term improvements.

Delete: Licciardo

Ltr Encl
Add: Tech Spec Review Group, DL(1) 1 1
Tech Spec Improvement Group DST(1) 1 1

Y601
1/4

Per H. Smith

It is recommended that, as much as possible, these short term objectives be incorporated into Revision 5 of NUREG-0452, "Standard Technical Specifications for Westinghouse Pressurized Water Reactors" now under review by the Technical Specifications Review Group. This would allow the short term improvements to be implemented under existing activities in both NRC Technical Specification Groups. It would also enhance the implementation process, since the WOG and the two NRC Technical Specification Groups are currently communicating on these activities. The WOG believes that this process would allow expedient short term improvements.

The WOG has begun identification of short term improvements in responding to the opportunity to comment on the draft Revision 5 of NUREG 0452. The WOG comments, which are attached, identify many, but not all, of the desired short term improvements. The attached comments are from individual WOG member utilities and Westinghouse, and have been compiled and organized into a useable format by the WOG as a courtesy to WOG member utilities and the NRC. No attempt was made to edit individual comments. This method was chosen to allow each participating organization to have an equal voice in the review and comment process and to present alternative solutions to the NRC. Future discussions with the NRC may result in the selection of one alternative where more than one is currently provided. Additional short term improvements will be discussed at the NRC/WOG meeting which we propose.

In summary, it is the intent of the WOG to work with the NRC to accomplish short term technical specification improvements in parallel with the current industry effort. Toward this end, it is requested that the NRC identify an appropriate meeting date, preferably in the last week of June, at which the WOG may present the identified short term objectives to the NRC. It is also requested that representation from both technical specification groups participate in the meeting. As a start, the NRC may use the attached WOG comments as an indication of the types of improvements sought by the WOG. The WOG will keep the AIF Subcommittee informed of these activities.

The WOG appreciates the NRC interest and activities in these areas and the courtesy of the NRC in inviting WOG participation in these areas. If the WOG can be of further assistance, or if you have any comments or questions please feel free to contact either Mark Burzynski or myself.

Very truly yours,

L. D. Butterfield, Chairman
Westinghouse Owners Group

Attachments

cc: AIF Subcommittee (w/o att.)
WOG Representatives (w/att.)
Tech Spec S/C Reps (w/att.)

6702g:12

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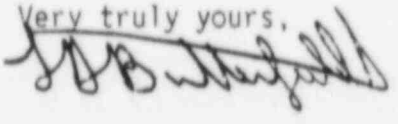
Very truly yours,



L. D. Butterfield, Chairman
Westinghouse Owners Group

Attachments

cc: AIF Subcommittee (w/o att.)
WOG Representatives (w/att.)
Tech Spec S/C Reps (w/att.)

6702g:12

WOG/W COMMENTS

STS REVISION 5

SECTION 1.0

Definition 1.1

prescribes remedial measures" should be changed to "describes responses"

Definition 1.2

Actuation Logic Test - see attachment 2, item 2

Definition 1.3

Analog Channel Operational Test - See attachment 2, item 2

Definition 1.7

the last two words of this definition (range and accuracy) need to be clarified.

Definition 1.5

the terms range and accuracy need to be clarified.

Definition 1.8

Controlled Leakage - see attachment 2, item 1

Definition 1.9

the definition as written would not allow the removal of a reactor vessel sample capsule.

Definition 1.9

Core alterations - The definition of core should be either revised or explained (perhaps in the bases) to allow the movement of some equipment or components within the reactor pressure vessel. For example, movement of a source range instrument or inspection camera should not be considered a core alteration. This would allow some movement of components (eg. cameras) without having to satisfy specifications related to core alterations.

Definition 1.11

the Rev. 4 definition did not include iodines or isotopes with half-lives greater than 15 minutes. Recommend using the Rev. 4 definition.

Definition 1.14

Item b. should be changed to read:

b. Leakage into the containment atmosphere from sources that are specifically located and known not to interfere with the operation of Leakage Detection Systems or which are PRESSURE BOUNDARY LEAKAGE, or

Definition 1.14

Identified Leakage - see attachment 2, item 1

Definition 1.15

Master Relay Test - see attachment 2, item 2

Definition 1.18

Operable - Operability - see attachment 2, item 3

Definition 1.26

the definition should be changed to read:

"...the channel sensor until stationary gripper coil voltage is sufficiently degraded so that the control rods are free to fall."

Definition 1.28

Shield Building Integrity - The definition of shield building should be bracketed to note it as being plant specific.

Definition 1.29

Shutdown Margin - The definition of shutdown margin requires the inclusion of an allowance for the most reactive rod. While this may be appropriate for critical conditions, it constitutes an unnecessary penalty for shutdown operation. It is recommended that either a new definition be added for shutdown margin for shutdown conditions or the existing definition be revised such that during shutdown conditions an allowance for the most reactive rod need not be considered.

Definition 1.31

Slave Relay Test - See Attachment 2, Item 2

Definition 1.36

the last sentence should be changed to read:

"...setpoint where applicable within the required range and accuracy."

Definition 1.37

Unidentified Leakage - See Attachment 2, Item 1

Definition 1.38

the first sentence should be modified as follows:

"...SITE BOUNDARY to which access is not..."

Definition 1.39

This definition is ambiguous for SQN EGTS.

SECTION 2.0

Specification 2.1.2

the word "it's" should be replaced by the word "this" in the ACTION Section.

"...within this limit within 1 hour, ..."
"...within this limit within 5 minutes, ..."

the action time of 5 minutes seems arbitrary. In an overpressure event operators would move quickly to relieve system pressure. The action should reflect this by requiring a return to within the limits as soon as possible. Note that the at power case does not include the 5 minute time limit.

Specification 2.2.1

General comment: replace R by RE and S by SE throughout this specification and its associated tables, bases and formulas.

Table 2.2-1

Function 7, overtemperature delta-T should have (0.8) replaced by "see note 5" in the SENSOR ERROR column.

Function 19.f should be deleted since it is redundant to 19.b.2. P-13 is exclusively an input to P-7.

The measured delta-T for OPdelta-T and OTdelta-T now has a lead-lag-lag compensation in notes 1 and 2. Previously a lag compensator had been used.

Change NOTE 2 on page 2-9 to read:
"...more than [3.8]% of delta-T span."

Change NOTE 4 on page 2-11 to read:
"...more than [3.0]% of delta-T span."

Add NOTE 5: The sensor error for temperature is [1.2] and for pressure is [1.0].

Table 2.2-1, Item 14

Since some plants have this function and some don't, it is suggested that this item be bracketed to indicate its plant specific nature. This applies to the bases discussion as well.

Table 2.2-1

Reactor Coolant Pump Breaker Position Trip has been deleted in draft 5. Since some plants still have this feature, it is suggested that it be left in but bracketed to indicate its plant specific nature. This applies to the bases as well.

Table 2.2-1, Item 19.b

Suggest that the references to P-10 and P-13 be deleted since they are addressed by items 19.e and f and the setpoint and allowable value for P-7 be not applicable. Also in the bases, place a bracket around the words "Turbine Trip" in the P-7 interlock discussion to indicate the plant specific nature of the trips affected by P-7.

Table 2.2-1, Item 19.d

Not all plants have P-9. It is suggested that this item be bracketed to indicate its plant specific nature. This applies to the bases as well.

Table 2.2-1, Item 19.e

Suggest placing an upper and lower allowable value (or range) on P-10 to indicate that it operates in both directions.

SECTION 2.0 BASES

Bases 2.1.1 Reactor Core

make the following changes in the third paragraph from the bottom of page B2-1:

"these curves are based on an enthalpy hot channel factor, $F^{N}_{\Delta H}$, of 1.49 and a reference cosine within a peak of 1.55 for axial power shape."

change the formula to read:

$$F^{N}_{\Delta H} = 1.49 [1 + 0.3 (1-P)]$$

Bases 2.1.2 Reactor Coolant System Pressure

this method is not consistent with industry practice. Hydro pressures are based on 125 percent of the design pressure. The design pressure is typically a differential pressure. The Hydro pressure should be 1.25 times the design pressure.

3110 should be changed to 3101 in the last sentence on page B2-2.

Bases 2.2.1 Reactor Trip System Instrumentation Setpoint

the last sentence in this section on page B2-4 should read:

"...This prevents the reactivity addition that would..."

Power Range, Neutron Flux, High Rates

the last sentence on page B2-4 should read:

"...DNBRs will be greater than the limit value."

Undervoltage and Underfrequency - Reactor Coolant Pump Buses

the bases should be revised to read as follows:

The Undervoltage and Underfrequency Reactor Coolant Pump Bus trips provide core protection against DNB as a result of complete loss of forced coolant flow. The specified Setpoints assure a Reactor trip signal is generated before the Low Flow Trip Setpoint is reached. For undervoltage, the delay is set so that the time required for a signal to cause a reactor trip after the undervoltage trip setpoint is reached shall not exceed [1.5] seconds. For underfrequency, the delay is set so that the time required for a signal to cause a reactor trip after the Underfrequency Trip Setpoint is reached shall not exceed [0.6] second.

Reactor Trip System Interlocks

P-6 should be modified to read as follows:

P-6 On increasing power P-6 allows the manual block of the Source Range trip (i.e., prevents premature block of Source Range trip), provides an automatic backup block for Source Range Neutron Flux doubling, and the manual block that deenergizes the high voltage to the Source Range detectors. On decreasing power, Source Range Level trips Neutron Flux doubling circuits are automatically reactivated and high voltage restored.

P-7 is not interlocked to enable a reactor trip on a turbine trip. Turbine trips should be deleted from P-7 on page B2-8.

the reactor coolant pump breaker position input to P-8 is plant specific and should be enclosed in brackets as shown below:

"...in one or more reactor coolant loops, [and one or more reactor coolant pump breakers open]. On decreasing power..."

P-10 should be modified to read as presented below:

P-10 On increasing power, P-10 allows the manual block of the intermediate Range trip and the Low Setpoint Power Range trip; and blocks the Source Range trip and provides an automatic backup function to de-energize the Source Range high voltage. On decreasing power, the Intermediate Range trip and the Low Setpoint Power Range trip are automatically reactivated and Source Range high voltage to the detectors is restored if power decreases below the P-6 setpoint.

Bases for Limiting Safety System Settings

2.2.1 Reactor Trip System Instrumentation Setpoints - items identified as optional for Plants Permitted N-1 Loop Operation.

It is suggested that the term "optional" be dropped and these items referred to as For Plants Permitted N-1 Loop Operation. The optional term makes it sound like it is not necessary (utility option) to put it in even for plants with N-1.

2.2.1 Reactor Trip System Instrumentation Setpoints, Turbine Trip - It is suggested that P-9 be bracketed since this function is performed by P-7 for many plants. Deletion of the description of the interlock function is also appropriate since the interlock is defined i other places and its presence here does not add to he discussion.

SECTION 3.0 AND 4.0

Specification 3.0.3

D. Applicability

E. Applicability Bases

3.0.3 It is suggested that a discussion concerning the interpretation of "time of failure to meet the L.C.O." be added for clarification.

4.0.3 It is suggested that should a utility find a missed surveillance, rather then force the utility to start action time when the surveillance was missed or to follow 3.0.3, the utility be requiried to perform the surveillance within the L.C.O. action time. It makes more sense to go ahead and perform the surveillance (if possible) while maintaining plant operation than to force a shutdown after or during which the surveillance would be performed. In most cases this would prevent an unnecessary shutdown.

Specification 3.0.5

L.C.O. 3.0.5 has been deleted and should be reinstated.

4.0.5 It is suggested that a statement be added to this bases discussion stating that the restrictions contained in the specifications concerning ASME Section XI are only applicable to items addressed in the technical specifications and not to Section XI in general. For example, pumps and valves contained in the technical

specifications are tested to the more stringent technical specification requirements. Pumps and valves not contained in the technical specifications are tested in accordance with the requirements and definitions of Section XI.

Specification 4.0.6

the following new surveillance requirement should be included:

4.0.6 Performing a surveillance that results in equipment being inoperable due to requirements of the surveillance (e.g., abnormal value alignments) is not considered a violation of the Limiting Condition for Operation and does not need to be reported as a violation provided the equipment is made OPERABLE at the completion of the surveillance.

SECTION 3/4.1

Action 3.1.1.1

"...ppm boron or equivalent boration rate until..."

Surveillance 4.1.1.1

Surveillance for verifying shutdown margin while critical is accomplished by verifying that rod insertion limits are met. Specification 3.1.3.6, rod insertion limits, however, does not refer to the shutdown margin specification. It is suggested that the interpretation that should be made is that as long as compliance with 3.1.3.6 or its action statement is satisfied, the shutdown margin L.C.O. is met. This clarification could be achieved by modifying 4.1.1.1.1.b to state, "by verifying that the provisions of Specification 3.1.3.6 or its ACTION statements are satisfied.

Surveillance 4.1.1.1.1a

"...If the inoperable control rod(s) is ..."

Surveillance 4.1.1.1.1b

"...that control bank insertion is within..."

Surveillance 4.1.1.1.1d

"...factors of specification 4.1.1.1.1e, with the control..."

Surveillance 4.1.1.1.2

"those factors stated in specification [4.1.1.1.1e]. The predicted..."

Surveillance 4.1.1.1.2

The surveillance requirement to monitor core reactivity balance is confusing. It is not clear what action is to be taken if the surveillance requirement is not satisfied. It seems inappropriate to apply L.C.O. 3.1.1.1. The surveillance states that the reactivity values be adjusted prior to exceeding 60 EFPD but does not discuss violations of the 60 EFPD. It is suggested that this requirement be deleted or made into an appropriate L.C.O.

Action 3.1.1.2

"...ppm boron or equivalent boration rate until..."

Surveillance 4.1.1.2

Change to read:

"If the inoperable control rod(s) is immovable..."

Surveillance 4.1.1.2

Surveillance Requirement 4.1.1.2.a requires that in the event of an inoperable rod the shutdown margin be adjusted for the withdrawn worth of the rod. In this mode (Mode 5) the reactor is required to have $K_{eff} < 0.99$ the shutdown margin is $\geq$ 1%. While these two values are not identical they are close enough that to adjust the shutdown margin for the stuck rod is inappropriate since to meet the mode definition is to satisfy the shutdown margin. It is suggested that this requirement be deleted.

Applicability 3.1.1.3

the term only** needs to be clarified.

Action 3.1.1.3.a.1

"...to less positive than (0) delta-K/K/°F..."

Specification 3.1.1.4

3/4.1.1.4, Minimum Temperature for Criticality

It is suggested that the action be modified to state, "...(541)°F, either restore T_{avg} to within its limit within 2 hours or be in HOT STANDBY". The present action to restore T_{avg} within 15 minutes or be in HOT STANDBY in the next 15 minutes is too restrictive for the importance of this limit; to comply would probably require a reactor trip.

Bases 3/4.1.1.4, Minimum Temperature for Criticality

It is suggested that the statement following (3) be moved to the end of the paragraph and bracketed since this is not applicable to all plants.

Specification 3.1.2

3/4.1.2, Boration Systems - See Attachment 2, Item 5

Specification 3.1.2.1

General comments:

This LCO would drive an operating plant through the worst case MSLB. It would require a Mode 5 shutdown margin in Mode 3. SQN MSLB break analysis results show worst case T_{avg} decrease of ~200°F (i.e., 550 --> 350°F). Assuming a realistic EOL MTC this LCO would require SQN to have ~4% delta-K/K shutdown margin over and above what our Chapter 15 analysis shows as being necessary.

The L.C.O. should be modified to read:

a. A flow path from the boric acid tanks via either a boric acid transfer pump or a gravity feed connection and a charging pump to the Reactor Coolant System if the boric acid storage tank is OPERABLE as given in specification [3.1.2.5a] for MODES 5 and 6 or as given in specification [3.1.2.6a] for MODE 4; or

b. The flow path from the refueling water storage tank via a centrifugal charging pump to the Reactor Coolant System if the refueling water storage tank is OPERABLE as given in specification [3.1.2.5b] for MODES 5 and 6 or as given in specification [3.1.2.6] for MODE 4.

The APPLICABILITY should be expanded to include Mode 4* and footnote* added.

---

*A maximum of one centrifugal charging pump shall be OPERABLE whenever the temperature of one or more of the RCS cold legs is less than or equal to [330°F].

Surveillance 4.1.2.1

Added parenthesis around the heat traced portion - this could infer surveillance requirements on the temp of the boration flow path whether or not it is heat traced.

Surveillance 4.1.2.2.a

the added parenthesis around the heat traced portion - This could infer surveillance requirements on the temp of the boration flow path whether or not it is heat traced.

Specification 3.1.2.3

if L.C.O. is not reinserted then the "emergency power source" requirement is redundant.

Applicability 3.1.2.3

should include MODE 4* and associated footnote *.

*A maximum of one centrifugal charging pump shall be operable whenever the temperature of one or more of the RCS cold legs is less than or equal to [330°F].

Surveillance 4.1.2.3.1

Pump differential pressure does not need to be separately specified if sufficient pump margin exists to make the degradation allowed by ASME Section XI to be controlling. The Technical Specifications should only specify a test pressure if it is more limiting than the ASME Section XI requirements.

Surveillance 4.1.2.3.2

Some plants prefer to place handswitches in pull to lock (PTL) if possible, so that if these pumps are required for a subsequent transient, the pumps or equipment could be restored to OPERABLE status in a minimum time. We would propose to put the handswitch in PTL and tag it out of service, to render equipment inoperable, especially ECCS pumps.

Since the methods used to demonstrate an INOPERABLE pump are plant specific they should be enclosed in brackets as presented below.

4.1.2.3.2 All charging pumps, excluding the above required OPERABLE pump, shall be demonstrated inoperable at least once per 31 days, except when the reactor vessel head is removed, by verifying that [the motor circuit breakers are secured in the open position.]

Surveillance 4.1.2.3.2

the specification should be modified to read:

"whenever the temperature of one or more of the RCS cold legs is less than or equal to [330]°F all charging pumps, excluding the above required OPERABLE pump, shall be demonstrated inoperable** at least..."

**An inoperable pump may be energized for testing provided the discharge of the pump has been isolated from the RCS by a closed isolation valve with power removed from the valve, W-STS operator, or by an manual isolation valve secured in the closed position.

Specification 3.1.2.4

this L.C.O. is redundant to 3.1.2.2. They could be combined to be more efficient.

Specification 3.1.2.4

delete footnote * and its use in the L.C.O. Also delete surveillance requirement 4.1.2.4.2 and MODE 4 APPLICABILITY.

Specification 4.1.2.4.1

Pump differential pressure does not need to be separately specified if sufficient pump margin exists to make the degradation allowed by ASME Section XI to be controlling. The Technical Specifications should only specify a test pressure if it is more limiting than the ASME Section XI requirements.

Surveillance 4.1.2.4.2

the methods used to demonstrate an INOPERABLE pump are plant specific and they should be enclosed in brackets. See comment on 4.1.2.3.2.

Specification 3.1.2.5

Revision 5 removed the upper and lower limits on the boron concentration in the BAT and substituted only a minimum requirement. Isn't a requirement on maximum concentration also necessary?

The volume and gallon units used in the L.C.O. should be changed to level and percent since this is what the operator reads in the control room. The gallon can be included in the basis.

Specification 3.1.2.6

the minimum and maximum temperatures for the RWST are not necessary for boration requirements. The temperature limits are only applicable for the accident injection specifications.

Revision 5 removed the upper and lower limits on the Boron concentration in the RWST and substituted only a minimum requirement. Isn't a requirement on maximum concentration also necessary?

The volume and gallons units used in the L.C.O. should be changed to level and percent since this is what the operator reads in the control room. The gallons can be included in the basis.

ACTION A should be modified to read:

"...above required borated water sources in MODE 1,2, or 3, restore..."

Action C should be added as follows:

C. With no borated water source OPERABLE in MODE4, restore one borated water source to OPERABLE status within 6 hours or be in COLD SHUTDOWN within the following 30 hours.

Surveillance 4.1.2.6

volume should be changed to level in 4.1.2.6.2.2.

4.1.2.6.a.3 contains a disclaimer which should be applied to all of part a. (per SR 4.0.3)

the minimum and maximum temperatures (in 4.1.2.6.b) for the RWST are not necessary for boration requirements. The temperature limits are only applicable for the accident injection technical specifications.

Specification 3.1.3.1

the words "full-length" as they apply to control or shutdown rods should be deleted.

ACTION statements 3a and 3d should be switched.

the ACTION statement should be written to allow continued operation with multiple inoperable but tripable rods if steps from demand and all other L.C.O.'s are satisfied.

Specification 3.1.3.1

3/4.1.3.1, Movable Control Assemblies

It is suggested that this specification and its Bases be replaced with the specification (and Bases) 3/4.1.3.1 found as Item 7 of Attachment 2.

Specification 3.1.3.2

3/4.1.3.2 and 3/4.1.3.3, Rod Position Indication System

It is suggested that all references to digital be deleted. Not all plants have digital systems, some have analog. The Bases should be modified accordingly.

Surveillance 4.1.3.2

the rod position monitor should be changed to read the rod position alarm.

Specification 3.1.3.3

the L.C.O. should be written without reference to shutdown rods. The DRPI does not indicate the actual position of the shutdown rods between 18 and 210 steps withdrawn. Delete the words "shutdown or" in the L.C.O.

Why has the ANALOG RPI been excluded?

The ACTION statement is too restrictive. Why not accept the use of rod bottom lights, verification of shutdown margin, etc.

Surveillance 4.1.3.3

the surveillance statement does not specify a frequency of performance.

the statement should be modified to read:

"...the full-range of rod travel at least once per 18 months."

The surveillance does not specify a frequency. It is preferred to verify the OPERABILITY of the Digital Rod Position Indicators by the performance of an ANALOG CHANNEL OPERATIONAL TEST. The only times desirable to pull rods is during startup, except for (possibly) shutdown banks, and special

testing, and of course during power operation. Rods should not be pulled unnecessarily.

Specification 3.1.3.4

this applies to MODES 1 and 2 but all testing and surveillances must be performed in MODE 3 and 5 and not 1 or 2. Is there a conflict?

all reference to full length should be deleted.

this specification should be a surveillance to L.C.O. 3.1.3.1 not a separate L.C.O.

Specification 3.1.3.4

3/4.1.3.4, Rod Drop Time - See Attachment 2, Item 6
Also, it is suggested that the L.C.O. words "of decay of stationary gripper coil voltage" be revised to "all rod motion". The time for gripper coil voltage to decay is included in the Reactor Protection System Response Times, Table 3.3-2. Including it in this specification is double accounting.

Specification 3.1.3.6

modify ACTION statement 3.1.3.6a to read "Immediately restore the...".

add the following additional ACTION statement after ACTION statement 3.1.3.6.a:

b. Immediately initiate and continue boration at greater than or equal to 30 gpm of a solution containing greater than or equal to 7000 ppm boron or equivalent boration rate, until the required control bank position is restored, or.

Surveillance 4.1.3.6

change rod insertion limit monitor to read "rod insertion limit alarm".

SECTION 3/4.2

Specification 3.2.1

This specification is for CAOC. An identical section should be included for RAOC.

the L.C.O. is much less restrictive than some current plant specifications and is desirable.

Action b. Rev. 5 states that if AFD is outside of the target band for greater than 1 hour or if AFD is outside of the Acceptable Operation Limits of Figure 3.2-1 the Hi-Flux Setpoints must be reduced. Rev. 4 requires the Hi-Flux Setpoints reduction only when AFD is outside the Acceptable Operating Limits of Figure 3.2-1. The requirements in Rev. 5 provide unnecessary restrictions and reduce operating efficiency. The Rev. 4 requirements should be retained.

Action c. - Rev. 5 will not permit power increases above 50% power unless the AFD is within the target band. Rev. 4 allows power increases above 50% power as long as penalty minutes are less than 1 hour even if AFD is outside the target band. The requirements in Rev. 5 provide unnecessary restrictions and reduce operating efficiency with no apparent justification or reason. The Rev. 4 requirement should be retained.

Applicability - Rev. 5 states that applicability of this specification applies to greater than 15% power. Rev. 4 applicability was greater than 50% power. The requirement could unnecessarily restrict return to power operation. The Rev. 4 applicability requirement should be retained.

the +3% is quite reasonable analytically but it is very tight for the operator. The old ±5% gave operators some trouble during xenon transients and plant startups. For a new plant without experienced operators the +3% would probably result in power reductions.

Why does ACTION b.2. set the power range neutron flux trip 5% above the operating limit. Is there a basis or is it arbitarily set?delete the following words from the last sentence in ACTION c; "until the indicated AFD is within the above required target band".

Specification 3.2.1

3/4.2.1, Axial Flux Difference

It is suggested that the phrase, "until the indicated AFD is within the above required target band" be deleted from ACTION c. This phrase is not consistent with the L.C.O. and is confusing. It is possible to satisfy the L.C.O. but not the action statement while on the action statement in that the L.C.O. would allow a return to power above 50% without being within the target band.

Surveillance 4.2.1.1.b

why change once per hour to twice per hour after 24 hours. If AFD is monitored on the process computer then you should not have to assume a data point existed over the last 30 minutes.

Surveillance 4.2.2.2

the Technical Specifications should offer $F_Q(z)$ surveillances as well as F_{xy}.

4.2.2.2.b should be changed to read:

"Calculating F_{xy} by increasing the measured..."

in item 4.2.2.2.f.4 the value 2.88 should be in parenthesis rather than brackets. It is not plant specific.

the grid plane regions of 4.2.2.2.f.3 should be changed to read:

17.

31.8

46.0

60.3

74.6

Surveillance 4.2.2.3

"when $F_Q(z)$ is measured by other than ..."

Surveillance 4.2.3.4

the time interval should be indicated as plant specific [7].

there is some confusion as to what measurement instrument is being referenced here as requiring calibration in the 7 days prior to the calorimetric.

Table 3.2-1

add a note at the bottom of the page that DNB parameters (pressurizer pressure limit) is N/A during performance of 4.1.1.3.6.

Specification 3.2.3

3/4.2.3, RCS Flow Rate and Nuclear Enthalpy Rise Hot Channel Factor

It is suggested that this specification be revised such that limits on $F^N_{\Delta H}$ only are included. RCS flow specifications should be removed to Specification 3/4.2.5 DNB Parameters. Figure 3.2-3 should be deleted. This is suggested since rod bow penalties are no longer specified on the technical specification and hence the trade off between $F^N_{\Delta H}$ and RCS flow to offset rod bow penalty is no longer

applicable. Example specifications are provided as Item 8 of Attachment 2. The bases would be modified appropriately.

Specification 3.2.3

Specification 3/4.2.3: With the elimination of the Rod Bow Penalty, Figure 3.2-3 as shown in Draft Revision 5 makes no sense, since it is not permissible to operate in the region between the LOCA limit and the DNB limit. Consequently, R must always be less than or equal to 1.0. Therefore, there is no benefit to this version of this specification since it is now equivalent to the old $F^N_{\Delta H}$ specification. In fact, the specification as it is now written is confusing and ambiguous. We recommend that this specification be revised to the old $F^N_{\Delta H}$ specification with RCS flow rate (and the associated venturi fouling factor and measurement uncertainty) specified under DNB parameters.

LCO 3.2.3 includes no penalty for Rod Bow. The Bases indicated that the necessary margin exists to remove the Rod Bow Penalty from the specification. This would also be a desirable change.

3.2.3 The formula shown in 3.2.3a shows a power dependence of [1.0 + .2(1-P] whereas Figure 3.2-3 shows it as [1.0 + .3(1- P)]. Which is correct? Rev. 4 has both formulas shown as [1.0+.2(1- P)].

Figure 3.2-3 - The DNB limit is measuring less if it is bounded by the LOCA limit (as we are at Seabrook). Suggest deletion of the curve and simply state the minimum RCS flow.

Figure 3.2-3 - Venturi fouling should be treated on a plant by plant basis. Delete from top of Figure 3.2-3.

Surveillance 4.2.3.2

the Technical Specifications should not specify methods or options. These techniques are best left to plant staff to determine. Delete the following: "...determined by process computer readings or digital voltmeter measurement..."

Specification 3.2.3

change to read as follows:

Indicated ... and F^N_H shall be maintained as follows for four loop operation.

a. RCS Total Flowrate $\geq$ [399,000]

b. $F^N_H \leq 1.55\ [1.0 + 0.3(1.0-P)]$

where:

Measured ... are obtained by using the movable incore detectors. An appropriate uncertainty of 4% (nominal) or greater shall then be applied to the measured value of F^N_H before it is compared to the requirements, and $P = \frac{\text{THERMAL POWER}}{\text{RATED THERMAL POWER}}$

ACTION

change to read as follows:

With RCS total flow rate or F^N_H outside the region of acceptable operation:

1. Restore RCS total flow rate and F^N_H to within the above limits, or ...

delete Figure 3.2-3.

ACTION (Continued)

b. Within ...flow rate determination that F^N_H and RCS total flow rate are restored ...

c. Identify ... may proceed provided that F^N_H and indicated RCS total flow rate demonstrated, through incore flux mapping and RCS total flow rate determination, to be within the region of acceptable operation defined by Specification 3.2.3 prior to exceeding the following THERMAL POWER levels: ...

Surveillance 4.2.3.2

change to read as follows:

Indicated RCS total flow rate and F^N_H shall be determined to be within the region of acceptable operation of Specification 3.2.3.

Surveillance 4.2.3.3

change to read as follows:

The indicated ... operation of Specification 3.2.3 at least once per 12 hours when the most recently obtained value of F^N_H obtained per Specification 4.2.3.2, is assumed to exist.

Surveillance 4.2.3.4

delete "The measurement instrumentation....flow measurement."

Surveillance 4.2.3.5

add: "The measurement instrumentation shall be calibrated within 7 days prior to the performance of the calorimetric flow measurement.

Specification 3.2.5

3/4.2.5, DNB Parameters

See Item 3/4.2.3 above and Item 8 of Attachment 2

Specification 3.3.1(p. 3/4 3-1)

Table 3.3-1, Reactor Trip System Instrumentation, Table Notation

The phrase, "happen to be" in the one asterisk note does not seem appropriate for technical specifications.

Table 3.3-1, Reactor Trip System Instrumentation, Action Statement

ACTION 5 does not address operation with 2 source ranges inoperable. This would require complying with specification 3.0.3 which is not appropriate in this instance. It is suggested that ACTION 5 be modified to address the condition of two source ranges inoperable.

Table 4.3-1, Reactor Trip System Instrumentation, Surveillance Requirements, Table Notation

Footnotes (3) and (6) should be modified to state that, "For the purposes of this surveillance requirement M(Q) means at least once per 31 (92) EFPD. These surveillances are burnup dependent and should not be tied to calendar time.

Table 3.3-1

General - Incorporate W0G TOPS

Reviewer disagree with changing the Shutdown Requirement for the Source Range Neutron Flux. Requiring two channels OPERABLE with reactor trip breakers open is considered unnecessary. Additionally, the revised ACTION 5, with only one source range OPERABLE, would prohibit evolutions that could dilute the boron concentration even if the Shutdown Requirements of 3.1.1.1 or 3.1.1.2 are met. This is considered unduly restrictive.

Reviewer does not know the reason for these revisions since the BASES is not specific enough to justify the changes. However, based on the comparison of W-STS Revisions 4 and 5, PGE considers the current requirements (Revision 4) adequate and much less restrictive.

ACTION 5 has no provisions for number of channels two less than the minimum OPERABLE.

The ACTIONS for functional units 11 and 12 should be changed to 6#.

The APPLICABLE MODES for functional UNIT 6a should be annotated with *** where

***The boron dilution flux doubling signals may be blocked during reactor startup.

Functional Unit 17 should be applicable only above the P-9 setpoint. Annote with ####.

The MINIMUM CHANNELS OPERABLE requirement for the Turbine Stop Valve Closure input has a typographical error. The correct value should be 4 vice the 1 listed.

Background:

From a safety standpoint P-10 does two functions (1) Provides input to P-7 which AUTO ENABLES the "AT POWER" Rx trips (2/4 logic above setpoint - 10%). (2) AUTOENABLES "Low Power" Rx trips (including S.R. high flux trip coincident w/P-6) on 3/4 logic below setpoint - 10%. Additionally, above P-10 a manual block of the "Low Power" Rx trips can be performed, however, this does not serve any safety function.

It should be noted that the bistables for P-10 have an energized output below the setpoint and switch when above the setpoint (i.e. to Auto enable the "low power" trips 3 bistables must be energized).

Problem:

The way the Tech Spec are currently written the input to P-7 is covered appropriately under P-7 functional unit 20.b. However, the Auto Enable of the "Low Power" Rx trips is not adequately covered. See the Attached marked up Tech Spec pages for the required changes discussed below.

Tech Spec Changes

CHANNELS TO TRIP should be 3, not 2. Three bistables must be energized to Auto Enable the "Low Power" Rx trips.

MINIMUM CHANNELS OPERABLE should be 4, not 3. Three channels are required to Auto Enable, thus 4 must be OPERABLE to meet single failure criteria. ACTION STATEMENT 12 has been added to reflect appropriate actions to different conditions. With less than 4 channels OPERABLE and the "Low Power" Rx trips blocked a plant shutdown below the P-10 setpoint (10%) is not warranted since the capability to enable the "Low Power" Rx trips may be lost. Since the P-10 bistables must be energized to enable the "Low Power" Rx trips, removing power from the bistables will not reinstate the trips. With less than 4 channels OPERABLE and the "Low Power" Rx trips not blocked, any P-10 failure will not block the "Low Power" Rx trip since it also takes coincident manual blocking (4 separate handswitches) to defeat them. Thus the appropriate action is to restore the inoperable channels to OPERABLE status prior to blocking the "Low Power" Rx trip.

APPLICABLE MODES should have mode 2 deleted. There is no consequence being in mode 2 with P-10 operable. The Auto enable of the "Low Power" Rx trips and the input to P-7 will take place at 10% Rx power which is mode 1. And, as discussed above, the "Low Power" Rx trips once enabled cannot be blocked without manual action. A failure which would cause a P-10 input to P-7 in modes 2 and below could only enable the "At Power" trips and thus has no adverse safety effect. Any P-10 malfunction that could make the S.R. detectors inoperable in mode 2 and below would be readily detectable via MCR indications and alarms and would be handled in accordance with L.C.O. 3.3.1 (item 6 table 3.3-1) covering the S.R. detectors.

Technical Specification 3.3.1 (Table 3.3-1) item 20.f requires via ACTION statement 8 that the plant enter specification 3.0.3 (which requires initiating plant shutdown in 1 hour) if both channels of P-13 fail. Believe this is too restrictive since the only function P-13 has is a totally redundant input to P-7. Since that input is covered under item 20.b, item 20.f should be deleted. Thus if we lose both channels of P-13 we would not be forced to shutdown unless we also lost 3 channels of P-10 since this would cause us to lose P-7. Then and only then would specification 3.0.3 be appropriate since the "at power" trips (low RC loop flow, RCP underfrequency and undervoltage, PZR press low, and PZR level high) would be defeated.

Table 3.3-1

Item 19, change as follows:

b. add "(Turbine Impulse Chamber)" under P-13 Input.

e. change CHANNELS TO TRIP to 3, not 2
change MINIMUM CHANNELS OPERABLE to 4, not 3
change ACTION TO 13, NOT 8.

delete item f.

the ACTION for functional UNIT 17 should be 6# or 12#.

the ACTION 10 for Functional Unit 18 does not allow sufficient time to correct the problem. Recommend that ACTION 10 be replaced by ACTION 9.

Functional Unit 19 should have the P-10 and P-13 requirements changed.

Table 3.3-1 Table Notations

*With the Reactor Trip System breakers in the closed position, and ..."

"**the boron dilution flux doubling signals may be blocked during reactor startup."

"#### Above P-9".

ACTION 2a, change 1 hour to 6 hours.

ACTION 2b, change 2 hours to 4 hours.

ACTION 2b, should be rewritten to read:

> "One additional channel may be bypassed for up to 4 hours for surveillance testing per specification 4.3.1.1 provided the inoperable channel is in the tripped condition; and "

ACTION 4 - would prevent going to MODE 5. It should allow a trade off of a periodic shutdown margin check for a cooldown as in ACTION 5.

ACTION 5 -

> Use the Rev. 4 version.
>
> With the primary water valves isolated the other actions become redundant.
>
> This action does not address the case where both source range channels are inoperable. As a result, Specification 3.0.3 would have to be applied; however, if the plant is already in Mode 5, the application of 3.0.3 makes no sense. Since the concern here is an inadvertent moderator dilution event, the Revision 4 action statement (which required verification of Shutdown Margin) would seem to be more appropriate.

Modify ACTION 5 to read:

> ACTION 5 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or within the next hour open the Reactor Trip System breakers, suspend all operations involving

positive reactivity changes and verify Valves _____ are closed and secured in position within the next hour. With no channels OPERABLE verify compliance with the SHUTDOWN MARGIN requirements of Specification 3.1.1.1 or 3.1.1.2 as applicable and take actions stated above within 1 hour and verify compliance at least once per 12 hours thereafter.

ACTION 6 -

change the 1 hour to 6 hours in 6a.
modify 6b to read:

One additional channel may be passed for up to 4 hours for surveillance testing per specification 4.3.1.1 provided the inoperable channel is in the tripped condition.

ACTION 7 -

change 1 hour to 6 hours.

ACTION 9 -

modify to read:

"...to OPERABLE status within 6 hours ...
...for up to 4 hours for surveillance..."

ACTION 10 -

modify to read:

"...bypassed for up to 4 hours for..."

modify to read:

With the number of OPERABLE CHANNELS one less than the MINIMUM CHANNELS OPERABLE requirement, restore the inoperable channel to OPERABLE STATUS within 6 hours or be in at least HOT STANDBY within the next 6 hours...bypassed up to 4 hours..."

ACTION 12 -

modify to read:

"...condition within 1 hour, or reduce power to below P-9."

modify to read:

With the number of OPERABLE channels one less than the MINIMUM CHANNELS OPERABLE requirement, operation may continue provided the inoperable channels replaced in the tripped condition within 6 hours.

ACTION 13 -

add the following:

ACTION 13 - With the number of operable channels less than the minimum channels operable requirement and

1) With the "low power" Rx trips blocked immediately restore the inoperable channels to operable status, or
2) With the "low power" Rx trips not blocked restore the inoperable channels to operable status prior to blocking the "low power" Rx trips.

The provisions of specification 3.0.3 are not applicable.

Table 3.3-2

why include the overpower delta-T response time if it is not assumed in the Accident Analysis.

add a footnote:

#Thermal Lag and RTD bypass manifold delay times are not included.

Table 4.3-1

change "M" in ANALOG CHANNEL OPERATIONAL TEST column to "Q" in items 2a, 2b, 3 through 14.

change "M" in TRIP ACTUATING DEVICE OPERATIONAL TEST column to "Q" in items 15 and 16.

change "R" in CHANNEL CALIBRATION column to "N.A" in items 17a and 17b.

change "M" in ANALOG CHANNEL OPERATIONAL TEST column to "Q" in item 19a and 19b.

insert new line under 19b to read:

P-13 input to P-7
CHANNEL CHECK: N.A.
CHANNEL CALIBRATION: R
ANALOG CHANNEL OPERATIONAL TEST: Q(8)
TRIP ACTUATING DEVICE OPERATIONAL TEST: N.A.
ACTUATION LOGIC TEST: N.A.
MODES FOR WHICH SURVEILLANCE IS REQUIRED: 1

change "M" in ANALOG CHANNEL OPERATIONAL TEST column to "Q" in items 19c, 19d and 20e.

delete line 20.f.

change "M" in TRIP ACTUATING DEVICE OPERATIONAL TEST column to "SA" in item 21.

change "M" in ACTUATION LOGIC TEST column to "SA" in item 22.

Table 4.3-1, TABLE NOTATIONS

change (*) to read as follows:

* With the Reactor Trip System breakers closed and the Control Rod Drive System capable of rod withdrawal.

change item (1) to read as follows:

(1) If not performed in previous 92 days.

change item (5) to read as follows:

Initial plateau curves shall be measured for each detector. Subsequent plateau curves shall be obtained, evaluated and compared to the initial curves. For the Intermediate Range and Power Range Neutron Flux channels the provisions of Specification 4.0.4 are not applicable for entry into MODE 2 OR 1.

change item (7) to read as follows:

(7) Each train ... every 184 days ....

change "Monthly" in item (9) to "Quarterly".

Specification 3.3.2(p. 3/4 3-16)

Table 3.3-3, Engineered Safety Features Actuation System Instrumentation

ACTION 19 is applied to items 6.f, g and h incorrectly. ACTION 19 requires the plant to be placed in Cold Shutdown if the L.C.O. is not met, however, items 6.f and h are applicable in Modes 1, 2, and 3 and item 6.g is Modes 1 and 2. The action is more restrictive than the L.C.O. New

actions should be specified for items 6.f, g and h which are consistent with the L.C.O.

Table 3.3-5, Engineered Safety Features Response Times

The layout of this table is inconsistent with the definition of ESF Response Time. For example Item 2, Containment Pressure-High-1 has an Item a followed by several entries with response times. The response times provided are from when containment pressure is at the high-1 setpoint and not from when the safety injection signal is initiated as the table layout may imply. It is recommended that the a. be deleted and all items including safety injection be numbered sequentially. That is, safety injection should not be a heading, just one function which results from the high-1 setpoint being reached.

Table 3.3-5, Engineered Safety Features Response Time

It is suggested that the Diesel Generator entry be deleted from this table since it is more appropriately included in the other response times and in Section 8 of the specification.

Table 3.3-3, Table 3.3-4 and Table 4.3-2, Engineered Safety Features Instrumentation

It is suggested that all references to P-14 as an interlock be deleted. Steam Generator Lever-High-High is addressed by Item 5 of these tables. Specifying P-14 (Steam Generator Level-High-High) as an interlock is confusing and contradictory.

Table 3.3-3, Page 3/4 3-18

delete from item 1: (Reactor Trip, Feedwater Isolation, Control Room, Isolation, Start Diesel Generators, Containment, Cooling Fans, and Essential Service Water).

on Page 3/4 3-19 add the following to item 1f:

TOTAL NO. OF CHANNELS: 3/steam line

CHANNELS TO TRIP: 2/steam line

any 2 loops

MINIMUM CHANNELS OPERABLE: 2/steam line

APPLICABLE MODES: change 3** to 3#

ACTION: 20*

delete from Page 3/4 3-19 all of item 1.f.1

Table 3.3-3, Page 3/4 3-20

change item 2a to read as follows:

TOTAL NO. OF CHANNELS: 2 pair
CHANNELS TO TRIP: 1 pair
MINIMUM CHANNELS OPERABLE: 2 pair
ACTION: 26

Table 3.3-3, Page 3/4 3-21

delete all of item 3b because it doesn't perform any function.

Table 3.3-3, Page 3/4 3-24

change item 4.e to read as follows:

TOTAL NO. OF CHANNELS: 3/steam line
CHANNELS TO TRIP: 2/steam line
any steam line
MINIMUM CHANNELS OPERABLE: 2/steam line
APPLICABLE MODES: change 2 to 2## and 3** to 3#,##
ACTION: 20*

delete all of items 4.e.1 and 4.e.2.

Table 3.3-3, Page 3/4 3-25

add "c" to item 5 to read:
c. Safety Injection

change item 6a ACTION to 27

Table 3.3-3, Page 3/4 3-26

change item 6.f and 6.g ACTION to 19*

change item 6.h ACTION to 27.

Table 3.3-3, Page 3/4 3-27

change item 8, Loss of Power, to Start Diesel Generator

add to item 9c the following:

TOTAL NO. OF CHANNELS: 4 - 2/train
CHANNELS TO TRIP: 2/Train
MINIMUM CHANNELS OPERABLE: 2/Train

delete #3 FROM ITEM 9.d APPLICABLE MODES

Table 3.3-3, TABLE NOTATIONS, Page 3/4 3-28

add the following beneath "#Trip function may be blocked in ...."

##Not applicable if the main steam isolation valves are closed.

Table 3.3-3, ACTION STATEMENTS, Page 3/4 3-29

change ACTION 19 to read as follows:

"With the number of OPERABLE...status within 7 days or be in at least HOT STANDBY within the next 6 hours."

add the following two items:

ACTION 26 - With the number of OPERABLE channels one less than the minimum, comply with the action statement for one pump inoperable in Specification (3.6.2.1a, 3.6.2.1b, 3.6.2.1c or 3.6.2.2.c, 3.6.2.1d)

ACTION 27 - With the number of OPERABLE channels less than the minimum, comply with the appropriate action statement for Specification 3.7.1.2.

Table 3.3-3

Functional Unit 1.

It is not necessary to list everything that happens when a safety injection signal is initiated. It is not appropriate to list a subset.

delete (Reactor Trip, Feedwater Isolation ... and Essential Service Water).

The provisions of 3.0.4 are not applicable to items 6.f and 6.g. These are anticipatory trips. Startup should not be prohibited because of an inoperable channel.

The action statement for a suction transfer valve should not be more restrictive than the action statement for the associated pumps.

P-14 is not required in Mode 3.

48 hours is too restrictive for anticipatory channels. The channels are only required in Modes 1, 2, and 3.

modify Table 4.3-1 as attached.

Table 3.3-4, Page 3/4 3-30

change column heading SENSOR ERROR (S) to read SENSOR ERROR (SE)

delete from item 1 the following:

(Reactor Trip, Feedwater Isolation, Control Room Isolation, Start Diesel Generators, Containment Cooling Fans, and Essential Service Water)

Table 3.3-4, Page 3/4 3-33

add the following to item 5:

c. Safety Injection

Table 3.3-4, Page 3/4 3-34

change item 6.f to read:

Loss-of- or Degraded 4KV ESF Bus Voltage

delete "Containment Sump Level and" from item 7.b.

delete note from item 7.b, "See Item 1. above for all Safety...."

change item 8 to read:

Start Diesel Generator

add to item 8:

c. Safety Injection

add note to item 8.c beginning under TOTAL ALLOWANCE (TA) column:

"See Item 1. above for all Safety Injection Trip Setpoints and Allowable Values."

Table 3.3-4, TABLE NOTATIONS, Page 3/4 3-36

change first paragraph to read:

*Time constants utilized .... $\leq$ [5] seconds." CHANNEL CALIBRATION shall ensure....

change second paragraph to read:

**The time constant utilized ... Rate-High is greater than or equal to [50] seconds. CHANNEL CALIBRATION shall ensure ...

~~Table 3.3-4~~

~~modify Table 3.3-4 as attached.~~

Table 3.3-5, Page 3/4 3-37

change 2.a.3 RESPONSE TIME IN SECONDS to read:

≤ [2](♦)

delete item 2.a.8

change 2.a.9 RESPONSE TIME IN SECONDS to read:

≤ [12]

Table 3.3-5, Page 3/4 3-38

change 3.a.3 RESPONSE TIME IN SECONDS to read:

≤ [2](♦)

delete item 3.a.8

change 3.a.9 RESPONSE TIME IN SECONDS to read:

≤ [12]

change 4.a.3 RESPONSE TIME IN SECONDS to read:

≤ [2](♦)

delete item 4.a.8

change 4.a.9 RESPONSE TIME IN SECONDS to read:

≤ [12]

change 5.a.3 RESPONSE TIME IN SECONDS to read:

≤ [2](*)

Table 3.3-5, Page 3/4 3-39

delete item 5.a.8

change 5.a.9 RESPONSE TIME IN SECONDS to read:

≤ [12]

add note to RESPONSE TIME IN SECONDS in item 6.b as follows:

"Where do these #'s [65] and [75] come from?"

Table 3.3-5, Page 3/4 3-40

change item 15, Auxiliary Feedwater (Suction Supply), RESPONSE TIME IN SECONDS to read: "N.A."

Table 3.3-5, TABLE NOTATIONS, Page 3/4 3-41

change (4) to read as follows:

Diesel generator starting and sequence loading delay included. RHR [& LPSI] pumps not included.

change (5) to read as follows:

Diesel generator starting and sequence loading delays not included. [LPSI &] RHR pumps not included.

add (6) to read as follows:

(6) Does not include valve closure time.

Table 4.3-2, Page 3/4 3-42

delete from item 1:

(Reactor Trip, Feedwater Isolation, Control Room Isolation, Start Diesel Generators, Containment Cooling Fans, and Essential Service Water)

Table 4.3-2, Page 3/4 3-44

add to item 5:

c. Safety Injection

add note to item 5.c beginning under CHANNEL CHECK column:

"See item 1 above for all safety injection requirements."

Table 4.3-2, Page 3/4 3-45

change item 6.f to read:

f. Loss-of- or Degraded 4 KV ESF Bus Voltage

Table 4.3-2, Page 3/4 3-46

change item 8 to read:

Start Diesel Generator

add to item 8:

c. Safety Injection

add note to item 8.c beginning under CHANNEL CHECK column:

"See item 1 above for safety injection surveillance requirements."

delete #3 from item 9.d MODES FOR WHICH SURVEILLANCE IS REQUIRED

Table 3.3-6, Page 3/4 3-48

change column heading ALARM/TRIP SETPOINT to SETPOINT + NORMAL BACKGROUND

change item 1.a SETPOINT + NORMAL BACKGROUND to read: ***

delete items 1.b, 1.b.1, 1.b.2, 2, 2.a, and 2.b.

change item 4 SETPOINT + NORMAL BACKGROUND to read:

[1.0 E-5] ci/cc

Table 3.3-6, TABLE NOTATIONS, Page 3/4 3-49

delete: "* Must satisfy specification 3.11.2.1 requirements."

change next "**" to "*" and next "***" to "**"

add *** as follows:

"*** Trip setpoint is to be established such that the actual submission dose rate would not exceed 10 MR/hr in the containment building. For containment purge in vent the setpoint value may be increased up to twice the maximum concentration activity in the containment determined by the sample analysis performed prior to each release in accordance with Table 4.11-2 provided the value does not exceed 10% of the equivalent limits of Specification 3.11.2.1a in accordance with the methodology and parameters in the ODCM."

Table 3.3-6, ACTION STATEMENTS, Page 3/4 3-49

delete ACTION 26

change ACTION 27 to read as follows:

"With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, comply with action statements for Specification 3.7.7, as appropriate."

delete ACTION 29

Table 4.3-3

delete RCS Leakage Detection (1.b 1) and 2)) and Purge and Exhaust Ventilation 2, a and b.

Specification 3.3.3.2(p. 3/4 3-51)

3/4.3.3.2, Moveable Incore Detectors

Surveillance 4.3.3.2 requires that the MID system be shown operable at least once per 24 hours when required for monitoring. Since the intent of this specification is to show the MID system operable within 24 hours of use the following wording changes are suggested, "...demonstrated OPERABLE within 24 hours, ..., when required for". Then eliminate the possible interpretation that it must be demonstrated operable every 24 hours.

Specification 3.3.3.3

see Byrons - it was revised since the surveillances aren't performed in the strictest definition of the tests. (i.e., CHANNEL CALIBRATION, etc.)

Surveillance 4.3.3.5.2

delete "including the actuated components".

Table 3.3-9

the MINIMUM CHANNELS OPERABLE column requires 100 percent OPERABILITY for Modes 1, 2, and 3. How will this be tested? Channel check or Functional?

Table 4.3-9, Page 3/4 3-59

item 5:

change "Average" to "Wide Range"

item 5:

change TOTAL NO. OF CHANNELS and MINIMUM CHANNELS OPERABLE to 1/loop

add to item 5:

a. Hot Leg
b. Cold Leg

item 14:

change TOTAL NO. OF CHANNELS and MINIMUM CHANNELS OPERABLE to 2/stm gen

Table 4.3-6, Page 3/4 3-60

change item 3 CHANNEL CHECK to read: "M*"

add footnote* to bottom of page to read:

"* When below P-6"

Specification 3.3.3.6

the following changes are made to the action statements to accommodate brief plant computer outages.

ACTION a. modified to read:

"...channels, except the RCS subcooling monitor, less than the Required Number of Channels..."

ACTION b. modified to read:

"...high range radiation monitor, RCS subcooling monitor, and the..."

Insert new ACTION c:

C. With the RCS subcooling margin monitor inoperable, the margin shall be verified at least once per 12 hours until the monitor is restored to OPERABLE STATUS. With the monitor inoperable for more than 2 hours, prepare and submit to the NRC within 14 days, pursuant to specification 6.9.2, a special report outlining the cause of the malfunction and the plans for restoring the channel to OPERABLE STATUS.

Reliable the old ACTION C and D to D and E.

Table 3.3-10, Page 3/4 3-62

change TOTAL NO. OF CHANNELS column to read: REQUIRED NO. OF CHANNELS
change item 13 to read:

PORV Position Indicator*

item 13:

change REQUIRED NO. OF CHANNELS to 1/valve

change item 14 to read:

PORV Block Valve Position Indicator**

item 14:

change REQUIRED NO. OF CHANNELS to 1/valve

item 15:

change REQUIRED NO. OF CHANNELS to 1/valve

add footnotes * and ** at bottom of page as follows:

* Not applicable if the associated block valve is in the closed position.

** Not applicable if the block valve is verified in the closed position and

Table 4.3-7, Page 3/4 3-64

change item 13 to read as follows:

"PORV Position Indicator*"

item 13:

change CHANNEL CALIBRATION to N.A.

change item 14 to read as follows:

"PORV Block Valve Position Indicator**"

item 14:

change CHANNEL CALIBRATION to N.A.

item 15:

change CHANNEL CALIBRATION to N.A.

Specification 3.3.3.7

This specification should be labeled (OPTIONAL).

Specification 3.3.3.8, Page 3/4 3-67

change ACTION a. to read:

"With any, but not more than one-half....unless the instrument(s) is located inside the containment."

add to ACTION:

c. With an automatic suppression system inoperable due to the inoperability of Function B detectors within a given zone, comply with the Actions stated in 3.7.11.2, 3.7.11.3, or 3.7.11.4 as applicable unless inside containment, then inspect that containment zone at least once per 8 hours (or monitor the containment air temperature at least once per hour at the locations listed in Specification 4.6.1.6).

change "c. The provisions of Specifications ..." in ACTION to "d".

Surveillance Requirements, Page 3/4 3-67

change 4.3.3.8.1 to read as follows:

"Each of the above required smoke detection instruments ..."

add 4.3.3.8.4 to read as follows:

"Repeat SR 4.3.3.8.1 replacing all of the smoke with one of the infrared, thermal, , etc. per zone. Add additional sentence: "Detectors shall be selected from the previously untested instruments until all infrared or thermal, or etc. detectors have been tested".

Specification 3.3.3.8

ACTION C is added to provide consistency between detectors and activated equipment. A distinction is made between smoke and non-smoke fire detectors. NFPA requires semi-annual testing for all smoke, but only one non-smoke per zone.

Table 3.3-11(p. 3/4 3-68)

change X/Y to A/B for Number of Function A and Function B. This is a Human factor concern.

Table 3.3-11(p. 3/4 3-68)

Table 3.3-11, Fire Detection Instruments

It is suggested that this table be deleted since it is merely a listing of instruments and does not contain vital information.

Specification 3.3.3.9(p. 3/4 3-69)

3/4.3.3.9, Loose Parts Detection System

It is recommended that this specification be deleted since its contribution to safer plant operation is questionable.

Surveillance 4.3.3.9

"An ANALOG CHANNEL OPERATIONAL TEST except for verification of Setpoint at least once per 31 days, and"

Table 3.3-12, ACTION STATEMENTS

ACTION 35 -

"...for up to 30 days..."

ACTION 36 -

...up to 30 days at a lower limit specified in Table 4.11-1."

The above changes require a 30 day action time to be consistent with the other gaseous effluent action statements. All detectors should be at the LLD's specified in Table 4.11-1 for consistency.

Table 3.3-13

delete the following instruments from the Table:

IIb, Iodine Sampler
1c, Particulate Sampler
1e, Sampler Flow Rate measuring device
5b
5c
5e

Samplers are not required if batch sample and analysis is done prior to each release in accordance with 3.11.2.1, and release goes out plant vent stack. Items 3b, 3c, and 3e should be annotated with *** in the APPLICABILITY column.

***At all times other than when the most recent secondary coolant system specific activity sample and analysis program gross radioactivity determination is less than or equal to 1 x 10^{-4} Ci/gm.

Table 3.3-13, TABLE NOTATIONS

ACTION 45 should have 30 days to be consistent with the other actions.

ACTION 47 should be rewritten as follows since radioactivity is not defined:

"...are analyzed for noble gas gross radioactivity or an isotopic analysis is performed with LLD's as given in Table 4.11.2"

ACTION 48 should be modifieo to read:

"...immediately suspend PURGING or VENTING of radioactive effluents via this pathway."

Table 4.3-9

delete the following instruments:

1.b
1.c
1.e
5.b
5.c
5.e

annotate 3b, 3c, and 3e with ***

Table 4.3-9, TABLE NOTATIONS

ADD ***:

***At all times other than when the most recent secondary coolant system activity sample and analysis program gross radioactivity determination is less than or equal to 1 x 10^{-6} Ci/gm.

Specification 3.3.4

This should be optional Specification.

Turbine overspeed protection should be as plant specific spec. GDC 4 does not specify turbine overspeed protection. Protection can come from passive measures such as plant layout. Valve testing should be monthly in accordance with W recommendations. Item b is redundant to a.

Recent efforts by both Kansas Gas and Electric (Callaway-G.E. turbine) and Alabama Power Company (Farley-Westinghouse turbine) have resulted in the deletion of the surveillance requirements of 4.3.4 in favor of testing as specified in a turbine overspeed protection reliability program. We recommend that these efforts be recognized in the Standard Technical Specifications by replacing the present surveillance requirements with a reference to a Turbine Overspeed Protection Reliability Program.

Surveillance 4.3.4.2

4.3.4.2.a should read:

> "During Turbine operation at least once per 31 days by direct observation of the movement of the following valves..."

Specification 3.4.1.1

Action Statement requires the plant to be in Hot Standby within six (6) hours; VCSNS Technical Specifications require Hot Standby within one (1) hour. There appears to be no change in the Bases.

Specification 3.4.1.2

Should require all RCPs or have plant specific 2 loop analysis or have remedial action to tag out Rod Control System or open reactor trip breakers.

Annotate APPLICABILITY with **

Add footnote:

**See special test exception Specification 3.10.4.

Specification 3.4.1.3(p. 3/4 4-3)

3.4.1.3e

RHR Loop [A], and/or

**A...is less than [50]°F above..."

Specification 3.4.1.3(p. 3/4 4-3)

3/4.4.1.3, Reactor Coolant System

The action statement for this specification forces the plant to Cold Shutdown if only 1 RHR Train is operable. It is suggested that the phrase, "if the remaining OPERABLE loop is an RHR loop, be in COLD SHUTDOWN within 24 hours" be deleted. It would be safer to remain in Mode 4 where more heat removal paths are capable of functioning than to go to Mode 5 and be forced to rely on a single heat removal source. Also compliance with the action may not be possible if all cooling paths are lost as it is now stated since cooldown to below 200°F would not be possible.

Surveillance 4.4.1.3.1

STS has no requirement to check breaker alignment for RHR pump.

Surveillance 4.4.1.3.1

"...Coolant pump(s), and/or RHR pumps, if not..."

Surveillance 4.4.1.3.2

"...secondary side narrow range water level..."

Surveillance 3.4.1.4.1

3/4.1.4.1.b

"...The secondary side narrow range water..."

Specification 3.4.1.5(p. 3/4 4-7)

see Byron's Unit 1 Technical Specification.

Specification 3.4.1.5(p. 3/4 4-7)

3/4.4.1.5 and 3/4.4.1.6, Isolated Loop

It is recommended that the word "optional" in the table be replaced with, "For plants with Reactor Coolant Loop Isolation Valves". this is less ambiguous than optional. This change should be made in the bases as well.

Specification 3.4.1.6

see Byron's Unit 1 Technical Specification.

Specification 3.4.2.1(p. 3/4 4-9)

delete footnote* and its use in the L.C.O.

modify the ACTION statement to read:

"...shutdown cooling mode, or place the overpressurization system into operation."

Specification 3.4.2.1(p. 3/4 4-9)

3/4.4.2.1, Pressurizer Safety Valves

It is recommended that this specification be deleted. In Modes 4 and 5 the cold overpressure mitigation system will be operable for overpressure protection. The action statement for this specification requires RHR to be placed in operation. Other specifications already requiring RHR operation in these modes. This specification does little if anything to ensure safe plant operation.

Specification 3.4.2.2(p. 3/4 4-10)

delete footnote * and its use in L.C.O.

add footnote b to eliminate catch 22.

b. The provisions of specification 3.0.4 may be suspended for up to 18 hours per value for entry into and during operations in MODE 3 for the purposes of setting the pressurizer code safety valves under ambient (hot) conditions provided cold setting was made prior to heatup.

Specification 3.4.2.2(p. 3/4 4-10)

3/4.2.2, Pressurizer Safety Valves

It is suggested that the phrase, "within 15 minutes" be deleted from the action. These words add nothing to the real action which is to return the valve to operable status or be shutdown in 6 hours, they only confuse the issue.

Specification 3.4.3(p. 3/4 4-11)

change the L.C.O. to read:

"The pressurizer shall be OPERABLE with a water level of less than or equal to [92]%, and ..."

change ACTION a to read:

"With less than two groups of pressurizer heaters..."

Specification 3.4.3(p. 3/4 4-11)

3/4.4.3, Pressurizer

The requirement to test heater capacity every 92 days seems overly restrictive in view of the excess heater capacity beyond 150 kw which is installed in the plant. It is recommended that this be an 18 month surveillance. Surveillance 4.4.3.3 should be bracketed to indicate the plant specific nature of heater power design.

Specification 3.4.5(p. 3/4 4-14)

The Steam Generators are required to be OPERABLE in MODES 1, 2, 3, and 4, but the surveillances can only be done when in cold shutdown. there seems to be a conflict.

Specification 3.4.5(p. 3/4 4-14)

3/4.4.5, Steam Generators - See Attachment 2, Item 6

Also, it is suggested that any place it refers to tube plugging, the words, "or repair" be added to allow this alternate.

Surveillance 4.4.5.2.6.1)

"...penetrations (greater than 20% of wall thickness),..."

note on Page 3/4 4-15

"...(greater than 10%) further degradation..."

Surveillance 4.4.5.3.c.1

"Reactor to secondary tube leaks (not ... Specification 3.4.6.2.c, or ..."

Surveillance 4.4.5.3.c.3

"A Condition IV loss-of-coolant ..."

Surveillance 4.4.5.3.c.4

"A Condition IV main steam ..."

Surveillance 4.4.5.4

change title from Acceptance Criteria to Definitions

4.4.5.4.a.7 and .8 delete the last work in each of these items (above, and).

4.4.5.4.2.9

"Preservice Inspection means a tube inspection of each tube in each steam ..."

Table 4.4-2

delete "& 50.72(b)(2) of 10 CFR Part 50" and insert "Specification 6.9.2 in its place in the ACTION REQUIRED column.

Specification 3.4.6.1(p. 3/4 4-21)

see Byron s ACTION statements. They provide clarification for the different combinations of systems.

Specification 3.4.6.1(p. 3/4 4-21)

3/4.4.6.1, RCS Leakage Detection System

This specification is very confusing. Can a gaseous monitor be used to satisfy both L.C.O. a. and c. or can the gaseous monitor be used to satisfy only one condition. The action is written in in a way that could be interpreted to apply only to gaseous or particulate monitors and not for instance the Containment Pocket Sump Level Monitor. Suggest revision of this specification be made on the bases expanded to make the interpretation clear.

Surveillance 4.4.6.1.a

"...OPERATIONAL TEST once per shift, every month, and once per refueling outage, respectively."

Specification 3.4.6.2(p. 3/4 4-22)

Specification 3/4.4.6.2: Recent efforts by Alabama Power Company have resulted in a relaxation of the pressure isolation valve leakage limit from 1 GPM to 0.5 GPM per inch of nominal valve size up to a maximum of 5 GPM. The SER to the license amendments for both Farley Units 1 and 2 recognized the conclusion of a study performed by EG&G which endorsed the new leakage limit. the original 1 GPM limit, in the words of the NRC, is not an indicator of imminent accelerated deterioration or potential valve failure. Allowable leak rates based on valve size are superior to a single allowable value because a single allowable value imposes an unjustified penalty on larger valves without providing information on potential valve degradation. Also, the larger valves must be repaired in place which subjects plant personnel to radiation exposure in order to meet an overly conservative standard.

3.4.6.2.c

"...any one steam generator (not isolated from the Reactor Coolant System)."

3.4.6.2.e

"[40] gpm CONTROLLED..."

3.4.6.2.f

"As specified in Table 3.4-1* for any reactor coolant system pressure isolation valve."

ACTION b

"...reduce the leakage rate to within limits within 24 hours..."

ACTION c

"...greater than the above limit, reduce the leakage rates to within limits within 4 hours, or be in at least HOT STANDBY..."

add footnote *

* Test pressures less than 2235 psig but greater than 350 psig are allowed. Observed leakage shall be adjusted for the actual test pressure up to 2235 psig assuming the leakage to be directly proportioned to pressure differential to the one-half power.

Specification 3.4.6.2(p. 3/4 4-22)

3/4.4.6.2, Operational Leakage - See Attachment 2, Item 1

Also, it is recommended that the pressure boundary valve specifications be revised in accordance with recent studies which suggest a leakage limit of 1/2 gpm per inch of valve diameter. The 1 gpm limit has no bases other than engineering judgement and lends itself to revision in the presence of data. It is felt that the specified testing is too restrictive and not indicative of plant design and operational experience. Testing within 24 hours of flow through a valve is severe if overall RCS leakage is within spec and there is no reason to assume valve failure.

Surveillance 4.4.6.2.2.d

"Within 7 days following..."

Table 3.4-2

Why are steady state limits for O_2 and CL not $\leq$ instead of $<$.

Table 3.4-2 - "Reactor Coolant System Chemistry Limits," coincide with Westinghouse recommendations that existed prior to February, 1977. They are less restrictive than current Westinghouse recommendations and do not reflect the "state of the art" requirements for primary system chemistry control. SCE&G's current Technical Specifications reflect the old data also.

Specification 3.4.8

there is an * on the MODE statement with no corresponding note.

specific activity is a plant specific number and should be in brackets.

insert footnote *

* With Tave greater than or equal to 500°F.

delete "of gross radioactivity" in L.C.O. 3.4.8.b.

~~Table 4.4-4~~

~~modify Table 4.4-4 as per attachment.~~

Surveillance 4.4.9.1.2

"...shall be used to update Figures 3.4-2, 3.4-3, and 3.4-4."

Table 4.4-5(p. 3/4 4-37)

Table 4.4-5, Reactor Vessel Material Surveillance Program - Withdrawal Schedule

It is recommended that this table be deleted since specimen withdrawal must be in accordance with 10 CFR50 Appendix H and ASTM E185. Inclusion of the table adds no new information or requirements and so is unnecessary.

Specification 3.4.9.2(p. 3/4 4-37)

Spray differential temperature limit should reflect the analysis.

The spray water delta-T limit should be the maximum analyzed for any number of cycles. The 320°F limit is typically associated with an unlimited number of cycles.

The L.C.O. should allow operation greater than this value for the number of cycles specified in Table 5.7-1. The delta-t should be eliminated if it is greater than ~ 620°F because this kind of delta-T is not possible to obtain.

substitute 620 for 320 in L.C.O. 3.4.9.2.c.

Specification 3.4.9.2(p. 3/4 4-37)

Table 3/4.4.9.2, Pressurizer

It is suggested that L.C.O. item c be revised to, "A maximum auxiliary spray water..." since only auxiliary spray water temperature is monitored via surveillance. This change should be made in the bases also.

Specification 3.4.9.3

The RHR Suction Relief Valve should be included in this specification (see Byron, Unit 1).

Assume this means the vent to be open not just operable, otherwise why allow "a vent" while requiring 2 PORVs. Should allow a flexible/variable setpoint. Reporting should be pursuant to 10 CFR50.72 and 73 not special reports.

Add surveillances on RHR reliefs (see Byron).

Specification 3.4.10(p. 3/4 4-40)

3/4.4.10, Structural Integrity

It is suggested that this specification be deleted since it does not place restrictions on component not already addressed by either other technical specifications, Section XI or regulations.

Surveillance 4.4.10

change to read:

4.4.10 In addition to the requirements of Specification 4.0.5, each reactor coolant pump flywheel shall be inspected as follows:

a. Volumetric examination of the areas of higher stress concentration at the bore and keyways will be performed each 40 month period during refueling or maintenance shutdowns coinciding with the service inspection schedule as required by Section XI of the ASME Code.

b. Visual examination of all exposed surfaces will be performed and a surface examination of the bore and keyway surfaces will be performed whenever the flywheels are removed for maintenance purposes, but not more frequently than once each 10 year interval.

Specification 3.4.11

W PWR's have two vent locations: vessel head and pressurizer steam space. The pressurizer vent is addressed in spec 3.4.4 for the pressurizer PORV. The head vent is only needed for modes 1, 2, and 3 (see spec 3.4.4). The requirement to cycle the valves every 92 days should be deleted as excessive testing. The pressurizer PORV can open on its own and the block valve is needed if it fails open. The head vent on the other hand will be opened by the operator and it is unlikely to fail under these conditions.

Surveillance Requirements 4.4.11.2.b (18-month testing) is considered unnecessary. The same test is performed every 92 days by Requirement 4.4.11.1. Even though the test performed by Surveillance Requirement 4.4.11.1 can be temporarily suspended by ACTION Statements a. or b., neither of these ACTION statements could extend the surveillance interval longer than 30 days past the 92-day requirement. Therefore, Surveillance Requirement 4.4.11.2.b is considered duplicative and unnecessary unless Requirement 4.4.11.1 is modified as discussed below.

Surveillance Requirement 4.4.11.1 would require cycling vent valves every 92 days with no restriction on Reactor Coolant System pressure. This raises the concern of valve wear due to cycling the valves against high Reactor Coolant System pressures (2200+ psig).

Some plants use the pressurizer power-operated relief valves (PORVs) to meet the Technical Specification requirement for capability of venting the pressurizer. Post-TMI requirements have deleted the requirement to cycle the PORVs at high pressures. this Technical Specification, as written, would require cycling of the PORVs at possible high pressures. Additionally, based on lessons learned from TMI, it would be prudent to not cycle any vent valves at high Reactor Coolant System pressures.

It is recommended that Surveillance Requirement 4.4.11.1 be deleted, and that Requirement 4.4.12.2 be modified to only cycle the valves at reduced pressures. this should be acceptable since these vents were installed to vent noncondensable gases during low-pressure conditions and need not be verified capable of venting high-pressure fluids.

Specification 3.4.11, Page 3/4 4-41

3.4.11 should read as follows:

> "Two Reactor Coolant System head vent paths consisting of [two] vent ... and closed."

delete items a., b., and c.

delete "and 4" from APPLICABILITY

change ACTION a to read as follows:

"With one of the above Reactor Coolant Systems head vent paths inoperable, STARTUP ... and in HOT SHUTDOWN within the following 30 hours."

Specification 3.5.1(p. 3/4 5-1)

3/4.5.1, Accumulators

It is suggested that the word, "immediately" in the second action statement be deleted. It does not add anything to the real action to either open the valve or be in HOT STANDBY within 6 hours since if the valve were opened anytime during the 6 hours the remainder of the action would not have to be complied with. It is suggested that Surveillance Requirement 4.5.1.1.a.1) be modified as follows, "Verifying, by the absence of alarms or by indicators, ...". This would give the utility the option to use either alarms or the indicators to satisfy the surveillance. Surveillance Requirement 4.5.1.2 requires that each accumulator level and pressure channel be operable. If one channel fails the utility must apply the action statement. This is very severe for an indicator and not consistent with other specifications. It is suggested that credit be allowed for the redundancy present (2 pressure and 2 level channels typically) such that one of each channel could fail and not require action in accordance with the action statement. This could be accomplished by changing the surveillance to read, "at least one each accumulator water level and pressure channel shall be demonstrated operable", or by adding, "c. The provisions of Specification 4.0.3 are not applicable", or by deleting the requirement. In either case, the requirement to monitor level and pressure via alarms or indicators will still be present and not remove the responsibility to maintain monitoring ability.

Specification 3.5.2(p. 3/4 5-5)

3/4.5.2, ECCS Subsystems - See Attachment 2, Item 1

Specification 3.5.4.1(p. 3/4 5-11)

3/4.5.4, Boron Injection System - See Attachment 2, Item 11

Specification 3.5.4.2(p. 3/4 5-12)

3/4.5.4, Heat Tracing - See Attachment 2, Item 11

SECTION 3/4.6A

ATMOSPHERIC TYPE CONTAINMENT

Specification 3.6.1.2(p. 3/4 6-2)

3/4.6.1.2, Containment Leakage - See Attachment 2, Item 6

Specification 3.6.1.4(p. 3/4 6-7)

3/4.6.1.4, Containment Isolation Valve and Channel Weld Pressurization Systems - See Attachment 2, Item 11

The technical specifications should not reference a method specified in 10 CFR Part 50 Appendix J. The current CFR referenced ANSI N45.4-(1972). The proposed CFR changes references ANS 56.8. Referencing a standard in the technical specifications will lead to unnecessary technical specification changes if and when the CFR changes without any additional regulatory benefit. Requiring compliance with appendix J requires compliance with the method designated in CFR.

4.6.1.3

It should read "demonstrated OPERABLE except for airlocks using continuous leakage monitoring systems:

4.6.1.3.a

This surveillance should be modified to incorporate the provisions of 10 CFR Part 50 Appendix J paragraph III.B.(c).

STS uses a 3.0 sec. leak time. This doesn't seem to be sufficient time to measure leakage.

Is the 3.0 sec. correct or should it be 30.0 sec.

See (**),the note should read "III.D.2(b)(ii)

Better to measure the air flow needed to maintain the constant pressure, and forget the time requirement.

GENERAL COMMENTS

Chicago Bridge and Iron(CBI the manufacturer) does not recommend testing door seals above 10 PSIG. The higher pressure test will unseat the door and blow out the gasket. To do the high pressure test, you seal the door tighter, which increases wear on the gasket.

Specification 3.6.1.7(p. 3/4 6-10)

3/4.6.1.7, Containment Vessel Structural Integrity

This specification contains surveillances which are very subjective. Specifically surveillance 4.6.1.7.1.b.1) and 2), 4.6.1.7.1.e and 4.6.1.7.2. Specifications such as these are subject to interpretations. It is suggested that all such surveillances be revised to more quantitative or deleted.

4.6.1.7.1.e

How do you test this?

4.6.1.7.2(Reinforced concrete containment)

Purge the Special Report requirements.

4.6.1.7.4

deleted

3.6.1.8

(a) Replace "...and sealed closed," with, "...and power removed,"

ACTION:

a. Change to read "... purge supply and/or exhaust isolation valves open and/or powered,close and remove power to that..."

comments:

What is the basis for the 1000(see"*"),5000 and 250 hours?

What is needed to increase these hours?

Purge valves should not be required OPERABLE, closed is better.(atmospheric containment)

Shield Building integrity is vague and adds little assurance beyond what the EGTS L.C.O. already provides.

LCO 3.6.1.8 should require unqualified purge valves to be closed and qualified purge valves to be open indefinitely. The arbitrary and capricious choice of a purge time based on valve size is not a wise regulation. Unless NRC can demonstrate that large qualified valves are more likely to fail in a design basis accident than small qualified valves, no distinction should be made.

Specification 3.6.1.8: The draft Revision 5 bases for this specification state that the purge valves should be used for safety-related reasons only, i.e. reduction of containment pressure, temperature, or activity. In light of this, and the fact that the NRC has provided no technical basis for the allowable purge times versus valve size, we would recommend that the specification be revised such that the purge valves can be opened as dictated by safety-realated concerns only, with no specified time limit. The burden of justifying the use of the purge system to Inspection and Enforcement would be upon the plant operators, but this would allow the operation of the purge system as required. This is further supported by the fact that in a footnote added as part of Revision 5, NRC indicates that additional time may be requested based on operational experience.

3.6.1.8.b

Change this to read "...may be open, provided no more than two lines are open at one time for purging and/or venting as required for safety related purposes such as:

1. Maintaining containment pressure within the limits of Specification 3.6.1.4
2. Reducing the containment atmosphere airborne radioactive and gaseous material to an acceptable level for personnel safety."

ACTION:

b. Change to read "...and/or exhaust isolation valve(s) open for reasons other than those stated in Specification 3.6.1.7.b, close the open..."

comments:

Containment Ventilation Systems(LCO) page 3/4 6-17A:

As written in draft Rev. 5 the big containment purge valves cannot be open during modes 1,2,3 and 4. This is contrary to past NRC guidance which permitted limited purging through the 36"/42" purge valves if

they were demonstrated capable of closing against LOCA and if purging was for safety related reasons.

3.6.1.8

a. Change to read "Each containment shutdown purge supply and exhaust isolation valve required to be closed shall be closed and sealed..."

ACTION:

a. Change to read,"With a containment purge supply and/or exhaust isolation valve required to be closed, open or not sealed..."

3.6.1.8.b

Technical Specification 3.6.1.8 wording could be interpreted as requiring that valve open time during MODES 5 and 6 should also be added when determining the total time the valves have been open in the "calendar year". The Specification should be reworded to make it clear that valve open time is only added up in MODES 1 through 4. A suggested change to Specification 3.6.1.8.b is shown below.

b. The [8-inch]* containment purge supply and exhaust isolation valve(s) may be open during MODES 1 through 4 for up to [1000]* hours during a calendar year provided no more than one pair (one supply and one exhaust) are open at one time.

4.6.1.8.1

Change to read "Each containment purge supply and exhaust isolation valve required to be closed..."

The wording "...sealed closed and closed at least once per 31 days." seems awkward.

4.6.1.8.3 + .4

.01 L_a at P_a seems unrealistically small, this surveillance should be in 3.6.4 with the other CIV's. Leakage through purge valves should be added to other B and C type penetrations per 10 CFR 50 APP. J items II.H.1, III. B.3, and III.C.3.

4.6.2.1

Pump discharge pressure does not need to be seperately specified if sufficient pump margin exist to make the degradation allowed by ASME section XI to be controlling. The technical specifications should only specify a test pressure if it is more limiting than the ASME SECTION XI requirements. (note affected pages are 19A,21A,17B, 19B, 21C,23C,14D,16D)

3.6.2.3 (page 3/4 6-23A)

ACTION

c. Change 72 hrs to 7 days. Omit the last sentence.

3.6.2.3 (page 3/4 6-23A)

3/4.6.2.3, Containment Coolant System - See Attachment 2, Item 11

3.6.3(p. 3/4 6-25)

3/4.6.3, Iodine Cleanup System - See Attachment 2, Item 11

4.6.3.b.3

Change to read "...ANSI N510-1980."

Specifications 3/4.6.3,3/4.7.7,3/4.7.8 and 3/4.9.12: references to Regulatory Positions in Regulatory Guide 1.55 should be replaced by references to the applicable sections of the appropriate ANSI standard.

4.6.3.d.1

Change to read "...ANSI N510-1980."

Change 4.6.3.e and 4.6.3.f similarly to the above.

3.6.4(p. 3/4 6-27)

ACTION

Change to read as follows:

a. "...penetration that is open and within 4 hours:"

1. Remove the four hour limit
2. Remove the four hour limit
3. Remove the four hour limit

OTHER WISE

Be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. The provisions of Specification 3.0.4 are not applicable provided that within 4 hours the affected penetration is isolated in accordance with ACTION a.2 or a.3 above and provided that the associated system, if applicable, is declared inoperable and the appropriate ACTION statements for that system are applied.

3.6.4(p. 3/4 6-27)

Table 3.6-1, Containment Isolation Valves

If this table cannot be deleted in its entirety from the technical specifications, then it should be limited to only automatic valves for which a response time is provided. Inclusion of other valves serves no real function other than to increase the length of the table. See Attachment 2, Item 13.

4.6.4.2

Change to read as follows:

Isolation valves specified in Table 3.6-1 that activate on a Phase"A", Phase"B" or containment purge and Exhaust isolation test signal shall be demonstrated...

The table 3.6-1 has some redundant parts. See 4.6.1.1, also see 6-28B,6-26C and 24D.

4.6.5.1

Both (a) and (b) should begin with the word "approximately".

4.6.5.2.a

Change to read as follows:

"...Upon reaching [700]-F,increase the temperature controller to maximum setting for ..."

4.6.5.3.b.3

Change to read:"...with ANSI N510-1980."

Make the same correction for all references to the ANSI standard in the specification.

3.6.5.4(p. 3/4 6-34)

3/4.6.5.4, Hydrogen Mixing System - See Attachment 2, Item 11

3.6.6(p. 3/4 6-35)

3/4.6.6, Penetration Room Exhaust Air Cleanup System - See Attachment 2, Item 11

4.6.6

Change all references to ANSI N510-1975 to ANSI N510-1980.

3.6.7(p. 3/4 6-37)

3/4.6.7, Vacuum Relief Valves - See Attachment 2, Item 11

CONTAINMENT SYSTEMS SPECIFICATIONS
FOR
WESTINGHOUSE
ICE CONDENSER TYPE CONTAINMENTS

3.6.1.2

The technical specification should not reference a method specified in 10 CFR Part 50 Appendix J. The current CFR referenced ANSI N45.4-(1972). The proposed CFR change references ANS 56.8. Referencing a standard in the technical specification will lead to unnecessary technical specification changes if and when the CFR changes without any additional regulatory benefit. Requiring compliances with Appendix J requires compliance with the method designated in CFR.

4.6.2.1 (P. 3/4 6-19B)

Pump discharge pressure does not need to be seperately specified if sufficient pump margin exist to make the degradation allowed by ASME section XI to be controlling. The technical specifications should only specify a test pressure if it is more limiting than the ASME section XI requirements.

3.6.5.2(p.3/4 6-30B)

A second action statement is warranted because of the distributed ignition system specification(3.6.5.3) and it's more restrictive action statement.

ACTION

Rewrite as follows:

a. With one...6 hours.
b. With both Hydrogen Recombiners Systems inoperable, restore at least one system to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours.

4.6.7.3.1(p. 3/4 6-40b)

Rewrite as follows:

a. no change

b. Demonstrated OPERABLE at least once per 9 months by:

1) no change

2) no change

3) In the first sentence change 25% to 50%.
In the last sentence change four to two.

4) Revise similarly to 3 above.

4.6.7.6(p. 3/4 6-44b)

Surveillance items (a) and (d) should only be performed once every 18 months. This interval is consistent with all other automatically actuated equiptment (e.g. surveillance 4.5.2.e). The fan speed requirement should be optional. It is only required for belt-driven fans. For vane axial fans, motor current is as good an indicator of fan speed.

SECTION 3/4.6C
CONTAINMENT SYSTEMS SPECIFICATIONS
FOR
WESTINGHOUSE
SUBATMOSPHERIC TYPE CONTAINMENT

4.6.1.2(p. 3/4 6-2C)

This surveillance references an incorrect standard.

4.6.1.3(p. 3/4 6-6C)

Change to read:

Each containment...OPERABLE except for air locks using continuous leakage monitoring systems.

3.6.1.8(p. 3/4 6-19)

Change to read as follows:

a. Each containment...exhaus isolation valve required to be closed shall...

ACTION

a. With a containment ...exhaust isolation valve required to be closed, open or...

4.6.1.8.1(p. 3/4 6-20C)

Revise as follows:

The containment purge supply and exhaust isolation valves required to be closed shall be ...

4.6.1.8.3(p. 3/4 6-20C)

Remove "42 inch"

4.6.2.1(p. 3/4 6-21C)
Pump discharge pressure does not need to be seperately specified if sufficient pump margin exist to make the degradation allowed by AMSE section XI to be controlling. The technical specifications should only specify a test pressure if it is more limiting than the ASME section XI requirements.

4.6.2.2(p. 3/4 6-22C)
Pump discharge pressure does not need to be seperately specified if sufficient pump margin exist to make the degradation allowed by ASME section XI to be controlling. The technical specifications should only specify a test pressure if it is more limiting than the ASME section XI requirements.

3.6.3(p. 3/4 6-24C)
In table 3.6-1 delete items 4 and 5.

SECTION 3/4.6D
CONTAINMENT SYSTEMS SPECIFICATIONS
FOR
WESTINGHOUSE
DUAL TYPE CONTAINMENT

4.6.1.2(p. 3/4 63D)
The surveillance refers to the incorrect standard.

4.6.1.3(p. 3/4 6-7D)
Change to read:
Each containment...OPERABLE except for air locks using continuous leakage monitoring systems.

3.6.1.7(p. 3/4 6-11D)

ACTION

With the.....limits within 24 hours or be in at least HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.

3.6.1.8(p. 3/4 6-12D)

Change to read as follows:

a. Each containment...exhaust isolation valve required to be closed shall...

ACTION

a. With a contaiment ...exhaust isolation valve required to be closed, open or...

4.6.1.8.1(p. 3/4 6-13D)

Revise as follows:

The containment purge supply and exhaust isolation valves required to be closed shall be ...

4.6.1.8.3(p. 3/4 6-13D)

Remove "42 inch"

4.6.2.1(p. 3/4 6-14D)

Pump discharge pressure does not need to be seperately specified if sufficient pump margin exist to make the degradation allowed by ASME section XI to be controlling. The technical specifications should only specify a test pressure if it is more limiting than the ASME section XI requirements.

4.6.2.1(p. 3/4 6-16D)

Pump discharge pressure does not need to be seperately specified if sufficient pump margin exist to make the degradation allowed by ASME section XI to be controlling. The technical specifications should only specify a test pressure if it is more limiting than the ASME section XI requirements.

3.6.4(p. 3/4 6-22D)
In table 3.6-2 delete items 4 and5.

SECTION 3/4.7 PLANT SYSTEMS

3.7.1.1(p. 3/4 7-1)

3/4.7.1.1, Safety Valves

It is recommended that this specification be replaced by Specification 3/4.7.1.1 provided as Item 12 of Attachment 2. The revised specification allows operation in Modes 2 and 3 provided at least 1 safety valve is operable without resetting reactor trip setpoints. Resulting trip setpoints in these modes is not necessary since the low power setpoints will be active. Also, forcing the plant to COLD SHUTDOWN in the action is unnecessary since the specification is applicable in Modes 1, 2, and 3 only. The revised specification correctly replaces COLD SHUTDOWN with HOT SHUTDOWN.

4.7.1.2.1(p. 3/4 7-4)
The surveillance should reference 4.0.5. IWP-1100, scope, states that Section XI pump testing is applicable pumps "that are required to perform a specific function in shutting down a reactor or in mitigating the consequences of an accident and are provided with an emergency power source." This definition fits the aux. feedwater

pumps. Pump differential pressure does not need to be seperately specified if sufficient pump margin exist to make the degradation allowed by ASME XI to be controlling. The technical specifications should only specify a test pressure if it is more limiting than the section XI requirements.

4.7.1.2.1(p. 3/4 7-4)

Change to read:

1) Verify that each motor-driven pump develops a differential pressure of greater than or equal to _____psid at a flow of greater than or equal to _____ gpm; on recirculation flow when tested pursuant to specification 4.0.5.
2) Change discharge pressure to differential pressure. Change "psig" to "psid".

4.7.1.2.1(p. 3/4 7-4)

Change to read:

a. By testing pursuant to Specification 4.0.5.
    1) no change
    2) Verifying.....applicable to the steam turbine-driven pump for entry into MODE 3.
    3) no change
    4) no change
b. no change
    1) no change
    2) Verifying that each auxiliary feedwater pump starts as designed automatically upon receipt of the following Auxiliary Feedwater Actuation test signals:
        a) _____
        b) _____

3.7.1.3(p. 3/4 7-6)

The CST should be optional. It is only required if the site does not have a qualified river water source.

3.7.1.3(p. 3/4 7-6)
Change to read:
The condensate storage tank (CST) shall be OPERABLE with a contained water level of at least 40%.

3.7.1.5(p. 3/4 7-9)

3/4.7.1.5, Main Steam Line Isolation Valves

It is recommended that the Mode 1 ACTION be revised as follows:, "..., otherwise be in MODE 2 within the next 2 hours". The current Mode 1 ACTION could force the plant to HOT SHUTDOWN, however, a specific action for Mode 2 and 3 is provided. The words in the Mode 1 ACTION cause confusion.

4.7.1.5(p. 3/4 7-9)
The closure time should be "5 seconds".

3.7.4(p. 3/4 7-12)
Change all references to "Service Water" to "Essential Service Water".

4.7.4(p. 3/4 7-12)
Change all references to "Service Water" to "Essential Service Water".

Add the following:

c. At least once per 31 days, by verifying that each cooling tower fans operates for at least 15 minutes and at least once per 18 months by visually inspecting and verifying no abnormal breakage or degradation of the fill materials in the cooling

tower.

3.7.5(p. 3/4 7-13)

3/4.7.5, Ultimate Heat Sink - See Attachment 2, Item 11

3.7.6(p. 3/4 7-14)

3/4.7.6, Flood Protection - See Attachment 2, Item 11

4.7.7(p. 3/4 7-15)
Change all references to "ANSI N510-1975" to "ANSI N510-1980".

4.7.7.a(p. 3/4 7-15)
The temperature limit specified in this surveillance should be based on ultimate human occupancy or equipment qualification, whichever is more limiting. The 80-F value is more like a creature-comfort value. This is unduly restrictive. Temperatures greater than 80-F would make both trains inoperable and invoke 3.0.3 and immediate shutdown.

4.7.7.a(p. 3/4 7-15)
Change "80-F" to "104-F".

4.7.8(p. 7-18)
Change all references to "ANSI N510-1975" to "ANSI N510-1980".

Revise item "d.2" as follows

2) Verifying that the system starts on manual initiation or a Safety Injection test signal,

4.7.9(p. 3/4 7-20)

The reinspection and additional testing should be based on the causes of failures to meet the acceptance criteria. Factors related to the snubber design and application are usually the basic causes of failure to meet the acceptance criteria. Consequently if company X licenses company to build company X design snubbers, which company X also builds, snubbers supplied by company X or company Y are type X snubbers because they are of the same design. The consideration that all snubbers are to be included is obvious from such provisions as "Each snubbers shall be demonstrated OPERABLE...." and "If all snubbers of each type...". The former exemption for snubbers of 50,000 pound capacity and greater is not currently granted. Differences in capacity alone do not justify classification as a type; however, differences in design in order to provide a specified capacity may justify classification as a type.

Based on not having to remove insulation from the pipe, valve, or other component for the visual inspection, only the visible fasteners should be required to be examined.

If a deficiency (such as a missing cotter pin) is not related as the internal functioning of the snubber, functional testing is not warranted.

The functional test is designed to verify operability of the snubbers. The visual inspection often identifies a condition that requires further investigation. Therefore, the option to verify operability through specific analysis of functional test should be available.

Different types of snubbers may be tested using one of the different sample plans.

Random and representative appear to be mutually exclusive. It is unlikely that the population of a type is large enough and sufficiently homogeneous as to application and environment to make a random sampling plan valid. We prefer to select from among previously untested snubbers and eventually test all snubbers of a

type in a manner similar to the safety valve and ice condenser programs. Repeat testing is not necessary if an isolated or design problem is corrected and the correction is evaluated to be acceptable. Verification by next cycle testing that an application environmental problem has been corrected appears to have merit.

The test program is designed to detect failure mode(s) of the types of snubber being tested. Activation level of Pacific Scientific Corporation (PSC) mechanical snubbers is an inherent function of the snubber design that varies only as a result of a defect of impending defect. Those variances can be detected by the drag force measurement without quantitative testing of the activation level. Therefore, operability of those snubbers can be established by a qualitative rather than a quantitative verification of activation. The proposed program is specific to PSC snubbers, rather than all designs of mechanical snubbers.

The functional requirement for bleed or release rate is that the snubber must not restrict normal thermal movement to the extent of overstressing the attached piping. Therefore, the acceptance criteria for bleed or release rate (drag force) for PSC snubbers were changed to allow forces not great enough to overstress the attached piping or component during thermal movement or to indicate impending failure of the snubber. This change recognizes the range of acceptable drag forces is related to the design of the snubber and it's application in the system. Generally, a maximum drag force of 2 percent of the capacity of the snubber is allowed; however, in some cases greater forces can be shown not to damage the attached pipe or component or to indicate impending failure of a certain snubber.

Sometimes, the earlier test data for hydraulic snubbers in storage has not been the same as later data. Therefore, hydraulic snubbers also should meet their specified acceptance criteria before reinstallation in the unit.

Vendor information is necessary for the basic design; however, the best indication of seal life is plant experience.

NOTE: This comment will also affect pages 3/4 7-22,3/4 7-23,3/4 7-24,B3/4 7-5,b3/4 7-6

4.7.9.(p. 3/4 7-20)

b. Visual Inspections

Change to read:

Snubbers...The first inservice visual inspection of each type of snubber shall be performed after 4 months of commencing POWER OPERATION but before the end of the first refueling outage and shall include all snubbers....shall be be performed at the next refueling outage.

Change the title of the table to "Percent of Inoperable Snubbers of Each Type"

Change the entries in the table mentioned above as follows:

0	changes to	0.43
1	"	" 0.65
2	"	" 1.29
3,4	"	" 1.94
5,6,7	"	" 3.84
8 or more	"	" 7.74

4.7.9.(p. 3/4 7-20)

Change to read:

a. Inspection Types

As...shall include snubbers of the same design of service environment associated with a specific failure mechanism.

b. Visual Inspections

Snubbers...Each type of snubber within these ...

Delete the following items from this page:

* [on any system]
* [of that system]
* [of a given system]
* [on a given system]
* [on that system]

4.7.9.(p. 3/4 7-21)

Change to read:

c. Visual Inspection Acceptance Criteria

Visual... and (3) visible fasteners ... generically susceptible; and (2) if the cause of rejection relates to a functional test parameter the affected...All snubbers connected to an inoperable common hydraulic fluid reservoir shall be counted as inoperable snubbers and evaluated as to OPERABILITY and functionally tested if appropriate.

d. An... visual inspection of the systems within the action time for accessible snubbers and the first outage of 72 hours or more for inaccessible snubbers following detection of such an event. ... (3) delete

e. Functional Test

1) At least 10% of the total of a ...

4.7.9.(p. 3/4 7-21)

Change to read:

d. An ... 6 months following such an event, except in such cases when the snubbers are in inaccessible areas, the visual inspection shall be conducted at the first reactor shutdown greater than 48 hours. In addition...

e. Functional test

During...shall be tested using the following sample plans for

each type.

4.7.9(p. 3/4 7-21)

e. Functional Test(continued)

2) A representative sample of a type...

3) An ... 55 snubbers within a type shall be functionally tested. For each snubber of a type which ...

* last paragraph:

Testing ... The review shall ensure, as far as practicable, that they are representative of the various configurations, operating environments, range size, and capacity of each type and that all snubbers within the types are tested in turn. Snubbers placed in the same location as snubbers which failed the previous functional test shall be retested at the time of the next functional test if the failure is determined by a failure analysis in accordance with 4.7.9.g to be related to the service environment. Those retest shall...

4.7.9.e(p. 3/4 7-21)

Surveillance Requirement 4.7.9.e requires that the NRC Regional Administrator shall be notified in writing of the sample plan selected for each snubber type prior to the plan being implemented.

This is considered an unnecessary burden on operators. The requirements in the Technical Specifications are periodically audited not only by the utility but by the NRC regional office. Based upon the existing reviews conducted with respect to Technical Specification requirements, it is considered unnecessarily burdensome to add to these reviews by having to inform the NRC Regional Administrator prior to implementing Technical Specification requirements.

4.7.9.(p. 3/4 7-23)

f. functional Test Acceptance Criteria

The ...that HYDRAULIC SNUBBERS:

g. add this to the end:

MECHANICAL SNUBBERS (Pacific Science Co.):

1. Activation (restraining action) takes place in both directions of travel.
2. The force required to initiate and maintain motion of the snubber is not great enough to overstress the piping or component during thermal movement or to indicate impending failure of the snubber.
3. For snubbers specifically required not to displace under continuous load, the ability of the snubber to with stand load without displacement.

4.7.9.(p. 3/4 7-24)

h. Functional Testing of Repaired and Replaced Snubbers

Snubbers ... in the unit. Snubbers shall ... and the test must have been ...

4.7.10.3(p. 3/4 7-27)

Delete this unneeded reporting requirement.

3.7.11.1(p. 3/4 7-28)

Should STS agree with NFPA requirements? Technical Specification surveillance frequencies seem to be less restrictive than NFPA.

Change to read:

a. At least [two] fire suppression pumps, with their discharge aligned to the fire suppression header,

b. delete

c. An OPERABLE ...or isolation valves to:

1) The yard hydrant curb valves,

2) The last valve ahead of the water flow alarm device on each sprinkler or hose standpipe, and the

3) The last valve ahead of the deluge valve on each Deluge or Spray System required to be OPERABLE per Specifications 3.7.11.2,3.7.11.5, and 3.7.11.6.

4.7.11.1.1(p. 3/4 7-29)

d. Delete this. This is not required by STS. If obstructions are found they will be discovered by surveillanc (g).

g. At ... Chapter 8, Section 16 of the Fire Protection Handbook, 15th Edition ...

4.7.11.1.1(p. 3/4 7-29)

e. At ... each testable non self indicating valve in...

f.

3) Cycling each non self indicating valve ...

4.7.11.1.1(p. 3/4 7-29)

The purpose of the test, per NRC reviewers is to determining valve position by stroking the valve. This is not necessary for self indicating valves.

note: This comment also pertains to page 3/4 7-31.

4.7.11.1.2(p. 3/4 7-30)

The fire pump diesel is optional.

3.7.11.2(p. 3/4 7-31)

3/4.7.11.2, Spray and/or Sprinkler Systems - See Attachment 2, Item 13

4.7.11.2(p. 3/4 7-31)

b. At least ... each testable non-self indicating valve in...

c.

1)

b) Cycling each non-self indicating valve...

3.7.11.3(p. 3/4 7-33)

3/4.7.11.3, CO_2 Systems - See Attachment 2, Item 13

3.7.11.4(p. 3/4 7-35)

3/4.7.11.4, Halon Systems - See Attachment 2, Item 13

Table 3.7-4, Fire Hose Stations - See Attachment 2, Item 13

3.7.11.5(p. 3/4 7-36)

ACTION:

a. In the fourth sentence change the word "operating technicians" to operating personnel.

3.7.11.6(p. 3/4 7-38)

Are there plants where this is primary protection to safe shutdown equipment? If this is not the case the technical specification should be deleted.

3.7.11.6(p. 3/4 7-38)

Table 3.7-5, Yard Fire Hydrants - See Attachment 2, Item 13

4.7.12.1(p. 3/4 7-40)

Item (c) implies that if you find one degradation you must check an additional 10%. Is this too restrictive? Maybe this should be some percentage.

3.8.1.1(p. 3/4 8-1)

ACTION:

a. With either one offsite the circuit or one diesel generator of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Specification 4.8.1.1.a within 1 hour and at least once per 8 hours thereafter; and Specification 4.8.1.1.2.a.4 within 24 hours; restore at least two offsite circuits and two diesel generators to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next.6 hours and in COLD SHUTDOWN within the following 30 hours. Perform additional requirements in accordance with title 4.8-1a and it's attachments.

b. With one offsite circuit and one diesel generator of the above required A.C. electrical power sources by performing Specifications 4.8.1.1a within 1 hour and at least once per 8 hours thereafter; and Specification 4.8.1.1.2.a.4 within 8 hours; restore ...

At the bottom of the page:

* A diesel generator shall be considered to be inoperable from the time of failure until it satisfies the requirements of Surveillance Requirement 4.8.1.1.2.4

3.8.1.1(p. 3/4 8-1)

ACTION:

a. With ...of the remaining A.C. offsite sources by performing

Specification 4.8.1.1.1a within 1 hour and at least once per 8 hours thereafter; and Specification 4.8.1.1.2.a.5 within 24 hours; restore ...

b. With ... of the remaining A.C. offsite sources by performing Specification 4.8.1.1.1a within 1 hour and at least once per 8 hours thereafter; and Specification 4.8.1.1.2.a.5 within 8 hours restore ...

c. With ... addition to the requirements of ACTION ...

3.8.1.1(p. 3/4 8-1)

On July 2, 1984, the NRC issued Generic Letter 84-15, "Proposed Staff Actions to Improve and Maintain Diesel Generator Reliability." A review of draft Revision 5 indicates that only a small portion of this letter was incorporated. Since the generic letter has been reviewed by CRGR, and draft Revision 5 is scheduled for review by CRGR, it would seem that Revision 5 should reflect Generic Letter 84-15.

Generic Letter 84-15 included proposed changes to the Technical Specifications to reduce the requirements of diesel cold starts. Part of the proposed change revised the requirements of ACTION Statements a, b, and d. These revisions would reduce the incidence of diesel generator starts by invoking Surveillance Requirement 4.8.1.1.2.a.4 (diesel start) only after 8 hours or 24 hours (depending on what is not OPERABLE) instead of within 1 hour and every 8 hours thereafter. To reduce premature emergency diesel generator degradation due to excessive starts, the Generic Letter 84-15 revisions should be included in Revision 5.

3.8.1.1(p. 3/4 8-2)

ACTION:

d. With ... requirements of Specification 4.8.1.1.2a.4 with in 8 hours, unless ...

3.8.1.1(p. 3/4 8-2)

d. With ... Specification 4.8.1.1.2a.5 within 8 hours and...

f. With one or more diesel generator set inoperable solely because the fuel levels in one or more tanks are below minimum, restore the levels to above the minimum within 24 hours; otherwise comply with Action a,b, or e above as applicable.

4.8.1.1.2.a.5(p. 3/4 8-3)

Change "[900]" to "[900] ± [18]"

4.8.1.1.2.d + e(p. 3/4 8-3,4)

Surveillance Requirements 4.8.1.1.2.d and (e) concern sampling requirements for the emergency diesel generator fuel oil. According to the bases, these requirements are intended to reflect the requirements of Regulatory Guide 1.137, Revision 1, October 1979. It would appear that they do not. For instance:

a) The draft says that samples should be taken in accordance with ASTM D4057, while the regulatory guide states ASTM D270.

b) The requirements in the draft for sampling new fuel prior to addition to the DFO tanks are not consistent with Regulatory Guide 1.137, Section C.2a and b, which define before-addition sampling requirements and then impose further after-addition requirements.

c) In Section 4.8.1.1.2.e, the draft references ASTM D276 and a specification of 10 mg/liter particulate contamination as the periodic monitor of condition. Again, this is not in conformance with regulatory Guide 1.137 and Appendix B to ANSI N195-76 which is in turn referenced by the Regulatory Guide. The proper test and specification should be ASTM D2274 and 2 mg/100 ml. This could lead to confusion with a particulate requirement of ASTM D975 which the fuel must meet as part of requirement 4.8.1.1.2.d.2. The difference being that ASTM D975 is the original specification for the

oil and is part of the procurement specifications. ASTM D2274 is used as a means of periodically monitoring fuel condition and stability while in storage.

4.8.1.1.2.d.1.a(p. 3/4 8-4)
Change "60/60-F" to "60-F".

4.8.1.1.2.f.6.b(p. 3/4 8-5)
Change "load sequencer" to "LOCA sequencer".

4.8.1.1.2.f.14.(p. 3/4 8-6)
STS added a requirement to surveil the EDG air start receivers, this requirement, which causes more EDG starts, seems to be contrary to generic letter 84-15.

Correct the reference.

4.8.1.1.2.f.9(p. 3/4 8-6)
Change "4.8.1.1.2e.6" to "4.8.1.1.2f.6" on this page.

4.8.1.1.3 Diesel Generator Reliability Improvement Program(p.3/4 8-7)

As a minimum the Reliability Improvement Program report for NRC audit shall include:

a) a summary of all test (valid and invalid) that occurred within the time period over which the last 20/100 valid tests were performed

b) analysis of failures and determination of root causes of failures

c) evaluation of each of the recommendations of NUREG/CR-0600, "Enhancement of Onsite Emergency Diesel Generator Reliability in Operating Reactors," with respect to their application to the plant

d) identification of all actions taken or to be taken to 1) correct the root causes of failures defined in (b) above and 2) achieve a general improvement of diesel generator reliability

e) the schedule for implementation of each action from (d) above

f) an assessment of the existing reliability of electric power engineered-safety-feature equipment

Once a licensee has prepared and maintain an initial report detailing the diesel generator reliability improvement program at his site, as defined above, the licensee need prepare only a supplemental report within 14 days after each failure during a valid demand for so long as the affected diesel generator unit continues to violate the criteria (3/20 or 6/100) for the reliability improvement program remedial action. The supplemental report need only update the failure/demand history for the affected diesel generator unit since the last report for that diesel generator. The supplemental report shall delineate any further procedural, hardware or operational changes to be incorporated into the site diesel generator improvement program and the schedule for implementation of those changes.

In addition to the above, submit a yearly data report on the diesel generator reliability.

4.8.1.1.2. (p. 3/4 8-8)

Change "NUMBER OF FAILURES IN LAST 100 VALID TESTS" to "NUMBER OF FAILURES IN LAST 20".

Show the above change in the appropriate places on the page.

Change the table entries as follows:

≤ 1	At least once per 31 days
2	At least once per 7 days**
≥ 3	See Table 4.8-2

At the bottom of the page:

* Criteria ... August 1977, where the number of test and failures is determined on a per diesel generator set basis. For the purpose of this schedule, only valid test conducted after the issuance shall be included in the computation to the "Last Valid Test"

** This test frequency shall be maintained until seven consecutive failure free demands have been performed and the number of failures in the last 20 has been reduced to one or less.

Change "Table 4.8-2" to "Table 4.8-1a".
Make a corresponding change for attachment one and attachment two.

The action in Table 4.8-2 is revised to read:
Within ... site in accordance with surveillance Requirement 4.8.1.1.3. Declare ...

3.8.1.2(p. 3/4 8-9)

3/4.8.1.2, A.C. Sources and 3/4.8.1.2, D.C. Sources and 3.8.3.2, Onsite Power Distribution

It is recommended that the words, "..., and within 8 hours, depressurize and vent the Reactor Coolant System through a greater than or equal to ___ square inch vent," be deleted. The COLD Overpressure System design is plant specific and the action specified in these specifications may not be appropriate for the particular design present. Since specification

3/4.4.9.3 provides requirement for the Cold Overpressure System and the ones in these actions are merely repetitive, deletion of the above identified words does not eliminate requirements.

3.8.2.1(p. 3/4 8-10)

3/4.8.2.1, DC Sources

Surveillance Requirements 4.8.2.1.b.2) and 4.8.2.1.c.1) and 2) contain requirements which are subjective and open to interpretation. It is suggested that these requirements be either made more quantitative or deleted from the technical specification.

4.8.2.1(p. 3/4 8-11)

c.

3) Place the symbol "*" as a superscript to the word "ohm".

4) The battery charger will supply a load equal to the manufacturers rating for at least [8] hours.

d. At ... loads for [240] minutes when ...

At the bottom of the page:

* Obtained by subtracting the normal resistance of:

1) The cross room rack connector (400 x 10 E-06 ohm, typical) and

2) The bi-level rack connector (50 x 10 E-06), typical; from the measured cell-to-cell connection resistance.

Table 4.8-2(p. 3/4 8-12)

See "Electrolyte Level category A":

... and ≤ 1/4" above...

note: revise the entry in Category B similarly.

3.8.2.2(p. 3/4 8-13)

ACTION:

a. With the required battery bank inoperable, ... irradiated fuel or crane operation with loads over the spent fuel pool; initiate...battery bank to OPERABLE ...

b. With the required full-capacity charger inoperable demonstrate the OPERABILITY of its associated battery bank by performing Specification 4.8.2.1.2.a.1 within 1 hour, and at least once per 8 hours thereafter. If any Category A limit in Table 4.8-2 is not met declare the battery inoperable.

3.8.3.2(p. 3/4 8-16)

ACTION:

With any ... changes, movement of irradiated fuel or crane operation with loads over the spent fuel pool, initiate ...

3.8.3.2(p. 3/4 8-16)

3/4.8.3.2, Onsite Power Distribution

The intent of this specification is not clear. Since the definition of OPERABILITY requires only one power source, this specification can be satisfied without the diesel generator being operable. If the intent of the specification is that the operable diesel and the operable distribution system must be in the same train, this specification should be modified to state, "and capable of being powered from an OPERABLE emergency power source".

3.8.4.1(p. 3/4 8-17)

3/4.8.4.1, A.C. Circuits Inside Primary Containment - See Attachment 2, Item 13

3.8.4.1(p. 3/4 8-17)

The purpose of this specification (and the equipment which falls within this specification) was not immediately obvious to this reviewer. The bases are inadequate and should be expanded so that this specification can be applied if indeed it is applicable.

ALTHOUGH DLC IS NOT CURRENTLY USING THIS WNES STANDARD TECH SPEC, TECH SPEC 3/4.8.4.1 ON CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE APPEARS TO NOT CORRECTLY IMPLEMENT THE BASES FOR WHICH IT WAS ESTABLISHED. THE BASES SAY "THE SURVEILLANCE REQUIREMENTS APPLICABLE TO ... FUSES PROVIDE ASSURANCE OF ... FUSE RELIABILITY." HOWEVER, THE SURVEILLANCE (4.8.4.1.A.3) REQUIRES ONLY A NON-DESTRUCTIVE RESISTANCE MEASUREMENT TEST. MEASURING RESISTANCE DOES NOT NECESSARILY PROVIDE ASSURANCE THAT A FUSE WILL HEAT UP AND MELT TO CAUSE AN OPEN CIRCUIT WHEN THE DESIGN AMPERAGE IS EXPERIENCED. ALTHOUGH AN INCORRECT RESISTANCE MAY INDICATE A DEFECTIVE FUSE THE CONVERSE IS NOT ALWAYS TRUE. A CORRECT SURVEILLANCE SHOULD INCLUDE A CHECK FOR CORRECT MATERIAL WITHIN THE FUSE (FROM EACH MANUFACTURES LOT) OR ANYTHING ELSE WHICH SIGNIFICANTLY DETERMINES THE TIME/MELTING POINT IN A FUSE. DLC IS NOTIFYING WNES OF THIS POTENTIAL DEFICIENCY FOR POSSIBLE FUTURE CORRECTION OF THE WNES STANDARD TECH SPECS AND/OR FOR THE WNES PLANTS IMPLEMENTING THIS INCORRECT SURVEILLANCE

3.8.4.2(p. 3/4 8-18)

Table 3.8-1 should be deleted based on the same reasoning used in the deletion of the snubber tables.

3.8.4.2(p. 3/4 8-18)

Table 3.8-1, Containment Penetration Conductor Overcurrent Protective Devices - See Attachment 2, Item 3

4.8.4.2(p. 3/4 8-19)

Resistance measurements are used by fuse manufactures as QC checks. They do not publish resistance measurements. Fuses only get more protective with age. Resistance testing is not warranted.

4.8.4.2(p. 3/4 8-19)

a.

3) By selecting and visually inspecting a... of that type. The visual inspection shall ensure that the fuse shows no sign of deterioration or degradation and, for clip type fuses, that the proper size and type of fuse is installed and that the connections are clean, tight, and free of visible oxidation. Fuses found inoperable during these visual inspections shall be repaired or replaced ... during these visual inspections, an ... shall be visually inspected ... that type have been visually inspected.

3.8.4.3(p. 3/4 8-22)

Consideration should be given to approved designs that do not utilize bypass thermal overloads in MOV's.

3.8.4.3(p. 3/4 8-22)

3/4.8.4.3 and Table 3.8-2, Motor Operated Valves Thermal Overload Protection - See Attachment 2, Items 11 and 13

3.8.4.3(p. 3/4 8-22)

Change to read:

The ... protection devices integral with the motor starter of ...

ACTION:

With one or more of the thermal overload protection device inoperable, ... ACTION Statement(s) as stated in the applicable specification for...

4.8.4.3(p. 3/4 8-22)

Change to read:

The ... protection devices shall... 25% of:

a. All thermal overload devices, such that each device is calibrated at least once per 6 years, and

b. All thermal overload devices, such that each thermal overload is calibrated and each valve is cycled through at least one complete cycle of full travel with the motor-operator when the thermal overload is OPERABLE, at least once per 6 years.

4.9.1.1(p. 3/4 9-1)

b. Withdrawl of ... of 57 steps (approximately 3 feet) from ...

3.9.5(p. 3/4 9-5)

In this LCO and it's SURVEILLANCE replace "refueling station" with "Containment Refueling Station".

3.9.6(p. 3/4 9-6)

In this LCO and it's surveillance replace references to "manipulator crane or crane" with "refueling machine".

3.9.7(p. 3/4 9-7)

The load limit should be "2000 pounds".

3.9.8.2(p. 3/4 9-9)

See (*), delete the phrase "Prior to criticality". It may be necessary to remove an RHR loop from service after initial criticality (or subsequent refueling) to perform core alterations.

3.9.10(p. 3/4 9-11)

APPLICABILITY:

Change to read:

During ... within the reactor cavity when... vessel have been irradiated.

3.9.10(p. 3/4 9-11)

Both the Callaway Technical Specifications and the Farley Technical Specifications provide for two water levels. At least 23 feet of water must be maintained over the top of the vessel flange during movement of fuel assemblies and at least 23 feet of water must be maintained over the top of the fuel assemblies within the vessel during movement of control rods only. The lower water level facilitates the connection of the drive rods while maintaining proper shielding. We recommend that Section 5 provide for the two water levels as described above.

4.9.12(p. 3/49-13)

Items (b.3,d.5,e and f):

Change "ANSI N510-1975" to "ANSI N510-1980".

3.10.5(p. 3/4 10-5)

b. delete

APPLICABILITY: MODES ... measurements and during surveillance of digital rod position indication

SECTION
3/4.11

3.11.1.1(p. 3/4 11-1)

Radioactive Effluents (See Attachment 2, Item 14)

3.11.1.1(p. 3/4 11-1)

Add the item below:

b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

4.11.1.1.1(p. 3/4 11-1)

Table 4.11-1:

Secondary side monitoring is not warranted unless there is evidence of primary to secondary leakage.

note: This comment also affects pages 3/4 11-4,3/4 11-9 and 3/4 11-11.

See "LIQUID RELEASE TYPE 2", add (7) behind the word releases. Add (7) below to page 3/4 11-4.

(7) Not applicable when the most recent Secondary Coolant System specific activity sample and analysis program gross radioactivity determination is less than or equal to 1.0 x 10^{-4} micro-curies/gm and the discharge radiation monitor setpoint is less than or equal to 1.0 x 10^{-4} micro-curies/gm above background.

Remove all references to the following:

* a priori
* a posteriori

3.11.2.1(p. 3/4 11-8)

Add the following:

b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

4.11.2.1.2(p. 3/4 11-8)

Table 4.11-2:

GASEOUS RELEASE TYPE item (3.c):

Add (8) after the word "others" add this item to the table.

(8) Not applicable when the most recent Secondary Coolant System specific activity sample and analysis program gross radioactivity determination is less than or equal to 1.0 x 10^{-7} micro-Ci/gm and the discharge radiation monitor setpoint is less than or equal to 1.0 x 10^{-4} micro-Ci/ml above background.

Remove all references to the following:

* a priori
* a posteriori

4.11.2.1.2(p. 3/4 11-11)

Additional sampling of power changes is not warranted unless there is evidence of an activity increase.

Table 4.11-2:

Item (3) Sampling ... period unless (a) analysis shows that the DOSE EQ I-131 concentration in the RCS has not increased by more than a factor of 3 and (b) the containment noble gas activity monitor shows that the radioactivity has not increased by more than a factor of 3.

3.11.2.6(p. 3/4 11-16)

Change all references to "gas storage tank" to "gas decay tank".

3.12.1(p. 3/4 12-1)

Table 4.12-1:

Remove all references to the following:

* a priori
* a posteriori

3.12.1(p. 3/4 12-1)

Radiological Environmental Monitoring - See Attachment 2, item 14

BASES FOR

SECTIONS 3.0 AND 4.0

LIMITING CONDITIONS FOR OPERATION

AND

SURVEILLANCE REQUIREMENTS

BASES:

4.0.3(p. B 3/4 0-2)

The Basis for Specification 4.0.3 has been revised and is more restrictive. The provision states that "ACTION statements are entered when the Surveillance Requirements should have been performed rather than at the time it is discovered that the test were not performed." This could require a number of immediate shutdowns, and is not desirable.

BASES:

4.0.3(p. B 3/4 0-2)

Change to read:

The ... Requirements. Upon determination that the Surveillance Requirement had been inadvertently omitted, power operation may continue provided that the Surveillance Requirement shall be successfully performed within the Limiting Condition for Operation (LCO) period, which would begin upon discovery.

3/4.1.2 BORATION SYSTEMS(p. B 3/4 1-2)

One set of pumps is inoperable below the LTOP temperature cutoff. The specifications should be consistent with the requirements to take the charging pumps out of service.

In the second paragraph change "200°F" to "275°F".

3/4.1.3 MOVABLE CONTROL ASSEMBLIES(p. B 3/4 1-3)

Delete the every thing after " 12 steps".

3/4.1.3 MOVABLE CONTROL ASSEMBLIES(p. B 3/4 1-3)

Verification of DRPI vs Demand Position at predetermined steps (ie. 24,48,120 and 256) is not in the specifications themselves. Where did this come from and what does it mean?

3/4.1.3 MOVABLE CONTROL ASSEMBLIES(p. B 3/4 1-3)

Bases for Specification 3/4.1.3: The bases do not appear to agree with specification in that the bases state that agreement between the Digital Rod Position Indicator System (DRPIS) and demanded position will be verified at 24, 48, 120, and 228 steps for the Control Banks and 18, 210, and 228 steps for the Shutdown Banks. The specification simply states that agreement will be verified to be within ± 12 steps during Operation and over the full range of travel during Shutdown.

3/4.2.1 AXIAL FLUX DIFFERENCE(p. B 3/4 2-1)

Insert ROAC

3/4.3.1 and 3/4.3.2 REACTOR TRIP SYSTEM and ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION(p. B 3/4 3-1)

Rewrite as follows:

The ... logic and sufficient... maintenance consistent with maintaining of appropriate level of reliability of the Reactor Trip System instrumentation and,(3) sufficient ...

The ... capability. Specified surveillance intervals and surveillance and maintenance outage times have been determined in accordance with WCAP - 10271, "Evaluation of Surveillance Frequencies and Out of Service Times for the Reactor Protection Instrumentation System", and supplements to that report. Surveillance intervals and out of service times were determined based on maintaining an appropriate level of reliability of the Reactor Trip System and Engineered Safety Features Actuation System Instrumentation.

3/4.3.3.6 ACCIDENT MONITORING INSTRUMENTATION(p. B 3/4 3-5)

Change "Revision 3" to "Revision 2".

3/4.3.3.10 RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION(p. B 3/4 3-6)

Change as follows:

The ... Part 50.

3/4.3.3.10 RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION(p. B 3/4 3-6)

Change as follows:

The ... Part 50.

3/4.3.4 TURBINE OVERSPEED PROTECTION(p. B 3/4 3-7)

This should be optional.

3/4.4.5 STEAM GENERATORS(p. B 3/4 4-3)

See the first sentence on page B 3/4 4-4. Add the following after the word "operation" ," to MODES 1, 2, and 3.

3/4.4.6.2 OPERATIONAL LEAKAGE(p. B 3/4 4-4)

Change "The 1 gpm leakage" to "The leakage limit from".

3/4.4.11 REACTOR COOLANT SYSTEM VENTS(p. B 3/4 4-16)

Change to read:

Reactor ... vent path ensures that ...

BASES

FOR

SECTION 3/4.6A

CONTAINMENT SYSTEMS SPECIFICATIONS

FOR

WESTINGHOUSE

ATMOSPHERIC TYPE CONTAINMENT

3/4.6.1.7 CONTAINMENT STRUCTURAL INTEGRITY(p. B 3/4 6-2A)

Delete the second and third paragraphs.

3/4.6.1.8(p. B 3/4 6-3A)

Delete the first paragraph.

3/4.6.5 COMBUSTIBLE GAS CONTROL(p. B 3/4 6-5A)

Delete the following:

[Cumulative ... filters].

BASES

FOR

SECTION 3/4.6B

CONTAINMENT SYSTEMS SPECIFICATIONS

FOR

WESTINGHOUSE

ICE CONDENSER TYPE CONTAINMENTS

3/4.6.1.10 CONTAINMENT VENTILATION SYSTEM(p. B 3/4 6-3B)

Delete the first and second paragraphs.

BASES
FOR
SECTION 3/4.6C
CONTAINMENT SYSTEMS SPECIFICATIONS
FOR
WESTINGHOUSE
SUBATMOSPHERIC TYPE CONTAINMENTS

3/4.6.1.8 CONTAINMENT VENTILATION SYSTEMS(p. B 3/4 6-3C)

Delete the first and second paragraphs.

BASES
FOR
SECTION 3/4.6D
CONTAINMENT SYSTEMS SPECIFICATIONS
FOR
WESTINGHOUSE
DUAL TYPE CONTAINMENTS

3/4.1.8 CONTAINMENT VENTILATION SYSTEM(p. B 3/4 6-2D)

Delete the first and second paragraphs.

SECTION 3/4.7
PLANT SYSTEMS

3/4.7.1.3 CONDENSATE STORAGE TANK(p. B 3/4 7-2)
This should be optional.

3/4.7.9 SNUBBERS(p. B 3/4 7-5)
Starting in the second paragraph change as follows:

Snubbers ...design and, if appropriate, by environmental or application conditions but... The same capacity (replace the word design) mechanical snubbers manufactured to a different design by ... manufacturer.

Two levels of surveillance are specified; visual inspections and functional testing. the visual inspections are designed to detect obvious indications of inoperability of the snubbers. Removal of insulation or contact with the snubbers is not required initially. However, suspected causes of inoperability are to be further investigated to establish OPERABILITY, or the snubber is to be declared inoperable, restored to OPERABLE condition and all snubbers of that type and snubbers of other types subject to the same failure mode are to be inspected at a more frequent interval. Visual inspections may be limited to the accessible or inaccessible category in which the failure occurred. Functional testing to verify the OPERABILITY of snubbers is to be performed each refueling outage on sample lots of each type of snubber. Sampling plans are specified to provide a sufficient degree of confidence that the required level of OPERABILITY is present. Failure to meet the functional test acceptance criteria requires testing of additional snubbers and a failure analysis. The functional test requirements are to be met each refueling outage at approximately 18-month intervals.

A list.... Part 50.

The visual ... observed failures and is ...

* replace the paragraph that starts "The acceptance..." with the following:

When the cause of the rejection of a snubber in a visual inspection is clearly established and remedied for that type of snubber and for any other type of snubbers that may be generically susceptible and OPERABILITY verified by inservice functional testing, if applicable, that snubber may be exempted from being counted as inoperable. Generically-susceptible snubbers are those which are of a specific make or model and have the same design features directly related to refection of the snubber of are similarly located or exposed to the same environmental conditions, such as temperature, radiation, and vibration.

3/4.7.9 SNUBBERS(p. B 3/4 7-6)

Replace the word "performance" with "reliability".

SECTION 5.0
DESIGN FEATURES

5.3.2(p. 5-6)

Show the absorber material as being hafnium.

SECTION 6.0

6.2.2(p. 6-1)

c. A Health Physics Technician* qualified in radiation protection procedures ...

Table 6.2-1b Second paragraph at the bottom of the page. Delete "(Other than the Shift Technical Advisor)". The Shift Technical Advisor at Vogtle will have SRO licences and therefore can be used to fill other positions in the MINIMUM SHIFT CREW COMPOSITION.

6.2.3(p. 6-6)

NRC has expanded the function of this group and at the same time lessened the experience requirements of the members. Under the composition section, it says that the members are located on site. According to NUREG-0737, utilities with multiple sites are not required to have ISEG members located on site.

6.5.1.5(p. 6-8)

Change "and four members" to "and three members".

6.5.1.6(p. 6-8)

Rewrite as follows:

a. Review of 1) procedures which establish plant-wide administrative controls to implement the Q.A. program or Technical Specification surveillance programs, 2) procedures for changing plant operating modes, 3) emergency and abnormal operating procedures, 4) procedures for effluent releases, 5) fuel handling procedures.

b. Review of 1) programs required by specification 6.8.4 and changes thereto, 2) proposed procedures and changes to procedures equipment or systems which involve an unreviewed safety questions per 10 CFR 50.59.

c. Review of proposed test and experiments; which involve an unreviewed safety question.

d. Review of proposed changed to the Technical Specifications;

e. Review of the report of the investigation of violations of the Technical Specifications which covers evaluation and recommendations to prevent recurrence. The report shall be forwarded to the [Vice President -Nuclear Operations] and to the [Company Nuclear Review and Audit Group].

f. no change

g. Review of evaluations of plant operations ...

h. no change

i. Review ... to the [Plant Superintendent];

j. Review ... to the [Plant Superintendent];

k. Review of any accidental, unplanned, or uncontrolled radioactive release in excess of 1 Ci, excluding dissolved and entrained gasses and tritium for liquid effluents, and in excess of 150 Ci for noble gasses or 0.02 Ci of radioiodines for gasseous effluents. Also included is the preparation of reports covering evaluation, recommendations and disposition of the corrective to prevent recurrence and the forwarding of these reports to the [Plant Superintendent] and to the [Company Nuclear Review and Audit Group].

l. Review of changes to the PROCESS CONTROL PROGRAM and the OFFSITE DOSE CALCULATION MANUAL.

6.5.1.6 (p. 6-8)

k. Some limits on the amounts released.

l. Radwaste treatment systems redundant to PCP. If there is a major change in one of these systems, the PCP would also have to be changed. (see item 6.5.1.6 attached)

6.5.1.7(p. 6-8)

a delete "prior to their implementation".

6.5.2.6(p. 6-11)

Change "[four CNRAG]" to "[three CNRAG]"

6.5.2.7(p. 6-11)

Change to read:

e. Noncompliance of ...

f. Significant ... nuclear safety; as referred to it by the [URG].

6.5.2.8(p. 6-11)

Delete item e, it is redundant to item f.

6.7.1(p. 6-13)

Changes as follows:

d. Critical operation ...

COMMENTS BY SUBJECT MATTER

1. Controlled Leakage

It is recommended that all references to an requirements for controlled leakage be deleted from technical specifications.

- Delete definition 1.8 CONTROLLED LEAKAGE
- Delete 3.4.6.2.e
- Delete 4.4.6.2.1.c
- Delete the fifth paragraph in bases 3/4.4.6.2 OPERATIONAL LEAKAGE entirely

It is recommended that the following revisions or additions be made to technical specifications in place of specifications on controlled leakage. These requirements ensure that ECCS injection flow analysis assumptions for which controlled leakage limitations were provided are satisfied. These specifications do not contain the ambiguity inherent in the existing controlled leakage specifications.

- IDENTIFIED LEAKAGE

  1.14 IDENTIFIED LEAKAGE shall be:

  a. Leakage (except Reactor Coolant Pumps seal leakoff) into closed systems, ...

- UNIDENTIFIED LEAKAGE

  1.37 UNIDENTIFIED LEAKAGE shall be all leakage which is not IDENTIFIED LEAKAGE .

Note: The following specifications are bracketed to indicate that inclusion is plant specific and is applicable only for plants with shared CVCS/ECCS systems.

- New Specification 4.5.2.i

[i. By verifying the current position of each electrical and/or mechanical position stop for the following RCP Seal Injection Throttle valves within 4 hours following completion of each valve manipulation or maintenance by verifying that with a differential pressure of greater than or equal to [100] psid between the discharge of the charging pumps and the reactor coolant system, the total seal injection path flowrate is less than or equal to [32] gpm.

RCP Seal Injection
Throttle Valve Number

_____

_____

_____

_____

- To the last sentence in bases 3/4.5.2 and 3/4.5.3 ECCS SUBSYSTEMS

...[and (4) to ensure that centrifugal charging, pump injection flow which is diverted through the seal injection path is less than or equal to the amount assumed in the analysis.]

(the "and" between statements 2 and 3 should be bracked)

2. Instrumentation Testing Definitions

The definitions for instrumentation testing contained in draft 5 are generally written for plants with a solid state protection system and may not be completed applicable to plants with other types of protection systems (e.g. relay or microprocessor based). It may be appropriate to indicate that these definitions are somewhat plant specific and may require modification. Alternately, additional definitions could be added applicable to other types of protection systems. The utility would choose the appropriate definitions and delete the others.

3. Equipment Operability

A discussion of Operability should be provided, perhaps in the bases for section 3/4.0, which addresses alternate instrumentation, support systems, etc. for which requirements exist in other specifications. For example, for a charging pump to be operable, component cooling water may need to be operable. However, specifications exist for component cooling water independent of its support function for charging pump operation. It is recommended that in situations such as these, the specifications be written such that only one action statement need be complied with. For the example given, if the charging pump is inoperable, apply only the action statements associated with loss of the charging function. If component cooling water becomes inoperable, apply only the action statements for loss of component cooling. If there are any instances where it would be necessary to apply action statements other than for the failed component it is suggested that the specifications require it in the L.C.O.'s, etc. for the affected systems. It is felt that any other use of the technical specifications would be prohibitively complicated and unmanageable.

4. Bases

In general, the bases are inadequate to really identify the reason for the various specifications. It is suggested that effort be put on to improving the bases to assist in understanding and interpreting the various technical specification requirements. This is particularly true if the applicability section.

It is suggested that all values contained in the bases which duplicate values in L.C.O.'s, actions, etc. be deleted. For example, respecifying a setpoint in the bases does not necessarily improve the discussion of the trip function. If a value in the bases is different from its associated value in the specification and/or is used to explain the source of the specification value, it should be retained.

It is suggested that the descriptions of the interlocks which accompany the interlock identifier (e.g., P-10) be deleted since they merely repeat information provided elsewhere and do not add to the discussion.

5. Mode Modifiers

In many cases where applicability is modified by asterisks, etc. it is not clear whether the modifier applies to one or all modes shown. For example, if the applicability was Modes 1 and 2*, does the asterisk go with just Mode 2 or Modes 1 and 2. Somewhere in the technical specification the use of mode modifiers should be explained.

5a. Boration Systems

It is suggested that Specifications 3.1.2.1 and 3.1.2.3 be applicable in Modes 4, 5 and 6 and that Specifications 3.1.2.2 and 3.1.2.4 be applicable in Modes 1, 2 and 3. This

is more consistent with cold overpressure requirements. All cold overpressure specifications currently contained in Specifications 3.1.2.2 and 3.1.2.4 could be deleted since for most (and perhaps all) plants there will be no cold overpressure restrictions in these modes. Specifically, delete the * note on Specifications 3.1.2.2 and 3.1.2.4 and delete 4.1.2.4.2. The Bases should be modified accordingly.

6. Specifications With Action Statements Which Do Not Allow Startup Of The L.C.O. Is Not Met

Specifications with Modes 1, 2, 3 and 4 applicability but with actions which do not allow startup if the L.C.O. is not met are confusing and it is suggested that they either be deleted or reformatted to make sense. The conclusion occurs since the action is not appropriate for the modes and if after startup, it is found that the L.C.O. was not met prior to startup but was not discovered at the time of startup. The action statements which are directed at preventing startup do not address the condition when the plant is already started up. It is not clear what is required under these circumstances, Specification 3.0.3 may not be appropriate. Examples of such specifications are 3/4.1.3.4, 3/4.4.5, and 3/4.6.1.2.

7. Moveable Control Assemblies, Specification 3/4.1.3.1 and Bases

Replace existing Specification 3/4.1.3.1 and bases with the following:

REACTIVITY CONTROL SYSTEMS

3/4.1.3 MOVABLE CONTROL ASSEMBLIES

GROUP HEIGHT

LIMITING CONDITION FOR OPERATION

3.1.3.1 All shutdown and control rods, which are inserted in the core, shall be OPERABLE and positioned within ± 12 steps (indicate position) of their group step counter demand position.

APPLICABILITY: MODES 1* AND 2*.

ACTION:

a. With one or more rods inoperable due to being immovable as a result of excessive friction or mechanical interference or known to be untrippable, determine that the SHUTDOWN MARGIN requirement of Specification 3.1.1.1 is satisfied within 1 hour and be in HOT STANDBY within 6 hours.

b. With one rod trippable but inoperable due to causes other than addressed by ACTION a above, or misaligned from its group step counter demand height by more than ± 12 steps (indicated position), POWER OPERATION may continue provided that within one hour either;

   1. The rod is restored to OPERABLE status within the above alignment requirements, or

   2. The rod is declared inoperable and the remainder of the rods in the group with the inoperable rod are aligned to within ± 12 steps of the inoperable rod while maintaining the rod sequence and insertion limits of Figure 3.1-1. The THERMAL POWER level shall be restricted pursuant to Specification 3.1.3.6 during subsequent operation, or

3. The rod is declared inoperable and the SHUTDOWN MARGIN requirement of Specification 3.1.1.1 is satisfied. POWER OPERATION may then continue provided that:

   a) A reevaluation of each accident analysis of Table 3.1-1 is performed within 5 days; this reevaluation shall confirm that the previously analyzed results of these accidents remain valid for the duration of operation under these conditions.

   b) A power distribution map is obtained from the movable incore detectors and $F_Q(Z)$ and $F^N_{\Delta H}$ are verified to be within their limits within 72 hours.

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*See Special Test Exceptions 3.10.2 and 3.10.3.

c) The THERMAL POWER level is reduced to less than or equal to 75% of RATED THERMAL POWER within the next hour and within the following 4 hours the high neutron flux trip setpoint is reduced to less than or equal to 85% of RATED THERMAL POWER.

c. With more than one rod trippable but inoperable due to causes other than addressed by ACTION a above, POWER OPERATION may continue provided that:

1. Within one hour, the remainder of the rods in the bank(s) with the inoperable rods are aligned to within ± 12 steps of the inoperable rods while maintaining the rod sequence and insertion limits of Figure 3.1-1. The THERMAL POWER level shall be restricted pursuant to Specification 3.1.3.6 during subsequent operation, and

2. The inoperable rods are restored to OPERABLE status within 72 hours.

d. With more than one rod misaligned from it's group step counter demand height by more than ± 12 steps (indicated position), be in HOT STANDBY within 6 hours.

SURVEILLANCE REQUIREMENTS

4.1.3.1.1 The position of each rod shall be determined to be within the group demand limit by verifying the individual rod positions at least once per 12 hours except during time intervals when the Rod Position Deviation Monitor is inoperable, then verify the group positions at least once per 4 hours.

4.1.3.1.2 Each rod not fully inserted in the core shall be determined to be OPERABLE by movement of at least 10 steps in any one direction at least once per 31 days.

ATTACHMENT 2

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TABLE 3.1-1

ACCIDENT ANALYSES REQUIRING REEVALUATION

IN THE EVENT OF AN INOPERABLE ROD

Rod Cluster Control Assembly Insertion Characteristics

Rod Cluster Control Assembly Misalignment

Loss of Reactor Coolant From Small Ruptured Pipes Or From Cracks In Large Pipes Which Actuates the Emergency Core Coolant System

Single Rod Cluster Control Assembly Withdrawal At Full Power

Major Reactor Coolant System Pipe Ruptures (Loss of Coolant Accident)

Major Secondary System Pipe Rupture

Rupture Of A Control Rod Drive Mechanism Housing (Rod Cluster Control Assembly Ejection)

BASES

3/4.1.3 Movable Control Assemblies

The specifications of this section are necessary to ensure that the following requirements are met at all times during normal N loop or N-1 loop operation. By observing that the RCCAs are positioned above their respective insertion limits during normal operation,

1. At any time in life for Mode 1 and 2 operation, the minimum SHUTDOWN MARGIN will be maintained. For operational modes 3, 4, 5, and 6, the reactivity condition consistent with other specifications will be maintained with all RCCAs fully inserted by observing that the boron concentration is always greater than an appropriate minimum value.

2. During normal operation the enthalpy rise hot channel factor, F^N_H, will be maintained within acceptable limits.

3. The consequences of an ejected RCCA accident will be restricted below the limiting consequences referred to in the ejected rod analysis.

4. The core can be made subcritical by the required shutdown margin with one RCCA stuck. In the event of an RCCA ejection, the core can be made subcritical with two RCCAs stuck, where one of the RCCAs is assumed to be the worst ejected rod control assembly.

5. The trip reactivity assumed in the accident analysis will be available.

6. Dropping an RCCA into the core or statically misaligning an RCCA during normal operation will not violate the thermal design basis with respect to DNBR.

7. The uncontrolled withdrawal of an RCCA will result in consequences no more severe than presented in the accident analysis.

8. The uncontrolled withdrawal of a control assembly bank will not result in a peak power density that exceeds the center line melting criterion.

OPERABILITY of the control rod position indicator channels (L.C.O. 3.1.3.2) is required to determine control rod positions and thereby ensure compliance with the control rod alignment.

OPERABILITY of the demand position indication system (L.C.O. 3.1.3.2) is required to determine bank demand positions and thereby ensure compliance with the insertion limits.

The ACTION statements which permit limited variations from the basic requirements are accompanied by additional restrictions which ensure that some of the original criteria are met. Misalignment of a rod requires measurement of peaking factors or a restriction in THERMAL POWER, either of these restrictions provide assurance of fuel rod integrity during continued operation provided no further abnormal condition develops.

For Specification 3.1.3.1 ACTIONS b and c it is incumbent upon the plant to verify the trippability of the inoperable control rod(s). This may be by verification of a control system failure, usually electrical in nature, or that the failure is associated with the control rod stepping mechanism. In the event the plant is unable to verify the rod(s) trippability, it must be assumed to be untrippable and thus fall under the requirements of ACTION A. Assuming controlled shutdown from 100% RATED THERMAL POWER, this allows approximately four hours for this verification.

The maximum rod drop time permitted by (L.C.O. 3.1.3.4) is consistent with the assumed rod drop time used in the accident analyses. Measurement with $T_{avg} \geq 550$ degrees-F and with all reactor coolant pumps operating ensures that the measured drop times will be representative of insertion times experienced during a reactor trip at operating conditions.

Bank demand positions and OPERABILITY of the rod position indicators are required to be verified on a nominal basis of once per 8 hours with more frequent verifications required if an automatic monitoring channel is inoperable. These verification frequencies are adequate for assuring that the applicable L.C.O.'s are satisfied.

8. RCS Flow Rate and $F^N_{\Delta H}$

It is suggested that the following be put in the technical specification in place of Specification 3/4.2.3 and 3/4.2.5 and then bases.

POWER DISTRIBUTION LIMITS

3/4.2.3 NUCLEAR ENTHALPY HOT CHANNEL FACTOR - $F^N_{\Delta H}$

LIMITING CONDITION FOR OPERATION

3.2.3 $F^N_{\Delta H}$ shall be limited by the following relationship:

$$F^N_{\Delta H} \leq 1.55 [1 + 0.3 (1-P)]$$

where $P = \frac{\text{THERMAL POWER}}{\text{RATED THERMAL POWER}}$, and

$F^N_{\Delta H}$ = Measured values of $F^N_{\Delta H}$ obtained by using the movable incore detectors to obtain a power distribution map. The measured values of $F^N_{\Delta H}$ shall be increased by 4% before comparison to the limit to account for measurement uncertainties.

APPLICABILITY: MODE 1

ACTION:

With $F^N_{\Delta H}$ exceeding its limit:

a. Reduce THERMAL POWER to less than 50% of RATED THERMAL POWER within 2 hours and reduce the Power Range Neutron Flux-High Trip Setpoints to $\leq$ 55% of RATED THERMAL POWER within the next 4 hours,

b. Demonstrate through in-core mapping that $F^N_{\Delta H}$ is within its limit within 24 hours after exceeding the limit or reduce THERMAL POWER to less than 5% of RATED THERMAL POWER within the next 2 hours, and

c. Identify and correct the cause of the out of limit condition prior to increasing THERMAL POWER above the reduced limit required by a or b, above; subsequent POWER OPERATION may proceed provided that $F^N_{\Delta H}$ is demonstrated through in-core mapping to be within its limit at a nominal 50% of RATED THERMAL POWER prior to exceeding this THERMAL POWER, at a nominal 75% of RATED THERMAL POWER prior to exceeding this THERMAL power and within 24 hours after attaining 95% or greater RATED THERMAL POWER.

SURVEILLANCE REQUIREMENTS

4.2.3.1 $F^N_{\Delta H}$ shall be determined to be within its limit by using the movable incore detectors to obtain a power distribution map:

a. Prior to operation above 75% of RATED THERMAL POWER after each fuel loading, and

b. At least once per 31 Effective Full Power Days.

c. The provisions of Specification 4.0.4 are not applicable.

POWER DISTRIBUTION LIMITS

3/4.2.5 DNB PARAMETERS

LIMITING CONDITION FOR OPERATION

3.2.5 The following DNB-related parameters shall be maintained within the limits shown on Table 3.2-1:

a. Reactor Coolant system T_{avg},

b. Pressurizer Pressure, and

c. Total Reactor Coolant System Flow.

Applicability: MODE 1.

ACTION:

With any of the above parameters exceeding its limit, restore the parameter to within its limit within 2 hours or reduce THERMAL POWER to less than 5% of RATED THERMAL POWER within the next 4 hours.

SURVEILLANCE REQUIREMENTS

4.2.5.1 Each of the parameters of Table 3.2-1 shall be verified to be within its limits at least once per 12 hours.

4.2.5.2 The RCS total flow rate indicators shall be subjected to a CHANNEL CALIBRATION at least once per 18 months. The measurement instrumentation shall be calibrated within 7 days prior to the performance of the calorimetric flow measurement.

4.2.5.3 The RCS total flow rate shall be determined by precision heat balance measurement at least once per 18 months.

TABLE 3.2-1

DNB PARAMETERS

PARAMETER	LIMITS		
	N Loops in Operation	N-1 Loops in Operation & Loop Stop Valves Open	N-1 Loops in Operation & Loop Stop Valves Closed
Indicated Reactor Coolant System T_{avg}	$\leq$ [581]°F	$\leq$ [569]°F	$\leq$ [570]°F
Indicated Pressurizer Pressure	$\geq$ [2220] psia*	$\geq$ [2220] psia*	$\geq$ [2220]* psia
Indicated Total Reactor Coolant System Flow	$\geq$ [ ] gpm	$\geq$ [ ] gpm	$\geq$ [ ] gpm

*Limit not applicable during either a THERMAL POWER ramp in excess of [5%] of RATED THERMAL POWER per minute or a THERMAL POWER step in excess of [10]% of RATED THERMAL POWER.

3/4.2.2 AND 3/4.2.3 HEAT FLUX HOT CHANNEL FACTOR, AND NUCLEAR ENTHALPY RISE HOT CHANNEL FACTOR

The limits on heat flux hot channel factor and nuclear enthalpy rise hot channel factor ensure that: (1) the design limits on peak local power density and minimum DNBR are not exceeded and (2) in the event of a LOCA the peak fuel clad temperature will not exceed the 220°F ECCS acceptance criteria limit.

Each of these is measurable but will normally only be determined periodically as specified in Specifications 4.2.2 and 4.2.3. This periodic surveillance is sufficient to ensure that the limits are maintained provided:

a. Control rods in a single group move together with no individual rod insertion differing by more than $\pm$ 12 steps, indicated, from the group demand position;

b. Control rod groups are sequenced with overlapping groups as described in Specification 3.1.3.6;

c. The control rod insertion limits of Specifications 3.1.3.5 and 3.1.3.6 are maintained; and

d. The axial power distribution, expressed in terms of AXIAL FLUX DIFFERENCE, is maintained within the limits.

F^{M}_{H} will be maintained within its limits provided Conditions a. through d. above are maintained. The relaxation of F^{M}_{H} as a function of THERMAL POWER allows changes in the radial power shape for all permissible rod insertion limits.

Fuel rod bowing reduces the value of DNB ratio. Credit is available to offset this reduction in the generic margin. the generic margins, totaling 9.1% DNBR completely offset any rod bow penalties. This margin includes the following:

a. Design limit DNBR of [1.30 vs 1.28],

b. Grid Spacing (K_3) of [0.046 vs. 0.059],

c. Thermal Diffusion Coefficient of [0.038 vs. 0.059],

d. DNBR Multiplier of [0.86 vs. 0.88], and

e. Pitch reduction.

The applicable values of rod bow penalties are referenced in the FSAR

When an F_Q measurement is taken, an allowance for both experimental error and manufacturing tolerance must be made. An allowance of 5% is appropriate for a full-core map taken with the Incore Detector Flux Mapping System, and a 3% allowance is appropriate for manufacturing tolerance.

The Radial Peaking Factor, $F_{xy}(Z)$, is measured periodically to provide assurance that the Hot Channel Factor, $F_Q(Z)$, remains within its limit. The F_{xy} limit for RATED THERMAL POWER (F_{xy} RTPw) as provided in the Radial Peaking Factor Limit Report per Specification 6.9.1.6 was determined from expected power control maneuvers over the full range of burnup conditions in the core.

When $F^N_{\Delta H}$ is measured, an additional allowance of 4% is necessary prior to comparison with the limit of Specification 3.2.3 to account for measurement errors.

POWER DISTRIBUTION LIMITS

BASES

3/4.2.5 DNB PARAMETERS.

The limits on the DNB-related parameters assure that each of the parameters are maintained within the normal steady-state envelope of operation assumed in the transient and accident analyses. The limits are consistent with the initial FSAR assumptions and have been analytically demonstrated adequate to maintain a minimum DNBR of 1.30 throughout each analyzed transient.

The indicated T_{avg} value of [581]°F and the indicated pressurizer pressure value of [2220] psig correspond to analytical limits of 595°F and 2205 psig respectively, with allowance for measurement uncertainty. The 12-hour periodic surveillance of these parameters through instrument readout is sufficient to ensure that the parameters are restored within their limits following load changes and other expected transient operation.

The indicated total Reactor Coolant system flowrate of [ ] gpm corresponds to an analytical limit of [ ] gpm with an allowance of [2.1]% for measurement uncertainty. The measurement uncertainty for RCS total flow rate is based upon performing a precision heat balance and using the result to calibrate the RCS flow rate indicators. Potential fouling of the feedwater venturi which might not be detected could bias the result from the precision heat balance in a non-conservative manner. Therefore, a penalty of [0.1]% for undetected fouling of the feedwater venturi is included in Figure 3.2-3. Any fouling which might bias the RCS flow rate measurement greater than [0.1]% can be detected by monitoring and trending various plant performance parameters. If detected, action shall be taken before performing subsequent precision heat balance measurements, i.e., either the effect of the fouling shall be quantified and compensated for in

the RCS flow rate measurement or the venturi shall be cleaned to eliminate the fouling.

The 12-hour periodic surveillance of indicated RCS flow is sufficient to detect only flow degradation which could lead to operation outside the acceptable region of operation shown on Figure 3.2-3.

9. Instrumentation Systems - The following are suggested:

It is suggested that protective functions which are to be found at several plants, but which may not be at all plants, be retained in the technical specifications and bracketed to indicate their plant specific nature. Examples are Steam/Feed Flow mismatch with low steam generator level and RCP Breaker Position Trip. For ESF functions it is recommended that NUREG 0452 Revision 4 instrument specifications be retained in addition to those in Draft Revision 5. Each utility would then eliminate any specification not applicable.

Confusion exists in the instrumentation tables concerning the point at which action is required. Some action statements refer to the total number of channels and some to the minimum channel operable. It is not possible to tell using the table, which is the L.C.O.; when to apply the action without referring to the action statement. The table should be modified such that the action point is clear. For example, action is always associated with the minimum channels operable column, never the total number of channels column. This would possibly allow deletion of the total number of channels column. Action Statement revision would be required.

It is suggested that the column, "Modes for which Surveillance is Required" be deleted since surveillance is required to be performed in the modes in which the instrumentation is required to be operable and this is specified. Having a modes column in the surveillance table is confusing, particularly where the modes are not quite the same.

It is suggested that appropriate revisions be made to the instrumentation specification to implement WCAP-10271 as approved in the NRC SER.

The instrumentation section of the technical specifications could be simplified considerably if rather than refer to each function, a simple list of the instruments be contained in the specification with appropriate surveillance and action requirements. This would eliminate the redundancy now contained in the specification which accounts for the majority of the pages in this action.

It is suggested that the various instrumentation tables be made consistent, that is, setpoint, minimum channels operable, etc. should be formatted the same for each instrument section. Also it would be convenient if there was consistency in the location of requirements. For example, reactor trip setpoints are contained in Section 2 while ESF setpoints are contained in Section 3/4.3. Reactor Trip and ESF setpoints have dedicated tables while radiation monitor setpoints are mixed in with other information. This is another reason for reformatting this section as discussed in the preceding paragraph.

10. Required Level for Steam Generator Operability

When Specifications 3/4.4.1 were written with a requirement to verify steam generator level no bases was provided upon which to calculate the minimum steam generator level. There is no accident analysis associated with this value. A bases needs to be provided to allow calculation of an appropriate value.

11. Optional Specifications

Where ever the word optional appears in an LCO or bases title it should be replaced by appropriate words which reference the design or accident analysis assumptions. The word optional is misleading in that it appears that the utility has the option to implement or not implement the specification. Actually the specification is either required or not required depending on the design and/or

analysis. If credit was taken for a particular system the the specification is required, it is not optional.

12. Steam Generator Safety Valves

It is recommended that existing specification 3/4.7.1.1 be replaced by the following.

3/4.7 PLANT SYSTEMS

3/4.7.1 TURBINE CYCLE

SAFETY VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.1 All main steam line Code safety valves associated with each steam generator of an unisolated reactor coolant loop shall be OPERABLE with lift settings as specified in Table 3.7-3.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

MODE 1

a. With (n) reactor coolant loops and associated steam generators in operation and with one or more main steam line Code safety valves inoperable, operation in MODE 1 may proceed provided, that within 4 hours, either the inoperable valve is restored to OPERABLE status or the Power Range Neutron Flux High Trip Setpoint is reduced per Table 3.7-1; otherwise reduce THERMAL POWER to less than 5% of RATED THERMAL POWER within the next 2 hours.

b. With (n-1) reactor coolant loops and associated steam generators in operation and with one or more main steam line Code safety valves associated with an operating loop inoperable, operation in MODE 1 may proceed provided, that within 4 hours, either the inoperable valve is restored to

OPERABLE status or the Power Range Neutron Flux High Trip Setpoint is reduced per Table 3.7-2; otherwise, reduce THERMAL POWER to less than 5% of RATED THERMAL POWER within the next 2 hours.

c. The provisions of Specification 3.0.4 are not applicable.

MODES 2 and 3

a. With less than one main steam line Code safety valve in each steam generator of an unisolated reactor coolant loop OPERABLE, either restore at least one main steam line Code safety valve to OPERABLE status in each steam generator of and unisolated reactor loop within 12 hours or be in at least HOT SHUTDOWN within the next 12 hours.

b. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.1.1 No additional requirements other than those required by Specification 4.0.5.

13. Equipment List

It is recommend that Tables and the like which do nothing more than provide list of equipment be deleted your technical specifications unless the listing is the only way to identify affected equipment. For example, it is unnecessary to list spray and/or sprinkler systems, it is sufficient to require all spay and/or sprinkler systems servicing safety related equipment or servicing equipment for which an LCO exist to be OPERABLE.

14. Radiological Specifications

In many instances radiological specifications are poorly written. For example, the LCO for specification 3.11.1.2 discusses actual dose but the action statement refers to calculated dose. The terminology should be consistent. Another example is specification 3.11.1.3. The LCO requires appropriate portions of the radwaste treatment system to be OPERABLE and used to reduce releases below projected dose limits. The action statement refers only to releases above the limit which were not treated. There is no action for releases above the limit when the effluent was being treated. Also terminology is not consistent, specification 3.11.1.2 referred to calculated dose, specification 3.11.1.3 refers to projected dose and in both cases actual dose is referred to. These examples are typical of the radiological specifications. It is suggested that these specifications be with drawn from the standard until such time as they have been rewritten or alternately a decision is made to include them only as a reference in the administrative section as discussed below.

In general, radiological specifications particularly 3/4.12 Radiological Environmental Monitoring are programmatic in nature and do not require plant shutdown. Additionally, doses and releases are generally governed by regulation.

Considering these it is suggested that radiological specification be removed from the specifications and allowed to exist as a program required by the administrative section of technical specifications.