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ARTHUR E. LUNDVALL, JR.
VICE PRESIDENT
SUPPLY

May 28, 1985

Director of Nuclear Reactor Regulation
Attention: Mr. J. R. Miller, Chief
Operating Reactors Branch #3
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Calvert Cliffs Nuclear Power Plant
Units Nos. 1 & 2; Dockets Nos. 50-317 and 50-318
Supplemental Response to NRC Generic Letter 84-24

Reference: BG&E letter from Mr. A. E. Lundvall to Mr. J. R. Miller (NRC)
dated February 28, 1985.

Gentlemen:

In the referenced letter, the Baltimore Gas and Electric Company requested schedular relief under the provisions of 10 CFR 50 paragraph 50.49(g) for completion of certain environmental qualification activities.

We are pleased to report that all of the modifications associated with our equipment qualification program that were scheduled for the Unit 1 refueling outage have been satisfactorily completed. We have also taken advantage of a recent unscheduled outage of Calvert Cliffs Unit 2 to upgrade the solenoid-operated isolation valves in the reactor coolant system vent paths (SV 103, 104, 105 and 106) to conform with the tested and fully qualified configuration.

At the request of your Staff, additional and more current information on the qualification of other equipment at Calvert Cliffs Unit 2 is also provided as an attachment to this letter.

If you should have any questions, please do not hesitate to contact us.

Very truly yours,

AEL/BSM/MDP/vf

Attachment

cc: D. A. Brune, Esq.
G. F. Trowbridge, Esq.
Mr. D. H. Jaffe, NRC
Mr. T. Foley, NRC
Mr. J. C. Ventura, Bechtel

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JUSTIFICATION FOR CONTINUED OPERATION

UNIT 2 MODIFICATIONS

I. Component Number(s): 2ZS 1585 A & B and 2ZS 1593 A & B

Location: Auxiliary Building - Room A321

Model Number(s): Current - Honeywell BZE6-2RQ2
Replacement - Namco EA180-24302

Description:

Limit switches ZS 1585 A & B and ZS 1593 A & B are used on valves CV 1585 and 1593, respectively, which are the isolation valves in the service water outlet from containment cooler numbers 2 and 4.

Technical Discussion:

The subject limit switches were formerly classified as non-safety related but have been upgraded to a safety-related status. The existing Honeywell limit switches will be replaced with qualified Namco limit switches.

CV 1585 and 1593 are normally closed, fail open valves which open on a containment spray actuation signal (CSAS). The solenoid operators for these valves, SV 1585 and 1593 are qualified. The limit switches provide indication only. Should the currently installed limit switches fail post-LOCA, at worst, they may indicate that the valves did not open. Therefore, the operators have been made aware that the subject limit switches are currently unreliable and that the affected valves are qualified and will be in their safe position post-LOCA. Affected indicators in the control room are identified by distinctive markings. The General Supervisor - Operations Standing Instruction No. 85-02 provides guidance to the control room operator on the interpretation of valve position indication signals dependent upon this equipment. Additionally, the operator can verify that the valves are open by checking the service water flow to the four coolers with flow transmitters FT 1584 and 1592. These flow transmitters have been physically upgraded and are qualified with the exception of the qualification documentation, which has not yet been updated to reflect this design change due to design document revision lag times.

This analysis meets the criteria of 10 CFR 50.49, paragraph (i), items (1) and (5).

Based on the above, continued operation is deemed justified.

Extension Request:

The subject limit switches are located in a high radiation area outside containment. Thus, the changeout cannot be made prior to an outage. Therefore, per 10 CFR 50.49, paragraph (g), an extension is requested to perform the replacement during the scheduled Fall 1985 Unit 2 refueling outage, based on the above JCO.

II. Component Number(s): 2SV 6540A through 6540G

Location(s): Containment - Room C229

Model Number(s): Valcor V526-5295-77

Description:

SV 6540 A through F are solenoid operated containment isolation valves in the sample supply lines to the hydrogen analyzer. SV 6540G is a solenoid operated containment isolation valve in the hydrogen analyzer sample return line. All of the subject valves are located inside containment.

Technical Discussion:

Qualification of these valves is not yet complete as a moisture seal must be installed at the conduit to valve connection in order to make the field installation consistent with the tested configuration. The subject valves were originally Dragon Model 10180-1. Since the valves are containment isolation valves they came under the equipment qualification (EQ) program. The EQ review of the Dragon valves determined that there was not sufficient qualification documentation available on the valves to consider them qualified. Therefore, the Dragon valves were replaced with qualified Valcor valves. The valves were judged to be qualified after the replacement, without the moisture seal, since their only function was to remain closed post-LOCA and all postulated failure modes left the valves in the closed position. At this time the hydrogen analyzer system was classified non-safety related. In response to NUREG-0737 the hydrogen analyzer system was reclassified safety-related and a new, qualified hydrogen analyzer was installed. Additionally, the subject valves qualification status changed in that they are now required to reopen post-LOCA. The equipment qualification review of the new hydrogen analyzer system and the subject valves was completed in October of 1984. It was this review that verified that moisture seals were required on the subject valves. Since the last refueling outage for Unit 2 was around June of 1984 it has not yet been possible to fully qualify the subject valves with the addition of the termination seal. The seal will either be a Raychem termination seal series NEIS or the Patel conduit seal.

All of the subject valves are normally closed, fail closed valves and are normally de-energized. They are all remote manually controlled. Failure of the valves post-LOCA due to the harsh environment will leave them in the closed position, which is safe from a containment isolation standpoint. Failure of the valves will also leave the operators with no method of monitoring the post-LOCA containment hydrogen concentration, as required by NUREG-0737. Therefore, procedures have been modified and the operators trained to start the qualified hydrogen recombiners following a LOCA. It has been verified that the hydrogen recombiners can maintain the containment hydrogen content at a safe level regardless of the size of the LOCA.

Each valve is equipped with two limit switches which are subject to the same failure mode. Should the limit switches indicate that the valves are closed there is no problem as the valves will be closed and the operators will be aware that the hydrogen analyzer cannot be used. Should the limit switches indicate any or all of the valves are open the operator will be able to ascertain that no samples are being taken by checking the instrumentation and indication from the hydrogen analyzer.

This analysis meets the criteria of 10 CFR 50.49, paragraph (i), items (3) and (5).

Based on the above, continued operation is deemed justified.

Extension Request:

The subject valves are inside containment, at an elevation requiring extensive scaffolding in order to perform the modification. Thus the seal addition cannot be performed non-outage. Therefore, per 10 CFR 50.49, paragraph (g), an extension is requested to perform the modification during the scheduled Fall 1985 Unit 2 refueling outage based on the above JCO. The Raychem materials required for the modification are currently on-site.

III. Component Number(s): 2ZS 4043 A & B and 2ZS 4048 A & B

Location: Auxiliary Building - Room A203

Model Number(s): Current - Namco SL-2C-11ZL
Replacement - Namco EA180-24302

Description:

Limit switches ZS 4043 A & B and ZS 4048 A & B are located on the main steam isolation valves CV 4043 and 4048.

Technical Discussion:

The subject limit switches were formerly classified as non-safety related but have been upgraded to a safety-related status. The existing Namco limit switches will be replaced with qualified Namco limit switches.

CV 4043 and 4048 are normally open valves which close on a SGIS and CSAS. The solenoid operators for these valves, SV 4043 and 4048, are fully qualified. The limit switches provide indication only. Should the currently installed limit switches fail post-LOCA, at worst, they may indicate that the valves did not close. Therefore, the operators have been made aware that the subject limit switches are currently unreliable and that the affected valves are qualified and will be in their safe position post-LOCA. Affected indicators in the control room are identified by distinctive markings. The General Supervisor - Operations Standing Instruction No. 85-02 provides guidance to the control room operator on the interpretation of valve position indication signals dependent upon this equipment.

This analysis meets the criteria of 10 CFR 50.49, paragraph (i), items (1) and (5).

Based on the above, continued operation is deemed justified.

Extension Request:

The subject limit switches are located outside containment, however, due to personnel protection concerns the valve must be taken out of service to perform the changeout. Neither MSIV can be taken out of service during operation. Therefore, per 10 CFR 50.49, paragraph (g), an extension is requested to perform the replacement during the scheduled Fall 1985 Unit 2 refueling outage, based on the above JCO.

IV. Component Number(s): 2ZS 3828 A & B and 2ZS 3830 A & B

Location: Auxiliary Building - Room A101 (ZS 3828) and A102 (ZS 3830)

Model Number(s): Current - Honeywell BZE6-2RN
Replacement - Namco EA180-24302

Description:

Limit switches ZS 3828 A & B and ZS 3830 A & B are located on valves CV 3828 and 3830 which are the isolation valves in the shutdown cooling heat exchangers component cooling water discharge line.

Technical Discussion:

The subject limit switches were formerly classified as non-safety related but have been upgraded to a safety-related status. The existing Honeywell limit switches will be replaced with qualified Namco limit switches.

CV 3828 and 3839 are normally closed, fail open valves which open on a SIAS. The solenoid operators for these valves, SV 3828 and 3820, are qualified. The limit switches provide indication only. Should the currently installed limit switches fail post-LOCA, at worst, they may indicate that the valves did not open. Therefore, the operators have been made aware that the subject limit switches are currently unreliable and that the affected valves are fully qualified and will be in their safe position post-LOCA. Affected indicators in the control room are identified by distinctive markings. The General Supervisor - Operations Standing Instruction No. 85-02 provides guidance to the control room operator on the interpretation of valve position indication signals dependent upon this equipment.

This analysis meets the criteria of 10 CFR 50.49, paragraph (i), items (1) and (5).

Based on the above, continued operation is deemed justified.

Extension Request:

The subject limit switches are located outside containment and can be replaced during normal operation. However, there is a parts delivery problem and it is not known at this time what the delivery schedule will be. Therefore, per 10 CFR 50.49, paragraph (g), an extension is requested to perform the replacement during the scheduled Fall 1985 Unit 2 refueling outage, based on the above JCO. Should the required parts become available prior to this, the replacement will be made as soon as possible.

V. Component Number(s): Terminal Blocks for the Following Instruments

Inside Containment - Room C229

2LT 4146, 4147	Containment Sump Level Transmitters
2PT 103, 103-1	Pressurizer Pressure Transmitters
2TE 112CA through 112CD	RCS Hot and Cold Leg RTDs
2TE 112HA through 112HD	RCS Hot and Cold Leg RTDs
2TE 122CA through 122CD	RCS Hot and Cold Leg RTDs
2TE 122HA through 122HD	RCS Hot and Cold Leg RTDs
2PT 102A through 102D	Pressurizer Pressure Transmitters
2PT 105 A & B	Pressurizer Wide Range Pressure Transmitters
2LT 1113A through 1113D	Steam Generator 1 Level Transmitters
2LT 1123A through 1123D	Steam Generator 2 Level Transmitters

Outside Containment

Room A316

2LT 1114A-D - AFW to Steam Generator 1 Pressure Transmitters
2LT 1124A-D - AFW to Steam Generator 2 Pressure Transmitters

Room A428

2I/P 3938, 3939 - Steam Generator Atmospheric Dump Valve Signal Converters

Model Number(s): Current - Weidmuller SAK or Marathon 1600 Series
Terminal Blocks

Replacements - Raychem Series WCSF-N Ring/Tongue
and Inline Splice Seals

Description:

The subject terminal blocks are used on safety related instrumentation inside and outside containment in harsh environments. Upon receipt of IE Information Notice 84-47, Calvert Cliffs performed a review of safety related terminal blocks and determined which terminal blocks might be subject to the deficiencies detailed in the Notice. The subject terminal blocks comprise the list of potentially deficient terminal blocks. These terminal blocks will be modified with either a ring/tongue heat shrink seal or an inline splice, both of which employ qualified Raychem seal kits.

Technical Discussion:

Replacement with qualified splices has been completed on Unit 1. This is consistent with what was proposed in Inspection Notice 84-47. We are confident that the terminal blocks in use on Unit 2 will perform adequately in a post-accident environment based on the existing qualification test reports. Nevertheless, Calvert Cliffs will perform the terminal block modifications for Unit 2 in order to preclude any further questions on the qualification of the subject terminal blocks.

We propose to complete this corrective action during the Fall 1985 refueling outage. Continued operation until then is justified on the basis of an evaluation of the Sandia National Laboratories (SNL) report, manufacturer's data, and analyses. This approach is also consistent with the corrective action suggested in Inspection Notice 84-47.

We conclude that even though the data presented in the SNL report is very conservative, it can be used to support our use of terminal block connections for instrumentation. We use Weidmuller SAK blocks at our pressure and level transmitters, qualified splices within the caps of RTDs, and Marathon 1600 series blocks at the electrical penetration assemblies (EPA). The leakage currents described in the SNL study are expected to occur primarily at the EPA terminal blocks if at all. The effect of this error on the associated instrument loops has been evaluated and determined to be acceptable.

It is our understanding that the Weidmuller blocks were not used in the SNL testing. Furthermore, we have test data which show lower leakage currents for Weidmuller blocks at 600V than for the blocks presented by SNL at 45 vdc. In other words, leakage currents on the Weidmuller terminal blocks are one to two orders of magnitude smaller than leakage currents from much lower applied voltages used by SNL. We conclude that the SNL data does not apply to the Weidmuller blocks used at our transmitters.

The terminations at the RTDs are bolted, ring/tongue terminals with Scotch 27 tape wrapping overall. Since the RTD head and cap are qualified for LOCA, the only parameters of concern are radiation and temperature. The tape is a glass cloth impregnated with a thermosetting pressure sensitive adhesive designed for continuous applications at 130°C (266°F). The base material, natural rubber, has a radiation damage threshold on the order of 1E+8 rads. This exceeds the anticipated accident dose of 1.3E+7 rads. Therefore, we consider this termination to be qualified. We consider its use to be acceptable on an interim basis.

In evaluating the specific data contained in the SNL report, we determined that the closest fit to the CCNPP LOCA profile is the Phase II test profile, more specifically, the initial ramp to the first temperature plateau (Figure 2, p. 9). The most significant points on the profiles are summarized below:

	<u>PHASE II</u>	<u>CCNPP</u>
ramp time	30 sec.	40 sec.
peak time	172°C - 175 °C (342°F - 347°F)	136°C (276°F)
duration at peak temp.	3 hrs. 9 min.	1 minute
ramp down to 95°C (203°F)	5 hrs. 4 min. (190°F)	2 hrs. 12 min.

The 95°C (203°F) level is significant since this is the threshold region for restoration of insulation resistance (IR) values to within two orders of magnitude of the pretest IR (p. 81). The SNL report identifies IR values of 10E + 5 to 10E + 9

ohms at this region for transmitter circuits. Additionally, the approximately 21°C (70°F) difference in peak temperatures can contribute significantly to the IR and error.

Our analyses concentrated on the SNL data presented for terminal block 11, with pressure transmitter connected, as that most representative of an actual transmitter circuit. The specific data presented in Table 13 (p. 58 ff.) identifies the lowest IR of 18K ohms for the 172°C (342°F) region and 28M ohms for the 95°C (203°F) region.

The data presented for the RTD circuit was developed during the end of Phase I profile. We do not consider this profile applicable, and therefore conducted our analyses using the previously identified IR values of 18K ohm and 28M ohms.

We evaluated the safety functions of the instruments identified in Ref. 1 and concluded that no engineered safeguard features and no accident mitigation function will be compromised. The other safety considerations are for accident monitoring during the transient conditions which may affect the instruments' accuracy. The errors introduced are temporary (approx. 2.2 hours for the worst LOCA analyzed).

We have reviewed the results of our error calculations with our operations personnel and conclude that these are acceptable. The control room operators will be provided with the results of our calculations until our next refueling and final resolution of this issue.

Therefore based upon the assessment of the use of terminal blocks for the identified instruments and the margin of conservatism based on the SNL data, we conclude that continued safe operation is justified.

VI. Component Number(s): 2ZS 515 A & B and 2ZS 516 A & B

Location: Containment - Room C229

Model Number(s): Current - Namco EA740-500-00
Replacement - Namco EA180-24302

Description:

Limit switches ZS 515 A & B and ZS 516 A & B are located on valves CV 515 and 516 which are isolation valves in the letdown path to the regenerative heat exchange.

Technical Discussion:

The subject limit switches were formerly classified as non-safety related but have been upgraded to a safety-related status. The existing Namco limit switches will be replaced with qualified Namco limit switches.

CV 515 and 516 are normally open, fail closed valves which close on a CVCS isolation signal and a SIAS. The solenoid operators for these valves, SV 515, 516, are qualified. The limit switches provide indication only. Should the currently installed limit switches fail post-LOCA, at worst, they may indicate that the valves did not close. Therefore, the operators have been made aware that the subject limit switches are currently unreliable and that the affected valves are qualified and will be in their safe position post-LOCA. Affected indicators in the control room are identified by distinctive markings. The General Supervisor - Operations Standing Instruction No. 85-02 provides guidance to the control room operator on the interpretation of valve position indication signals dependent upon this equipment.

This analysis meets the criteria of 10 CFR 50.49, paragraph (i), items (3) and (5).

Based on the above, continued operation is deemed justified.

Extension Request:

The subject limit switches are located in a high radiation area inside containment. Thus, the changeout cannot be made prior to an outage. Therefore, per 10 CFR 50.49, paragraph (g), an extension is requested to perform the replacement during the scheduled Fall 1985 Unit 2 refueling outage, based on the above JCO.

VII. Component Number(s): 2ZS 505 A & B and 2ZS 506 A & B

Location: Containment - Room 229 (ZS 506)
Auxiliary Building - Room A321 (ZS 505)

Model Number(s): Current - Namco EA-740-500-00
Replacement - Namco EA-180-24302

Description:

Limit switches ZS 505 A & B and ZS 506 A & B are used on valves CV 505 and 506 which are containment isolation valves in the controlled reactor coolant pump bleed off to the reactor coolant drain tank.

Technical Discussion:

The subject limit switches were formerly classified as non-safety related but have been upgraded to a safety-related status. The existing Namco limit switches will be replaced with qualified Namco limit switches

CV 505 and 506 are normally open, fail closed valves which receive a SIAS to close. The solenoid operators for these valves, SV 505 and 506, are qualified. The limit switches provide indication only. Should the currently installed limit switches fail post-LOCA, at worst, they may indicate that CV 505 and 506 failed to close. Therefore, the operators have been made aware that the subject limit switches are currently unreliable and that the affected valves are qualified and will be in their safe position post-LOCA. Affected indicators in the control room are identified by distinctive markings. The General Supervisor - Operations Standing Instruction No. 85-02 provides guidance to the control room operator on the interpretation of valve position indication signals dependent upon this equipment.

This analysis meets the criteria of 10 CFR 50.49, paragraph (i), items (3) and (5).

Based on the above, continued operation is deemed justified.

Extension Request:

ZS 506 A & B are located in a high radiation area inside containment. Thus, the changeout cannot be made prior to an outage. ZS 505 A & B are located outside containment and can be replaced during normal operation. However, there is a parts delivery problem and it is not known at this time what the delivery schedule will be. Therefore, per 10 CFR 50.49, paragraph (g), an extension is requested to perform the replacement during the scheduled Fall 1985 Unit 2 refueling outage, based on the above JCO. Should the required parts become available prior to this, the replacement will be made as soon as possible.

VIII. Component Number(s): 2ZS 518 A & B and 2ZS 519 A & B

Location: Containment - Room C229

Model Number(s): Current - Namco EA740-500-00
Replacement - Namco EA180-24302

Description:

Limit switches ZS 518 A & B and ZS 519 A & B are located on valves CV 518 and 519 which are the containment isolation valves in the normal charging flow path, downstream of the regenerative heat exchanger.

Technical Discussion:

The subject limit switches were formerly classified as non-safety related but have been upgraded to a safety-related status. The existing Namco limit switches will be replaced with qualified Namco limit switches.

CV 518 and 519 are normally open, fail open valves which are remote manually operated. The solenoid operators for these valves, SV 518 and 519, are qualified. The limit switches provide indication only. Should the currently installed limit switches fail post-LOCA, at worst, they may indicate that the valves did not close. Therefore, the operators have been made aware that the subject limit switches are currently unreliable and that the affected valves are fully qualified and will be in their safe position post-LOCA. Affected indicators in the control room are identified by distinctive markings. The General Supervisor - Operations Standing Instruction No. 85-02 provides guidance to the control room operator on the interpretation of valve position indication signals dependent upon this equipment.

This analysis meets the criteria of 10 CFR 50.49, paragraph (i), items (3) and (5).

Based on the above, continued operation is deemed justified.

Extension Request:

The subject limit switches are located in a high radiation area inside containment. Thus, the changeout cannot be made prior to an outage. Therefore, per 10 CFR 50.49, paragraph (g), an extension is requested to perform the replacement during the scheduled Fall 1985 Unit 2 refueling outage, based on the above JCO.

IX. Component Number(s): 2ZS 661 A & B

Location: Containment - Room C229

Model Number(s): Current - Honeywell DTE6-2RN2
Replacement - Namco EA180-24302

Description:

Limit switches ZS 661 A & B are located on valve CV 661 which is the isolation valve in the safety injection path bleed off to the reactor coolant drain tank.

Technical Discussion:

The subject limit switches were formerly classified as non-safety related but have been upgraded to a safety-related status. The existing Honeywell limit switches will be replaced with qualified Namco limit switches.

CV 661 is a normally open, fail closed valve which closes on a SIAS. The solenoid operator for this valve, SV 661, is qualified. The limit switches provide indication only. Should the currently installed limit switches fail post-LOCA, at worst, they may indicate that the valves did not close. Therefore, the operators have been made aware that the subject limit switches are currently unreliable and that the affected valve is qualified and will be in its safe position post-LOCA. Affected indicators in the control room are identified by distinctive markings. The General Supervisor - Operations Standing Instruction No. 85-02 provides guidance to the control room operator on the interpretation of valve position indication signals dependent upon this equipment.

This analysis meets the criteria of 10 CFR 50.49, paragraph (i), items (3) and (5).

Based on the above, continued operation is deemed justified.

Extension Request:

The subject limit switches are located in a high radiation area inside containment. Thus, the changeout cannot be made prior to an outage. Therefore, per 10 CFR 50.49, paragraph (g), an extension is requested to perform the replacement during the scheduled Fall 1985 Unit 2 refueling outage, based on the above JCO.

X. Component Number(s): 2ZS 517 A & B

Location: Containment - Room C229

Model Number(s): Current - Honeywell MTE-4RN
Replacement - Namco EA180-24304

Description:

Limit switches ZS 517 A & B are located on valve CV 517 which is the containment isolation valve in the auxiliary spray line off the regenerative heat exchanger.

Technical Discussion:

The subject limit switches were formerly classified as non-safety related but have been upgraded to a safety-related status. The existing Honeywell limit switches have been replaced with qualified Namco limit switches. However, pending the installation of qualified conduit-to-limit switch seals the switches are judged to be unqualified.

CV 517 is a normally closed, fail closed valve which is remote manually operated. The solenoid operator for this valve, SV-517, is qualified. The limit switches provide indication only. Should the currently installed limit switches fail post-LOCA, at worst, they may indicate that the valve did not close. Therefore, the operators have been made aware that the subject limit switches are currently unreliable and that the affected valve is fully qualified and will be in its safe position post-LOCA. Affected indicators in the control room are identified by distinctive markings. The General Supervisor - Operations Standing Instruction No. 85-22 provides guidance to the control room operator on the interpretation of valve position indication signals dependent upon this equipment.

This analysis meets the criteria of 10 CFR 50.49, paragraph (i), items (1) and (5).

Based on the above, continued operation is deemed justified.

Extension Request:

The subject limit switches are located in a high radiation area inside containment. Thus, the seal additions cannot be made prior to an outage. Therefore, per 10 CFR 50.49, paragraph (g), an extension is requested to perform the replacement during the scheduled Fall 1985 Unit 2 refueling outage, based on the above JCO.

XI. Component Number(s) 2ZS 2085 A & B

Location: Containment - Room C229

Model Number(s): Current - Namco EA740-500-00
Replacement - Namco EA180-24302

Description:

Limit switches ZS 2085 A & B are located on valve CV 2085 which is the control valve on the containment instrument air supply header.

Technical Discussion:

The subject limit switches were formerly classified as non-safety related but have been upgraded to a safety-related status. The existing Namco limit switches will be replaced with qualified Namco limit switches.

CV 2085 is a normally open, fail closed valve which is remote manually operated and closes on a low header pressure signal from PS 2085. The solenoid operator for this valve, SV 2085, is qualified. The limit switches provide indication only. Should the currently installed limit switches fail post-LOCA, at worst, they may indicate that the valve did not close. Therefore, the operators have been made aware that the subject limit switches are currently unreliable and that the affected valve is fully qualified and will be in its safe position post-LOCA. Affected indicators in the control room are identified by distinctive markings. The General Supervisor - Operations Standing Instruction No. 85-02 provides guidance to the control room operator on the interpretation of valve position indication signals dependent upon this equipment.

This analysis meets the criteria of 10 CFR 50.49, paragraph (i), items (1) and (5).

Based on the above, continued operation is deemed justified.

Extension Request:

The subject limit switches are located in a high radiation area inside containment. Thus, the changeout cannot be made prior to an outage. Therefore, per 10 CFR 50.49, paragraph (g), an extension is requested to perform the replacement during the scheduled Fall 1985 Unit 2 refueling outage, based on the above JCO.

XII. Component Number: 2ZS 2180 A & B

Location: Auxiliary Building - Room A321

Model Number: Current - Honeywell MTE-4RN
Replacement - Namco EA180-24302

Description:

Limit switches ZS 2180 A, B are located on valve CV 2180 which is a containment isolation valve in the vent path from the reactor coolant drain tank and pressurizer quench tank to the waste gas processing system.

Technical Discussion:

The subject limit switches were formerly classified as non-safety related but have been upgraded to a safety related status. The existing Honeywell limit switches will be replaced with qualified Namco limit switches

CV 2180 is a normally open, fail closed valve which closes on a CIS. The solenoid operator for this valve, SV 2130, is qualified. The limit switches provide indication only. Should the currently installed limit switches fail post-LOCA, at worst, they may indicate that the valves did not close. Therefore, the operators have been made aware that the subject limit switches are currently unreliable and that the affected valves are qualified and will be in its safe position post-LOCA. Affected indicators in the control room are identified by distinctive markings. The General Supervisor - Operations Standing Instruction No. 85-02 provides guidance to the control room operator on the interpretation of valve position indication signals dependent upon this equipment.

This analysis meets the criteria of 10 CFR 50.49, paragraph (i), items (3) and (5).

Based on the above, continued operation is deemed justified.

Extension Request:

The subject limit switches are located outside containment and can be replaced during normal operation. However, there is a parts delivery problem and it is not known at this time what the delivery schedule will be. Therefore, per 10 CFR 50.49, paragraph (g), an extension is requested to perform the replacement during the scheduled Fall 1985 Unit 2 refueling outage, based on the above JCO. Should the required parts become available prior to this, the replacement will be made immediately.

XIII. Component Number: 2ZS 4260 A & B

Location: Auxiliary Building - Room A321

Model Number: Current - Honeywell MTE-4RN
Replacement - Namco EA180-2403

Description:

Limit switches ZS 4260 A, B are located on valve CV 4260 which is a containment isolation valve in the reactor coolant drain tank pump discharge path.

Technical Discussion:

The subject limit switches were formerly classified as non-safety related but have been upgraded to a safety related status. The existing Honeywell limit switches will be replaced with qualified Namco limit switches

CV 4260 is a normally open, fail closed valve which closes on a SIAS. The solenoid operator for this valve, SV 4260, is qualified. The limit switches provide indication only. Should the currently installed limit switches fail post-LOCA, at worst, they may indicate that the valve did not close. Therefore, the operators have been made aware that the subject limit switches are currently unreliable and that the affected valve is qualified and will be in its safe position post-LOCA. Affected indicators in the control room are identified by distinctive markings. The General Supervisor - Operations Standing Instruction No. 85-02 provides guidance to the control room operator on the interpretation of valve position indication signals dependent upon this equipment.

This analysis meets the criteria of 10 CFR 50.49, paragraph (i), items (3) and (5).

Based on the above, continued operation is deemed justified.

Extension Request:

The subject limit switches are located outside containment and can be replaced during normal operation. However, there is a parts delivery problem and it is not known at this time what the delivery schedule will be. Therefore, per 10 CFR 50.49, paragraph (g), an extension is requested to perform the replacement during the scheduled Fall 1985 Unit 2 refueling outage, based on the above JCO. Should the required parts become available prior to this, the replacement will be made immediately.

XIV. Component Number: 2ZS 4150 A & B and 2ZS 4151 A & B

Location: Containment - Room C229

Model Number: Current - Namco EA740-500-00
Replacement - Namco EA180-24302

Description:

Limit switches ZS 4150 A & B and ZS 4151 A & B are located on valves CV 4150 and 4151 which are isolation valves in the containment spray headers.

Technical Discussion:

The subject limit switches were formerly classified as non-safety related but have been upgraded to a safety related status. The existing Namco limit switches will be replaced with qualified Namco limit switches

CV 4150 and 4151 are normally closed, fail open valves which open on a SIAS. The solenoid operators for these valves, SV 4150 and 4151, are qualified. The limit switches provide indication only. Should the currently installed limit switches fail post-LOCA, at worst, they may indicate that the valves failed to open. Therefore, the operators have been made aware that the subject limit switches are currently unreliable and that the affected valves are qualified and will be in their safe position post-LOCA. Affected indicators in the control room are identified by distinctive markings. The General Supervisor - Operations Standing Instruction No. 85-02 provides guidance to the control room operator on the interpretation of valve position indication signals dependent upon this equipment.

This analysis meets the criteria of 10 CFR 50.49, paragraph (i), items (3) and (5).

Based on the above, continued operation is deemed justified.

Extension Request:

The subject limit switches are located in a high radiation area inside containment. Thus, the changeout cannot be performed prior to an outage. Therefore, per 10 CFR 50.49, paragraph (g), an extension is requested to perform the replacement during the scheduled Fall 1985 Unit 2 refueling outage, based on the above JCO.

XV. Component Number: 2ZS 5291 A & B
Location: Containment - Room C229
Model Number: Current - Namco EA740-500-00
Replacement - Namco EA180-24302

Description:

Limit switches 5291 A, B are located on valve CV 5291 which is a containment isolation valve in the containment atmosphere radiation monitor line.

Technical Discussion:

The subject limit switches were formerly classified as non-safety related but have been upgraded to a safety related status. The existing Namco limit switches will be replaced with qualified Namco limit switches

CV 5291 is a normally open, fail closed valve which closes on a SIAS. The solenoid operator for this valve, SV 5291, is qualified. The limit switches provide indication only. Should the currently installed limit switches fail post-LOCA, at worst, they may indicate that the valve did not close. Therefore, the operators have been made aware that the subject limit switches are currently unreliable and that the affected valve is qualified and will be in its safe position post-LOCA. Affected indicators in the control room are identified by distinctive markings. The General Supervisor Operations Standing Instruction No. 85-02 provides guidance to the control room operator on the interpretation of valve position indication signals dependent upon this equipment.

This analysis meets the criteria of 10 CFR 50.49, paragraph (i), items (3) and (5).

Based on the above, continued operation is deemed justified.

Extension Request:

The subject limit switches are located in a high radiation area inside containment. The changeout cannot be performed prior to an outage. Therefore, per 10 CFR 50.49, paragraph (g), an extension is requested to perform the replacement during the scheduled Fall 1985 Unit 2 refueling outage, based on the above JCO.