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April 17, 1989

Docket No. 50-245
B13157
Re: 10CFR50.49

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Gentlemen:

Millstone Nuclear Power Station, Unit No. 1
Reactor Water Clean-Up System
Containment Isolation Valves

In a letter dated March 2, 1989,(1) Northeast Nuclear Energy Company (NNECO) transmitted to the NRC an LER filed pursuant to 10CFR50.73(a)(2)(v) concerning two isolation valves in the reactor water cleanup (RWCU) system. That LER described a condition discovered in the course of a self-initiated review of the environmental qualification (EQ) of electrical equipment, including equipment exempted from 10CFR50.49 at Millstone Unit No. 1. The review was part of NNECO's normal and ongoing effort to maintain current information and data regarding components on our Equipment Qualification Master List (EQML). The specific question which arose concerns the capability of these valves to perform their intended safety functions in the event of certain postulated small pipe breaks. NNECO promptly undertook a comprehensive review of this concern to assess the reportability of this matter, the operability of the valves, and NNECO's obligations under the Technical Specifications for Millstone Unit No. 1. NNECO verbally reported this condition on January 31, 1989, pursuant to 10CFR50.72(b)(2)(iii). We have apprised the Staff of developments and information as it was obtained. We provide here further information concerning the results of NNECO's efforts and corrective actions which have been taken.(2)

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(1) S. E. Scace letter to U.S. Nuclear Regulatory Commission, dated March 2, 1989, "Licensee Event Report 89-001-00."

(2) In LER 89-001-00, NNECO informed the Staff of our plans to submit this additional information in March 1989. Based upon a discussion with the Millstone Senior Resident Inspector on March 30, 1989, an extension to the March 31, 1989 commitment date was requested by NNECO and granted by the Staff.

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NNECO emphasizes that the review which identified the conditions described herein was undertaken voluntarily as part of normal efforts to maintain the EQML so as to reflect current qualification and equipment data and information at Millstone Unit No. 1. NNECO is firmly committed to such efforts to maintain its qualification program and processes to reflect new or changed information, consistent with its regulatory obligations. NNECO believes that such efforts provide an important potential additional benefit, namely the opportunity to identify areas in which the safety of the plant can be improved, such as in this instance.

Background

In the course of developing and implementing an Integrated Safety Assessment Program (ISAP) for Millstone Unit No. 1, NNECO identified several motor-operated valves subject to the qualification requirements of 10CFR50.49, which were candidates for inclusion in the ISAP process. In accordance with the ISAP program, NNECO submitted an analysis of the public safety implications of qualifying these valves.(3) During the same time period, NNECO requested an extension of the November 30, 1985 qualification deadline with respect to a subset of those valves and requested that the need to qualify these valves be evaluated within the ISAP process.(4) The Commission granted the schedular extension, and confirmed the appropriateness of addressing the valves' status within the ISAP process, by Memorandum and Order, dated November 20, 1985. The two valves discussed in this letter were included in the extension.

Based upon its evaluations, NNECO requested on January 17, 1986, pursuant to the then recently revised 10CFR50.12, an exemption from the requirements of 10CFR50.49 for 11 valve motor operators.(5) Two of these valves, 1-CU-2 and 1-CU-3, were isolation valves on the RWCU system suction piping. NNECO assessed the likelihood that these valves would perform their intended safety functions before they would be exposed to accident environments for durations sufficient to prevent the valves from performing their safety functions. As indicated in the request for exemption, NNECO determined that based upon the predicted accident environment and the availability and timing of isolation signals in the event of the assumed pipe breaks, probabilistic evaluations, and estimates of impact on averted off-site dose, qualification of these

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(3) J. F. Opeka letter to C. I. Grimes, dated October 17, 1985, "ISAP Summaries of Public Safety Impact Model Project Analyses."

(4) J. F. Opeka letters to Chairman N. J. Palladino, dated September 30, and October 29, 1985, "Electrical Equipment Schedular Extension Requests."

(5) J. F. Opeka letter to C. I. Grimes, dated January 17, 1986, "Environmental Qualification of Electrical Equipment, Request for Exemption."

valves under 10CFR50.49 would be of little benefit. Accordingly, we requested that they be exempted from 10CFR50.49 requirements. The Staff concurred and issued the exemption on June 8, 1987.(6)

NNECO Review

As noted, NNECO identified the above condition in the course of its review of the status of equipment on its Millstone Unit No. 1 EQML. This review took into account current information regarding the qualification and status of the equipment, e.g., to reflect recent design changes and new radiation data. In reviewing the qualification status of these valves, NNECO reexamined the documentation for the previously issued exemption. NNECO noted that the documentation could be read to suggest that certain formal qualification documentation existed for these valves for conditions other than radiation and aging (e.g., pressure, temperature). Actually, there is no formal qualification testing documentation, although there is information and data for similar components and material. NNECO believes this lack of clarity arose because the exemption request for these valves apparently focused on their qualification status for radiation and aging impacts, noting the absence of qualification data for those parameters. It is noteworthy that the ISAP evaluation assumed failure of these valves to close, regardless of the extent of qualification documentation. Additional information to support NNECO's position that the lack of qualification data did not detrimentally affect the level of assurance of valve operability is presented in Attachment 1.

In addition, it was noted that available isolation signals may not produce the previously established isolation response for certain small pipe breaks. Specifically, NNECO noted that for those scenarios, the resulting environment, although less severe than under a large break, would be present over a longer period of time than for large breaks, prior to detection of the break and initiation of isolation. NNECO recognized that this additional exposure time could influence the valves' ability to function when called upon. Accordingly, NNECO undertook a more detailed analysis of this situation.

Results of NNECO Review and Responsive Actions

In accordance with NNECO procedures and prior to completion of the evaluation described in Attachment 1, a determination was made on January 31, 1989, that with the then-available isolation signals, there was insufficient information to conclude these valves would operate prior to exposure to accident environments which could render them inoperable under certain newly postulated pipe break scenarios. Accordingly, pursuant to 10CFR50.72(b)(2)(iii), NNECO promptly reported this condition to the Staff.

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(6) D. M. Crutchfield letter to E. J. Mroczka, dated June 8, 1987, "Exemption-Valve Motor Operators."

In addition, at that time, NNECO declared these two valves inoperable, in accordance with Technical Specification requirements, and closed the valves (see Section 3.7.D.2 of the Technical Specifications). In doing so, NNECO satisfied the relevant action statements in the Technical Specifications. (Under the Technical Specifications for Millstone Unit No. 1, the plant was able to continue operation without the RWCU system so long as specified water chemistry parameters were maintained.) NNECO subsequently evaluated and implemented new measures to provide assurance of valve operability during the time required to perform their safety function. These valves were declared operable on February 2, 1989.

o Initial Isolation Signals

At the time NNECO applied for and received the exemption for these valves, automatic isolation for both valves was accomplished upon receipt of a low[7] reactor water level signal.[8]

o Additional Isolation Signals

Upon identification of the small break concern, NNECO promptly sought to provide for alternative isolation signals. First, NNECO pursued establishing a signal which would be sensitive to the changes in environmental conditions associated with small breaks inside the drywell. NNECO determined that the safety-grade drywell pressure switches would detect the estimated pressure increases in the drywell as a result of a small break. These pressure switches have a trip setting of $\leq$ 2 psig. (These are the same drywell pressure switches used for reactor scram via the reactor protection system.) Detection would occur within approximately 22 seconds of any break greater than 0.01 ft^2, and would provide an isolation signal that would close both valves within approximately 18 seconds of detection. NNECO has determined that the conditions to which valve 1-CU-2 would be exposed, within that time frame, would not adversely impact the ability of the valve to function. In order to accomplish this function automatically, NNECO established an additional

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(7) Subsequently, Amendment No. 4 to the Millstone Unit No. 1 Technical Specifications modified this RWCU system isolation signal to a low-low reactor water level to avoid unnecessary RWCU isolations. C. O. Thomas letter to E. J. Mroczka, dated July 17, 1987. This change results in isolation of 1-CU-2 and 1-CU-3 in approximately 43 seconds for large breaks as compared to 30 seconds identified in the exemption request.

(8) In addition, NNECO had noted the availability of a signal in the event of high flow in the RWCU piping, providing additional opportunity to close these valves should a break occur in the RWCU piping. (More information regarding this isolation signal is contained in subsequent sections.)

signal to the isolation circuitry for these valves and the rest of the RWCU system isolation valves to provide an isolation response upon receipt of a high drywell pressure signal.

With respect to small breaks outside the drywell that could impact operability of valve 1-CU-3, NNECO evaluated the possible use of existing high temperature detectors. An existing NNECO procedure directed operator action to evaluate and isolate apparent breaks in the event of high area temperature alarms, including those involved here. NNECO has now modified this procedure to direct isolation of the RWCU (both valves 1-CU-2 and 1-CU-3) promptly upon receipt of an RWCU area high temperature alarm. As discussed more fully in Attachment 1, this procedure and associated operator action adequately assured that valve 1-CU-3 would have completed its operation before exposure to a harsh environment could adversely impact its operability.

o Long-Term Response

NNECO has decided to replace 1-CU-2 and 1-CU-3 valve operators with qualified motor operators during the current refueling outage. In doing so, NNECO desires to provide even greater assurance of performance of these valves in postulated accident conditions. Further, although not adversely impacted by the previous status of the valves, NNECO will obtain greater flexibility in addressing certain off-normal conditions. As an example, elimination of the procedural provision to promptly isolate 1-CU-2 and 1-CU-3 upon receipt of an RWCU area high temperature alarm and/or removal of the RWCU isolation signal upon high drywell pressure would provide enhanced operational flexibility in responding to off-normal conditions.

Generic Implications

NNECO recognizes that the conditions examined, with respect to these valves, may also have broader implications. Accordingly, to assess possible generic implications and provide appropriate input for operation of each of the plants at the Millstone Station and the Haddam Neck plant, NNECO and the Connecticut Yankee Atomic Power Company are undertaking an evaluation to assess whether other questions could exist with respect to consideration of various break sizes. To date, we have found no other situation where the originally postulated breaks would not be bounding.

Exemption for Valves CU-2/CU-3

NNECO's exemption with respect to these valves was premised, in part, on the determination that these valves would have operated in a timely manner, i.e., prior to a time when exposure to environments could render them inoperable, so that qualification under 10CFR50.49 was unnecessary. NNECO's exemption request addressed a number of scenarios involving postulated breaks inside and outside the drywell, the available isolation signals for such breaks, a

probabilistic analysis of the impact on postulated core melt frequency if either of these valves were to fail,[9] the limited qualification data for the valves, and the potential for failure of unqualified equipment to mislead the operator.

It is also noted that the exemption request included a discussion of a high-flow isolation signal for 1-CU-2 and 1-CU-3 that could be misinterpreted. For certain RWCU breaks, a high flow in the RWCU line could indirectly cause an isolation due to high temperature. No credit by NNECO was assumed, in any way, for this isolation in either the exemption request or the ISAP evaluation, and removal of the discussion of a high-flow isolation from the exemption basis has minimal, if any, impact.

As discussed in Attachment 1, after the implementation of the revised isolation signal logic, NNECO believes that during the time between the modification and shutdown for refueling, valves 1-CU-2 and 1-CU-3 would have responded to the full range of postulated breaks, and that such response would have been completed within the time NNECO had judged the valves to remain operable (i.e., prior to exposure to a harsh environment significant enough to adversely impact the valves' performance). NNECO believes there continued to be reasonable assurance that these valves would have performed their intended safety functions, consistent with the previously authorized exemption.

NNECO believes the information provided herein reflects the relevant considerations for determining the status of these valves. It does not appear necessary to have pursued additional regulatory relief beyond the existing exemption in that the status of the valves since February 2, 1989 was consistent with their status authorized by that exemption. In any event, full compliance with 10CFR50.49 for 1-CU-2 and 1-CU-3 will be assured prior to start-up from the current refueling outage since the subject valve motor operators will be replaced. At that time, the subject exemptions will no longer be required.

Conclusion

For the reasons set forth above, NNECO concludes that it has fully addressed the new concerns relating to these valves and has demonstrated reasonable

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(9) NNECO has also reevaluated its probabilistic determinations in view of the latest information available. NNECO has determined that there will be minimal impact on the prior results, even taking into account the new break scenarios. In reevaluating the results, NNECO also considered the impact of quarterly valve surveillance testing actually performed on these valves, rather than the originally assumed 22-month period between surveillance testing.

assurance that the valves would have performed their intended safety functions. Attachment 2 to this letter provides answers to NRC Staff concerns raised in Inspection Report No. 50-245/89-02.(10) NNECO welcomes the opportunity to discuss these matters further with the Staff, if desired.

Please contact us if you have any additional questions regarding the enclosed information.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

E. J. Mroczka
Senior Vice President

cc: W. T. Russell, Region I Administrator
M. L. Boyle, NRC Project Manager, Millstone Unit No. 1
W. J. Raymond, Senior Resident Inspector, Millstone Unit Nos. 1, 2, and 3

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(10) L. H. Bettenhausen letter to E. J. Mroczka, dated March 8, 1989, "Inspection Report No. 50-245/89-02."

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Attachment 1

RWCU Valve Break Scenarios

April 1989

RWCU Valve Break Scenarios

INTRODUCTION

The discussion below examines the functions of valves 1-CU-2 and 1-CU-3 for postulated break scenarios inside and outside the drywell. The discussion focuses on the ability of the valves to have performed their intended functions in these scenarios from February 2, 1989 to the present outage. It should be noted that for each break scenario, the valve not exposed is the assumed single active failure for the postulated pipe break scenario, and the exposed valve must be shown to perform its intended function under the postulated conditions. As noted below, the identified isolation mechanisms provide assurance that the exposed valves would have performed their functions in specific postulated break conditions before being subjected to a harsh environment long enough to render the valve inoperable.

System Description

The RWCU system provides a means of removing contaminants from the reactor water by filtration and ion exchange operation. The RWCU system maintains pressure boundary integrity from its connection to the primary system out to the outermost drywell penetration isolation valve (1-CU-3). The system contains drywell isolation valves (1-CU-2 inside drywell, 1-CU-3 outside drywell) designed to protect containment integrity generally, and specifically to provide break isolation for breaks in the RWCU line under certain scenarios. The relevant portion of the system commences at the main RWCU system inlet, located at the 'A' reactor recirculation pump suction line. Water from that line flows into the RWCU at reactor pressure and temperature. A simultaneous secondary flow is routed from the reactor bottom head drain line. These join and the line exits the drywell through one piping penetration which is isolated by 1-CU-2 and 1-CU-3.

(1) LARGE BREAKS INSIDE THE DRYWELL

NNECO evaluated double-ended pipe breaks, including recirculation system, main steam and isolation condenser piping and breaks in the RWCU system, inside the drywell that could result in a harsh environment for valve 1-CU-2.

Function of 1-CU-2 and 1-CU-3

For any large break inside the drywell, including an RWCU system break, the only function of valves 1-CU-2 and 1-CU-3 is containment isolation.

Discussion

Valve 1-CU-2 would be exposed to the harsh environment inside the drywell, while 1-CU-3, which is located outside the drywell in the reactor building, would not be exposed to harsh pressure and temperature conditions. The only environmental parameters of concern to 1-CU-3 would be radiation and aging. However, 1-CU-3 would receive a signal to close upon reaching 2 psig inside the drywell or reactor low-low water level long before these effects could adversely impact valve operability. Therefore, 1-CU-3 would perform its containment isolation function for all large breaks inside the drywell.

Valve 1-CU-2 would become exposed to a harsh environment inside the drywell. However, 1-CU-2 would receive an isolation signal and be fully closed within 40 seconds. NNECO has determined that the environmental conditions that 1-CU-2 would be exposed to, in this short time frame, would not adversely impact the ability of the valve to function.

Based on the above, it is concluded that both 1-CU-2 and 1-CU-3 would have been capable of performing their safety function of containment isolation for large pipe breaks inside the drywell. Thus, this scenario is single failure proof.

(2) SMALL BREAKS INSIDE THE DRYWELL

This includes a spectrum of pipe breaks in recirculation, main steam, isolation condenser, and RWCU piping inside the drywell, that could result in a harsh environment for valve 1-CU-2.

Function of 1-CU-2 and 1-CU-3

For any small break inside the drywell, including RWCU system break, the only function of valves 1-CU-2 and 1-CU-3 is containment isolation.

Discussion

Valve 1-CU-2 would be exposed to a harsh environment inside the drywell for small breaks. NNECO has determined that the safety-related drywell pressure switches with a trip setting of $\leq$ 2 psig would detect the estimated drywell pressure increase that would result from a small break. Detection of the break based on drywell pressure would occur within approximately 22 seconds for any break greater than 0.01 ft^2 (the cutoff of 0.01 ft^2 is consistent with the spectrum of breaks analyzed for ECCS performance), and would send a signal to isolate 1-CU-2 and 1-CU-3. Valves 1-CU-2 and 1-CU-3 would close within the next 18 seconds. NNECO has also determined that the environmental conditions that 1-CU-2 would

be exposed to within that time frame would not adversely impact the ability of the valve to perform its safety function.

Valve 1-CU-3 is located outside the drywell, in the reactor building, and would not be exposed to the harsh environment resulting from the small break inside the drywell. 1-CU-3 receives the same isolation signals as 1-CU-2. The only environmental parameters of concern for 1-CU-3 would be radiation and aging. However, 1-CU-3 would receive a signal to close long before these effects could adversely impact valve operability. Therefore, 1-CU-3 would be capable of performing its containment isolation function.

Based on the above, it is concluded that both 1-CU-2 and 1-CU-3 would have been capable of performing their safety function of containment isolation for small pipe breaks in the drywell. Thus, this scenario is single failure proof.

(3) LARGE BREAKS OUTSIDE THE DRYWELL

NNECO evaluated double-ended high energy line breaks outside the drywell including breaks in the RWCU system piping, that could result in a harsh environment for valve 1-CU-3.

Function of 1-CU-2 and 1-1-CU-3

For a double-ended high energy line break outside the drywell, 1-CU-2 and 1-CU-3 do not have any containment isolation function, since the coolant loss is already outside the drywell. The only function of these valves would be for break isolation if the break were in the RWCU system. For other design basis line breaks outside the drywell, closure of 1-CU-2 and 1-CU-3 would not provide any significant safety benefit.

Discussion

For a double-ended RWCU system break outside the drywell, closure of 1-CU-2 or 1-CU-3 would isolate the break. For a large RWCU system break, 1-CU-2 and 1-CU-3 would receive a signal and close, upon reaching low-low water level, within 43 seconds of the break. The operability of 1-CU-3 would not be adversely affected in this short time, and 1-CU-3 would be capable of performing its safety function. Since 1-CU-2 is inside the drywell and would not be exposed to any harsh environment other than radiation and aging concerns which are time-dependent, there is no adverse impact of operability for 1-CU-2 in the time frame that closure would be required.

Based on the above, it is concluded that both 1-CU-2 and 1-CU-3 would have been capable of performing their safety function of break isolation

for large breaks outside the drywell. Thus, this scenario is single failure proof.

(4) SMALL BREAKS OUTSIDE THE DRYWELL

NNECO evaluated the spectrum of small high energy line breaks, including RWCU system breaks, outside the drywell that could result in a harsh environment for valve 1-CU-3.

Function of 1-CU-2 and 1-CU-3

For a small high energy line break outside the drywell, 1-CU-2 and 1-CU-3 do not have any containment isolation function since the coolant loss is already outside the drywell. These valves would only function for break isolation if the break were in the RWCU system. For other small high energy line breaks outside the drywell, closure of 1-CU-2 and 1-CU-3 would not provide any significant safety benefit.

Discussion

While a large break in the RWCU system outside the drywell would result in isolation of 1-CU-2 and 1-CU-3 within 43 seconds, a smaller break would take longer to reach the reactor water low-low level set point. In fact, the reactor low-low level setpoint may never be reached if the feedwater system were able to make up for the inventory loss. Note that for all breaks, 1-CU-2 would not be exposed to a harsh pressure and temperature environment and would remain operable to perform its safety function. In the case of a small break, 1-CU-3 could be exposed to a harsh environment for a significant period of time before the valve receives an automatic isolation signal on reactor low-low level. This could adversely affect the ability of 1-CU-3 to perform its safety function.

To provide timely detection of small breaks outside the drywell, NNECO relied on existing area high temperature alarms.(1) NNECO has reviewed the operability of these high temperature detectors, including the pertinent critical subcomponents in the postulated worst-case small break conditions. While the temperature detectors are neither Category I nor

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(1) These alarms have been demonstrated to perform in the past. In 1986, a small break did occur outside the drywell in the RWCU system. (See E. J. Mroczka letter to NRR (Attn: C. I. Grimes) dated December 10, 1986). On that occasion, the high temperature alarms functioned and provided a timely indication of a 3/4-inch pipe break in the RWCU system.

environmentally qualified, NNECO has determined there is reasonable assurance these detectors will perform their function and would have alerted operators in sufficient time to permit a manually initiated remote closure of the isolation valves prior to the time environmental conditions could adversely impact their operation. NNECO conservatively assumed that upon initiation of the alarm, operators would have identified the condition and isolated 1-CU-3 within 12 minutes of the initial alarm. NNECO also conservatively postulated a harsh environment for small breaks (down to 0.01 ft^2) as 215°F and 100 percent humidity during the entire period (this equates to a double-ended break of the 8-inch RWCU line). Based upon a detailed review of data and information reflecting on 1-CU-3's components and associated equipment's response under such conditions, NNECO has concluded that the valve would have remained operable for at least the 12-minute interval in question. NNECO has revised its alarm response procedures to instruct operators to immediately close both 1-CU-2 and 1-CU-3 upon receipt of high temperature alarms in this area. This action could have been taken entirely from within the control room.

Based on the above, it is concluded that both 1-CU-2 and 1-CU-3 would have been capable of performing their safety function of break isolation for small breaks outside the drywell. Thus, this scenario is single failure proof.

Docket No. 50-245
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Attachment 2

Answers to NRC Staff Concerns
Raised in Inspection Report No. 50-245/89-02

April 1989

Answers to NRC Staff Concerns
Raised in Inspection Report No. 50-245/89-02

Item No. 1:

The licensee stated in their October 15, 1985 exemption request letter that 1-CU-2 and 3 were exempt because, if a break occurred inside the containment, the outboard valve would isolate the RWCU system and vice versa. The licensee's recent actions related to 1-CU-2 and 3 were predicated on the fact that this arrangement is not single failure-proof. The inspectors questioned whether there are non-single-failure proof exemptions in the June 8, 1987 NRC letter.

Response:

Our January 17, 1986 exemption request(1) for valves 1-CU-2 and 1-CU-3 was based upon several factors. We concluded there was reasonable assurance that these valves would close prior to being exposed to the harsh environment given the existing operating time of only 30 seconds. As such, we were able to satisfy the single failure criterion since even if the containment isolation valve not located in the harsh environment were assumed to be the random single failure, the valve located in the harsh environment was assumed to perform its safety function prior to being affected by the harsh environment. Additionally, this position was supported by the probabilistic evaluation which showed that the probability of the valve not located in the harsh environment being the random single failure was extremely low.

As committed to in the March 2, 1989 LER, we plan to submit information regarding the root cause of this issue in April 1989. As part of that submittal, we will address whether any other similar situations exist with the other EQ exemptions.

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(1) We note that the October 17, 1985 letter, referenced by the NRC, represents the ISAP submittal made by NNECO, not the exemption request which was submitted on January 17, 1986. The ISAP evaluation primarily addressed the probabilistic evaluation of these valves and did not represent the totality of our justification for the permanent exemption, which complied with the provisions of the then recently revised 10CFR50.12.

Item No. 2:

The licensee's exemption request identified that the RWCU system isolated on either low-low vessel level or high flow in the RWCU system. The licensee confirmed that the Millstone 1 RWCU system has never had high flow as an isolation signal. The NRC/NRR reviewer involved in the exemption request for 1-CU-2 and 3 confirmed that he did consider the isolation on high flow in his decision to support the exemption for 1-CU-2 and 3.

Response:

As discussed in the cover letter, NNECO did not credit this isolation signal in either the exemption request or the ISAP evaluation. Removal of that discussion from the exemption would have had minimal, if any, impact from our perspective. We offer no comment on the extent to which the high flow isolation signal was considered in the NRC's evaluation of our exemption request.

Item No. 3:

The licensee stated that the errors in the exemption request described in (1) were noted during licensee reviews for removing the 1-CU-2 and 3 operators from the master EEQ list. The inspectors questioned whether the licensee's method for exemption request preparation is less rigorous and thorough than his method for review of the EEQ master list. This is suggested by the exemption request inaccuracies, as evidenced by the discussions in (1) and (2) above. The inspector requested the licensee provide for NRC review a description of the process/criteria used by engineering personnel to remove items from the EEQ master list.

Response:

NNECO has already provided the resident inspector with the process/criteria used to remove items from EQML. With respect to the rigor and thoroughness by which exemption requests are prepared, the exemption request process is governed by Nuclear Engineering & Operations (NE&O) Procedure 4.04 (Review and Approval of Proposed Changes to Selected License Requirements) and is considered similar to the NE&O Procedure 4.02 (Proposed Technical Specification Change Requests and Emergency Waiver Requests) process which is conducted for proposed license amendment requests. We firmly believe that the NE&O 4.04 process is routinely a thorough, complete, accurate, and rigorous process. There is an inherent recognition by NNECO that utilization of 10CFR50.12 requires thoughtful deliberation. We are equally disturbed about the overall quality of the information that existed in the exemption request for 1-CU-2 and 1-CU-3. With this in mind, an independent root cause analysis of this matter has been undertaken. As committed to in the March 2, 1989 LER, we plan to submit information regarding the root cause of this issue later this month.