

Public Service
Electric and Gas
Company

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SEP 24 1992

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United States Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Gentlemen:

RESPONSE TO GENERIC LETTER 92-04
RESOLUTION OF THE ISSUES RELATED TO REACTOR VESSEL
WATER LEVEL INSTRUMENTATION IN BWRs PURSUANT TO 10CFR50.54(F)
HOPE CREEK GENERATING STATION
FACILITY OPERATING LICENSE NO. NPF-57
DOCKET NO. 50-354

Public Service Electric and Gas Company (PSE&G) hereby submits its response to Generic Letter 92-04 "Resolution of the Issues Related to Reactor Vessel Water Level Instrumentation in BWRs Pursuant to 10CFR50.54(F)". The attachment to this letter details the actions taken by PSE&G to address the subject concern. If you have any questions regarding this response, please do not hesitate to call.

Sincerely,



Attachment

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REQUESTED ACTIONS

1. In light of potential errors resulting from the effects of noncondensable gas, each licensee should determine:
 - a. The impact of potential level indication errors on automatic safety system response during all licensing basis transients and accidents;
 - b. The impact of potential level indication errors on operator's short and long term actions during and after all licensing basis transients and accidents;
 - c. The impact of potential level indication errors on operator actions prescribed in emergency operating procedures or other affected procedures not covered in (b).

PSE&G RESPONSE

1. PSE&G has reviewed the applicable concern for potential errors resulting from the effects of noncondensable gas and has determined the following:
 - a. The impact of potential level indication errors on automatic safety system response during all licensing basis transients and accidents for Hope Creek Generating Station (HCGS) are provided in the BWROG report "BWR REACTOR VESSEL WATER LEVEL INSTRUMENTATION", revision 1, forwarded to the NRC on August 28, 1992. PSE&G endorses this report as reflecting the automatic systems and plant response for a late BWR/4 design as installed at HCGS.
 - b. The impact of potential level indication errors on operator's short and long term actions during and after all licensing basis accidents and transients has been assessed for HCGS. PSE&G has concluded that operator short and long term actions are adequately described in the BWROG report. Training about the causes and effects of the potential phenomenon has been provided to HCGS operators.
 - c. The impact of potential level indication errors on operator actions prescribed in the emergency operating procedures or other affected procedures not covered in (b) has also been assessed for HCGS. It has been determined that no procedure changes are required at this time. Additional training in accordance with the EPC recommendations for operators concerning the usability of water level indication is considered appropriate until long term corrective actions are

EPC recommendations for operators concerning the usability of water level indication is considered appropriate until long term corrective actions are determined and recommended by the EPC. This additional guidance will be based on the BWROG program of testing and analysis.

REQUESTED ACTIONS

2. Based on the results of (1), above, each licensee should notify the NPC of short term actions taken, such as:
 - a. Periodic monitoring of level instrumentation system leakage; and,
 - b. Implementation of procedures and operator training to assure that potential level errors will not result in improper operator actions.

PSE&G RESPONSE

2. Based upon the results of (1) above, PSE&G provides the following:
 - a. HCGS began its fourth refueling on September 12, 1992. A walkdown of the instrumentation components inside the drywell was performed during the unit shutdown. Walkdown and inspection of the instrument racks outside the drywell has been and will be conducted periodically.

During the normal cooldown of the plant, recorders were provided on each of the four wide range level instrumentation channels to determine if the same level indication fluctuations found at some other BWR units were present at HCGS. Initial results indicate that these anomalies are not present at Hope Creek.

Channel checks which compare indicated level to its counterpart level channels is performed daily. Acceptance criteria or maximum allowed deviation between channels is applied for these checks.

Other means to assure that leaks which may develop in the level indication system are readily detectable are being investigated.

- b. Operator training about the potential phenomenon has been provided to HCGS licensed operators in accordance with the BWROG/EPC letter to the plant operations

REQUESTED ACTIONS

3. Each licensee should provide its plans and schedule for corrective actions, including any proposed hardware modifications necessary to ensure the level instrumentation system design is of high functional reliability for long term operation. Since this instrumentation plays an important role in plant safety and is required for both normal and accident conditions, the staff recommends that each utility implement its longer term actions to assure a level instrumentation system of high functional reliability at the first opportunity but prior to starting up after the next refueling outage commencing 3 months after the date of this letter.

PSE&G RESPONSE

3. PSE&G intends to continue to support the BWROG's efforts in this area. The Owner's Group plans include the collection of plant unique data, tests, analysis, and development of potential modifications. The approach to be taken will be based on full scale prototypal tests of reference leg configurations, and in parallel the development of an analytical reference leg model. PSE&G agrees with the BWROG and the staff that the water level instrumentation issue is not an immediate safety concern and believes it is premature to commit to any modifications until the phenomenon and its implications are completely understood. Based on the results of the BWROG's work, PSE&G will implement the necessary hardware and/or procedural modifications when or if they are identified. PSE&G will provide the results of this testing and its implications for HCGS when completed. A schedule for corrective actions will also be provided to the NRC at that time.