



Public Service Electric and Gas Company P.O. Box 236 Hancocks Bridge, New Jersey 08038-0236

Nuclear Business Unit

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LR-N000067

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

Gentlemen:

**RAI RESPONSE FOR CONTAINMENT EXAMINATION RELIEF REQUESTS
HOPE CREEK AND SALEM GENERATING STATION
FACILITY OPERATING LICENSES DPR-70, DPR-75, AND NPF-57
DOCKET NOS. 50-272, 50-311, AND 50-354**

This letter responds to the NRC request for additional information (RAI) regarding Public Service Electric and Gas Company's request for relief associated with containment examinations at the Hope Creek and Salem Generating Stations. The response to each RAI question is provided in the attachment to this letter.

Should you have any questions regarding this request, please contact Mr. C. E. Manges, Jr. at 856-339-3234.

Sincerely,

A handwritten signature in black ink that reads "G. Salamon for GS". The signature is written in a cursive style.

G. Salamon
Manager – Licensing

Attachment

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USNRC Senior Resident Inspector – Hope Creek (X24)

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Mr. K. Tosch, Manager IV
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**Attachment to LR-N000067
Response to RAI for Containment Inspection Relief Request**

A response to each of the NRC questions is provided below.

RAI Item (1)

"The 1998 Code Edition, Subsections IWE and IWL, defer to *owner-defined* General and Detailed visual examinations in lieu of accepted visual examination requirements, as currently described in IWA-2000. Please describe the following attributes of your visual examination program, addressing both IWE and IWL components:

- Describe the General visual acceptance criteria that will be used to evaluate indications found on containment surfaces, containment welds, bolting, moisture barriers, dissimilar metal welds, etc.
- Each relief request states that Detailed and General visual examinations are either similar or equivalent to existing examinations (VT-1 and VT-3). However, it is unclear whether PSE&G is committing to use VT-1 and VT-3 requirements and acceptance in lieu of the owner-defined General and Detailed examinations found in Article IWE and IWL. Please clarify if the General and Detailed visual examinations incorporate all existing VT-1 and VT-3 requirements. In addition, state whether personnel performing these examinations will be VT-1 or VT-3 qualified. If existing VT-1 or VT-3 requirements will not be used, describe all General and Detailed visual criteria used to address visual examinations.

PSE&G Response:

In accordance with ASME Section XI, 1998 Edition/Addenda, PSE&G will be performing General and Detailed visual examinations, using VT-1 (Detailed)/VT-3 (General) qualified personnel.

The General and Detailed visual examinations do not incorporate all existing VT-1 and VT-3 requirements.

The following are the attributes of our IWE/IWL visual examination program:

A. ACCEPTANCE CRITERIA FOR IWE (Ref. ASME Section XI, 92/92 Addenda)

1. General Visual

Coated metal containment surface examinations (including welds and dissimilar metal welds) will be conducted to detect unacceptable evidence of flaking, blistering, peeling, discoloration, and other signs of distress that will affect either the containment structural integrity or leak tightness.

Non-coated metal containment surface examinations (including welds and dissimilar metal welds) will be conducted to detect unacceptable evidence of cracking, discoloration, wear pitting, excessive corrosion, arc strikes, gouges, surface discontinuities, dents and other signs of surface irregularities.

Bolting examinations will be conducted to detect unacceptable flaws that can cause violation of leak-tight boundary or structural integrity.

Moisture barrier examinations will be conducted to identify unacceptable wear, damage, erosion, tear, surface cracks, or other defects that permit intrusion of moisture against inaccessible areas of the pressure retaining surfaces of the containment shell or liner.

2. Detailed Visual

Coated metal containment surface examinations will be conducted to detect unacceptable evidence of flaking, blistering, peeling, discoloration, and other signs of distress that will affect either the containment structural integrity or leak tightness.

Non-coated metal containment surface examinations will be conducted to detect unacceptable evidence of cracking, discoloration, wear pitting, excessive corrosion, arc strikes, gouges, surface discontinuities, dents and other signs of surface irregularities.

B. ACCEPTANCE CRITERIA FOR IWL

1. General and Detailed Visual

General and Detailed Visual examination of concrete containment surfaces will be conducted to identify unacceptable areas of concrete deterioration or distress, using ACI 201.1(1984) for guidance; and/or a determination by the Responsible Engineer that any identified damage or degradation is not sufficient to warrant further evaluation or performance of repair/replacement activities, per IWL-3211 and IWL-2310(b) (98A98).

C. EXAMINATION RESOLUTION CRITERIA

General and Detailed Visual examinations will be performed either directly or remotely, based on the area(s) under examination with adequate illumination and by personnel with visual acuity sufficient to detect evidence of degradation as follows:

General and Detailed Visual examinations will be performed from floors, roofs, platforms, walkways, ground surfaces or other permanently installed vantage points.

1. General Examination

- (a) General examinations will be performed directly or remotely, with the use of optical aids, such as telescopes, borescopes, fiber optics, cameras, or other suitable instruments. The examinations, using natural or artificial lighting, shall be sufficient to resolve a 1/32 in. black line on an 18 percent neutral gray card.

2. Detailed Examination

- (a) Direct detailed examinations may be conducted when access is sufficient to place the eye within 24 in. of the surface to be examined and at an angle not less than 30 deg. to the surface. Mirrors may be used to improve the angle of vision. The examination, using natural or artificial lighting, shall be sufficient to resolve a 1/64" black line on an 18 percent neutral gray card.
- (b) Remote detailed examinations may be substituted for direct examination. Remote examination may use aids, such as telescopes, borescopes, fiber optics, cameras, or other suitable instruments, provided such systems have a resolution capability at least equivalent to that attainable by direct visual examination.

D. PERSONNEL QUALIFICATIONS

Qualification of examination personnel for Detailed and General Visual examinations will conform to the requirements for VT-1 and VT-3 respectively per the existing PSE&G Written Practice.

PSE&G's written practice satisfies the requirements of ANSI/ASNT CP-189 (1991 Edition) for containments only; and the supplemental requirements of the ASME Boiler and Pressure Vessel Code - Section XI (up to and including 1992 Edition, with 1992 Addenda).

The initial experience requirements for qualification of concrete examination personnel shall be defined by the Responsible Engineer, as permitted within IWL-2300 [IWL-2310(d) and IWL-2320(b)] of Section XI (98A98).

RAI Item (2)

“The 1992 Edition of the Code requires a visual examination (VT-1) of bolting when a connection is disassembled. The 1998 Edition requires a General visual, performed in place, with no requirement for visual examination when the joint is disassembled. It is not clear what, if any examinations will be performed on disassembled bolted connections. If VT-1 will not be performed on this type of connection, please provide an explanation and basis for how this practice provides an acceptable level of quality and safety.”

PSE&G Response:

PSE&G plans to perform a General Visual examination of pressure retaining containment bolting, in place in accordance with ASME Section XI 1998/1998 Addenda.

The VT-1 visual examination requirements were primarily written for the examination of components and items within the reactor coolant pressure boundary. Bolted connections associated with primary containment are not subject to the service conditions (e.g., pressure, temperature, loading) as the bolting within the reactor coolant pressure boundary. VT-1 examinations are not required for Class 2 and 3. Bolted connections associated with primary containment are not subject to conditions that cause accelerated degradation or aging. For this reason examination on disassembled bolted connections is not warranted.

Additionally, pressure retaining containment bolted connections that are disassembled would be expected to be inspected based on normal maintenance practices (i.e., mechanics working on IWE boundary bolted connections would be expected to inspect, repair or replace as needed within the skill of the craft).

The General Visual examination, in conjunction with the existing maintenance practices for disassembled bolted connections, provides an acceptable level of quality and safety.

RAI Item (3)

“IWL-2410 allows for deferral of concrete visual exams to the next scheduled plant outage for portions of the concrete surface which cannot be examined within the stated time interval. Please explain if credit will be taken for two successive intervals.”

PSE&G Response:

PSE&G does not plan to take credit for these examinations across two successive intervals.