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ACCESSION NBR:9812090009 DOC.DATE: 98/12/01 NOTARIZED: YES DOCKET # FACIL:50-244 Robert Emmet Ginna Nuclear Plant, Unit 1, Rochester G 05000244 AUTH.AIAME AUTHOR AFFILIATION MECRECY,R.C. Rochester Gas & Electric Corp. RECIP.NAME RECIPIENT AFFILIATION VISSING,G.S.

SUBJECT: Forwards response to NRC 980901 RAI re degradation of CRDM/ CEDM nozzle & other vessel closure head penetrations, per GL 97-01.Response addresses issues which are deemed to be generic in nature.

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ROBERT C. MECREDY Vice President Nuclear Operations

December 1, 1998

 U. S. Nuclear Regulatory Commission Document Control Desk
 Attn: Guy S. Vissing Project Directorate 1-1
 Washington, D.C. 20555

- Subject: Response to Request for Additional Information (RAI) Related to Degradation of CRDM/CEDM Nozzle and Other Vessel Closure Head Penetrations (TAC No. M98567)
  R. E. Ginna Nuclear Power Plant Docket No. 50-244
- Ref. (1): Letter from Guy S. Vissing (NRC) to Robert C. Mecredy (RG&E), SUBJECT: GENERIC LETTER (GL) 97-01, "DEGRADATION OF CRDM/CEDM NOZZLE AND OTHER VESSEL CLOSURE HEAD PENETRATIONS" REGARDING THE ROCHESTER GAS AND ELECTRIC CORPORATION RESPONSES TO GL 97-01 FOR THE R. E. GINNA NUCLEAR PLANT (TAC NO. M98567), dated September 1, 1998
- Ref.(2): Memorandum from Jefferey F. Harold (NRC) to S. Singh Bajwa (NRC), SUBJECT: SUMMARY OF THE MEETING ON SEPTEMBER 29, 1998, BETWEEN THE NRC STAFF AND MEMBERS OF THE PRESSURIZED WATER REACTOR (PWR) OWNERS' GROUPS AND NUCLEAR ENERGY INSTITUTE (NEI) TO DISCUSS THE STATUS OF MULTI-PLANT ACTION TAC NOS. OPENED IN REGARD TO ISSUANCE OF GENERIC LETTER (GL) 97-01, dated November 5, 1998

# Dear Mr. Vissing:

By Reference (1), the NRC staff requested additional information regarding degradation of CRDM/CEDM nozzle and other vessel closure head penetrations. By Reference (2), the NRC staff reported on discussions that had been held between the staff and an industry working group, PWR Materials Reliability Project (MRP), that had been formed to address the issue of GL 97-01. It was agreed that a generic, integrated response from the PWR MRP that would address the NRC's generic information requests in the RAIs on behalf of NEI, EPRI, and all of the participating members of the CEOG, B&WOG, and WOG would be submitted to the NRC in mid-December 1998. The attachment to this letter provides the requested plant specific information and reference to the PWR MRP response for those issues which are deemed to be generic in nature.

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1" 2015 It should be noted that RG&E has decided to perform an inspection of the reactor vessel head penetrations during the next refueling outage, scheduled to begin March 1, 1999.

Very truly yours,

peredy Robert C. Mecredy

Attachment

Subscribed and sworn to before me on this 1st day of December, 1998

ristina Jarden

Notary Public

CHRISTINA K. SARDOU Notary Public, State of New York Registration No. 01SA6015061 Genesee County Commission Expires October 19, 2000

Mr. Guy S. Vissing (Mail Stop 14B2) xc: Project Directorate I-1 Division of Reactor Projects - I/II Office of Nuclear Reactor Regulation U.S. Nuclear Regulatory Commission Washington, D.C. 20555

> Regional Administrator, Region I **U.S.** Nuclear Regulatory Commission 475 Allendale Road King of Prussia, PA 19406

U.S. NRC Ginna Senior Resident Inspector

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# RESPONSE TO NRC REQUEST FOR ADDITIONAL INFORMATION (RAI) REGARDING THE RG&E RESPONSES TO GENERIC LETTER (GL) 97-01 FOR THE R. E. GINNA NUCLEAR PLANT

1. Indicate whether RGE is participating in the latest industry integrated program developed for the assessment of VHP nozzles in domestic PWR designed reactors. If so, please provide the following information with respect to the industry's integrated program for assessing PWSCC in domestic PWR VHP nozzles:

a. Identify all PWR Owners Groups that RGE is a member of.

# Response:

RG&E is a member of the Westinghouse Owners Group and as such has participated in the Owners Group and NUMARC (NEI) Activities related to the CRDM penetration issue since its inception in the early 1990's.

- b. Indicate whether RGE is participating in the latest integrated programs developed by these Owners Groups for assessing PWSCC in PWR VHP nozzles, and if so, whether or not any of the following topical reports are applicable to the assessment of VHP nozzles in the Ginna reactor design:
  - Topical Report BAW-2031, developed for member utilities and plants in the Babcock & Wilcox Owners Group (B&WOG)
  - Topical Report CE NPSD-1085, developed for member utilities and plants in the Combustion Engineering Owners Group (CEOG)
  - Topical Report WCAP-14901, Revision 0, and/or WCAP-14902, Revision 0, developed for member utilities and plants in the Westinghouse Owners Group (WOG)

## Response:

RG&E is currently participating in the Westinghouse Owners Group and PWR Materials Reliability Project (MRP) activities. Topical reports WCAP-14901 and WCAP-14902 are applicable to Ginna. c. If any of the topical reports listed in Item 1.b. above are applicable to the assessment of VHP nozzles in the Ginna reactor design, provide a description of the probabilistic susceptibility model being endorsed to assess the VHP nozzles in the Ginna reactor design. Include the following information with respect to the description of the susceptibility model:

#### **Response:**

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A description of the Westinghouse susceptibility model is included as Enclosure 7 of the PWR MRP integrated response.

Provide the model's relative susceptibility ranking for the VHP nozzles (1) in the Ginna reactor design to the rankings compiled by other utilities applying the model to the assessment of the VHP nozzles in their plant designs. In addition, if one of the Westinghouse Topical Reports is applicable to the assessment of the VHP nozzles in the Ginna reactor design, compare the susceptibility ranking of VHP nozzles in the Ginna reactor design to that of WOG member plants applying the other model to the assessment of the VHP nozzles at their plants. Include the basis for establishing the ranking of you plant relative to the others. Justify why the crack initiation and growth susceptibility model used for your VHP nozzles is considered to yield as reasonable a ranking as would application of the other probabilistic failure model being used be WOG member utilities. Provide a composite susceptibility ranking of all WOG member plants and any conclusions which may be drawn from such a ranking with respect to the assessment of PWSCC in the Ginna VHP nozzles relative to those in other WOG member designs.

#### Response:

The industry ranking of plants is provided by the Industry Histogram in Enclosure 1 of the PWR MRP integrated response. Ginna is included in the histogram using the Westinghouse model.

(2) Describe how the probabilistic susceptibility model used for the assessment of the VHP nozzles in the Ginna design was bench-marked, and provide a list and discussion of the standards the model was bench-marked against.

Response:

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The benchmark of the Westinghouse model is discussed in Enclosure 2, Question 2, Response 2.b. of the PWR MRP integrated response.

(3) Provide additional information regarding how the probabilistic susceptibility model being used for the assessment of the VHP nozzles in the Ginna design will be refined to allow the input of plant-specific inspection data into the model's analysis methodology.

#### Response:

The Westinghouse probabilistic susceptibility model can be refined for plant specific inspection data as described in Enclosure 2, Question 3, Response 3.b. of the PWR MRP integrated response.

(4) Describe how the variability in product forms, material specifications, and heat treatments used to fabricate each VHP nozzle in the Ginna reactor design is addressed in the probabilistic susceptibility model being used for the assessment of these nozzles.

Response:

Variability in product forms, material specifications, and heat treatments and how they are addressed are contained in Enclosure 2, Question 1, Response 1.b. of the PWR MRP integrated response.

2. Indicate whether any final conclusion has been made to commence with the volumetric examinations of the VHP nozzles at the Ginna Nuclear Station in 1999. If the decision has been made not to commence with the examinations of the VHP nozzles in the Ginna design, justify why RGE considers it to be safe to operate the Ginna plant without performing volumetric examinations of the Ginna VHP nozzles.

#### Response:

In support of the industry Integrated Assessment Program, the Ginna reactor vessel head penetrations are scheduled to be inspected during the 1999 refueling outage.

3. Identify all other plants where volumetric examinations were performed on the VHP nozzles in the reactor design. Include a more in-depth summary of the inspection results at the other plants which RGE considers to be applicable to the evaluation of VHP nozzles at Ginna, and identify the heats of materials for the Ginna VHP nozzles which are considered to be bounded by the examination results at these plants.

## Response:

The listing of plants that have performed examinations will be provided as part of the submittal to be issued by the PWR MRP. Per Westinghouse Proprietary Class 2 Report, WCAP 13493, and RG&E review of the report, Ginna contains the same three material heat numbers as the Point Beach Unit 1 reactor vessel head.