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 RECIP.NAME RECIPIENT AFFILIATION
 VISSING, G.

SUBJECT: Forwards response to NRC RAI re GL 97-05 response for RE
Ginna Nuclear Power Plant.

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ROBERT C. MECREDY
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September 16, 1998

U.S. Nuclear Regulatory Commission
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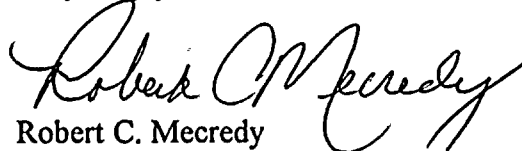
Subject: Response to Request for Additional Information (RAI) Related to Generic Letter
97-05 (TAC No. MA0466)
R. E. Ginna Nuclear Power Plant
Docket No. 50-244

Ref. (1): Letter from Guy S. Vissing (NRC) to Robert C. Mecredy (RG&E),
SUBJECT: REQUEST FOR ADDITIONAL INFORMATION (RAI)
RELATING TO GENERIC LETTER 97-05 RESPONSE FOR THE R. E.
GINNA NUCLEAR POWER PLANT (TAC No. MA0466), dated August 11,
1998

Dear Mr. Vissing:

By reference 1, the NRC staff requested additional information regarding the response to generic
letter 97-05 for the R. E. Ginna Nuclear Power Plant. The attachment to this letter provides the
requested information.


Very truly yours,


Robert C. Mecredy

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A079

Attachment

Subscribed and sworn to before me
on this 16th day of September, 1998
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Notary Public

LORETTA MARSHALL-PARKER
Notary Public in the State of New York
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xc: Mr. Guy S. Vissing (Mail Stop 14B2)
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Division of Reactor Projects - I/II
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U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Regional Administrator, Region I
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U.S. NRC Ginna Senior Resident Inspector

Question No. 1:

The response to GL 97-05 indicated that the licensee has qualified a technique to size the depth of small volume manufacturing burnish marks (MBM). It was noted that the response did not address performing a reexamination of preservice eddy current inspection data to confirm the presence of MBM indications identified during inservice inspections. Discuss whether it is the practice of Ginna Station to review preservice inspection data to confirm the presence of MBM indications. If this is not the practice employed by the licensee, discuss the qualification of eddy current inspection techniques used during inspections to adequately distinguish between MBM and other modes of volumetric tube degradation.

Response to Question No. 1:

It is the practice at Ginna station to review Steam Generator baseline data to confirm the presence of MBM indications. This information was previously provided to the NRR chemistry branch during the Ginna 1997 refueling outage Steam Generator inspection conference call. This MBM review is performed at multiple levels of eddy current analysis, which will be discussed along with Ginna inspection methodology and examination history.

The Ginna Babcock & Wilcox International (BWI) replacement steam generators had a ASME section XI baseline examination performed prior to installation. This inspection included 100% Bobbin coil examination tube end to tube end, 100% inlet and outlet bobbin profilometry, and MRPC inspections at selected locations to improve our knowledge base. Rochester Gas & Electric thoroughly documented all detectable manufacturing imperfections. Based on a bobbin coil normalization of six (6) volts on the four (4) 0.026" 100% through the wall holes at optimum frequency (550 KHZ.), all MBM imperfections were recorded at a threshold of 0.4 volts on the 140 KHZ. absolute.

A post installation preservice bobbin coil peripheral examination using the same baseline examination technique and normalization methodology was performed to assure no shipping or installation damage had occurred.

During the first inservice examination a 100% bobbin coil tube end to tube end examination with the same baseline examination technique and normalization methodology was performed, as well as MRPC on selected roll transitions, tight radius u-bends, and outer radius u-bends to further improve our knowledge base.



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A technique for detection and sizing of MBM's was submitted by Rochester Gas & Electric to the EPRI NDE center for EPRI S/G Examination Guidelines Appendix H peer review prior to the first ISI examination. The technique was approved by the peer review group. The technique for MBM sizing gave Rochester Gas & Electric the ability to determine the manufacturing buff mark depth based on a manufacturing buff mark eddy current indication response. Based on this qualification it was determined that an MBM with a 5% through wall depth provided a 2.5 volt eddy current signal response from 140 KHZ. absolute. This qualification provides conservative sizing due to the fact that all MBM's are considered to have a 120° circumferential extent. Based on information provided by the tubing manufacture and Ginna specific MRPC data, the majority of MBM's detectable with eddy current contain circumferential extents of at least 120°, while many MBM's have circumferential extents greater than 120°. This provides a larger signal response from the 140 KHZ. absolute and a greater, more conservative, depth estimate.

Based on this background Ginna has employed a methodology to address MBM indications. The primary analysts utilize the Zetec Historical Management Software (HMS). This tool enables the analyst to look at all baseline indications in report form and to compare current ISI inspection data to baseline data. If there is a change from the baseline then the change is addressed. If there are new indications, the primary analyst addresses them at this time. In addition we have selected a 2.5 volt 140 KHZ. absolute response reporting criteria. The primary and secondary analysts report all MBM indications in excess of this threshold. The primary and secondary analysts also report all MBM indications with a differential mix response above the horizontal baseline. New indications, MBM's above the 2.5 volt threshold, and MBM's with a differential response above the baseline are mandatory indications for a resolution analyst to further review.

The resolution analyst performs a direct signal comparison utilizing the Zetec Data Segment Recall Software (DSR). This comparison is performed on any new indications, any MBM indications in excess of 2.5 volts, and any indications that have a differential mix response above the horizontal baseline. The signal response from the ISI inspection is then compared to the same signal response from the baseline examination. The specific eddy current signal response is compared for any changes. Changes are considered to have taken place when an increase in signal voltage, an increase in signal length, or a change in eddy current phase rotation towards the flaw plane in a logical phase rotation between the multiple frequencies has occurred. If no eddy current signal change is observed the resolution analyst records the indication as dispositioned by preservice. If the resolution analyst observes a change in eddy current signal response from baseline, the resolution analyst labels the signal as changed from preservice and the indication is further examined with the MRPC +point delta coil. The indication could than be dispositioned as a volumetric indication, or labeled as degraded.

The Ginna Steam Generator tubing MBM eddy current analysis process accounts for the detection of new indications, and the possibility of inservice changes of MBM indications.

