

ROCHESTER GAS AND ELECTRIC CORPORATION • 87 EAST AVENUE, ROCHESTER, N.Y. 14604

KATHLEEN W. AMINNE
VICE PRESIDENT
ELECTRIC AND STEAM

*Not an
incident*

June 1, 1973

TELEPHONE
AREA CODE 716 546-2700



Mr. Donald J. Skovholt
Assistant Director of Operating Reactors
U. S. Atomic Energy Commission
7920 Norfolk Avenue
Bethesda, Maryland 20014

Subject: R. E. Ginna Nuclear Power Plant, Unit No. 1
Fuel Rod End Plug Examination
Docket No. 50-244

Dear Mr. Skovholt:

On October 30, 1972 we wrote to Mr. John O'Leary informing him of the discovery of a loose fuel rod end plug in the Ginna reactor, along with an evaluation of its effect. In this communication we indicated that arrangements were underway to have the end plug examined in a hot cell to determine the cause for its separation from the fuel rod.

The consideration of a hot cell examination was advanced within RG&E when there was still the possibility that the foreign object was not an end plug. Subsequent to the letter we questioned the value of such an examination. After several months of discussion within RG&E we have decided that we do not intend to perform hot cell work. The reason for this decision is elaborated below.

The end plug was positively identified as being from a region 3 assembly. Region 3 fuel was discharged at the end of cycle 1B because of the incidence of internal hydriding (due to excessive fuel rod moisture levels) which had caused fuel rod defects. Subsequent to the fabrication of the region 3 which experienced a relatively high failure frequency, Westinghouse Electric Corporation has taken corrective action through design and process changes to preclude excessive moisture levels within the fuel rods. The successful operation of many regions of fuel subsequent to these corrective actions has convincingly demonstrated the adequacy of the corrective measures and verified the initial interpretation of the failure mechanism. Given the excessive moisture levels in region 3 fuel, severe internal hydriding (probably secondary hydriding upon entrance of water into the rod) is the expected cause for the separation of this end cap from its fuel rod.

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DATE June 1, 1973
TO D. J. Skovholt

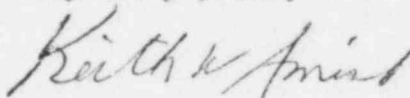
The visual examination of the end plug by TV at the site tends to confirm this belief since the end plug appears somewhat irregular in geometry. This would be the expected result of hydriding of the end plug.

In the event that this particular end plug failure was not attributable to the hydriding mechanism, attempts to identify an alternate failure mechanism would be precluded by deterioration of the end plug.

On the basis of the foregoing, it is likely that the failure mechanism has been correctly identified and, further, if the proposed mechanism is incorrect, it is not expected that hot cell examination of this end plug would reveal the correct mechanism.

The decision not to perform hot cell work has been evaluated by the Nuclear Safety Audit and Review Board and they concur with this position.

Very truly yours,


Keith W. Amish

cc: Mr. J. P. O'Reilly