

CATEGORY 1

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9801050006 DOC.DATE: 97/12/22 NOTARIZED: YES DOCKET #
 FACIL: 50-244 Robert Emmet Ginna Nuclear Plant, Unit 1, Rochester G 05000244
 AUTH.NAME AUTHOR AFFILIATION
 MECREDDY, R.C. Rochester Gas & Electric Corp.
 RECIP.NAME RECIPIENT AFFILIATION
 VISSING, G.S.

SUBJECT: Forwards responses to RAI re ALARA considerations related to spent fuel pool mods.

DISTRIBUTION CODE: A001D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 5
 TITLE: OR Submittal: General Distribution

NOTES: License Exp date in accordance with 10CFR2,2.109(9/19/72). 05000244

RECIPIENT ID CODE/NAME	COPIES LTTR ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL
PD1-1 LA	1 1	PD1-1 PD	1 1
VISSING, G.	1 1		
INTERNAL: <u>FILE CENTER</u> 01	1 1	NRR/DE/ECGB/A	1 1
NRR/DE/EMCB	1 1	NRR/DRCH/HICB	1 1
NRR/DSSA/SPLB	1 1	NRR/DSSA/SRXB	1 1
NUDOCS-ABSTRACT	1 1	OGC/HDS3	1 0
EXTERNAL: NOAC	1 1	NRC PDR	1 1

NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE. TO HAVE YOUR NAME OR ORGANIZATION REMOVED FROM DISTRIBUTION LISTS OR REDUCE THE NUMBER OF COPIES RECEIVED BY YOU OR YOUR ORGANIZATION, CONTACT THE DOCUMENT CONTROL DESK (DCD) ON EXTENSION 415-2083

TOTAL NUMBER OF COPIES REQUIRED: LTTR 13 ENCL 12

C
A
T
E
G
O
R
Y

1

D
O
C
U
M
E
N
T



ROCHESTER GAS AND ELECTRIC CORPORATION • 89 EAST AVENUE, ROCHESTER, N.Y. 14649-0001



AREA CODE 716 546-2700

ROBERT C. MECREDY
Vice President
Nuclear Operations

December 22, 1997

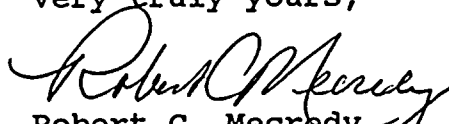
U.S. Nuclear Regulatory Commission
Document Control Desk
Attn: Guy S. Vissing
Project Directorate I-1
Washington, D.C. 20555

Subject: Response to Request for Additional Information - Spent
Fuel Pool (SFP) Modifications - ALARA Considerations
R.E. Ginna Nuclear Power Plant
Docket No. 50-244

Dear Mr. Vissing:

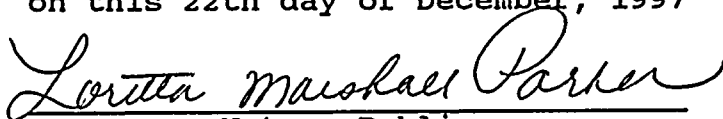
During telephone conversations on December 4, and December 11, 1997, the NRC staff requested additional information on ALARA considerations related to the SFP modification. Attached are responses to the questions.

Very truly yours,


Robert C. Mecredy

JPO

Subscribed and sworn to before me
on this 22th day of December, 1997



Notary Public

LORETTA MARSHALL PARKER

Notary Public in the State of New York

MONROE COUNTY

Commission Expires Dec. 12, 1998.

9801050006 971222
PDR ADDCK 05000244
P PDR



A0011/1

xc: Mr. Guy S. Vissing (Mail Stop 14B2)

Senior Project Manager
Project Directorate I-1
Washington, D.C. 20555

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

Ginna Senior Resident Inspector

Mr. Paul D. Eddy
State of New York
Department of Public Service
3 Empire State Plaza, Tenth Floor
Albany, NY 12223-1350

ATTACHMENT

Response to Spent Fuel Pool Request for Additional Information ALARA Considerations

1. *Identify and provide a description of the ALARA precautions for the major contributors to the total dose for the 1998 reracking.*

The major contributors to dose during the 1998 reracking are expected to be preparing the old racks for eventual vendor processing and manipulating the activity-loaded filters which result from the vacuuming of the Spent Fuel Pool floor. The diving operations are expected to result in low personnel exposure.

RG&E has not yet awarded the bid for processing of the to-be-removed racks, whether as a whole or cut up. Shipment of the racks as a whole would reduce the resultant dose because less handling would be required. The racks would be removed from the pool, decontaminated to less than 200 mr/hr, inserted into a bag after being dried and shipped out for processing. When the rerack effort was performed in 1984 only one of six racks had a dose rate higher than 200 mr/hr when it was removed from the spent fuel pool. If the racks have to be cut up prior to shipment for processing, the dose will be higher, since they have to be cut small enough to fit into "low-specific activity" radwaste boxes. All efforts will be made to minimize the dose from the racks by removing crud deposited in the cracks and spaces in the racks (see lessons learned).

The processing of filters used to clean the Spent Fuel Pool floor will also result in some personnel exposure. The Spent Fuel Pool will be cleaned with a vacuum system to ensure visual clarity and to remove as much of the source term as possible. This will be initiated well in advance of the actual rerack efforts to maximize the extent of the pool clean up. As the filters reach their maximum allowable dose rate for burial, they will be placed in casks and shipped as radwaste for processing.

Diving activities are also projected to have some dose consequences. The divers will be removing supports, shim plates, light funnels and bolts. The divers will also support the lifting of the racks by attaching slings. The total estimate for diving operations is 12 hours (see response to item 3 for ALARA considerations in this effort).

2. Discuss lessons learned from the 1985-1986 reracking.

Note: A majority of the previous rerack project occurred in 1984.

There were a number of lessons learned from the 1984 project that will be utilized to enhance the effort in 1998.

Lessons Learned:

- Hydrolaying without vacuuming first is ineffective.

Most of the dose came from crud trapped in the racks. In 1998, we plan to vacuum the racks prior to removing them from the water. We will then hydrolyze the whole rack while still under water.

- High dose rates affect specific R07-LD instrument probes; they should not be used in fields in excess of 1 rem/hr due to detector amp burn up.

We will be incorporating a teledose system into the diving operations and incorporating the use of R07-BM probes, which will allow us to better monitor higher dose rates (up to 150 rem/hr).

- Problems with the ventilation system.

Ventilation system operation is critical during welding and grinding operations, which should be minimal during the 1998 effort. If racks need to be cut up prior to processing, RG&E will perform tests and inspections of the ventilation system well before its operation is required.

- The bridge crane became unwound while the vacuum pump was attached, thus affecting underwater vacuuming.

This was caused by the inexperience of the crane operator. In 1998, the bridge crane will only be operated by experienced individuals.

- A majority of the decontamination crew dose resulted from exposure to crud buildup on the decontamination pit floor and drain system.

The rerack decontamination will be less time consuming because the racks will be vacuumed and hydrolayed prior to being transported to the decontamination pit. This will reduce the amount of crud deposited in the pit.

3. *Provide a description of the ALARA precautions to minimize dose to the divers.*

All diving operations will be governed by a procedure specific to diving operations at Ginna Station. All divers will have teledosimetry, with a continuous readout monitored at the top of the pool. The divers will also have voice communications to the radiation protection technician who is monitoring their doses. There will be a pre-job meeting for each important phase of the job, including one for each dive. Divers will enter and exit the pool in such a way as to not have to traverse any higher-than-allowed dose areas. All individuals involved in the dive will attend the pre-job meeting so that job scope and expectations are clear. Areas where the diver may go will be identified to the diver just prior to entering the water. Unexpected teledose readings or job conditions will be a reason for immediate termination of the dive and reassessment of the job scope. All diver requirements will be included in the procedure being developed. We will continue to examine and address any industry experience related to this type of project.

4. *Provide a description of the ALARA precautions to minimize the dose when moving and decontaminating racks over the pool.*

The area around the Spent Fuel Pool will have restricted access so that only personnel working on the job will be allowed in the vicinity. During the 1984 rerack the highest dose rate measured on any of the racks as they were removed from the pool was 300 mrem/hr. All other racks were in the range of 20-100 mrem/hr. As noted previously, RG&E will vacuum and hydrolayze the racks prior to removing them from the spent fuel pool water, reducing the subsequent dose rate during processing (bagging or, if necessary, cutting them up).

5. *Provide an estimate of the dose rate at the Spent Fuel Pool bridge during the reracking.*

The dose rate at the bridge is not expected to be higher than the dose rate during refueling activities. The dose rate during the 1997 refueling activities in the Spent Fuel Pool was 0.3 mrem/hr average for bridge activities, based on actual measurements. The maximum dose rate for all refueling activities on the bridge was 1 mrem/hr.