

١.

. >

GPU Nuclear Corporation

Post Office Box 480 Route 441 South Middletown, Pennsylvania 17057-0191 717 944-7621 TELEX 84-2386 Writer's Direct Dial Number:

U.S. NUCLEAR

10.7

1

(717) 948-8461

4410-84-L-0069 Document ID 0185U

22

2

10

N

April 30, 1984

THI Program Office Attn: Mr. L. H. Barrett Deputy Program Director US Nuclear Regulatory Commission c/o Three Hile Island Nuclear Station Middletown, PA 17057

Dear Mr. Barrett:

Three Mile Island Nuclear Station, Unit 2 (TMI-2) Operating License No. DPR-73 Docket No. 50-320 1984 Reactor Building Decon Activities

The purpose of this letter is to summarize the content of our recent discussions concerning proposed activities in the Reactor Building in 1984 that will result in lowering the projected doses associated with reactor disassembly and defueling. These dose reduction activities are within the scope of the Safety Evaluation Report (SER) for the On-Going Containment Building and Dose Reduction Activities which was transmitted via GPUNC Letter 4410-83-L-0227 dated September 29, 1983, and are consistent with the recommendations of the Dose Reduction Task Force. Specifically, these activities include:

- Equipment removal from the 347' Elevation -- Reactor Coolant Pump Motor Stand and Alignment Stand
- 2. LOCA duct decontamination
- 3. Reduction of dose rates due to Air Coolers
- Removal of radionuclides from Elevation 347' floor
- 5. 347' Elevation "Hot-Spot" decontamination and shielding

8405040078 840430 PDR ADOCK 05000320 P PDR

1009

GPU Nuclear Corporation is a subsidiary of the General Public Utilities Corporation

..

These tasks were selected based upon criteria which will most benefit the THI-2 Recovery Program in the near term. The approach recommended for each task is based upon current knowledge; however, within the scope of each is an engineering evaluation of the various dose reduction techniques which could be used. If the evaluation reveals that a more effective method is available, then the recommended technique will be modified.

Implementation of this program will require an estimated expenditure of 291 man-rem and will result in a net estimated reduction of approximately 1200 man-rem during reactor disassembly and defueling activities and 4500 man-rem over the duration of the recovery program.

Although difficult to quantify, these dose reduction activities will result in significant program cost savings by improving worker efficiency and lengthening containment stay times while maintaining worker dose at the same or reduced levels. At the current dose levels, a worker will be limited to 40 hours of containment activity per year. Based on the program reassessment projections, approximately 308 radiation workers will be required per year for the next 5 years, assuming the average worker will receive 3.5 Rem per year. When the proposed dose reduction tasks are completed, yearly containment residence time for an individual will be extended and reduce the number of radiation workers to 239 per year. This represents a 22 percent reduction in the requirement for qualified radiation workers.

The proposed dose reduction activities schedule is shown in the attached bar chart. It should be noted that these activities may be scheduled with flexibility; i.e., none are dependent upon specific plant conditions, each can be completed in a relatively short time (usually about six months), and each can be implemented independently of the others and other scheduled activities. However, to minimize the man-rem costs, it is planned to perform selected tasks on the 347' elevation prior to reactor vessel head removal which is currently scheduled for early August, 1984. After these activities are completed, an evaluation will be performed to determine the effectiveness of these dose reduction measures.

Please call Hr. J. J. Byrne of my staff if you have any questions on this information.

BA Kanga

B. K. Kanga Director, TMI-2

BKK/TLG/sle

Attachment

cc: Program Director - TMI Program Office, Dr. B. J. Snyder

SELECT OPTION : ALL ACTIVITY NUMBER

SORT OPTION : NONE

PROJ.	START: 1 /1 /1984	EST. DURATION: 320										LAST UPDATE:				3	3 /30/19			
ACT .	DESCRIPTION	2 JAN 84	1 F E B 84	5 H A R 84	5 A P R 84	5 M A Y 84	1 JUN 84	1 J U L 84	1 A U G 84	1 5 8 9 84	S 0 C T 84	1 N 0 Y 84	1 DEC 44	1 J A N 85	\$ F E B 65	i M A R 65	1 A P R 85	5 M A Y 85	1 J U N 65	1 JUL 81
101 102 103	DECON 347' ELEVATION EQUIPMENT ENGRG EVALUATION/DEMONSTRATION PREPARE UNIT WORK INSTRUCTION STAGE/DECON & REPOSITION/PAINT		1																	
201 202 203	LOCA DUCT DECONTAMINATION ENGRG EVALUATION AND ECM PREPARE UNIT WORK INSTRUCTION STAGE AND DECON		1															T		
301 302 303	DECON REACTOR BLDG AIR COOLERS ENGRG EVALUATION/DEMONSTRATIONS PREPARE UNIT WORK INSTRUCTION STAGE AND DECON				1				+											+
401 402 403	REMOVE RADIONUCLIDES FROM 347 FLOOP ENGRG EVALUATION/DEMONSTRATIONS PREPARE UNIT WORK INSTRUCTION STAGE/DECON/CLEAN/PAINT REMOVE AND PROCESS WASTE	R																		

.

.