

Nuclear

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:

(717) 948-8461

4410-84-L-0135
Document ID 0055A

October 4, 1984

TMI Program Office
Attn: Dr. B. J. Snyder
Program Director
US Nuclear Regulatory Commission
Washington, DC 20555

Dear Dr. Snyder:

Three Mile Island Nuclear Station, Unit 2 (TMI-2)
Operating License No. DPR-73
Docket No. 50-320
Fuel Pool "A" Safety Evaluation Report

This letter is to request your concurrence in the attached revisions to Sections 3.1 and 3.2 of the Fuel Pool "A" Safety Evaluation Report (SER). These revisions clarify the intent of the decontamination methodology and criteria described in the initial SER which were intended primarily for decontamination of the tanks. Sections of the piping and similar components may require removal from the system and additional decontamination to reduce radiation levels to those acceptable for shipping. This decontamination may take place in onsite facilities designed for decontamination utilizing commercially accepted methods. Gross decontamination will continue to be performed in situ.

Decontamination of the piping outside the fuel pool will be done using commercially accepted methods. Gaseous effluents will be processed through a HEPA filter and monitored prior to release. Liquid effluents will be disposed of utilizing plant procedures approved by the NRC.

Pursuant to the requirements of 10 CFR 170, an application fee of \$150.00 is enclosed for this request.

8410100224 841004
PDR ADOCK 05000320
P PDR

Rec'd w/ check for \$150.00

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

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Dr. B. J. Snyder

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If you have any questions concerning this information, please call
Mr. J. J. Byrne of my staff.

Sincerely,



F. R. Standerfer
Vice President/Director, TMI-2

BKK/RBS/jep

Attachment

cc: Deputy Program Director - TMI Program Office, Mr. W. D. Travers

SAFETY ANALYSISSA # 4340-3161-83-3Rev. # 1-APage 1of 51**TITLE**

**SAFETY EVALUATION REPORT
FOR
FUEL POOL "A" REFURBISHMENT**

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Title

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Fuel Pool "A" Refurbishment Plan

Rev.	SUMMARY OF CHANGE	Approval	Date
1	Change decontamination criteria for lower tanks due to defueling schedule.		
1A	Allow decontamination of piping to be performed external to the Fuel Pool		

3.0 DECONTAMINATION

3.1 CRITERIA

The decontamination criteria are as follows:

- ° All tank decontamination will be done in the pool
- ° The tanks and associated piping will be decontaminated to allow off site shipment as Type A.
- ° Tank decontamination by flushing and high pressure water sprays will continue as long as it is effective, i.e., it will not be stopped as soon as the shipping criteria are met

NOTE: These criteria need not be met for the lower tanks due to the accelerated defueling schedule. However, the lower tanks should be decontaminated to the extent allowed by the schedule prior to removal to support defueling.

3.2 METHODS

An iterative procedure will be used in decontaminating the internals of the tanks and associated piping, with radiological surveys performed at the end of each step to determine if further decontamination is necessary or effective. As a first step, the tanks and associated piping will be flushed with water. This will remove residual activity associated with the reactor building water and tank sludge. The second step will involve the use of high pressure water sprays inside the tank to dislodge loose particles and complete the sludge removal.

If these techniques for decontamination of the tanks while in the Fuel Pool fail to meet the Type A offsite shipping criteria, the use of chemicals for decontamination will be evaluated. Alternatively some mechanical technique such as abrasive blasting or grinding may be appropriate if the affected areas are small and localized. However, such alternate techniques are outside the scope of this evaluation since water techniques are expected to be successful and sufficient chemical evaluations have not been performed. If chemicals are to be used, engineering evaluations including safety evaluation will be performed on a case by case basis.

Tank farm piping will be flushed in conjunction with the flushing of the tanks. Since the piping is intended to be discarded as Type A waste, no special high pressure water sprays or other techniques will be used to attempt to release the piping for unrestricted use.

After initial flushing, if piping/related components require additional decontamination, it may be performed either in the pool or in a remote location. If decontamination is performed remotely, i.e., outside the Fuel Handling Building in a facility designed specifically for decon activities, then any commercially acceptable decon method may be utilized.

3.3 WASTES GENERATED

3.3.1 Liquid Waste

Approximately 100,000 gallons of liquid waste is expected to result from the water decontamination of these tanks. The waste will contain primarily insoluble with some soluble cesium and strontium compounds. Trace quantities of other isotopes may be present but are not considered to affect waste treatment. It is intended to process the liquid waste through SDS and/or EPICOR as indicated by sample analysis. The processed water used for decontamination will not require any special treatment after decontamination and prior to processing.

3.3.2 Solid Waste

Solid wastes are expected to result from discarding the tank farm piping and from the normal use of protective clothing. The tanks themselves are not expected to be discarded as waste. Rather, they are to be stored onsite for possible reuse or shipped to another facility for use. The solid waste resulting from ancillary operations and protective clothing will be segregated as radioactive or non-radioactive and further segregated as compactable or non-compactable. No special considerations will be required as these wastes are produced by plant operations in radiologically controlled areas. Since the majority of FPA is not a contaminated area the quantity of these wastes is expected to be minimal.