



CONNECTICUT YANKEE ATOMIC POWER COMPANY

HADDAM NECK PLANT

RR #1, BOX 127E, EAST HAMPTON, CONN. 06424

July 1, 1980

U. S. Nuclear Regulatory Commission  
Region I  
Office of Inspection and Enforcement  
631 Park Avenue  
King of Prussia, PA 19406

ATTENTION: Mr. Boyce Grier,  
Director

Reference: Facility Operating License No. DPR-61  
Docket No. 50-213  
ETS-NR/50-213/80-06

Dear Mr. Grier:

On June 22, 1980, during the draindown of the refueling cavity to the Refueling Water Storage Tank (RWST), analysis of an RWST grab sample indicated that the tank contained 26.9 curies. This quantity exceeded the Environmental Technical Specification, Section 2.4.1.7 limit of 10 curies. This event was reported by telephone to your office on June 22, 1980.

A written report containing a detailed description of the event as required by Environmental Technical Specification 5.6.2.a.(1) is attached.

Very truly yours,

Richard H. Graves  
Station Superintendent

RHG:MDQ/mts  
Attachment

cc: Dir., Office of Nuclear Reactor Regulations, Washington, D. C. (17)  
USNRC, c/o Document Management Branch, Washington, D. C. (1)

8007080077

## ATTACHMENT

### EVENT DESCRIPTION

With the upper core package in place over the reactor, dewatering of the refueling cavity commenced June 22, 1980 at 1235 with a draindown of 20,000 gallons via the core Residual Heat Removal (RHR) System, bypassing a series ion exchange mode. Based upon an RHR sample taken at 0830 that day, this volume of water would have resulted in 3 curies being introduced into the RWST. The fast draindown sequence was followed by a slow draindown via the fuel transfer canal drain through a series ion exchanger mode. The decontamination factors for this mode were 10-15. Total tank activity was projected at each sampling using tank level, specific activity of the water after ion exchange, and activity contained in the tank from the fast draindown. All projections were well below 10 curies.

Available data at 1600 hours indicated that another 10,000 gallons could be fast drained from the RHR system. This was completed at 1730. An RHR sample analysis at 1900 yielded a specific activity approximately 6 times that determined at 0830. Following this discovery, RWST dip samples were taken, analysed and verified, with calculations yielding 26.9 curies. The draindown was terminated and the RWST placed into a purification loop with the spent fuel pool ion exchanger.

### CAUSE

Investigation of this event revealed that control rod drag testing was performed between 1000 and 1300 hours on June 22. This testing resulted in a large amount of crud displacement into the RHR coolant system, raising the specific activity up by a factor of 6. With this event occurring between sample analyses at 0830 and 1700 hours, it was not known that the fast draindowns would yield greater than 10 curies. Calculations later showed that the 20,000 gallon draindown yielded ~ 17 curies, while the 10,000 gallon draindown yielded ~ 8 curies.

### CORRECTIVE ACTION

The RWST was placed on a recirculation mode through a purification loop in an effort to bring the total curie content well below 10 curies before draindown recommenced. The RWST total curie content went below 10 curies on June 24.

### ACTION TO PREVENT REOCCURRENCE

Cavity draindowns will be done using the series ion exchange mode where practicable. Fast draindowns shall be employed only after the water to be drained has been sampled and analysed just prior to draindown, and no other transactions which could affect system activity will be performed.