

PHONE: (305) 245-2910 Ext. 353

Additional Cause Description and Corrective Actions

Eight assemblies were removed to the spent fuel pool for damage inspections. A summary of the inspection results and the disposition of each assembly is given below:

- X-04: The leaning fuel assembly was inspected. Scratches were found on the top and bottom nozzles and on the foot. Additional tests and inspections will be performed on this assembly to verify its integrity. If the results are satisfactory, this assembly will be used in the Cycle IX core loading of Unit 3.
- Z-06: Reconstruction of the event indicates that Z-06 was the first assembly struck by assembly X-04. Thirteen fuel pins sustained damage. The cladding was still intact. This new fuel assembly is being returned to the manufacturing plant for repairs.
- X-17: Assembly X-17 occupied the core position adjacent to Z-06. It was found leaning approximately twelve inches from upright. Inspection revealed two scratched fuel pins. This assembly was considered acceptable for use and was placed back in the core.
- W-51: Assembly X-04 was found leaning against assembly W-51. Eight fuel pins were damaged. The cladding remained intact. Because this assembly had already been used in three fuel cycles, it was decided to reject it from any future use.
- Z-35: Inspection of assembly Z-35, which occupied a space adjacent to X-04, revealed a scrape on the bottom grid. This assembly was placed back in the core.
- W-11: The core perimeter position on one side of assembly W-51 was occupied by assembly W-11. Scratches found on six of its fuel pins confirm that it was contacted by the falling assembly, X-04. W-11 was considered acceptable for use and was placed back in the core.
- Z-30: Assembly Z-30 occupied a core position adjacent to assembly W-51. Inspection revealed no damage and Z-30 was placed back in the core.
- Z-26: Inspection of assembly Z-26, which occupied a space adjacent to X-04, revealed no damage. Assembly Z-26 was placed back in the core.

Plant Reactor Engineering Staff and Westinghouse Management Team made the decision to use the assemblies based on a standard Westinghouse acceptance criteria that considers the type of damage, the width of the scratches, the depth of the scratches, the extent of grid damage, the mechanical integrity of the element and existing evidence of rod to rod contact.

Refueling operations were proceeding normally before the event. Three assemblies were placed, assembly X-04 was placed, and then four more assemblies were set in place. Shift change was being conducted when X-04 was observed to be leaning. According to all indications, assembly X-04 was set down properly. It has been concluded that the assembly was on the bottom, but not properly located on the guide pins. Since this assembly was used in a previous fuel cycle, bowing or twisting of the assembly might have given the appearance that the top was aligned even though the bottom was not.

A special instruction has been written to require that a third operator be present during the remaining refueling operations. The function of this additional operator is to visually verify that the fuel assemblies are properly placed on the guide pins.

In an effort to prevent fuel handling errors in the future, procedures used to conduct refueling activities have been modified as follows: TV camera (for accessible core positions) and visual verification of fuel assembly position will be required. When loading fuel into the core, no fuel assembly will be unlatched until proper alignment with the guide pins is verified. Requirements have been added for adequate lighting at all times during fuel movement. Any problems experienced with the lighting must be corrected prior to any further fuel movement. Lighting adjustments will be made as required. Malfunctions of lighting equipment or other refueling equipment will be reported to the Plant Supervisor-Nuclear. Also, during refueling, a detailed turnover of the refueling activities will be given by the off-going refueling shift. The relieving shift will verify that all equipment is functionally operational before resuming refueling operations. Additional checks have been added to the various refueling procedures to ensure that the periodic tests of the in-core, mast-mounted TV camera and the manipulator crane have been performed as required. Additionally, operator requalification classes review fuel handling procedures, provide classroom training on fuel handling, and provide hands-on training in the spent fuel pit moving burnable poison assemblies and thimble plugs.



DEC 5 A 9:37

November 29, 1983
PNS-LI-83-717

Mr. James P. O'Reilly
Regional Administrator, Region II
U.S. Nuclear Regulatory Commission
101 Marietta Street N.W., Suite 2900
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

REPORTABLE OCCURRENCE 251-83-03

TURKEY POINT UNIT 4

DATE OF OCCURRENCE: APRIL 17, 1983

TECHNICAL SPECIFICATION 6.9.2.a.9

FUEL ASSEMBLY X-04

UPDATE NUMBER 1

The attached Licensee Event Report is being submitted to update our initial report dated May 2, 1983.

Very truly yours,

J. W. Williams, Jr.
Vice President
Nuclear Energy Department

JWW/PLP/js

Attachment

cc: Director, Office of Inspection and Enforcement (40)
Harold F. Reis, Esquire
File 933.1 TP

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