

NRC FORM 365
(7-77)

U. S. NUCLEAR REGULATORY COMMISSION

EXHIBIT A

01 NYIPS 2 00-00000-00 3 41111 4 5

7 8 9 14 15 25 26 30 37 38

LICENSEE CODE LICENSE NUMBER LICENSE TYPE CAT

CON'T

0	1
7	8

REPORT SOURCE

L	6	0	5	0	0	0	2	4	7	7	1	1	0	8	8	2	8	0	7	1	1	8	3	9
60	61	DOCKET NUMBER						68	69	EVENT DATE						74	75	REPORT DATE						80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

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02 Video tapes of selected fuel assemblies were obtained during

03 a planned visual inspection program performed during the

04 Cycle 5/6 refueling & maintenance outage. Review of these

05 video tapes indicated that four region 5 assemblies and one

06 region 6 assembly experienced clad degradation. The health

07 and safety of the public were unaffected. Related event:

08 LER 81-005.

80

7 8 9

SYSTEM CODE 9 10 11

CAUSE CODE 11 12

CAUSE SUBCODE 12 13

COMPONENT CODE 13 14 15 16

COMP. SUBCODE 16 17

VALVE SUBCODE 17 18

17 LER/RO REPORT NUMBER

EVENT YEAR 21 22

SEQUENTIAL REPORT NO. 23 24 25 26

OCCURRENCE CODE 26 27

REPORT TYPE 27 28

REVISION NO. 28 29

ACTION TAKEN 29 30

FUTURE ACTION 30 31

EFFECT ON PLANT 31 32

SHUTDOWN METHOD 32 33

HOURS 33 34 35 36

ATTACHMENT SUBMITTED 36 37

NPRD-4 FORM SUB. 37 38

PRIME COMP. SUPPLIER 38 39

COMPONENT MANUFACTURER 39 40 41 42

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 It is believed that the most probable cause of the clad degradation within the Westinghouse 15 x 15 (9 grid) HIPAR fuel assemblies is hydriding. Only one of the affected assemblies had been scheduled for reuse in Cycle 6 and this assembly was replaced with a non-degraded assembly.

7	8	9	FACILITY STATUS		% POWER		OTHER STATUS		METHOD OF DISCOVERY		DISCOVERY DESCRIPTION	
1	5		H	28	0	0	0	29	NA	C	31	Visual fuel inspection
7	8	9	ACTIVITY CONTENT		RELEASED OF RELEASE		AMOUNT OF ACTIVITY		LOCATION OF RELEASE			
1	6		Z	33	Z	34		NA		NA		
7	8	9	PERSONNEL EXPOSURES		NUMBER		TYPE		DESCRIPTION			
1	7		0	0	0	37	Z	38		NA		
7	8	9	PERSONNEL INJURIES		NUMBER		DESCRIPTION					
1	8		0	0	0	40				NA		
7	8	9	LOSS OF OR DAMAGE TO FACILITY		TYPE		DESCRIPTION					
1	9		Z	42						NA		
7	8	9	PUBLICITY		ISSUED		DESCRIPTION					
2	0		N	44						NA		
7	8	9									NRC USE ONLY	
7	8	9										

NAME OF PREPARER C. Limoges

PHONE: 914/526-5184

ATTACHMENT

Docket No. 50-247
LER 82-045/01X-1

Consolidated Edison Co. of N.Y., Inc.
Indian Point Unit No. 2

During the Cycle 5/6 refueling outage a planned non-destructive underwater television/videotape fuel inspection of thirty-eight assemblies was scheduled. Following a binocular inspection performed during core unloading, eleven additional assemblies were inspected for possible damage. Observed end plug damage on two assemblies led to high magnification television inspection of the top and bottom end plugs of twenty-two additional assemblies. Detailed reviews by Westinghouse of the fuel inspection videotapes identified a total of six fuel rods with defects in four region 5 assemblies, (assembly Nos. E06, E16, E23 and E42) and one Region 6 Assembly (assembly No. F44). The details of this review are provided here.

- o Assembly E06 had two defective fuel rods. Rod 11 on Face 3 was breached about 2 inches below grid 6. The rod showed a whitish clad surface appearance (a characteristic of secondary hydriding) at several axial locations. The top end plug of the rod appeared to be nearly broken off from the rod just below the circumferential end plug weld.

The top end plug of rod 12 was found completely separated from the fuel rod and the end of the plenum spring was visible extending out of the top of the rod, indicating that the fuel pellets remained contained within the rod. The separated top end plug was trapped in one of the flow holes in the adapter plate. The remaining portion of rod appeared to be normal except for a localized whitish clad surface which was observed just below grid 8. Assembly E06 was routinely discharged.

- o Assembly E16 had one defective fuel rod. Rod 7 on Face 2 had a crack just below the circumferential end plug weld. Assembly E16 was routinely discharged.
- o Assembly E23 had one defective rod. Rod 11 on Face 3 had a swollen area below grid 1. The clad surface appeared whitish in several areas. Assembly E23 was routinely discharged.
- o Assembly E42, which had exhibited a hydride blister type defect on rod 13 in the second row on face 2 approximately 12 inches above grid 6 during the Cycle 4/5 fuel inspection (LER 81-005), had been reinserted in the Cycle 5 core following evaluation. The assembly was carefully reexamined during the Cycle 5/6 fuel inspection. The defect area appeared to have deteriorated somewhat, after one additional cycle of exposure. An additional blister was observed on the rod about one inch below the previously identified defect.

A white streak was evident on the rod starting from the newly identified blister. The white streak is believed to be the result of fission gas flow from the defective rod. Assembly E42 was routinely discharged.

- o Assembly F44 had one defective fuel rod. The top end plug of Rod 4 in the second row was found completely separated from the fuel rod, just below the circumferential end plug weld. The end of the plenum spring was visible extending out of the top of the rod indicating that the fuel pellets remained contained within the rod. The separated end plug was seated between and at the top of adjacent fuel rods. The rod showed what appeared to be a blister between grids 2 & 3. Assembly F44, which had been scheduled for reuse in Cycle 6, was not reused. A suitable replacement was substituted for this assembly.

In addition to the above assemblies with identified defects, assembly E05 has one possibly defective rod. Rod 14 of face 3 had a fret mark below grid 1; however, the cladding does not appear to be breached. This rod also exhibited whitish cladding which has been observed on rods with hydriding. No distinct breach in the cladding was observed but there are suspect areas just above Grid 3 and between Grids 7 & 8. Assembly E05 was routinely discharged.

During the subject Cycle 5/6 Refueling and Maintenance Outage, an internal inspection of the reactor vessel and steam generator waterboxes was performed. No loose fuel rod end plugs were found.

The results of the visual inspection program were reviewed in detail with the fuel manufacturer, Westinghouse. It is believed that the most probable cause of the clad degradation observed within the 15 x 15 (9 Grid) HIPAR fuel assemblies is hydriding. A traceability study, which was performed for the defective fuel rods, did not identify any manufacturing abnormalities.

John D. O'Toole
Vice President

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July 11, 1983

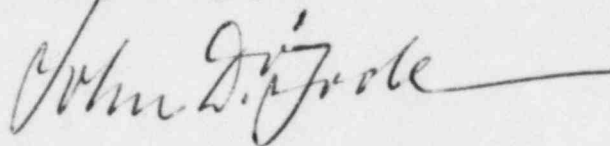
RE: Indian Point Unit No. 2
Docket No. 50-247
LER-82-045/01X-1

Dr. Thomas E. Murley
Regional Administrator - Region I
U.S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA 19406

Dear Dr. Murley:

Transmitted herewith is an updated report for Licensee
Event Report LER-82-045.

Very truly yours,



Attach/
Copies to:

Document Control Desk
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