

ATTACHMENT 3

**1992 UNIT 2 REFUELING OUTAGE
INSERVICE INSPECTION SUMMARY REPORT**

EVALUATION ANALYSIS OF EXAMINATION AND RESULTS

**NORTH ANNA POWER STATION - UNIT 2
P.O. BOX 402
MINERAL, VA 23117**

COMMERCIAL SERVICE DATE 12-14-80

JULY 16, 1992

**VIRGINIA ELECTRIC AND POWER COMPANY
5000 DOMINION BOULEVARD
GLEN ALLEN, VA 23060**

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Serial Number: 92-442
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Evaluation Analysis

There was 1 component which had a condition exceeding the acceptance standards of IWB-3517.1(b) and was not repaired. This component was acceptable for continued service by evaluation as allowed by IWB-3142.4. This component, 2-SI-153 on 12050-WMKS-113A-4, will be reexamined during the next three inspection periods as required by IWB-2420(b). The evaluation and exam report are included in Attachment 3 pages 2 and 3.

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ATTACHMENT 1
 VIRGINIA POWER
 VISUAL EXAMINATION (VT-1)
 BOLTING

NDE-R-92 CC

1. Station: NORTH ANNA Unit: 2 System: SI

2. Drawing: 12050-WMK5-0113A-4 Remote: _____ Direct:

3. Component Inspected: 2-SI-153 12"-SI-467-1502-Q1

CHECKLIST	ACCEPT	REJECT	N/A
Note: Checking N/A requires explanation in Block 13.			
4. Crack like flaws, that exceed the allowable flaw standard as defined in acceptance criteria; note visual flaws will require supplemental NDE examination if not replaced.	<input checked="" type="checkbox"/>	_____	_____
5. More than one deformed or sheared thread in the zone of the thread engagement of bolts, studs, or nuts.	_____	<input checked="" type="checkbox"/>	_____
6. Localized general corrosion that reduces the the bolts or stud cross-section area. Light surface corrosion is considered acceptable.	<input checked="" type="checkbox"/>	_____	_____
7. Bending, twisting, or deformation of bolts or studs to the extent that assembly or disassembly is impaired.	<input checked="" type="checkbox"/>	_____	_____
8. Missing or loose bolts, studs, nuts, or washers.	<input checked="" type="checkbox"/>	_____	_____
9. Fractured bolts, studs, bushings, washers, or nuts.	<input checked="" type="checkbox"/>	_____	_____
10. Degradation of protective coatings, on bolting surfaces.	<input checked="" type="checkbox"/>	_____	_____
11. Evidence of coolant leakage near bolting attributed to component or possibly potentially adverse effects	<input checked="" type="checkbox"/>	_____	_____

12. Supplemental Examination Required: Yes No
 Explain (Required): VT-1 if maintenance is required

13. Comments EXAMINED 16 STUDS AND NUTS IN PLACE
*5- 14 NUTS WITH LACK OF THREAD ENGAGEMENT

14. Notify ISI Engineer of reportable condition.
3/23/92 Date Notification received by [Signature]

15. Name Of Examiner (Print): JERRY P WREN Exam Date 3-20-92
 Signature: [Signature] Level II VT-1, 2, 3

16. ANII Signature: [Signature] Date 3/23/92



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STATION REQUEST REA # 92 - 028
Station ISI
Request #

ENGINEERING EVALUATION
Class 1,2,63 NDE Problem Resolution

NP _____

COMPONENT NO. 2-SI-153 LINE NO. 12"-SI-467-1502-Q1

LOCATION DWG 12050-WMKS-113A-4 REFERENCE DWG _____

REPORTED PROBLEM:

① 14 nuts with lack of thread engagement (: lack of
at least one thread exposed above the nut) - lack of
thread engagement ranges from 1-3 threads inside the nut
Stud/nut size is 1 3/4" diameter

REPORTED BY: C. Conner DATE 2/23/92 EXT. 2065

EVALUATION: According to J.E. Shigley, 'Mechanical Engineering Design', © 1963,
p. 251, 'three full threads are all that are required to develop the full
bolt strength'. While full thread engagement is desirable, it is not
necessary for structural integrity of the connection providing that
at least three threads are engaged, which is the case in this
REA.

CORRECTIVE ACTION REQUIRED

No corrective action required.

EVALUATED BY O.A. Zaluziak DATE 03-25-92

REVIEWED BY Guy E. Mielzewska DATE 3/25/92