

LICENSEE EVENT REPORT

CONTROL BLOCK: (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

01 I A D A C 1 2 0 5 - 0 0 0 0 0 0 - 0 0 0 3 4 1 1 1 1 1 1 4 5
7 8 9 LICENSE CODE 14 15 LICENSE NUMBER 25 26 LICENSE TYPE 30 37 CAT 38 58

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01 REPORT SOURCE L 6 0 5 10 10 0 3 3 1 7 0 4 1 1 8 3 8 0 5 1 0 8 3 9
7 8 9 DOCKET NUMBER 60 61 EVENT DATE 74 75 REPORT DATE 80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES 10

02 During refueling outage, inaccessible snubbers were visually inspected i
03 n accordance with STP 46H003. Engr eval concluded 1 snubber was inop. Th
04 e functionality of 1 other was indeterminent & considered inop. 1 had a
05 bushing missing & 1 had a bushing disengaged. Associated syst included R
06 HR (Div II) & CRD. Engr eval (T.S.3.6.H.2) concluded that the ESF functi
07 ons were not degraded and the public health and safety was not affected.

08
09 SYSTEM CODE CAUSE CODE CAUSE SUBCODE COMPONENT CODE COMP SUBCODE VALVE SUBCODE
C J 11 D 12 Z 13 S U P P O R T 14 D 15 Z 16
7 8 9 10 11 12 13 14 15 16 17 18 19 20
17 LER/RO REPORT NUMBER 8 3 21 22 SEQUENTIAL REPORT NO. 0 1 0 24 25 OCCURRENCE CODE 0 3 28 29 REPORT TYPE L 30 31 REVISION NO. 0 32
ACTION TAKEN FUTURE ACTION EFFECT ON PLANT SHUTDOWN METHOD HOURS ATTACHMENT SUBMITTED NPRO-4 FORM SUB. PRIME COMP. SUPPLIER COMPONENT MANUFACTURER
G 18 X 19 Z 20 Z 21 0 0 0 22 Y 23 N 24 A 25 P 12 10 19 26
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS 27

10 Cause was inadequate proc during previous maint/instl. All snubber defic
11 ciencies were corrected this outage. Insp interval will remain at 18 mon
12 ths as allowed by T.S. 4.6.H.2. STP 46H003 was revised to clearly deline
13 ate insp critera. STP 46H004 (func testing proc) will be revised to incl
14 ude instl & removal of mech snubbers.

15 FACILITY STATUS H 28 0 0 C 29 NA OTHER STATUS 30 METHOD OF DISCOVERY B 31 Scheduled Surveillance 32
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

16 ACTIVITY CONTENT RELEASED OF RELEASE Z 33 Z 34 NA AMOUNT OF ACTIVITY 35 LOCATION OF RELEASE 36
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

17 PERSONNEL EXPOSURES NUMBER TYPE DESCRIPTION 39
0 0 0 37 Z 38 NA
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

14 PERSONNEL INJURIES NUMBER DESCRIPTION 41
0 0 0 40 NA
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

13 LOSS OF OR DAMAGE TO FACILITY TYPE DESCRIPTION 43
Z 42 NA
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

20 PUBLICITY ISSUED DESCRIPTION 45
N 44 NA
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

NAME OF PREPARER Gregg A. Reimers

PHONE: 319-851-7307

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Iowa Electric Light and Power Company

Licensee Event Report - Supplemental Data

Docket No. 050-0331

Licensee Event Report Date: 5-10-83

Reportable Occurrence No: 83-010

Event Description and Probable Consequences:

During the 1983 refueling outage, the inaccessible snubbers identified in Technical Specifications (mechanical type) were visually inspected in accordance with Surveillance Test Procedure (STP) 46H003. This STP was revised, prior to the inspection, to include comprehensive inspection criteria (criteria in STP 46H003 exceed the visual inspection acceptance criteria in T.S. 4.6.H.2). Engineering evaluations were then performed on all identified deficiencies. Engineering evaluations (completed on 4/11/83), concluded 1 mechanical snubber was inoperable and 1 was indeterminate as to operability. Both of these snubbers were considered inoperable in accordance with Technical Specification 4.6.H.2 visual inspection acceptance criteria. The following is a list of the two inoperable snubbers.

Snubber No.	System	Supported Component	Problem
DLA-6-SS-12	RHR (Div II)	LPCI line	Clevis pin bushing misaligned
DBA-6-SS-29	CRD	Return line	Bushing missing

Engineering evaluations of the components supported by the inoperable snubbers have also been performed to determine system operability (T.S. 1.0 Definition 5 per T.S. 4.6.H.2). These evaluations have concluded that the respective failures did not degrade the supported component, nor would they have prevented the component from performing its intended safety function during design basis events. Therefore, the health and safety of the plant personnel and the public were not jeopardized.

Additional visual deficiencies that did not degrade snubber operability, per engineering evaluation, included the following:

Observation	Number of observations this inspection
Spacers/Cotter Pin Missing	13
Lockwires Broken/Missing	8
Improper Fit/Interference	6
Bent/Misaligned	7
Corrosion	4
External Damage	2
Miscellaneous	5

Iowa Electric Light and Power Company

Licensee Event Report - Supplemental Data

Docket No. 050-0331

Licensee Event Report Date: 5-10-83

Reportable Occurrence No: 83-010

Cause Description and Corrective Actions:

Prior to this inspection, the surveillance procedure (STP 46H003) did not require identification of minor deficiencies during visual inspection. The current revision, which was used for this inspection, explicitly identifies visual inspection criteria. These criteria address various mechanical aspects of the snubber assemblies. Additionally, the STP (46H004) that provides functional testing is being revised to provide reference to snubber design drawings to ensure proper snubber re-installation and maintenance procedures will also require reinstallation in accordance with design drawings. Sufficient detail will be verified to be present in design drawings of snubber installations during this procedure revision. The above mentioned improvements in the inspection and handling of snubbers will provide for early snubber problem identification. Thereby, snubber reliability will be improved. For the purpose of establishing the next mechanical snubber visual inspection interval, T.S. 4.6.H.2 allows considering a snubber found inoperable by visual inspection to be operable providing the following two conditions are satisfied.

- (1) Cause for rejection established and remedied, and
- (2) Affected snubber functionally tested "as found" and determined operable.

For the two above inoperable snubbers, Condition (1) has been satisfied for this inspection via the revised visual inspection STP (which includes all other generically susceptible snubbers) and the resulting maintenance requests identifying the specific deficiency to be corrected (which remedied the specific snubber deficiencies). Future testing activities will be controlled via the above STP 46H004 revision and snubber maintenance procedures will require installation in accordance with design drawings as well. Condition (2) is not applicable to this situation since the problems were in the attachment of the snubbers and not the actual snubbers. Therefore, both of the above snubbers are considered operable for establishing the next inspection interval of 18 months for mechanical snubbers.

LER 82-010

Discussion of Mechanical Snubber DBA-5-SS-31Background

On April 15, 1983, following re-installation of the reactor head and insulation, functional testing of the subject snubber was initiated. Functional testing of this snubber and three others was being performed as a result of failures identified during 1981 inspection pursuant to IEB 81-01. Snubber DBA-5-SS-31 is located on the head spray line for RHR system. This snubber had been inspected early in this outage and determined operable in accordance with Technical Specification, Appendix A, 4.6.H.2 visual inspection acceptance criteria. Testing, however, revealed that the snubber demonstrated some binding and erratic movement. An engineering evaluation was initiated to determine if the snubber in its as-found condition was capable of performing its intended function. This engineering evaluation concluded that the snubber would perform as designed to allow normal thermal expansion with considerable margin yet restrain during dynamic conditions.

Actions Completed and Pending

Snubber DBA-5-SS-31 was replaced with a new snubber. The preliminary engineering conclusion of the cause of binding of this snubber is that possibly vibration in conjunction with thermal effects results in slow deterioration. Disassembly of this snubber will assist in finalizing our conclusions. Engineering has initiated a design review of the supports and snubbers for this head spray line. The results of this effort are anticipated to be implemented at our next refueling outage (Cycle 8). This redesign will constitute an improvement to the existing design configuration (since pipe stress, restraint and hanger design are adequate in the current configuration).

Snubber Impact on Visual Inspection Interval

DAEC Technical Specification, Appendix A, Section 4.6.H was reviewed in light of our experience with this snubber. Our specific question was whether the mechanical snubbers visual inspection interval should be shortened. For the following reasons, we have concluded that this situation does not require adjusting the inspection interval:

- (1) Visual Inspection Acceptance Criteria (T.S. 4.6.H.2) requires verification that (1) there is no visible indications of damage or impaired operability and (4) that the snubber has freedom of movement and is not frozen up. Both the initial visual inspection and the subsequent inspection verified that there was no visual indication of damage to the snubber and that the snubber was not frozen.
- (2) T.S. 4.6.H.2 also specifies criteria for classifying a snubber operable for purposes of establishing the next visual inspection interval once visual acceptance criteria is violated. Although this snubber was not classified inoperable during visual

inspections, the binding prompted a review of the basis for not shortening the inspection interval. Engineering evaluation has demonstrated snubber operability in the as found condition. The binding problem is being addressed thru engineering design efforts to reduce suspected vibration. Binding was not observed elsewhere and the three other snubbers that were identified inoperable pursuant to IEB 81-01 testing were tested satisfactory this outage. In addition, manual stroke testing of the snubber (functional testing per T.S. 4.7.H.3) demonstrated sufficient freedom of movement to ensure operability. On this basis, the inspection interval would not need to be shortened even if the visual inspection acceptance criteria had been violated. Further, testing of this snubber will be repeated in accordance with T.S. 4.6.H.3.

Iowa Electric Light and Power Company

May 11, 1983
DAEC-83- 368

Mr. James G. Keppler
Regional Administrator
Region III
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

Subject: Licensee Event Report No. 83-010
(30 day)

File: A-118a, TE-2

Dear Mr. Keppler:

In accordance with Appendix A to Operating License DPR-49, Technical Specifications, Section 6.11.2.b(4), and Bases for Duane Arnold Energy Center and Regulatory Guide 10.1, please find attached a copy of the subject Licensee Event Report.

This LER addresses mechanical snubber experience during our Cycle 7 refueling outage. Two attachments to LER 83-010 are provided. Attachment 1 provides supplement data on two mechanical snubbers which were determined to be inoperable in accordance with DAEC Technical Specification Appendix A, Section 4.6.H.2 - Visual Inspection Acceptance Criteria. Attachment 2 provides a discussion of an additional snubber which, although not inoperable per T.S. 4.6.H.2, merits discussion in terms of establishing snubber inspection intervals. Attachment 2 is provided for your information.

Very truly yours,

BR York for

Daniel L. Mineck
Plant Superintendent - Nuclear
Duane Arnold Energy Center

DLM/GAR/pf*

Docket 50-331

attachment

cc: Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

NRC Resident Inspector - DAEC

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MAY 13 1983