

D.M.B.
U-600465
L16-86(03-31)-L
1A.120

ILLINOIS POWER COMPANY



CLINTON POWER STATION, P.O. BOX 678, CLINTON, ILLINOIS 61727

March 31, 1986

Docket No. 50-461

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

Subject: 10CFR Part 21 Defect - Failure of
Sway Strut and Snubber Pipe Clamps at
Clinton Power Station (21-85-06)

Dear Mr. Keppler:

In Illinois Power Company's (IP) Letter U-600208, dated August 12, 1985, you were notified that IP was conducting an evaluation of a potential 10CFR Part 21 defect in certain sway strut and snubber pipe clamps supplied by Basic Engineers for use at the Clinton Power Station (CPS).

Based on that evaluation, IP has concluded that had this defect gone undetected, it would have resulted in inadequate support of various safety-related piping systems in the faulted condition. This could have affected the integrity of those systems and is judged to be a reportable defect under the provisions of 10CFR21. Therefore, IP is providing the following information in accordance with the requirements of 10CFR Part 21:

- (i) D. P. Hall, Vice President of Illinois Power Company, by means of this report, hereby informs the Commission of a 10CFR21 defect.
- (ii) The components involved in the reportable defect evaluation are sway strut and snubber pipe clamps in sizes 3/4" and 1".
- (iii) The clamps were supplied to CPS by Basic Engineers, a division of National Valve and Manufacturing Company.
- (iv) Basic Engineers became aware of certain conditions in their 3/4" and 1" clamps which could cause the clamps to slip circumferentially around the pipe when a compressive load equal to the faulted rated load was applied to the clamp at an angle of 5° from the clamp centerline. Tightening the clamp bolts tight enough to prevent rotation results in stretched bolts and probable failure. Testing and evaluation programs at Basic Engineers failed to detect the conditions presented here prior to supplying the product to CPS.

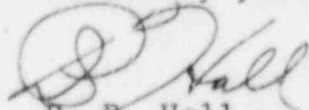
8604080337 860331
PDR ADDCK 05000461
A PDR

APR 2 1986 1E19

- (v) On June 10, 1985, National Valve notified Baldwin Associates (BA) (general contractor for CPS) and BA notified the Manager of Quality Assurance, Illinois Power, on June 13, 1985.
- (vi) BA identified a total of 188 pipe hangers which were originally designed with the clamps manufactured by Basic Engineers. Fifty-nine of these were either voided or revised to other design configurations. Sargent and Lundy (S&L) determined that 129 hangers were installed using the subject clamps. Eleven of these were reworked under FECN No. 11996 and FECN 12040. The balance (118) were reworked under FECN 12559. The number and system location of the defective clamps are given in Attachment "A".
- (vii) The corrective action which has been taken is as follows:
 - (a) Basic Engineers has revised the clamp load capacity data sheets and installation instructions to provide new torque values.
 - (b) Basic Engineers has changed the material requirements to use higher strength nuts and bolts with hardened washers to prevent stretching the bolts.
 - (c) S&L performed a computer sort to identify all pipe support types S, R & X for pipe sized 3/4" and 1" at the CPS. BA used this sort to establish a list of all affected safety related small bore hangers.
 - (d) All affected hangers have been identified and change documents have been issued to identify this condition in the M09-1003N & 1004N drawings.
 - (e) The affected supports were re-worked per Field Engineering Change Notices issued by S&L (FECN 11996, FECN 12040 and FECN 12559). The work was completed in February, 1986.
- (viii) Not applicable to Clinton Power Station.

Our evaluation of this reportable defect is available for your review at our offices. I trust that this letter provides sufficient information for your review and analysis of the problem and solution.

Sincerely yours,


D. P. Hall
Vice President

U-600465
L16-86(03 -31)-L
1A.120

cc: USNRC Resident Office
Illinois Department of Nuclear Safety
Director of Inspection and Enforcement (3 copies)
INPO Records Center
National Valve and Manufacturing Company

ATTACHMENT A

M-1AB03072X	M-1RB12513S	M-1RE20049X
M-1IS01074S	M-1RB21616S	M-1RE42021X
M-1IS01075S	M-1RB21505S	M-1RH73001X
M-1IS08024X	M-1RB21596S	M-1RH73002S
M-1MS10201S	M-1RB21597S	M-1RH82002S
M-1MS10301S	M-1RB21598S	M-1RH82003X
M-1MS10401S	M-1RB21599S	M-1RI21006S
M-1MS10501S	M-1RB21609S	M-1RT19003X
M-1MS10602S	M-1RB21611S	M-1RT28007S
M-1MS38072S	M-1RB21614S	M-1RT46001S
M-1MS38073X	M-1RB22555S	M-1SX03018X
M-1MS38093S	M-1RB24565S	M-1SX04017X
M-1MS38094S	M-1RB24567S	M-1SX48007X
M-1MS38095S	M-1RB24568S	M-1SX49006X
M-1MS38096S	M-1RB24569S	M-1TX16049S
M-1MS46001S	M-1RB24575S	M-1RB21628S
M-1MS48003S	M-1RB31514S	M-1RB23542S
M-1MS48005S	M-1RB31529S	M-1RB24580S
M-1MS49002R	M-1RB31597S	M-1RB14553S
M-1MS49003S	M-1RB33510R	M-1RB14554S
M-1MS49004R	M-1RB33516S	M-1RR09006S
M-1MS49005S	M-1RB34507R	M-1RR10006S
M-1MS50001S	M-1RB34511R	M-1RR29022S
M-1MS50002R	M-1RB34515X	M-1RR29026S
M-1MS87009S	M-1RE16002X	M-1LP08028X
M-1RA03017X	M-1RE16004X	M-1HP09001R
M-1RA03020X	M-1RE16032X	M-1RE16001X
M-1RB11504S	M-1RE16039X	M-1RE16013X
M-1RB11535S	M-1RE20011X	M-1RE16014S
M-1RB11537S	M-1RE20020X	M-1RE16030S
M-1RB11539S	M-1RE20041X	M-1RE16037S
M-1RE16050X	M-1RE16059X	M-1RE20038X
M-1RE42042S	M-1RE42043S	M-1RR05001R
M-1RR07601R	M-1RT28096S	M-1SC01016R
M-1SC01017R	M-1SX68015R	M-1TD19001X
M-1TD19006X	M-1TD19011X	M-1TD20001X
M-1TD20005X	M-1TD20010X	M-1TD28001X
M-1TD28002R	M-1TD31001R	M-1TD31002R
M-1TD44001X	M-1TD44002X	M-1TD44010X
M-1TD44013X	M-1TD45001X	M-1TD45002X
M-1TD45011X	M-1TD45014X	M-1RE16012S
M-RES01921R	M-WZS00804X	M-WZS00831X
(3ES00630X)	ESS00630X	M-1RA03002R
(3ES00634X)	ESS00634X	