

F-0995
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ILLINOIS POWER COMPANY

CLINTON POWER STATION, P.O. BOX 878, CLINTON, ILLINOIS 61727

November 14, 1984

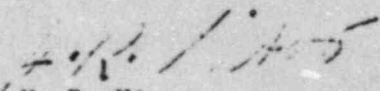
50-461

Mr. Gordon L. Parkinson
Bechtel Power Corporation
Fifty Beale Street
San Francisco, CA 94119

Dear Mr. Parkinson:

Enclosed is S&L's response to Observation Report Number 13, Rev. 0.
This response has been reviewed by Illinois Power.

Sincerely yours,


H. R. Victor
Manager,
Nuclear Station Engineering

DWW/lm

cc: See Attached Distribution List

3001
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8411200369 841114
PDR ADOCK 050G0461
A PDR

[Handwritten Signature]

SARGENT & LUNDY
ENGINEERS
FOUNDED 1891

55 EAST MONROE STREET

CHICAGO, ILLINOIS 60603

(312) 269-2000

TWX 910-221-2807

R. C. HEIDER
ASSOCIATE
312-269-7048

SLMI-13894

Date: November 2, 1984

Project No. 4536-51, -53

Illinois Power Company
Clinton Power Station - Unit 1

Independent Design Review
Observation and Resolution Reports

Mr. J. D. Geier
Assistant to Vice President
Illinois Power Company
500 South 27th Street
Decatur, Illinois 62525

Dear Mr. Geier:

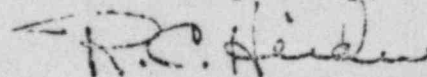
Enclosed is a copy of the below listed Resolution Reports with the proposed resolution (Items 5 and 6) completed by Sargent & Lundy:

Resolution Report Number 13, Revision 0

We are also enclosing a copy of the corresponding Observation Reports for completeness.

Please review our proposed resolution and, if you concur, sign Item 7 of the Resolution Report and forward the report to the independent reviewer. Also, please return a copy of the signed Resolution Report to Sargent & Lundy for our records.

Yours very truly,



R. C. Heider
Project Manager

RCH:nd

Attachment - all recipients

D. P. Hall	E. B. Branch
H. R. Victor	B. A. Erler
F. A. Spangenberg (originals)	W. G. Schwartz
L. E. Ackmann/W. A. Chittenden	I. R. Stensland
W. G. Hejener	H. S. Taylor
E. V. Abraham	R. A. Witt
R. X. French	R. B. Johnson
J. M. McLaughlin	M. J. Shewski
H. M. Sroka	D. K. Schopfer

CLINTON POWER STATION
Job 15478-003

OBSERVATION REPORT

File No. 13
File Revision No. 0
Date October 16, 1984

1. Level 1 classification of Observation:

- Not significant to safety
 Additional information required *See 5, "Recommendation for resolution"
 Significant to safety, send to Level 2 Committee

2. Structure(s), system(s), or component(s) involved:

Pipe rupture restraints for HELB and MELB.

3. Description of Observation:

Pipe rupture restraints are designed based on calculations of cold and hot gaps as predicted by computer analysis. Verification is needed that the measured hot gaps match the theoretical gaps, considering changes in support locations, variation in temperatures, and uncertainties built in the mathematical model.

4. Significance of Observation:

The potential exists that the design of the pipe rupture restraints might not be adequate without provisions for monitoring and adjusting the gaps in the hot pipe position.

5. Recommendation for resolution (optional):

S&L should verify design adequacy of the pipe rupture restraints for hot gaps, and provide an assessment of its safety significance.

6. Signatures:

Level 1 Review Committee

[Signature] 10/17/84

A. S. Powell

R. S. Cahn

D. B. Hardy

[Signature]

[Signature]

CLINTON POWER STATION
Job 15478-003

RESOLUTION REPORT

File No. 13
File Revision No. 0
Date October 16, 1984

1. Resolution by Level 1 Internal Review Committee

2. Classification of Observation:

- a. Not valid (see continuation sheet)
- b. Not significant to safety
- c. Additional information required
- d. Significant to safety

3. Program resolution is:

- a. Closed item
- b. Action to be taken by Reviewee

4. Review Committee signatures:

<u><i>[Signature]</i></u>	<u>R. D. Cahn</u>
<u><i>[Signature]</i> 10/17/84</u>	<u><i>[Signature]</i></u>
<u>L. S. Powell</u>	<u><i>[Signature]</i></u>

5. Reviewee proposed resolution:

a. Description of proposed resolution:

(See Continuation Sheet)

b. Basis of proposed resolution:

(See Continuation Sheet)

6. Reviewee response report signed by

[Signature]
Engineer

11-1-84
Date

[Signature]
Manager

11-1-84
Date

7. Illinois Power Co. Review :

[Signature] 11/13/84
Date

CLINTON POWER STATION
Job 15478-003

RESOLUTION REPORT
(continuation sheet)

File No. 13
File Revision No. 0
Date _____

-
- 5a. Based on experience with other in-house projects, Sargent & Lundy (S&L) has recognized that the Nuclear Regulatory Commission has required hot gap checks for pipe rupture restraints. Although there is no specific Final Safety Analysis Report commitment for such a program, the Clinton project has had provisions to perform a hot gap check. S&L has informally discussed a hot gap check program with Illinois Power Company (IPC) and the contractor over the past two years. As shown on the attached Man-Hour Deviation Request Number 830C08-0, dated May 16, 1983, we had allotted man-hours for this program.

Due to the current on-going design and installation work on pipe rupture restraints, the hot gap program details had not yet been finalized. On October 10, 1984, the S&L recommendations for this program were forwarded to IPC (SLMI-13616, copy attached). IPC concurred with the S&L recommendation on October 24, 1984 (S-4870, copy attached).

Based on the above discussion, provisions for a pipe-rupture restraint hot gap check program had been made on the Clinton Project. Therefore, there is no potential for Clinton pipe rupture restraints being inadequate due to gap uncertainties; thus, there is no safety concern.

- 5b. See Item 5a for response.

Mechanical Department

Man-Hour Deviation Request

MDR No.: <u>B30008-0</u> Sheet <u>1</u> of <u>1</u> Division: <u>EMD</u>	Is this a Scope of Work Change? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No SWCR No. _____	Routing	
Project: <u>CLINTON</u> Client: <u>ILLINOIS POWER COMPANY</u> Project No.: <u>4536</u> Date: <u>MAY 16, 1983</u>		Name	Location
*Assignable Cause <input checked="" type="checkbox"/>		Project Part Number Affected: <u>Part- 00</u>	
Description of Change: <u>AS BUILT PIPE RUPTURE UPDATE</u>			
<u>Review of as built pipe and pipe whip restraint drawings.</u> <u>Assumes no substantial deviations requiring reanalysis for pipe whip.</u>			
Drawings Affected:		Documents Affected:	
Does This Change Affect Other Mechanical Divisions? Which?		Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/>
Does This Change Affect Other Departments? Which?		Yes <input type="checkbox"/> No <input type="checkbox"/>	This Change is Mandatory <input checked="" type="checkbox"/> This Change is Discretionary <input type="checkbox"/> This MDR has been considered in Project Man-Hour Estimate Rev. <u>23</u> , Date: <u>6-15-83</u>
Have They Been Advised?		Yes <input type="checkbox"/> No <input type="checkbox"/>	
Does This Change Affect the Drawing Release Schedule?		Yes <input type="checkbox"/> No <input type="checkbox"/>	
*Assignable Cause 1. Client Change 2. Vendor Change 3. S&E Change 4. Incorrect Estimate 5. Vendor Interface 6. Code Change 7. QA Requirements 8. Regulatory Change 9. Other		Effect on Divisional Man-Hours	Man-Hours Add (Reduce)
Initiated by: <u>S. D. Billian</u> Date: <u>6/14/83</u>		Reviewed by: <u>E. C. ...</u> Project Manager Date: <u>7/1/83</u>	
Submitted by: <u>[Signature]</u> Division Head Date: <u>6/16/83</u>		Approved by: _____ Project Director Date: _____	

Form MBAP-5.3, 7-78, Dept. Not.

H-Y

SARGENT & LUNDY
ENGINEERS
FOUNDED 1891

85 EAST MONROE STREET

CHICAGO, ILLINOIS 60603

(312) 269-2000

TWX 910-221-2807

SLMI - 13616
October 8, 1984
Project Number 4536-00

Illinois Power Company
Clinton Power Station - Unit 1

Pipe Whip Restraint
Hot Gap Check

Mr. H. R. Victor
Manager - Nuclear Station
Engineering Department
Illinois Power Company
Clinton Power Station - V-928
P. O. Box #306
Clinton, Illinois 61727

Attention: Mr. P. E. Walberg

Dear Mr. Victor:

As previously reviewed with the Nuclear Station Engineering Department, Sargent & Lundy is recommending a hot functional field inspection of pipe whip restraint gaps. If Illinois Power Company agrees, the following will be done:

1. Each gapped whip restraint will be visually inspected in the field to assure that the pipe does not contact the whip restraint in the pipe hot position.
2. The available margin in design will then be used in selecting those pipe whip restraints which require the hot functional gap check. These same pipe whip restraints will be field inspected in the hot position to compare the measured hot gap with the calculated hot gap. This is required due to the following:
 - . The pipe whip restraint design load is sensitive to the actual gap. Gaps larger than design require reconciliation.

SARGENT & LUNDY
ENGINEERS
CHICAGO

Mr. H. R. Victor
Illinois Power Company

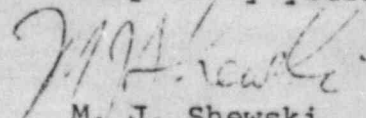
SLMI - 13616
October 8, 1984
Page 2

- . Non-linearities in piping systems cause variations between the analyzed versus the actual thermal growth. This variation may be greater than that acceptable for pipe whip restraint design.
- 3. Those pipe whip restraints that have larger measured gaps than design can be reconciled by:
 - . Pipe whip restraint adjustment.
 - . Addition of shims.
 - . Engineering evaluation.

Please note that hot gap checks have been requested by the Nuclear Regulatory Commission on other projects.

We will await your concurrence prior to initiating this program.

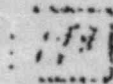
Very truly yours,



M. J. Shewski
Mechanical Project
Engineer

MJS:rjp
Copies:
D. Daniels
A. E. King
CPS D/R Center
R. C. Heider
W. G. Schwartz
R. A. Witt
J. Gray
S. D. Killian
T. A. McKenna
R. A. Parson
R. E. Wadlington
R. S. Walters

ILLINOIS POWER COMPANY



S-4870
B60-84(10-24)-6
500 SOUTH 27TH STREET, DECATUR, ILLINOIS 62525-1805

October 24, 1984

Mr. H. M. Sroka
Sargent & Lundy Engineers
55 East Monroe Street, 21C05
Chicago, IL 60603

Attention: Mr. Ray Parsons

Dear Mr. Sroka:

With regard to your letter of October 8, 1984 (SLM1-13616) concerning pipe whip restraint hot gap checks, we concur with your recommendation that these gaps be checked during hot functional testing. Our program will consist of the following:

- (1) All gapped whip restraints will be visually inspected to assure that the pipe does not contact the whip restraint in the pipe hot functional position.
- (2) Selected whip restraint gaps will be measured and recorded. These measured gaps will be compared to the predicted gaps and those which fall outside their allowable tolerances will be submitted to you for additional evaluation.

To support the above effort we will require you to provide the following information:

- (a) A list of all whip restraints which are gapped and therefore require inspection per (1).
- (b) A list of all gapped restraints requiring inspection per (2) along with their predicted gaps and allowable tolerances for each.

If you have any questions please contact G. Stevens at NSED ext. 296.

Sincerely,

J. S. Spencer
Director - Design Engineering
Nuclear Station Engineering

GMS/urns

cc: R. F. Thiel, V-270
P. E. Walberg, V-928
H. R. Victor, V-928
Jon Greene, T-31
Bob Ziwnski, T-31



October 24, 1984

Mr. H. M. Sroka
Sargent & Lundy Engineers
55 East Monroe Street, 21C05
Chicago, IL 60603

Attention: Mr. Ray Parsons

Dear Mr. Sroka:

With regard to your letter of October 8, 1984 (SLMI-13616) concerning pipe whip restraint hot gap checks, we concur with your recommendation that these gaps be checked during hot functional testing. Our program will consist of the following:

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- (b) A list of all gapped restraints requiring inspection per (2) along with their predicted gaps and allowable tolerances for each.

If you have any questions please contact G. Stevens at NSED ext. 296.

Sincerely,

J. S. Spencer
Director - Design Engineering
Nuclear Station Engineering

GMS/nms

cc: R. F. Thiel, V-270
P. E. Walberg, V-928
H. K. Victor, V-928
Jon Greene, T-31
Bob Ziminski, T-31

Clinton Power Station

Independent Design Review
Standard Distribution List

Director of Nuclear Reactor Regulation
Attn: Mr. A. Schwencer, Chief
Licensing Branch No. 2
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

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

Byron Siegel
Clinton Licensing Project Manager
Mail Code 416
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Fred Christianson
Mail Code V-690
NRC Resident Office
Clinton Power Station
R.R. #3, Box 228
Clinton, Illinois 61727

James L. Milhoan
Section Chief, Licensing Section
Quality Assurance Branch
Office of Inspection and Enforcement
Mail Stop EWS - 305A
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Richard C. Knop
Section Chief
Projects Section 1-C
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Richard J. Goddard, Esq.
Office of the Legal Director
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Don Etchison
Director, Illinois Department of
Nuclear Safety
1035 Outer Park Drive
Springfield, Illinois 62704

Allen Samelson, Esq.
Assistant Attorney General
Environmental Control Division
Southern Region
500 South Second Street
Springfield, Illinois 62706

Jean Foy
Spokesperson, Prairie Alliance
511 W. Nevada
Urbana, Illinois 61801

Richard Hubbard
MHB Technical Associates
1723 Hamilton Avenue
Suite K
San Jose, California 95125

Gordon L. Parkinson
Bechtel Power Corporation
Fifty Beal Street
P. O. Box 3965
San Francisco, California 94119

Roger Heider
Sargent & Lundy Engineers
55 East Monroe Street
Chicago, Illinois 60603