

# The National Board of Boiler and Pressure Vessel Inspectors

S. F. HARRISON, Executive Director

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1919 64<sup>th</sup> 1983  
ANNIVERSARY

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March 5, 1984

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Mr. William Dircks, Executive Director  
U.S. Nuclear Regulatory Commission  
7735 Old Georgetown Road  
Bethesda, MD 20014

SUBJECT: National Board Audit of the ASME Code Related Construction  
of the William H. Zimmer Nuclear Power Plant - Moscow, Ohio

Dear Mr. Dircks:

Enclosed is a copy of our letter of February 29, 1984 to Mr. Ralph Yost informing the State of Ohio that, as a result of Cincinnati Gas & Electric Company's abandonment of the Zimmer plant as a nuclear unit, the National Board would be willing to furnish whatever support deemed necessary should it be reinstated.

Very truly yours,

*S. F. Harrison*

S. F. Harrison  
Executive Director

SFH/jsb

Enclosure

cc: Victor Stello, NRC - Bethesda, MD  
James Keppler, NRC - Glen Ellyn, IL  
Wm. L. Forney, NRC - Glen Ellyn, IL  
P. P. Gwynn, NRC - Zimmer Site, Moscow, OH

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# The National Board of Boiler and Pressure Vessel Inspectors

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J. T. CROSBY, Past Chairman  
Little Rock, Arkansas



February 29, 1984

COPY

Mr. Ralph Yost, Acting Division Chief  
Department of Industrial Relations  
Division of Boiler Inspection  
2323 West Fifth Avenue  
P.O. Box 825  
Columbus, Ohio 43216

Subject: Zimmer Nuclear Power Plant  
Moscow, Ohio

Dear Mr. Yost:

As you are aware, The Cincinnati Gas & Electric Company announced on January 21, 1984 that all nuclear construction on the William H. Zimmer Nuclear Power Station was to be immediately halted. As part of that announcement, CG&E also stated that should the Zimmer plant be completed, it would be as a coal fired plant.

As requested by the State of Ohio, The National Board of Boiler and Pressure Vessel Inspectors had been conducting an audit of the construction activities at the Zimmer Nuclear Power Plant. This audit was being performed on The Cincinnati Gas & Electric Company and its various subcontractors on the Zimmer site.

The purpose of this letter is to inform your office that, because of the January 21, 1984 announcement, the National Board has determined that our continuing the audit serves no purpose. The National Board ceased all site activities on January 27, 1984.

During the period that the National Board maintained an office on the Zimmer site, there were twenty-six (26) instances identified where CG&E or their subcontractors had performed activities that were not within the requirements of the rules of the State of Ohio or the ASME Boiler and Pressure Vessel Code.

After the National Board's arrival on the Zimmer site on March 1, 1982, a close-working relationship was developed between the State of Ohio, the National Board, and CG&E in an effort to correct the previous violations that had occurred and also to close the National Board's identified findings.

As stated earlier, the National Board had identified findings in 26 specific areas. At the time of our departure from the Zimmer site, the National Board had recommended to the State of Ohio that 12 findings be closed. Progress was being made in the closure of other findings. It must be recognized that many of the proposed corrective actions to close findings could not be implemented because of the stop-work order imposed on CG&E by the U.S. Nuclear Regulatory Commission.


Page 2  
Mr. Ralph Yost  
February 29, 1984

The Cincinnati Gas & Electric Company was making every effort to correct past practices and deficiencies. At the time of the January 21, 1984 announcement, the National Board had just completed a review of CG&E's plan to have the Bechtel Power Corporation take over and complete the construction of the Zimmer plant.

The National Board is sad that the proposed plan for Bechtel takeover was not implemented and completed. We feel that completion of the Zimmer plant would have been in the best interests of the Cincinnati Gas & Electric Company and the citizens of the State of Ohio.

As always, the National Board offers our assistance to your office whenever needed. Should the climate and attitudes change, and should Zimmer be reinstated as a nuclear unit, we of course are at your service.

Very truly yours,

  
S. F. Harrison  
Executive Director

SFH/jsb

\*Attachments (4)

- \*Attachment #1 - Letter of December 9, 1981 from Donald M. Milan, State of Ohio to Earl A. Borgmann, CG&E.
- \*Attachment #2 - Letter of January 20, 1984 from S. F. Harrison, National Board to G. F. Cole, CG&E.
- \*Attachment #3 - Letter of September 14, 1983 from James W. Harris, State of Ohio to S. F. Harrison, National Board.
- \*Attachment #4 - HJK/Bechtel Plan for Completing ASME Section III Piping Systems at Wm. H. Zimmer Nuclear Station - Unit 1.



JAMES A. RHODES  
Governor

STATE OF OHIO  
DEPARTMENT OF INDUSTRIAL RELATIONS

Division of Boiler Inspection  
2323 West Fifth Avenue • P.O. Box 825  
Columbus, Ohio 43216

(614) 466-2743

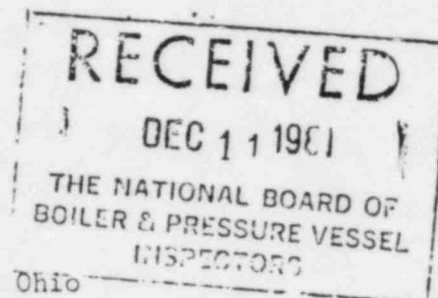
HELEN W. EVANS  
Director

STEPHEN C. LANDERMAN  
Assistant Director

DONALD M. MILAN  
Chief of Division

December 9, 1981

Earl A. Borgmann, Senior Vice President  
Cincinnati Gas & Electric  
139 E. Fourth Street  
Cincinnati, Ohio 45202



Subject: Zimmer Nuclear Power Plant, Moscow, Ohio

Dear Mr. Borgmann:

As a direct result of recent allegations by the Nuclear Regulatory Commission and a preliminary investigation conducted by Mr. R. E. Jagger, Assistant Director of Inspections of The National Board of Boiler and Pressure Vessel Inspectors and myself, serious questions regarding the safety and compliance of this plant to State of Ohio rules and standards have arisen.

In order to alleviate our concerns and assure the safety of the people of The State of Ohio, I have requested that The National Board of Boiler and Pressure Vessel Inspectors conduct a comprehensive and complete independent investigation into the A.S.M.E. code related portions of the subject plant and the Authorized Nuclear Inspector's activities which comes under the scope of our jurisdiction. This investigation should be initiated as soon as possible, and will continue in effect as required until said plant becomes operational or goes commercial.

In order for you to initiate and comply with this request, it will be necessary for you to make immediate and direct contact with Mr. S. F. Harrison, Executive Director of The National Board or Mr. D. J. McDonald, Director of Inspections who are located at 1055 Crupper Avenue, Columbus, Ohio 43229, Telephone Number 614-888-8320. They will be able to answer any questions you may have regarding the investigation, and give you approximate estimates of the costs involved, which must be borne in their entirety by your company.

The benefits and assurances offered by this investigation are apparent, and your usual fine cooperation is anticipated.

Very truly yours,

*Donald M. Milan*  
Donald M. Milan  
Chief of Boiler Division  
State of Ohio

cc: Helen Evans - Director of Industrial Relations  
S. F. Harrison - National Board

ATTACHMENT #1

# The National Board of Boiler and Pressure Vessel Inspectors

S. F. HARRISON, Executive Director

## BOARD OF TRUSTEES

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Little Rock, Arkansas

1919 64<sup>th</sup> 1983  
ANNIVERSARY

January 20, 1984

Mr. G. F. Cole  
Ass't. V.P. - Nuclear Projects  
The Cincinnati Gas & Electric Company  
Wm. H. Zimmer Nuclear Power Station  
U.S. Route 52  
P.O. Box 2023  
Moscow, Ohio 45153

Subject: Preliminary Plan for the Completion of the Installation  
of ASME Section III Piping Systems at Zimmer (CG&E  
Letter GFC-84-0023 dated January 16, 1984)

Dear Mr. Cole:

The National Board has reviewed the subject letter, including the technical requirements as addressed in Parts I and II, and has comments on both as follows:

It is regrettable that the Nuclear Regulatory Commission rejected CG&E's proposed Course of Action with H.J. Kaiser continuing as the Constructor for the Construction Completion Plan, particularly in view of the plan for Bechtel's participation in monitoring management and the PVQC program.

It is agreed that the subject plan presented provides a practical method of completing the ASME Section III piping systems. However, it should be understood that the referenced agreement is not within ASME Code rules in certain areas.

The areas specifically referred to are: a) weld repairs and b) non-conformances. There are no Code rules that we are aware of which would allow one Certificate Holder to make repairs or correct non-conforming conditions on the work of another Certificate Holder, and then allow the second Certificate Holder to assume responsibility for all the work.

The logical and probably the correct way to approach the situation that exists at Zimmer to date is for HJK to complete and execute Data Reports for all work performed by HJK. This would include correcting any known deficiencies, completing any partially completed welds, and making all required weld repairs prior to certification of Data Reports by HJK and its Authorized Nuclear Inspector.

Given the situation existing at the Zimmer station today, i.e., the Nuclear Regulatory Commission's refusal to allow HJK to perform any construction activity, the National Board feels that the following conditions must be met:

ATTACHMENT #2

Page 2

Mr. G. F. Cole

Wm. H. Zimmer Nuclear Power Station

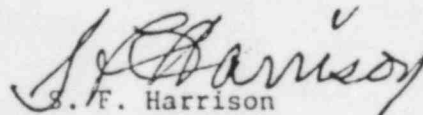
January 20, 1984

1. Require HJK to prepare, execute and certify Data Reports for all work which can be shown to meet Code requirements at the present time, or be brought into Code compliance, within the NRC's imposed restraints, including certification of the appropriate Data Reports by their Authorized Nuclear Inspector (ANI).
2. Where HJK cannot or shall not be allowed to make the required corrections, Bechtel will assume the responsibility for completion of these activities and assume Code responsibility for the total weld, providing all related Code requirements are met. This is to say, where Bechtel completes Code work started by HJK, Bechtel assumes all responsibility including as applicable procurement, materials, welding, PWHT, NDE, and correction of deficiencies as documented by HJK and Bechtel on the Transfer Document.
3. Prior to implementation of this agreement, both Bechtel and HJK must have the procedures and instructions which will implement this agreement in place.
4. The Nuclear Regulatory Commission should review and accept this course of action.

If the above conditions are satisfied and all outstanding comments on the subject plan can be resolved by all participants to the agreement, the National Board will recommend acceptance of this plan to the State of Ohio. However, it should be understood that the final acceptance is subject to approval by the State of Ohio (Enforcement Agency) and the Nuclear Regulatory Commission (Regulatory Authority).

We have enclosed a marked-up copy of the plan for your consideration.

Very truly yours,

  
S. F. Harrison  
Executive Director

SFH/jsb

Enclosure

bcc: James W. Harris, State of Ohio  
Ralph Yost, State of Ohio



STATE OF OHIO  
DEPARTMENT OF INDUSTRIAL RELATIONS  
2323 West Fifth Avenue P.O. Box 825  
Columbus, Ohio 43216

RICHARD F. CELESTE  
Governor

JAMES W. HARRIS  
Director

September 14, 1983

Mr. S. F. Harrison, Executive Director  
National Board of Boiler and Pressure  
Vessel Inspectors  
1055 Crupper Avenue  
Columbus, Ohio 43229

Dear Mr. Harrison:

In confirmation of a discussion which I had with your Mr. R. Jagger on June 27, 1983, please accept this letter as our request to continue the National Board fulfilling our jurisdictional representation on all nuclear and boiler/pressure vessel reviews, audits and surveys.

It is our understanding that the National Board will not commit the State of Ohio to anything nor will you make any attempt to enforce the laws or rules of the State of Ohio. Further, we understand that you will report to us any violation or deviations as they might apply to our laws or rules.

We wish to retain the privilege of visitation and observation of the aforementioned activities with the understanding that we need to be kept fully informed.

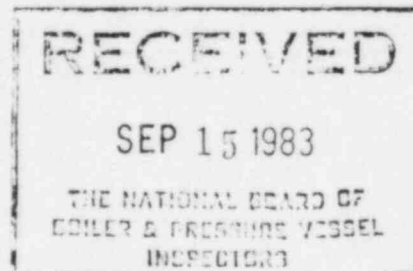
Thank you in advance for your assistance as we look forward to continued cooperation between the State of Ohio and the National Board.

Sincerely,

*James W. Harris*  
James W. Harris  
Director

JWH:c

cc: Mr. Hugh McCormack, Deputy Director  
cc: Mr. Ralph Yost, Acting Chief



ATTACHMENT #3

1/12/84  
Draft VI

HJK/BECHTEL  
PLAN FOR COMPLETING ASME SECTION III  
PIPING SYSTEMS AT  
WM. 4. ZIMMER NUCLEAR STATION - UNIT 1

SCOPE:

The purpose of this document is to identify the responsibilities of H. J. Kaiser (HJK) and Bechtel for completing the installation of ASME Section III piping systems at Zimmer. In the description below, it is necessary to understand that Bechtel will be acting on behalf of the Owner (CG&E) as Project Director when approving HJK Code activities and as a NA Certificate Holder when performing Bechtel Code activities. CG&E retains overall responsibility for the piping system and has assigned design responsibility to Sargent and Lundy (S&L).

PART I

Basic Premises

- A. HJK shall not perform any additional ASME Section III installation work subsequent to the date of execution of this Plan.
- B. HJK shall maintain a sufficient organization at the jobsite to perform the following activities:

1. Perform field verification, inspections, and quality documentation review and approve the results of tests and examinations performed under the auspices of PVQC on portions of the piping system which HJK retains Code responsibility. To the extent possible, the results will be utilized by PVQC.
  2. Complete and validate the quality verification documentation for the preparation and certification of NPP-1 and N-5 Code Reports and ~~The~~ other information Transfer Documents described in this Plan.
  3. Prepare "as-constructed" Code responsibility drawings reflecting those portions of the piping system completed by HJK and for which HJK retains Code responsibility for the installation.
- C. Bechtel shall obtain the services of Hartford Steam Boiler Inspection and Insurance Company to perform the Code required inspections for the completion of installation of the ASME III piping systems by Bechtel.
- D. Bechtel, as Project Director, shall manage the performance of the PVQC Program - a program to independently verify the quality of past construction. As Project Director, Bechtel shall also, as directed by CG&E, monitor the remaining HJK Code activities including verification, documentation reviews and the preparation of Code Data Reports.
- E. When Bechtel completes a Code weld or item that was previously the responsibility of HJK, Bechtel assumes Code responsibility for that weld or item. The portion of the piping system that is completed and repaired will be identified on the Bechtel N-5 Code Data Report.

- F. Upon completion of PVQC, welds and other Code activities within the piping system shall be grouped into the categories of "complete," "incomplete" and "nonconforming" for which responsibility for Code compliance and completion of installation shall be described below:

1. Complete

Welds and other Code activities which are complete to the point of installation, including an acceptable postweld heat treatment, which conform to the requirements of ASME Section III and for which HJK retains Code responsibility for the installation.

Examples:

- a) Welds that are complete and conforming and for which the required NDE has been performed and accepted by HJK and the ANI.
- b) Welds that are complete and conforming, but for which the required NDE has not been performed for acceptance. The NDE Subcontractor shall perform the required NDE to procedures approved by HJK and Bechtel, with the results being reviewed and approved by HJK and their ANI, and accepted by Bechtel as the Project Director and their ANI.
- c) Welds that are complete, but for which the required NDE shows an unacceptable surface indication or the radiograph is not acceptable due to film quality, shooting technique, density or weld surface roughness that may mask an unacceptable indication. Bechtel shall perform the grinding to remove the unacceptable surface indication or condition. The NDE Subcontractor shall perform the required final examination to procedures approved by HJK and Bechtel with the results being reviewed and approved by HJK and their ANI, and accepted by Bechtel as the Project Director and their ANI. HJK shall verify weld acceptability.

## 2. Incomplete

Welds and other Code activities that are incomplete, but which can be completed to meet the requirements of ASME Section III. HJK is responsible for the work and its documentation to the point of HJK completion. Bechtel is responsible for completion of the weld. The responsibility for Code compliance of the completed weld or item is transferred from HJK to Bechtel (See Exhibit A)

### Examples:

- a) Welds that are incomplete, but conforming to that stage of completion where additional welding is required.
- b) Flange connection complete, bolting and torque not verified.

## 3. Nonconforming

Welds and other Code activities that are nonconforming and require repair, rework or cutout/replacement. HJK is responsible for the work and its documentation to the point of HJK completion. Bechtel is responsible for completing any work and has the responsibility for Code compliance of the completed weld or item. The responsibility for Code compliance of the completed weld or item started by HJK and completed by Bechtel is transferred to Bechtel (See Exhibit A).

### Examples:

- a) Welds that are complete, but for which the Welding Procedure and Welder Qualification cannot be substantiated and hence the NCR is dispositioned "cutout".

- b) Welds that are complete, but for which the piping material is not traceable to the Quality Verification documentation and hence the NCR is dispositioned "cutout".
- c) Welds that are complete, but for which the required NDE shows an unacceptable indication which requires repair by welding and hence the NCR is dispositioned "repair".

## PART II

### Code Responsibilities For

### Code Data Reporting and Symbol Stamping

- A. Welds and other Code activities within the portion of the piping system for which HJK has Code responsibility for installation and which as a result of PVQC and HJK verification are determined to be complete and conforming to the requirements of ASME Section III, shall be processed as follows:

- 1. Responsibilities for "Completed" Work

- a) HJK shall:

- 1) Prepare and sign an N-5 Code Data Report and assign National Board Registration numbers for completed systems that meet the requirements of ASME Section III. Where applicable, for hydrostatic test pressure, HJK shall indicate "Hydrotest by Others" on the N-5 when not performed by HJK.

- 2) Prepare and sign NPP-1 Code Data Reports for field fabricated piping subassemblies which have not been installed and for which they retain Code responsibility and which meet the requirements of ASME Section III.
- 3) HJK shall not be required to submit an N-5 Data Report prior to Bechtel beginning system completion work for the portions of systems to be Bechtel's responsibility. However, the Code responsibility drawing for the system which identifies responsibility for Code compliance shall be completed prior to the work commencing.
- 4) HJK shall apply the "NA" Code Stamp (indicating responsibility and Code compliance) for the installation of completed piping systems by HJK and that meet all of the requirements of ASME Section III, with the exception of the final system hydrostatic test.
- 5) HJK shall apply the NPT Code Stamp for HJK fabricated piping subassemblies for which NPP-1 Code Data Reports have been prepared and which are not included on an HJK N-5 Code Data Report.

b) Bechtel shall:

- 1) Prepare and sign N-5 Code Data Report(s) and assign National Board Registration Number(s) for each piping system that is completed by Bechtel. The N-5 Data Report shall include the N-5 Data Reports for completed piping systems by HJK and the applicable Code Data Reports for other components (pumps, valves, vessels, piping subassemblies, etc.).

- 2) When required for modification and repairs, Bechtel shall amend the NPP-1 Code Data Reports for piping subassemblies fabricated by HJK or others. Bechtel shall clearly indicate on the back of Form NPP-1 which modifications or repairs were performed by Bechtel. Those items listed on the HJK Data Report, which are then modified or repaired by Bechtel after the N-5 Data Report has been completed by HJK shall be shown on the Bechtel N-5 Data Report.
- 3) Bechtel shall, if required, perform a pressure test of the completed and installed piping system as defined in the Design Specification. This pressure test shall include piping systems installed by HJK, identified on the HJK N-5 Code Data Report, and not previously pressure tested.
- 4) Bechtel shall apply the "NA" Code Stamp (indicating responsibility and Code compliance) for installation of piping systems that were started by HJK and completed by Bechtel.
- 5) If modifications or repairs are required to be made by Bechtel before receiving the N-5 Data Report for HJK, Bechtel shall:
  - o Coordinate with HJK to modify the Code responsibility drawings, indicating that Code responsibility for that work has been transferred.
  - The drawings shall be controlled by written and approved procedures with defined methods of revision approved by HJK and Bechtel.
  - The S&L Design drawings shall be revised or appropriate change documents shall be approved prior to start of work, if required.

- o Assume Code responsibility for the weld or item requiring modifications or repairs.
- o Document on the Bechtel N-5 Data Report after completion of the modifications or repairs.

B. Welds and other Code activities within the portion of the piping system for which HJK has Code responsibility for installation which are determined to be incomplete, but which can be completed to meet the requirements of ASME Section III, shall be processed as follows:

1. Responsibilities for "Incomplete" Work:

a) HJK shall:

- 1) Identify those operations that were completed and conform to ASME Section III, and those that are incomplete on a Transfer Document (See Exhibit A), signed by HJK and their ANI. The Transfer Document, and supporting Quality Verification documentation, certifies to the degree of conformance those operations performed to the requirements of ASME Section III.
- 2) The Transfer Document shall include HJK's ASME Certificate of Authorization Number and the expiration date. The signature of the HJK ANI on the Transfer Document shall indicate his concurrence with the correctness and accuracy of the Transfer Document.

b) Bechtel shall:

- 1) Afford the Bechtel ANI the opportunity to review the HJK Transfer Document and appropriate Quality Verification documentation transmitted to Bechtel. Bechtel shall review the Quality Verification documentation for completeness and conformance to HJK procedures, project specifications, and the requirements of ASME Section III.
- 2) Prior to performing Code work, Bechtel shall coordinate the responsibility change with HJK.
- 3) When Bechtel completes Code work that was previously the responsibility of HJK, Bechtel is responsible for that Code work. The portion of the piping system that was completed and repaired is identified on the Bechtel N-5 Code Data Report.

C. Welds and other Code activities within the portion of the piping system for which HJK had initial Code responsibility for installation that are determined to have a nonconforming condition shall be processed as follows:

1. Responsibilities for "Nonconforming" Work:

a) HJK shall:

- 1) Prepare Nonconformance Reports and recommended dispositions as appropriate.

- 2) On "repair"/"replace" disposition, indicate on Code responsibility drawings as Bechtel responsibility and prepare Transfer Document per Part II. B.1.a).
- 3) On "accepta as is" disposition, indicate on Code responsibility drawing as HJK responsibility.

b) Bechtel shall:

- 1) Approve disposition of nonconformances.
- 2) Coordinate the transfer of responsibility in accordance with Part II. B. 1.b).
- 3) When Bechtel repairs or replaces a portion of the piping system that was previously the responsibility of HJK, Bechtel assumes Code responsibility for that work and identifies the work on the Bechtel-prepared N-5 Data Report.