

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

Report No. 50-546/79-11; 50-547/79 11

Docket No. 50-546; 50-547

License No. CPPR-170; CPPR-171

Licensee: Public Service of Indiana
1000 East Main Street
Fairfield, IN 46168

Facility Name: Marble Hill Nuclear Generating Station, Units 1 and 2

Inspection At: Marble Hill Site, Jefferson County, Indiana

Inspection Conducted: July 26, 27, 31 and August 1-3, 1979

Inspectors: *C.C. Williams*
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Inspection Summary

Inspection on July 26, 27, 31 and August 1-3, 1979 (Report No. 50-546/79-11
50-547/79-11)

Areas Inspected: Special, unannounced inspection involving determination of adequacy of site management, QA/QC and engineering organizations. The investigation involved 240 inspector hours onsite by four NRC inspectors.

Results: In the areas inspected it was determined that the subject organizations were inadequate in staffing, technical qualification and experience to an extent that precludes continued construction of safety-related items. Four items of noncompliance were identified and are outlined in Paragraphs 4, 5 and 6 of this report.

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Introduction

The Marble Hill Nuclear Power Plant, Units 1 and 2, licensed to Public Service of Indiana, is under construction at a site approximately 10 miles south of Madison, Indiana. Sargent & Lundy is the architect engineering agent for the plant. The facility will utilize two 1150 megawatt pressurized water reactors supplied by Westinghouse. Unit 1 is approximately 20% complete and Unit 2 is approximately 6% complete.

Reason for Special Inspection

As is detailed in Region III Marble Hill Report Numbers 50-546/79-07; 50-546/79-08 and 50-546/79-09 and the July 10, 1979, report from "The National Board of Boiler and Pressure Vessel Inspectors," serious and extensive noncompliance to construction and fabrication requirements have occurred at the Marble Hill plant site. As a result of these findings, civil construction activities were stopped several times. The objective of this inspection was to identify the underlying causes of the nonconforming conditions outlined in the reports referenced above.

During the conduct of the above referenced inspections, symptomatic deficiencies were noted in the number, qualifications and nuclear construction experience of personnel in the site organizations for management, quality assurance/control, and engineering. This effort focused on an assessment of the practical capability of these organizations and their methods of operation and interfacing for controlling the construction activity.

Summary of Findings

NRC has concluded that effective implementation of the documented Marble Hill Quality Assurance program for all safety-related construction has not occurred. PSI has not sufficiently complied with its fundamental commitment to conduct all of these construction activities in accordance with the requirements of 10 CFR 50, Appendix B, and other required codes and standards.

The principal causes of these adverse conditions and noncompliances were: (1) insufficient management and management support, (2) insufficient number of personnel, (3) insufficient technical qualification of personnel, and (4) insufficiently experienced personnel.

The secondary but significant contributing causes were: (1) failure to adequately identify PSI's task or mission regarding the verification of the adequacy of work done by contractors, (2) failure to devise a system to comprehensively account for and evaluate all identified nonconformances occurring on the site, (3) failure to recognize the generic implications of recurring deficiencies, (4) failure to recognize that fixed price construction contracts, while not inherently defective, are likely to place heavier demands on the licensee verification of construction adequacy,

(5) failure to delegate sufficient authority to QC inspectors and their managers regarding stop-work authority, (6) failure to institute employment (manning) and compensation practices which would attract adequately qualified and experienced job applicants, (7) failure of corporate management to recognize the need to be more responsive to site QA/QC manning request, (8) failure to be responsive to and recognize the importance and authority of construction code enforcement bodies, and (9) failure to recognize that the use and attempted upgrading of laborers to supplement unavailable journeyman craftsmen requires more comprehensive training and oversight.

The above findings by their nature involve all safety-related construction activity at the site. Without extensive corrective actions, there is little likelihood that continued construction can be accomplished with adequate assurance that quality requirements will be met.

Based on the above, NRC participated in the licensee's decision to stop all safety-related work at the site until comprehensive corrective actions were established and demonstrated to be effective. This conclusion was further reinforced by the issuance of a confirmatory order by the NRC on August 15, 1979.

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DETAILS

1. Principal Persons Contacted

Public Service of Indiana

*S. W. Shields, V. P. Electric Systems
*L. A. Crews, V. P. Construction
*T. R. Buras, Supervising Engineer Nuclear
*G. Hofmockel, V.P. Engineering
*F. R. Hodges, QA Manager
*M. L. Morris, Assistant Project Manager
R. M. Brown, Construction Project Superintendent
*T. L. McLarty, QA Construction Supervisor
*W. T. Smith, Construction Field Supervisor
*S. K. Farlow, Site Design Control Supervisor
D. L. Shuter, Lead QC Engineer
J. Roberts, Supervisor QA Design and Procurement
V. Berlin, QC Engineer
T. L. Sheet, Supervisor QA Records Reviewer
F. Wilkins, Records Reviewer
W. Minic, QC Inspector
J. Span, QC Inspector
R. E. Wooley, Construction Supervising Engineer
J. Bott, Engineer
R. E. Coughlin, V. P. Nuclear
W. A. Muensterman, Sr. Construction Project Engineer
R. A. Latronica, Sr. Construction Project Engineer
C. J. Korba, Personnel Manager
D. A. Dedrick, Senior QA Engineer
C. Davis, QA Engineer
D. Barker, QA Engineer
N. Nocodemus, QA Engineer
J. Payton, QA Engineer
R. A. Mustafa, Engineer

Construction Code Representatives

W. F. Johnson, Supervisor Quality Systems, National Board of Boiler and Pressure Vessel Inspectors
Robert F. Johnson, Chief Inspector Indiana Boiler and Pressure Vessel Board
C. W. Allison, Field Representative National Board of Boiler and Pressure Vessel Inspectors.
Charles Merkel, Nuclear Inspection Specialist, Indiana Boiler and Pressure Vessel Board
W. Braden, Authorized Nuclear Inspector (Site Contractor)
H. Moran, Authorized Nuclear Inspector (Site Contractor)

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Nutech Corporation

R. F. Reedy, Consultant (ASME Code)
J. Crowe, Consultant (ASME Code)

Newburg-Marble Hill

M. P. Cooper, General Superintendent
J. Ball, Lead QC Engineer
E. P. Guy, Quality Assurance Supervisor

Chicago Bridge and Iron Company

L. Bauer, Project Foreman

Cherne Contracting Corporation

C. Jergens, QC Manager

Stewart Mechanical Incorporated

D. A. Hignite, QC Supervisor
B. Cash, QC Inspector

*Denotes those present at the exit meeting.

2. Scope of Inspection

This inspection included review and examination of the PSI organizations for corporate management, site construction management, site QC, Corporate QA, site engineering, and corporate engineering.

It also included evaluation of PSI's resolution of nonconformances to the ASME Boiler and Pressure Vessel Code Section III, Division 1, as documented by "National Board" letter dated July 10, 1979, and the construction performance of site civil, mechanical and piping contractors to the extent that PSI's capability to control the quality of the plant construction activity was demonstrated.

3. Corporate and Site Management

a. Interviews were held with supervisors and managers of Public Service of Indiana QA/QC, Construction Project and Personnel organizations. The purpose of these interviews was to determine underlying causes of the concrete and other problems experienced at Marble Hill. This was accomplished by review and evaluation of:

(1) Organization and staffing.

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- (2) Knowledge and experience of project management personnel in nuclear power and major construction projects.
 - (3) Understanding and commitments to quality assurance.
 - (4) Establishment of goals and objectives.
 - (5) Responsibilities and delegation of authority.
 - (6) Action on field identified problems and the timeliness and adequacy of this action.
 - (7) Interface provisions and communications between organizations.
- b. Based on these discussions with both site and corporate management personnel and review of records and internal reports, the apparent major contributors to the Marble Hill problems are summarized below:

- (1) Lack of full understanding and appreciation of the complexity of managing a project of the magnitude of Marble Hill. The Tendency was to treat management of the Marble Hill project much the same as past management of fossil power plant construction. There was not a recognition of the need for personnel having nuclear construction experience to man key site positions nor of the number of site personnel needed to exercise adequate control of site work.
- (2) The role and responsibility of the QA/QC organization and its impact on other company organizations had not been adequately defined and this has led to apparent misunderstanding and lack of full acceptance of the QA/QC organization.
- (3) Adequate authority had not been delegated to site management personnel.

c. Other contributing factors include:

- (1) Over reliance on contractors.
- (2) Emphasis on costs.
- (3) Pay policies.

4. Review of QA/QC Organization

a. Objective

The objective of this part of the inspection was to determine the effectiveness of PSI QA/QC organization during the construction of Marble Hill Units 1 and 2.

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b. Method of Accomplishment

The preceding objectives were accomplished by an examination of:

- (1) PSI QA/QC organization; staffing and qualifications.
- (2) Responsibilities and authorities of QA/QC personnel.
- (3) Interfaces between QA/QC - project management - engineering - contractors and craftsmen.
- (4) Determination of possible constraints relative to the effective implementation of these responsibilities.
- (5) Communications within the project management group both upward and downward.
- (6) Effectiveness of dealing with unsatisfactory conditions which have been identified.
- (7) Attitudes toward quality.

The methods used in accomplishing the objectives required interviewing PSI QA/QC and project management personnel, reviewing PSI QA/QC management and technical records including documented requests for additional inspection personnel, Field Nonconformance Reports, PSI Field Corrective Action Requests, and correspondence involving ASME Section III materials. Interviews were also conducted with representatives of the National Board of Boiler and Pressure Vessel Inspectors, and the Authorized Inspectors representing site contractors.

c. Findings

- (1) Liberal interpretation by PSI, for PSI QA/QC personnel, of the ANSI N45.2.6-1973 standard (concerning qualification of inspection examination and testing personnel) has resulted in the following:
 - (a) Neither PSI procedure QAP 6.8 nor CMP 3.10 requires extensive previous inspection experience prior to assigning personnel as PSI Inspectors (Level I, II, or III), QC Engineers or QA Construction Supervisor.
 - (b) Of the twenty-nine (29) PSI site QA/QC personnel, who are currently involved in inspection/surveillance or overview of site activities, only four (4) have had nuclear power plant construction inspection experience

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prior to being assigned by PSI to the QA/QC organization. There is less than 15 man years of experience distributed between these 4 people.

This condition is contrary to 10 CFR 50, Appendix B, Criterion II; the Marble Hill PSAR Chapter 17.1.2 and therefore ANSI N45.2.6 (1973). This item is an infraction. (546/79-11-01; 547/79-11-01)

- (2) PSI has failed to provide comprehensive documented instructions or procedures to assure that repetitive nonconforming conditions are identified, tracked and corrected to prevent their recurrence. Consequently, the following adverse conditions were noted.
- (a) Over a twelve month period Newberg-Marble Hill issued ninety-one (91) Field Nonconformance Reports identifying areas of defective concrete (i.e. honeycomb). It was not until April, 1979 after NRC intervention that PSI viewed this condition as an unsatisfactory trend.
 - (b) Over a fifteen month period Newberg-Marble Hill issued twenty-five (25) Field Nonconformance Reports identifying "out of slump" concrete as being placed. The applicable specification (Y-2850, paragraph 411.A.e addendum 1) has not required that the placement of concrete be slowed to minimize the amount of nonconforming concrete placed, should the in-process concrete test results prove unsatisfactory. It was not until July, 1979 that PSI seriously viewed this condition as an unsatisfactory trend, requiring a specification change.
 - (c) A total of two hundred and thirty-five (235) Field Corrective Action Requests, identifying unsatisfactory documentation or nonconforming piping spool pieces, were issued by PSI to/against ITT Grimmell (an off site vendor supplying piping spool pieces). One hundred and ninety-six (196) of these being documentation deficiencies, the remaining thirty-nine being related to improper fabrication. The corrective action for these unsatisfactory conditions failed to prevent recurrence.

This condition is contrary to 10 CFR 50, Appendix B, Criterion XVI and the Marble Hill PSAR Chapter 17, Section 17.1.16. This is an infraction. (546/79-11-02; 547/79-11-02)

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- (d) As a result of interviews with QC inspectors and review of nonconformance documentation, it was determined that there have been numerous unsatisfactory conditions which have occurred during the in-process installation of concrete. However, immediate stopping of the nonconforming activity apparently did not occur. These conditions may have been prevented or reduced to a minimum; if the PSI QC inspector(s) who observed the occurrence(s) could have required that the activity was immediately stopped. The present system employed by PSI for issuing a stop-work order requires inordinate processing through the QA/QC organization, and project and engineering organizations. Consequently, the effectiveness of QC inspection is seriously compromised. That is, the inspector has no practical authority to stop in-process nonconforming activities. NRC inspectors determined that there has been only one quality related stop-work issued by PSI at the Marble Hill site. This condition is contrary to 10 CFR 50, Appendix B, Criterion II and the Marble Hill PSAR Chapter 17, Section 17.1.1.1. This is an infraction and is cited as an element of Appendix A, Item 1. (546/79-11-01; 547/79-11-01)
- (e) It was determined through indepth discussion that PSI's practical understanding and assesment of their QC inspection task or mission, is not comprehensive. Historically, the QC organization conducts surveillances of construction activities. However, these surveillances have been mostly topical without enough depth or frequency to adequately assure that the contractor's craftsmen and QC organizations were performing as required. Perfunctory QC surveillance appears to have been the basis of PSI management and implimenting decisions regarding the site QC organization. As can be seen in the sites nonconformance history, and the multitude of adverse issues identified by NRC and others, this QC philosophy is inadequate and has led to conditions as identified in this report, that constitutes nonconformance to 10 CFR 50, Appendix B, Criterion II. (546/79-11-01; 547/79-11-01)
- (f) As is indicated by attachments A and B (PSI QC Group Manpower Summary) the PSI site QC organization is and has been seriously understaffed. By site QC managements estimation, there is currently a need for additional members of the QC organization. It is indicated that 31 QC inspectors are needed, whereas only eight are currently available. Moreover, the eight who are

currently available are in some cases, seriously inexperienced as cited above and in Appendix A of this report. (546/79-11-01; 547/79-11-01)

- (g) As is shown by Attachment A of this report (graphic comparison of PSI total site QC organization to total site manning), the number of inspectors as compared to construction forces has remained virtually the same from December 1978 to July 1979, although site construction activity during the spring and summer has increased tremendously. Approximately 300 additional people were added to the work force. (Note: only eight of the 29 members of the site QC organization are QC inspectors.) NRC inspectors determined that in November 1977, PSI QC forces represented 41% of the total QC forces at the site. In December 1978, PSI QC represented 36% of total QC staffing at the site. At the time of this inspection PSI QC represented 31% of the total QC forces at the site. The foregoing shows fundamentally, that while construction activity was increasing tremendously, PSI capability to monitor it was steadily decreasing. At the time of this inspection it had decreased to the extent that PSI's quality assurance commitments were not being effectively implemented. Moreover, this finding confirmed in part, that all safety-related work was involved.

NOTE: Stating that PSI's QC forces represented 41, 36, and 31 percent of total site QC staffing does not indicate that there is some ideal percentage. Its use here indicates only that reliance on contractors QC forces was increasing, and PSI's QC staff's surveillance capability was decreasing as the construction activities increased.

- (h) In regard to the Newburg-Marble Hill organization NRC inspectors have determined that their performance was less than satisfactory (reference NRC Reports 546/79-07, 08, and 09). It is noted here that the causes for these unsatisfactory performances were in part, inadequate experience, numbers of personnel and apparently inadequate independence of QC personnel from the Newburg production organization. See Attachment C.

NRC inspectors concluded from observation and discussion that Newburg production managers have apparently an undue impact on the quality decisions of QC inspectors. These observations and judgements by the NRC inspectors led them to the conclusion that the nature of the contractual relation (fixed-price) between PSI and

Newburg production has had an adverse effect on Newburg QC. The many unidentified problems and their acceptance by Newburg production and QC contributed to perceived "undue influence" that Newburg production has on Newburg QC. This conclusion is more judgemental than clearly demonstrable. It is not believed that fixed price contracts inherently compromise quality, but rather, in circumstances where a contractor is experiencing serious difficulties acquiring qualified manpower and adequate production, extremely heavy demands are placed on the licensee's quality verifying organizations if all construction quality requirements are to be met. It is to this extent that NRC inspectors believe that the nature of the contract has affected the quality of construction at this plant site.

- (i) As is indicated above, NRC independently determined and site records confirmed that the PSI QC organization is seriously understaffed. (See Attachments A and B). It is apparent that site management of the QC organization although not adequately aware of the need for fully qualified and experienced QC personnel, were aware of the need for 44 additional personnel at the time of this inspection.
- (j) As stated above in subparagraph (f) the PSI site QC organization management, recognized that it was seriously understaffed and in part under qualified.

NRC inspectors questioned the apparent delay in hiring the necessary personnel for these positions. NRC inspectors reviewed and examined the PSI management records associated with request for additional personnel for the QA/QC department and the PSI administrative procedures for processing personnel or "manning request."

It was determined that the PSI administrative practices for processing QA/QC manning request involved the highest level of management in the utility and required many levels of approval between the initiator and those providing final approval. This process is graphically represented by Attachment D.

This system imposed an incredible amount of tedious justification on the initiator of the increased staffing request (QC Manager). The system routinely took months to complete, and frequently approved only a fraction of the requested staffing. This process was applied to every position within the site QC department from file clerks to principal engineers.

Review of PSI "Manning - General Headquarters - Nuclear Services Department Quality Assurance Section" documents dated from 1976 to present, show consistent failure of corporate management to be sufficiently responsive and timely in acting on the staffing requirements of the site QC organizations. These records document a litany of lack of knowledge and appreciation of the site QC role; reluctance to accept the judgements of the requestor; bureaucratic minutiae and simple ignorance of the construction and quality implementing process. The specific documents reviewed included meeting minutes and notes of the various participants as outlined on Attachment D of this report. Examples are QC staffing manning records dated, April 18, 1978, July 26, 1977, June 1, 1979, February 17, 1978, July 12, 1978, June 24, 1975, November 12, 1976, March 30, 1978, June 29, 1976, and June 22, 1976.

It is apparent that this extraordinarily rigorous administrative practice applied by corporate management to QC staffing request was prompted by a need for fiscal responsibility. This practice existed since 1947. However, its effect has been to seriously undermine the capability of the QC organization to accomplish its mission and it is viewed as the single largest contributor to the many deficiencies, noncompliances, and omissions noted to date at the site. It is considered that the job descriptions and related salary ranges involved clearly indicate that the likelihood of attracting and employing fully qualified persons for these tasks was small. Based on the issues identified above, subparagraphs (e)-(i) it is concluded that PSI has not sufficiently established and implemented its quality assurance program. This is contrary to 10 CFR 50, Appendix B, Criterion II. This item is an infraction. (546/79-11-01; 547/79-11-01)

5. Examination of Site Engineering Organization

As a result of record review and indepth discussions with site construction engineering personnel of various disciplines, the RIII inspector has established the following conclusions.

- a. Relative to site Construction Engineers it is concluded that the documented job description is inadequate, and the task instructions and directives are unclear.

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Review of personnel files of the construction engineers indicates basically, that they are to review and evaluate construction procedures and supervise construction. Though the concept appears to be adequate, discussions with personnel indicate that they were not appropriately familiar with the work in progress to enable them to adequately evaluate the work performed. In other words, training and indoctrination of the staff was apparently inadequate.

Moreover, the overall job related experience of the construction engineering staff appears inadequate to successfully accomplish their mission. Less than 4% of the total (24) construction engineers at the site excluding S&L engineers have had previous nuclear related construction experience. For many, their current employment at the site provides the first field construction experience in their careers. Also, these circumstances prevail to some extent in the site based S&L engineering organization. These circumstances as supported below are considered an element of noncompliance as identified in item 1 of Appendix A of this report. (546/79-11-01; 547/79-1101)

(1) Training Program Inadequate

A documented program outlining the various subjects in which indoctrination and training should be imparted, was not established.

Examples of this finding are as follows:

- (a) It was determined that mechanical construction engineers were not sufficiently familiar with the ASME code requirements which not only led to the precipitation of the National Board of Pressure Vessel Inspector's findings but also resulted in the inability of the engineers to assess the significance of the findings for the work in progress. (See noncompliance item No. 546/79-11-04.)
 - (b) The electrical construction engineering group has not documented an acceptable program to train and indoctrinate personnel in the requirements of IEEE and ANSI standards and the Safety Analysis Report.
- b. It was determined that the staff demonstrated an inability to adequately assess problems in construction which resulted in their inability to initiate timely corrective action.

Examples of this finding are as follows:

- (1) Unfamiliarity with acceptable Nelson Stud welding resulted in J. J. Robertson construction personnel continuing

nonconforming welding of Nelson studs in the turbine building deck (Category II) unchallenged by PSI constructing engineering staff or others.

- (2) Lack of knowledge of the construction sequence for installing safety related structural beams resulted in torquing the bolts of structural beam connections prior to acceptance of welding attachments to the beams.
 - (3) Failure to recognize the significance of an apparent honeycomb condition associated with observable voids on the curved wall of Unit 2 containment building resulted in failure to identify and tag this nonconformance pending further investigation. They were tagged at the NRC inspector's request on July 31, 1979.
 - (4) Being apparently unfamiliar with the requirements of the ASME code, mechanical construction engineers failed to realize that a serious co-ordination problem relative to quality records, etc. existed between Cherne and Stewart Mechanical which resulted in the documentation of numerous nonconformance reports.
 - (5) Failure to properly assess the significance of fabrication defects and failure to relate them to other similar components was disclosed. This is exemplified by Nonconformance Report No. 6.28 which identified multiple linear indications which were discovered after Cherne welded a pipe to an embedded Category 1 pipe penetration identified as 2AB-3, (located in the auxiliary building). No action was taken to verify the adequacy of other piping common to this material heat and manufacturer. The NRC inspector identified this concern and action was initiated on August 2, 1979, to perform NDE tests on penetrations of the same heat (No. 73457) such as 1AB-3, 1AB-50, 1AB-140, 1AB-141, 2AB-113, 2AB-114 and/or review the CMTRs to determine whether they met the prescribed tests prior to installation.
 - (6) The demonstrated lack of familiarity with welding procedure specification (WPS) requirements and failure to scrutinize work in progress, contributed to their failure to recognize that the CBI welding procedure E7018/7303 Revision 1 dated June 20, 1977, did not specify weld technique for some positions.
- c. The inspector reviewed CBI Weld Procedure Specification (WPS) E7018/7303 Revision 1 dated June 30, 1977. This WPS was being used by CBI to field fabricate Diesel Fuel Oil Storage Tanks on site. In Revision 0 of the WPS the weld technique was initially specified as "Stringer Bead" with an asterisk and later

obliterated with 'x's; the asterisk indicated at the bottom of the page "Weave bead technique for vertical up and overhead passes"; this obliteration left the WPS without any technique for all passes other than vertical up and overhead. With this error, the WPS went through the review cycle which included Sargent & Lundy, the Architect Engineer, and was approved without detection and correction. The WPS was later revised and Revision 1 dated June 30, 1977 was issued with the error undetected and corrected during the subsequent review cycle. The inspector informed the licensee that reviews performed to evaluate and approve the WPS was insufficient and that this was an item of noncompliance (infraction) contrary to 10 CFR 50, Appendix B, Criterion IX. (546/79-11-03; 547/79-11-03)

d. Motivation/Initiative/Leadership Appears Inadequate

- (1) It was determined that Construction Mechanical engineers made no attempt to digest the National Board and Boiler Pressure Vessel Inspector's findings (report dated July 10, 1979), examine the issues themselves and/or respond to correct the findings and issues. (See noncompliance item No. (546/79-11-02, Paragraph 6.e of this report.)
- (2) Neither Construction engineers nor QA/QC engineers were successful in their examination of Unit 2 containment building and auxiliary building to determine that all possible honeycomb conditions and nonconforming patches have been identified and tagged. (See RIII Reports 546/79-07, 08 and 09.)
- (3) It was apparent that neither construction engineers nor QA/QC engineers have determined or examined the acceptance/rejection criteria for receipt and construction documentation packages. Incomplete checklists were provided to the document reviewers on site. The checklist originators (engineers) should be provided additional training; efficient channels of communications should be established with requirements to periodically verify the adequacy of documentation packages and associated instructions. The identified omissions contribute to quality problems as is evidenced by the finding that minimum wall thickness of Borg Warner Valves were not measured and recorded by the vendor.
- (4) It was determined that to the extent of their participation, construction engineers did not establish an adequate system to tag or otherwise identify equipment with incomplete quality records.

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e. Inadequate dissemination of information that is, use of NRC Bulletins/Circulars to make personnel aware of potential problem areas:

- (1) It was established that receipt inspection personnel were not on the distribution list for such information and other mechanisms were not apparent.
- (2) It was determined that there was no formal or routine method for informing construction engineers to be on the alert for material or products known to be unacceptable for use or otherwise questionable.

6. The National Board of Boiler and Pressure Vessel Inspectors Report/ASME Boiler and Pressure Vessel Code Issues

- a. On July 10, 1979 the National Board of Boiler and Pressure Vessel Inspectors issued a report (provided here as attachment E) which documented extensive items of apparent nonconformance to ASME Code requirements. The inspection on which this report was based was conducted at the request of the Secretary and Chief Inspector of the State of Indiana Boiler and Pressure Vessel Board. This request came as a result of long term issues of apparent nonconformance to ASME Code requirements, on the part of PSI, which had not for reasons yet undetermined, acted to comprehensively and forthrightly resolve these issues.
- b. Fundamentally, PSI without benefit of proper ASME qualifications and documented authority, was perceived by the national board, based on PSI activities and site records, to be acting as a material supplier and/or an ASME Code N-stamp holder. Moreover, two site contractors who were properly qualified and authorized by the ASME Code, were experiencing difficulties meeting their code commitments as a direct result of (1) PSI not being duly authorized and/or qualified to perform as either an "ASME N-stamp holder or applicant" or a "material supplier", and (2) PSI's inability and/or refusal to make adequate and complete quality documentation available for the site contractor's Authorized Inspectors review.
- c. Discussion with PSI's site and corporate management regarding these issues after the issuance of the "National Boards . . ." report, demonstrated a serious lack of understanding and appreciation on their part, for the seriousness of these apparent nonconformances. This is further demonstrated by the fact that PSI did not notify NRC of the board's findings.
- d. During this inspection, NRC inspectors conducted interviews with piping contractors ("Stewart Mechanical" and "Cherne

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Contracting Corporation") authorized nuclear inspectors. Based on these discussions and review of nonconforming material records identified by the Cherne ANI, NRC has concluded that the problems in material records identified by the "National Board . . ." Inspection prevails. Among other identified nonconformances there is currently no documented applicant for N-stamp certification for the construction of the Marble Hill plant. NRC recognized that the "Board's" findings were based on conditions which prevailed at the time of their inspection and that some of these findings may be immediately resolvable by records currently available at the site.

e. During examination of site records NRC inspectors identified a multitude of records (nonconformance reports, letters and other documents) which demonstrate that the licensee was fully aware of these circumstances as early as July 14, 1977 and has failed to date, to provide comprehensive and responsible corrective action. This conclusion is based on the following letters from site contractors regarding these issues provided as attachments to this report:

- (1) Attachment "F", Stewart Mechanical letter dated July 14, 1977, J. L. Butt, QA Manager to Frank Hodges, PSI.
- (2) Attachment "G", Stewart Mechanical letter dated June 2, 1978, J. L. Butt, QA Manager to Frank Hodges, PSI.
- (3) Attachment "H", Stewart Mechanical letter dated July 13, 1978, J. L. Butts, QA Manager to J. Roberts, PSI.
- (4) Attachment "I", Cherne Contracting Corporation letter dated May 14, 1979, C. Jergens, QC Manager to T. McLarty, PSI.
- (5) Attachment "J", Cherne Contracting Corporation letter dated March 7, 1979 M. Anderson to Frank Hodges, PSI.
- (6) Attachment "K" Cherne Contracting Corporation letter dated June 6, 1979, C. Jergens to T. McLarty, PSI.
- (7) Attachment "L", Cherne Contracting Corporation letter dated June 6, 1979, C. Jergens to T. McLarty. (Second letter to this date.)
- (8) Attachment "M", Cherne Contracting Corporation letter dated July 27, 1979, C. Jergens to T. McLarty, PSI.

The above is contrary to PSI commitment to 10 CFR 50, Appendix B, Criterion XVI in that these nonconformances and other discrepant issues were not promptly corrected and the measures

taken did not assure that the cause of the condition was corrected to an extent to preclude repetition. This item is an element of Appendix "A" item number 4. (546/79-11-02; 547/79-11-02)

- f. During examination of the PSI documents (nonconformance reports associated with the PSI/Cherne quality records issues) the inspector questioned Cherne NCR No. 6.94. Nonconformance report No. 6.94 dated June 11, 1979, identified as a problem that PSI was not an N-stamp holder. However, it was subsequently voided. The controlling procedures do not describe the "voided" status of a nonconformance report. The "voided" NCR No. 6.94 reference Cherne NCR No. 0.1427, however, the PSI records system does not account for NCRs by the given designation (0.1427). It was subsequently reported that the referenced NCR 0.1427 was never written. Therefore, it appears that there was no basis to void or close NCR 6.94. Subsequently, it was reported that a Cherne letter was the basis for the voiding of this NCR, but it did not relate to NCR 6.94.

The unresolved status of this documentation, and the defective records system, does not constitute an adequate basis for closing or voiding NCR No. 6.94.

This matter is considered to be in noncompliance to PSI commitments 10 CFR 50, Appendix B, Criterion XV, in that control measures did not provide appropriate procedures for identification, documentation, disposition and notification to affected organizations. (546/79-11-04; 547/79-11-04)

- g. PSI has subsequently applied to ASME for an N-stamp for Class 1, 2 and 3 piping systems; requested "Hartford Steam Boiler" to furnish full time inspection of the project and initiated other corrective actions as outlined in PSI letter dated July 28, 1979, attached here as item "N". This matter is considered unresolved. (546/79-11-05; 547/79-11-05)

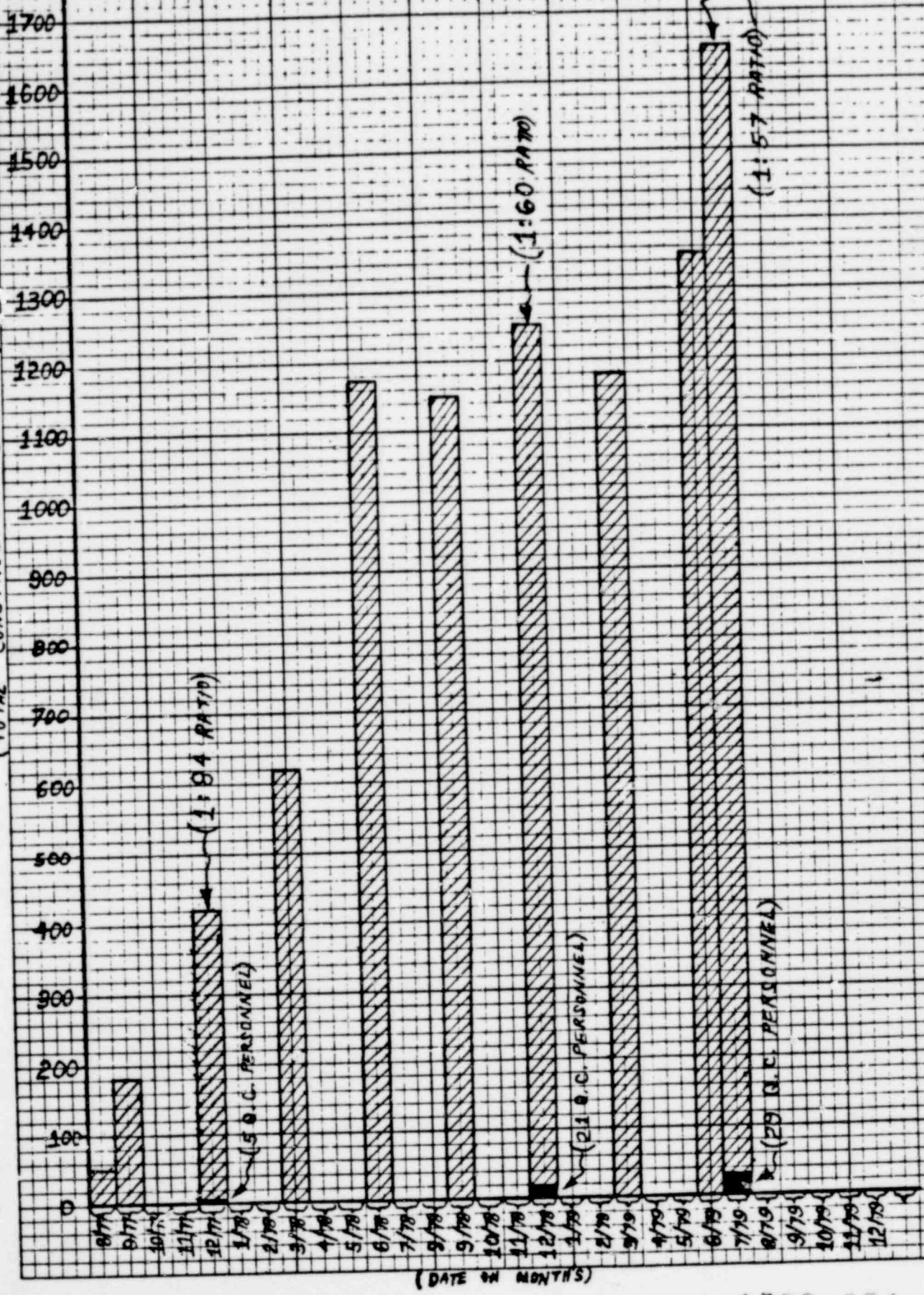
Attachments: Attachments A - N

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ATTACHMENT A
PSI

(TOTAL CONSTRUCTION STAFFING) = MANUAL AND REPAIRING

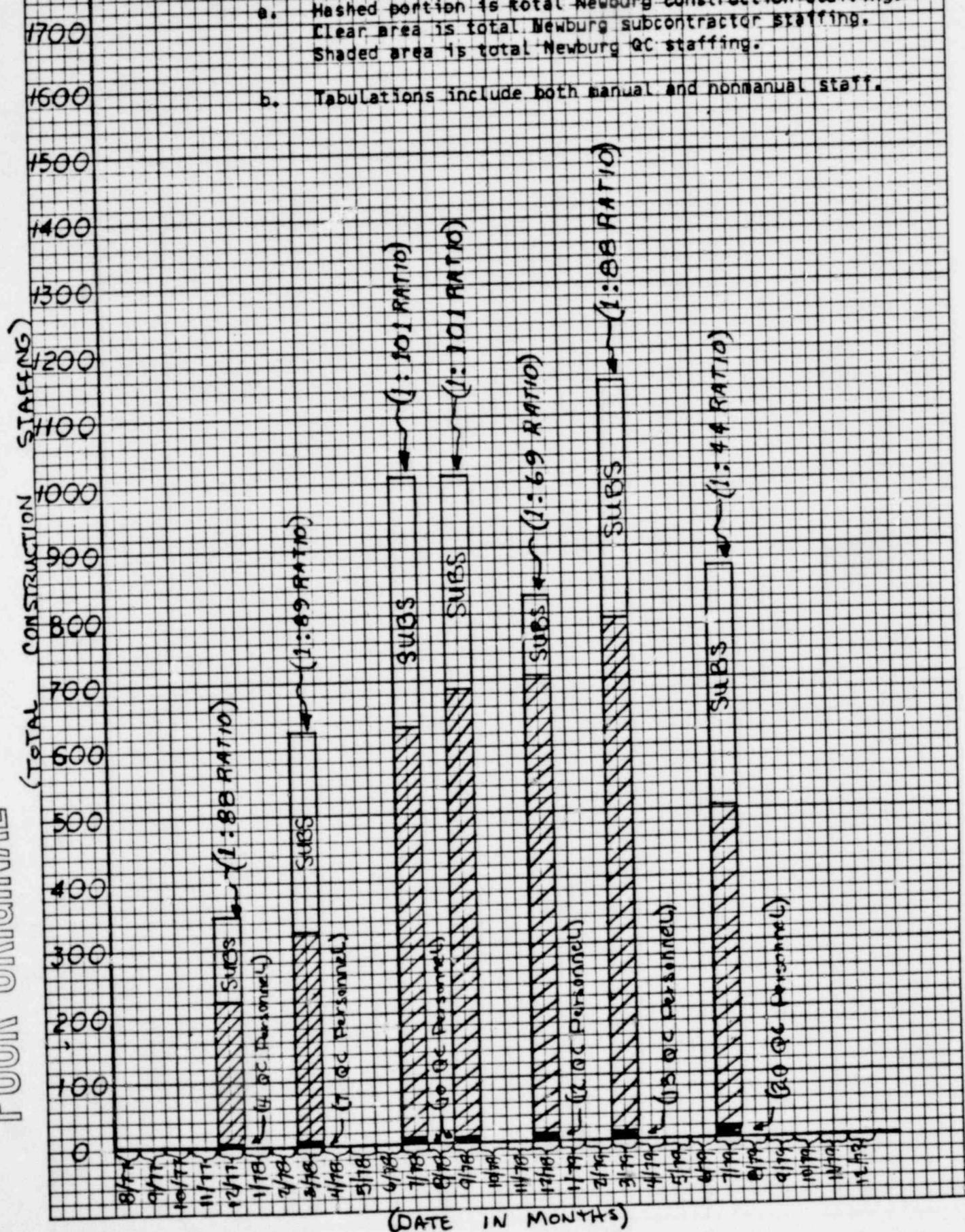
PCOR ORIGINAL



Attachment C
Note:

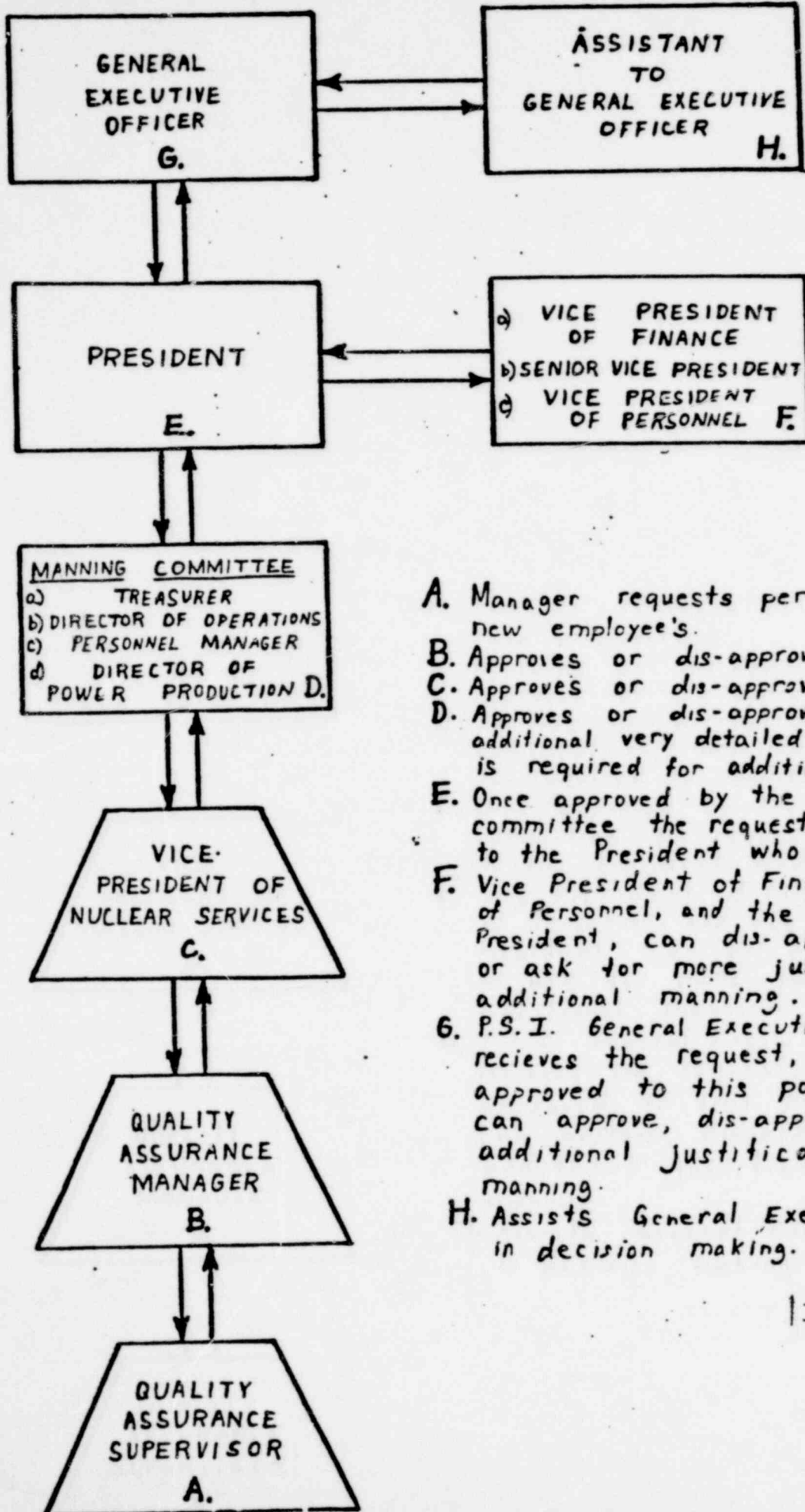
- a. Hatched portion is total Newburg construction staffing.
Clear area is total Newburg subcontractor staffing.
Shaded area is total Newburg QC staffing.
- b. Tabulations include both manual and nonmanual staff.

POOR ORIGINAL



APPROVAL CHAIN REQUIRED FOR ADDITIONAL MANNING
IN PUBLIC SERVICE OF INDIANA GA/QC DEPARTMENT

ATTACHMENT D



- A. Manager requests permission to hire new employee's.
- B. Approves or dis-approves.
- C. Approves or dis-approves.
- D. Approves or dis-approves. At this point additional very detailed justification is required for additional manning.
- E. Once approved by the manning committee the request is then forwarded to the President who, aided by the
- F. Vice President of Finance, Vice President of Personnel, and the Senior Vice President, can dis-approve or approve or ask for more justification for the additional manning.
- G. P.S.I. General Executive officer then receives the request, if it has been approved to this point. He also can approve, dis-approve or ask for additional justification for manning.
- H. Assists General Executive Officer in decision making.

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ATTACHMENT E

Potapous

The National Board of Boiler and Pressure Vessel Inspectors

B. F. HARRISON, Executive Director

H. E. MAUK, Chairman
Wilmington, Delaware

D. R. GALLUP, 1st Vice Chm.
Springfield, Illinois

J. T. CROSBY, 2nd Vice Chm.
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Nashville, Tennessee

July 10, 1979

Mr. Lloyd A. Crews
Vice-President of Construction
Public Service Company of Indiana
1000 E. Main Street
Plainfield, Indiana 46168

POOR ORIGINAL

SUBJECT: National Board of Boiler and Pressure Vessel Inspectors
Unannounced Visit of June 12-14, 1979 to Public Service
Company of Indiana, Inc., Marble Hill Nuclear Generating
Station, Units #1 and #2, New Washington, Indiana.

Dear Mr. Crews:

In compliance with a request from Mr. Robert R. Johnson, Secretary and Chief Inspector, State of Indiana Boiler and Pressure Vessel Board in his letter of May 29, 1979 to Mr. D. J. McDonald, Director of Inspections, National Board of Boiler and Pressure Vessel Inspectors, requesting that a visit be made by National Board Representatives to the subject site to determine if compliance with the requirements of the ASME Boiler and Pressure Vessel Code Section III, Division 1, Nuclear Power Plant Components were being maintained, National Board Representative's Royal Beckwith, Michael Houle and Charles Allison visited the Marble Hill Nuclear Plant site on June 12-14, 1979.

Upon arrival at the Ramada Inn, Scottsburg, Indiana on June 11, 1979, Mr. Charles E. Merkel, Nuclear Inspection Specialist, NB#4111-N, Indiana Boiler and Pressure Vessel Board was contacted by telephone. Mr. Merkel joined the National Board Representatives at the Marble Hill plant site the morning of June 12, 1979 and remained with them during the remainder of their visit through June 14, 1979.

On the morning of June 12, 1979 the National Board team visited the site offices of Public Service Company of Indiana Inc. and met with Mr. T. L. McLarty, Q. A. Construction Manager, and on June 13, 1979, the Team again visited the Public Service Company of Indiana, Inc. site offices where they met with Mr. Frank Hodges, Public Service Company of Indiana Q. A. Manager, Mr. Jeff Roberts, Supervisor of Q. A. Design and Procurement and Mr. McLarty. The National Board Teams exit meeting was held at the end of this June 13, 1979 meeting. Those attending that meeting were:

- Frank Hodges, Manager QA, PSI
- Chas. E. Merkel, State of Indiana
- Royal Beckwith, National Board
- Charles W. Allison, National Board
- Michael J. Houle, National Board
- Jeff Roberts, Supervisor, Q. A. Design & Procurement
- T. L. McLarty, PSI, Q. A. Construction Supervisor

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Following are the findings of the National Board Team during the June 12-14, 1979, visit.

1.0 Public Service Company of Indiana, Inc.

1.1 Public Service Company of Indiana, Inc., (P.S.I.) is the owner of Marble Hill Nuclear Generating Station.

They are in the possession of ASME owner's Certificate of Authorizations #N-2022 issued February 27, 1978, expires February 27, 1981 for Unit #1 and #N-2023 issued February 27, 1978, expires February 27, 1981 for the Marble Hill Nuclear Generating Station, New Washington, Indiana.

1.2. The Docket date for these two 1130 MWE units was September 1975. The construction permit was issued on April 4, 1978.

1.2.1 The A. E. and subcontractor's for Public Service Company of Indiana at this site are;

1.2.1.1 A. E., Sargent & Lundy Engineers, Chicago, Illinois

1.2.1.2 General Contractor; Gust K. Newberg Construction Company, 2040 N. Ashland, Chicago, Illinois 60614. Interim letters renewed May 20, 1979 and June 9, 1979, expires May 20, 1980 and June 9, 1980; N-class CC Concrete Containment at various field sites-no site audit at Marble Hill; NA, Class 1, 2, 3 Components, Parts, Appurtenances, Piping Subassemblies and Component Supports at various field sites; Class 1-2-3 Piping Subassemblies and Component Supports at various field sites; no site audit at Marble Hill; NPT-Class 1, 2, 3 Piping Subassemblies and Component Supports at various field sites, no site audit at Marble Hill, A. I. A., Lumbermans Mutual Casualty.

1.2.1.3 Cherne Contracting Corporation 7777 Washington Avenue, South Minneapolis, Minnesota 55440. NPT#1375 issued May 18, 1979 expires May 14, 1982. Class 1-2-3 Piping Subassemblies and Component Supports and Class MC Penetration Assemblies at various field sites, no audit at Marble Hill. NA#1374 issued May 18, 1979 expires May 14, 1982, installation of Class 1-2-3 Components, Parts, Appurtenances, Piping Subassemblies and Component Supports and Class CS Core Support Structures at various field sites; no audit at Marble Hill site; A. I. A., Hartford Steam Boiler.

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- 1.2.1.4 Stewart Mechanical Enterprises, Inc., 757 Grady Lane, Louisville, Kentucky 40213. NPT-#2274-10 issued January 19, 1979 expires January 19, 1982. Class 1-2-3 & MC Component Parts and Appurtenances and Class 1-2-3 Piping Subassemblies and Component Supports at Marble Hill only. Units #1 and #2; NA-#2273-10 issued January 19, 1979 expires January 19, 1982; Installation of Class 1-2-3 Components, Parts, Appurtenances, Piping Subassemblies and Component Supports at Marble Hill only. Units #1 and #2. A. I. A., Lumbermans Mutual Casualty.
- 1.2.1.5 Chicago Bridge & Iron Company, 800 Jorie Blvd; Chicago, Illinois 60521. N-#2134-80 issued May 1, 1979, expires May 1, 1982, Class 3 Storage Tanks at Marble Hill only. Units #1 and #2. A. I. A., Hartford Steam Boiler.
- 1.2.1.6 Whalen-Chilstrom Company, Louisville, Kentucky; no Certificate of Authorization. Performing re-bar work on containment not under Section III.
- 1.3 The Owners Designee, Sargent & Lundy Company prepared and certified the Design Specification. The Design Specification was certified on December 16, 1977 with revisions on February 9, 1978 and August 25, 1978.
- 1.3.1 The Design Specification for the Nuclear Power Systems was to the 1974 Edition of ASME Boiler and Pressure Vessel Code Section III, Division 1 and Winter 1976 addenda. The containment vessel was designed to the 1974 edition of Section III, Division 1 and Winter 1974 addenda. The Concrete portion of the containment (and other concrete work) preceded the mandatory date of Section III, Division 2 and therefore was not designed to ASME Code requirements.
- 1.3.2 Stewart Mechanical Enterprises, Inc. a sub-contractor of Gust T. Newberg Construction Company, the General Contractor, could not on June 13, 1979 determine the Code Edition and addenda the pipe-material they were receiving from Public Service or the pipe material they were purchasing was required to be purchased too. On June 14, 1979 they were advised by Public Service Company of Indiana, Inc. by telephone in the teams presence that the Design Specification Code dates were the 1974 Code Edition of Section III, Div. 1 and Winter of 1975 addenda. Their Code work is being performed to the 1977 Edition of Section III, Division 1, no addenda according to Mr. Barry Cash, Welding Supervisor and Q. A. Inspector.
- 1.3.3 Cherne Contracting Corporation is a piping contractor for this job: The Sargent & Lundy Design Specification Y-2739-CA, 08-25-78 Cherne is required to work to states in paragraph 123, "All work, material, and equipment shall conform to the following Codes where applicable;

123.1, ASME Boiler and Pressure Vessel Code Section III, 1977, with addenda and Code cases in effect (see subarticle 113.1)". (See attachment #1).

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Public Service Company of Indiana purchases and supplies Cherne with all Code pipe material over 2½" NPS. The majority of the material supplied by Public Service Company of Indiana was purchased to Code editions prior to 1977, including material purchased to the 1971 Edition of Section I. That material was also supplied to Cherne by Public Service Company of Indiana for nuclear code fabrication and installation.

NCA-3251 1.3.4 It appeared apparent that neither the owner or the subcontractors had the necessary information for determining the specific Code Edition and addendas material was purchased to. Consequently, the proper documentation, receiving procedure, etc; could not be determined by either the subcontractors or the National Board Team.

1.4 Public Service Company of Indiana, Inc., the owner, purchases all material over 2½" diameter for their sub-contractors, Cherne Contracting Corporation, and Gust K. Newburg Construction Company for their subsidiary Stewart Mechanical Services, Inc.

NCA-5261 1.4.1 Public Service Company of Indiana Receiving Inspection consists of checking the part number on the part or material against the material manufacturers or suppliers transmittal. No documentation is supplied to the subcontractors. The subcontractors receive the material by means of a P. S. I. equipment/material issue form (see attachment #2).

Public Service Company of Indiana insists that should the sub-contractor or their A. N. I. find it necessary to review the CMTR's, or other material or parts data reports they may do so by visiting P.S.I. and reviewing their micro-fiche records.

NCA-3800 1.4.2 Public Service Company of Indiana is procuring material and components and supplying their sub-contractor's thereby acting as a material supplier. They have audited their supplier, primarily ITT Grinnell, and have been audited by Cherne for pipe fittings and flanges and fasteners and appear on Cherne's qualified vendor list for those items only but have not been audited by Stewart Mechanical Enterprises, Inc., according to Mr. Cash of Stewart Mechanical and Mr. Guy, Q. A. Supervisor for Gust K. Newberg Construction Company.

NCA-3800 1.4.3 Public Service Company of Indiana does not have an ASME Quality Systems Certificate, do not have a documented identification and verification program and are not a Certificate of Authorization Holder (footnote 8 NCA-1140(b)).

1.4.4 At the time of the National Board visit of June 12-14, 1979 neither the owner or any contractor or subcontractor on the Marble Hill site had or had applied for an ASME Certificate of Authorization to use the "N" symbol at the Marble Hill site.

NCA-1220 1.4.5 Some Certified Mill Test Reports for material procured by Public Service Company of Indiana for their subcontractor's which were
NCA-1140

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reviewed at Public Service Company of Indiana indicated material such as A-515-74-Gr. 65 produced under ASTM A 155-75 Gr. KC65, Cl. 1 as welded pipe with filler metal added to be ASTM rather than SA, the C.M.T.R. did not indicate the material to be for Section III Nuclear, the class, ASME Section III Code Edition and addenda, a Quality System Certificate number and/or as having been audited as required, Heat Treat Charts or radiography film, or applicable information. In addition, as previously noted some of the material supplied was Section I material for Section III work (example: see attachment #3). The CMTR's were generally stamped as approved by the manufacturers Q. A. (National Annealing Box Company) by ITTG-IPI the suppliers Q. A. (ITT-Grinnell Industrial Piping), and the purchasers, Q. A., (Public Service Company of Indiana).

1.4.6

Although it was requested that some Public Service Company of Indiana purchase orders be made available for review, none were, during the three days the National Board Team was at the Marble Hill site.

NCA-3252 1.4.7

Information was requested on several occasions during the visit whether the owner had designated impact testing per paragraph NCA-3252. No answer was forthcoming.

NCA-8122 1.4.8

Public Service Company of Indiana has an inspection agreement with Hartford Steam Boiler Inspection and Insurance Company. Paragraph NCA-8122 requires such an agreement with an Authorized Inspection Agency to provide inspection and audit services. According to Mr. Hodges, Q. A. Manager, no such services have been provided since the initial owners Certificate interview. The only available Hartford Authorized Nuclear Inspector on the site is Cherne Contracting Corporations A. N. I. who advised the National Board Team he had been instructed not to provide such services to Public Service Company of Indiana.

NCA-3510 1.5

Public Service Company of Indiana, Inc., advised the National Board team that they, as the owner, had over all responsibility for the design and construction of the Marble Hill Nuclear Generating plant and they did not propose to delegate that responsibility to others.

Paragraph NCA-3510 defines the "N" Certificate Holder as that organization assuming responsibility for code compliance with respect to material, design, fabrication, installation, examination, testing, inspection, certification and stamping for items requiring an N symbol stamp and requires the N Certificate holder to retain overall responsibility including certification and stamping.

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Paragraph NCA-3551(b) in addition, states that the N Certificate Holder is ultimately responsible for the design of the component and for the adequacy and completeness of the design documents.

Public Service Company of Indiana, Inc., has not been issued an N Certificate of Authorization for this site, nor has any other organization been issued that required Certificate of Authorization for this site.

1.5.1 It appears, therefore that the owner, Public Service Company of Indiana having assumed overall responsibility is apparently in violation of NCA-3510 and NCA-3551(b) as indicated above.

NCA-3530 1.5.2
NCA-1210
NCA-8000
NCA-8233.10
Table 8210-1
NCA-3500
PSI may also be in apparent violation of paragraph NCA-3530 since they intend that the construction of the NSSS be in compliance with the Code and NCA-3530 requires an N Certificate of Authorization to be obtained for the construction of any item intended to be in compliance with the requirements of this section and to be stamped with an N Code Symbol.

NCA-3461 1.5.3
In addition there may be an apparent violation of paragraph NCA-3461 which requires the N Certificate Holder to be responsible for surveying, qualifying and auditing suppliers of subcontracted services including NDE contractors. There are suppliers of subcontracted services on this site, however under the Code they apparently are not responsible to anyone since there is no N Certificate holder on site.

NCA-4134 1.5.5
It would also appear that in assuming the responsibilities of an N Certificate Holder without having obtained a valid Certificate of Authorization to use the N symbol, they may also be in apparent violation of paragraph NCA-4134.

NCA-3800 1.6
Public Service Company of Indiana, Inc., supplies material to their sub-contractors on this site.

They do not have a material identification and verification program as required for a material supplier and do not appear to meet any of the requirements of NCA-3800.

NCA-3867.5 1.6.1
Public Service Company of Indiana refusal to supply Code material documentation such as Certified Mill Test Reports to their sub-contractors for whom they are acting as a material supplier, apparently violates paragraph NCA-3867.5.

NCA-3867.6 1.6.2
Some of the documentation accepted by Public Service Company of Indiana for material to be used in safety related Code construction for this site indicates the material is not acceptable for nuclear Code construction and in addition is not documented as required by NCA-3867.6.

1.7 The owner Public Service Company of Indiana, Inc., acting as the

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N Certificate of Authorization holder appears to be in apparent violation of paragraphs NCA-1140, 1220, 3251, 3252, 3461, 3500, 3510, 3530, 3551(b), 3800, 3867.5, 3867.6, 4134, 4134.4, 5261, 8000, 8122 and Table 8210-1 of Section III, Division 1 of the ASME Boiler and Pressure Vessel Code.

2.0 Cherne Contracting Corporation

2.1 On the afternoon of June 12, 1979 the National Board team visited the Cherne Contracting Corporation site offices and met with Mr. James Mortell, Vice-President and Project Engineer, Craig Jergens, Q. C. Manager and William Braden, A.N.I. NB#7448-N, of Hartford Steam Boiler Inspection and Insurance Company, A. I. A. for Cherne.

On June 13, 1979 the Team met with Gregory A. Bosier, Manager of Quality Assurance for Cherne at their site office.

2.2 The documentation submitted to Cherne by their material supplier Public Service Company of Indiana with the material supplied, in some cases consists only of Public Service Company of Indiana equipment/material issue form on which the Public Service Company of Indiana equipment number and/or the vendor equipment number appears with Public Service Company of Indiana ticket number.

2.2.1 No evidence is available for that material, that the required Code receipt inspection was performed, no certified mill test reports are available to identify the material as acceptable for nuclear code work and that it is in compliance with the design and material specifications Cherne is required to work with.

2.2.2 In those cases where Cherne has been supplied with CMTR, those documents in some cases are not acceptable since the material manufacturer/material supplier Certificate of Authorization or Quality System Certificate identification and date is missing, the Code Edition is not included, the Code addenda and Code class is not included and NCA-3800 statement is not indicated.

2.3 As a result of this lack of documentation, Cherne is unable to use the material with confidence that it will meet the Code requirements and their Authorized Inspection Agency A. N. I. William Braden, NB#7448-N will not accept the material. Consequently, the material is on hold until it can be properly identified. A copy of Cherne nonconformity report listing 94 material items by Public Service Company of Indiana piece number which have not yet been identified by Public Service Company of Indiana, is enclosed as attachment #4. Also see Cherne's letter of May 14, 1979 to Public Service Company of Indiana, attachment #5, Cherne's information request of May 3, 1979 to Public Service Company of Indiana, attachment #6 and Cherne's information request of May 21, 1979 to Public Service Company of Indiana, attachment #7.

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3.0 Stewart Mechanical Enterprises, Inc.

3.1 Stewart Mechanical Enterprises, Inc., is a subsidiary of Gust K. Newberg Construction Company, the general contractor on this site.

3.2 On June 13, 1979, the National Board team met with Ed Guy, Q. A. Supervisor for Gust K. Newberg Construction Company and J. Chris Maron, Project Engineer, Barry Cash, Q. C. Inspector and Welding Supervisor and Terry Vititoe, Q. A. document control, both of Stewart Mechanical, in the Stewart site trailer offices.

3.3 The Team was advised that Stewart Mechanical Enterprises, Inc. was surveyed by an ASME Nuclear Survey Team on site on January 19, 1979.

3.4 Mr. Guy, Mr. Cash and Mr. Vititoe stated, as did Public Service Company of Indiana representatives previously, that all material over 2½" diameter was purchased by Public Service Company of Indiana and supplied to Newberg who in turn acted as a material supplier in supplying Stewart Mechanical Enterprises, Inc., and that no documentation for the material was received other than Public Service Company of Indiana equipment/material issued form and Newburg transmittal form #4 to which the Public Service Company of Indiana issue form was attached. (See attachment #8). Public Service Company of Indiana is not on Stewart's approved vendors list and they have not audited Public Service Company of Indiana as either a vendor or a material supplier.

3.5 On June 13, 1979 Stewart representatives stated that they also receive some fabricated pipe subassemblies from Public Service Company of Indiana but do not receive any documents other than confirmation from Public Service Company of Indiana that the piping sub-assembly is acceptable for installation.

Mr. Guy of Gust K. Newberg Enterprises, Inc., stated that Newberg in transmitting the material from Public Service Company of Indiana to Stewart Mechanical did not consider themselves a material supplier, did not have a Quality System identification and verification program and had not been audited by Stewart Mechanical Enterprises Inc.

3.6 Stewart Mechanical at their Louisville, Kentucky shop purchases small diameter pipe less than 2½" in. diameter for use on this site. Receiving inspection is performed at Louisville (see attachment #9) and sent to Stewart Mechanical at the Marble Hill site with the CMTR.

The CMTR does not indicate the material is for nuclear work, does not include Code Edition and addenda dates and does not include the material manufacturers Quality System number and expiration date or statement of audit to NCA-3800 as required by paragraph NCA-3867.6 (see attachment #10). There was no evidence that U. S. Steel Lorain, the material manufacturer had been audited by Stewart.

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3.7 On June 13, 1979, the A. N. I. Herbert Moran National Board number 6182-N-S, an employee of Stewarts A. I. A. , Lumbermans Mutual Casualty Insurance Company was not on the site. The A. N. I. previously assigned to Stewart on this site by Lumbermans were G. W. Bryant National Board number 4292 and George Deaton National Board Number 7905.

3.8 The National Board team returned to the Stewart Mechanical trailer site office on June 14, 1979 to meet with the A. N. I., Herbert Moran.

He stated he spends part of his time at Stewart Mechanical Louisville shop inspecting piping subassemblies fabricated there for the Marble Hill site and part of the time at the site.

He stated he had this day inspected his first welded joint (tack welds) for Stewart at the site, being on the central service water lines.

3.9 Mr. Moran produced a considerable number of NPP-1 Manufacturers Data Report forms on June 14, 1979 for the National Board Teams review.

These NPP-1 Data Reports cover pipe material and spool pieces procured by Public Service Company of Indiana for Stewart. The material is pipe with the long seam welded with filler metal added (SA 155 KC 65 Class 2). All of this material is termed "spool pieces" although much of it apparently had no fabrication performed other than the long seam. (See attachments #11).

3.9.1 When asked why the National Board Team had been informed the previous day that Public Service Company of Indiana supplied no documentation for any material procured for Stewart and that no documentation of any kind was available for review at Stewart, the A. N. I. stated the Newberg and Stewart representatives did not understand what documentation the team wanted to review.

3.9.2 The material apparently is documented on NPP-1 data forms because its design and procurement preceded the Code requirement to report such welded piping on MM-1 data report forms.

NCA-8415 3.10 No documentation was presented for review covering the piping sub-assemblies fabricated at Stewart Mechanical Enterprises, Inc., Louisville shop and shop inspected by A. N. I. Moran or others.

NCA-4134.4
NCA-4134.8 3.11 Stewart-Louisville apparently prepares the traveler for Stewart Marble Hill site and includes the SA-material. Stewarts-Marble Hill Q. A. Manual in paragraph 5.4 requires the welding supervisor to record the identification of the material on the traveler. The identification serial number on the Louisville receiving report with the identification of the item and that number is added to the traveler at the Marble Hill site.

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3.12 It appears that Stewart Mechanical Enterprises, Inc., are in apparent violation of paragraphs NCA-4134.4, NCA-4134.7, NCA-4134.8, NCA-3800, NCA-3867.6, and NCA-8415.

4.0 Chicago Bridge and Iron Company

4.1 The National Board team visited the Chicago Bridge & Iron Company site trailer office on June 14, 1979 and met with Fred Lusch, welding and Q. A. Superintendent and J. Trickle, Welding Supervisor of Chicago Bridge & Iron. The A. N. I. Bruce Montana National Board Number 8130 was not on the site at the time of this visit. It was noted that C. M. Duckee NB#7740 and Donald Donoho NB#3981 A. N. I. for Hartford Steam Boiler had also been on this site for Chicago Bridge & Iron.

4.2 Chicago Bridge and Iron had left the site in March, 1979 and had returned June 13, 1979.

4.3 Chicago Bridge and Iron is constructing the containment vessels metal liners (not Code stamped) and some penetrations (code stamped). In addition they are field assembling class 3 storage vessels with capacities to 112,000 gallons for 15 psi and low vacuum. They are working to the 1974 edition and winter 1975 addenda of Section III.

The vessel parts are formed and sub-assembled at Chicago Bridge and Iron Greenville, Pennsylvania shop.

They propose to field assemble 16 such class 3 vessels and have field assembled one (1) to date, which was NB number 4217. It has not yet been hydrostatic tested and signed off by the site A. N. I.

4.4 Chicago Bridge and Iron had an ASME Nuclear Survey on this site in January 1979.

4.5 According to Mr. Lusch, Public Service Company of Indiana does not procure material, parts or appurtenances for Chicago Bridge and Iron.

4.6 Chicago Bridge and Iron welding procedures available on this site were reviewed and the following apparent Code violations were noted;

QW-200.1 4.6.1 Non-essential variables are required to be listed and described on WPS per paragraph QW-200.1 and QW-201.1 of Section IX.
QW-201.1

QW-410.5 4.6.1.1 The WPS did not list in detail the method of initial or interpass cleaning per paragraph QW-410.5.

QW-410.6 4.6.1.2 The WPS did not describe the method of backgouging per paragraph QW-410.6

QW-410.13 4.6.1.3 The WPS did not list the use of non-metallic or non-fusing retainers per paragraph QW-410.13.

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- QW-402.10 4.6.1.4 The WPS did not indicate the root spacing per paragraph QW-402.10
- QW-201.1 4.6.2 WPS 7018/73030 Rev. 1 June 20, 1977 LBR had been revised by crossing out 'Stringer Bead' and inserting 'weave bead technique'. That revision was not noted and approved per paragraph QW-201.1. The material in use was SA 516 Gr. 70.

5.0 Whalen-Chilstrom, Louisville, Kentucky and Milwaukee, Wisconsin

Whalen-Chilstrom Company is a sub-contractor of Gust K. Newberg Construction Company. They are doing the re-bar work on the containment vessels. Since the design is to the 1974 edition of Section III they are not required to hold an ASME Certificate of Authorization for that work, do not hold such a Certificate, and were therefore not visited by the National Board Team.

6.0 Recommendations

6.1 Public Service Company of Indiana, Inc.

6.1.1 Since Public Service Company of Indiana, Inc., has stated that only they will assume overall responsibility for Code compliance with respect to material, design, fabrication, installation, examination, testing, inspection, certification and stamping, it is the National Board's opinion that the owner's ASME Certificate of Authorization should be withdrawn until such time as Public Service Company of Indiana, Inc., has obtained a valid Certificate of Authorization to use the ASME "N" symbol and have corrected the apparent Code violations indicated in paragraph 1.7 of this report.

6.1.2 It is the National Board's opinion that Public Service Company of Indiana, Inc., should cease acting as a material supplier of ASME Code material to their sub-contractors for ASME Code construction until such time as Public Service Company of Indiana has complied with all of the applicable requirements of NCA-3800 of Section III of the ASME Boiler and Pressure Vessel Code.

6.2 Stewart Mechanical Enterprises, Inc.

6.2.1 It is the National Board's opinion that Stewart Mechanical Enterprises, Inc., should correct the apparent Code violations indicated in paragraph 3.12 of this report without delay and should cease using material for ASME Section III Code fabrication until it can be identified as meeting the requirements of Sections II and III of the ASME Code.

6.3 Chicago Bridge and Iron Company.

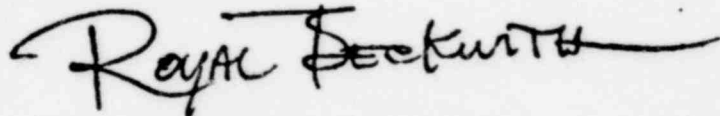
6.3.1 It is the opinion of the National Board that Chicago Bridge and Iron Company should cease using the welding procedure specifications they now have on the Marble Hill Nuclear plant site until such time as those specifications and their revisions meet the requirements of ASME Codes Sections III and IX.

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7.0 Other apparent Code violations may exist in addition to those indicated in paragraphs 1.0, 3.0, 4.0 and their sub-paragraphs of this report and it is recommended that Public Service Company of Indiana, Inc., Stewart Mechanical Enterprises, Inc., and Chicago Bridge and Iron Company, review in depth the applicable parts of Section III and IX and their respective Q. A. Manuals with their respective A. N. I. and their Authorized Inspection Agency's Inspection Specialist.

Very truly yours,



Royal Beckwith
Assistant Director of Inspections

RB/dld

cc: William Ward, Nuclear Construction Mgr., PSI
Arlene Spadafino, ASME
Chairman of SC/NC
Robert Johnson, Chief Inspector of Indiana
Hartford Steam Boiler Ins. & Insp. Co.
Kemper Insurance Co.
Uldis Potapovs, NRC
Gary Ratcliffe, Pres., Cherne Contracting Corp.
Marvin Mitchell, Pres., CBI
George Duthie, Pres. Stewart Mechanical Enterprises
Robert Luedeking, Pres., Gust K. Newberg Construction Co.

POOR ORIGINAL

Enclosures: Attachments

1382 071

FOR ORIGINAL

SARGENT & LUNDY
ENGINEERS
CHICAGO

ATTACHMENT #1

Y-2779
CA, 08-25-78

CHERNE

PAGE 1 OF 3

of the Specification. Furthermore, ignorance is not acceptable as basis for any claim whatsoever for additional or extra compensation.

120.2 Contractor shall at all times have a competent superintendent on the premises to represent him and to whom instructions may be given. Contractor shall maintain a representative on the premises until final acceptance of the WORK has been obtained from Purchaser.

120.3 Contractor shall properly protect and be responsible for the equipment and materials to be unloaded and/or erected hereunder, in accordance with manufacturer's instructions, from the time of arrival at the site, until the work is accepted in its entirety by Purchaser, except during such time as said equipment or materials are removed from the control of Contractor by specific instructions of Purchaser. Contractor shall have complete responsibility for the equipment or materials while being unloaded and handled for him by others.

120.4 It shall be Contractor's responsibility to furnish the services of all trades involved in the WORK.

120.5 Contractor will be held liable for all repairs and/or replacements of any and all associated facilities damaged as a result of said Contractor's activities in the area, subject to Purchaser's acceptance.

121. CONFORMANCE WITH 10 CFR PART 21
The Work indicated in this specification and/or on the drawings as Nuclear Safety-Related requires the application of the provisions of Title 10, Chapter 1, Code of Federal Regulations, Part 21, Reporting of Defects and Noncompliance (10 CFR Part 21). It is the responsibility of the Contractor to implement the provisions of 10 CFR Part 21 insofar as they are applicable to the Contractor's Work under this specification.

122. REVISION OF SPECIFICATION AND AWARD TO CONFORM TO PURCHASE ORDER
Within six weeks after award, and at option of Purchaser, Contractor will revise his proposal to conform to the actual award. The revised proposal will incorporate all changes up to and including the award. The specification will be similarly revised by the Consulting Engineers.

123. CODES AND STANDARDS
All work, material, and equipment shall conform to the following codes where applicable:

123.1 ASME Boiler and Pressure Vessel Code Section III - 1977, with addenda and code cases in effect (see subarticle 113.1).

123.2 ANSI Standard Code for Pressure Piping ANSI B31.1 - 1977, with all applicable addenda (see subarticle 113.1).

POOR ORIGINAL

- 109.10 The words "nuclear safety related" are used in this Specification to designate systems, subsystems or pieces of equipment that comprise systems that are required to accomplish the safe shutdown of the nuclear power plant or that are required to operate following a postulated accident.
- 109.11 Wherever Work is indicated as being by "Piping Contractor", P.C. or Y-2739 Contractor, it shall be construed as being work by Contractor as covered under this Specification Y-2739.
- 109.12 The term "rough set" shall be construed to mean "set within 1 inch of final position".
- 109.13 Wherever "Class A, B, C, D, or G piping" is used in this Specification, it shall be construed to mean the S&L pipe classes defined in paragraph 113.1 hereof.

SPECIFIED PRODUCTS AND SUBSTITUTIONS

110. Mention of materials, or components by name as products of certain manufacturers in this Specification is made to insure that the proper Quality and/or type is provided. Products of other manufacturers will be acceptable if Contractor furnishes proof to the Consulting Engineers that the proposed substitute products are equal to or better than the specified products in quality, performance, design and suitability for the intended use.

ORIGIN OF COMPONENTS

111. Contractor agrees that no components of any nature manufactured outside the U.S.A., Canal Zone, Puerto Rico or Virgin Islands shall be included in his scope of supply unless specifically agreed upon in writing by Purchaser. If any foreign fabricated components are included, Contractor shall, upon notice in writing, replace them entirely at his own expense, including installation, and shall be liable to Purchaser for any damage to Purchaser's plant and any losses due to any delay caused Purchaser by such replacement.

QUALITY ASSURANCE AND CONTROL

112. As set forth in Purchaser's Quality Assurance Specification "Piping System Installation", Rev. 0, 6-30-77, Y-2739.

ASME SECTION III DESIGN SPECIFICATION REQUIREMENTS

113.

113.1

- a. Classification (NCA-3253):
The piping furnished and/or fabricated under this Specification is classed as Class 1, Class 2 or Class 3 piping per Section III of ASME Boiler and Pressure Vessel Code, Non-Section III piping per the ANSI Standard Code for Pressure Piping - ANSI B31.1 or Non-Section III piping per acceptable industry standards.

- b. The Section III Class 1, 2 and 3 piping shall be designed and constructed in accordance with the rules of the respective subsection (NB, NC or ND) of Section III of the ASME Boiler and Pressure Vessel Code. The Non-Section III ANSI B31.1 piping shall be designed and constructed in accordance with the rules of the ANSI Standard Code for Pressure Piping - ANSI B31.1 or per acceptable industry standards.
- c. For Owner's purposes, each individual piping line (or system) classification is as designated in the Piping Line List (column 7) forming a part of this Specification, as follows:

<u>Code Classification</u>	<u>S&L Piping Line List Classification</u>
c1.1 Section III - Class 1 piping.....	A
c1.2 Section III - Class 2 piping.....	B
c1.3 Section III - Class 3 piping.....	C
c2. Non-Safety Related-Category II Piping:	

<u>Code Classification</u>	<u>S&L Piping Line List Classification</u>
c2.1 ANSI B31.1 (Non-Section III) piping.....	D
c2.2 Non-Section III per industrial standards.....	G

113.2 Document Distribution NCA-3256 (Section III Piping):

- a. Owner will file a copy of this Specification with the enforcement authority in accordance with Section III of the Code, Paragraph NCA-3256, before the system is placed in service.
- b. Any communication between the enforcement authority and the manufacturer or installer shall be sent to Owner for forwarding to the respective party, unless Section III of the Code states otherwise. In the latter case, copies of the correspondence shall be sent to Owner for prior acceptance before being forwarded.
- c. Owner will file a copy of this Specification with the Inspector at the manufacturing site and erection site before construction begins.
- d. Manufacturer shall provide the Inspection Agency with the necessary number of copies of his Quality Assurance Manual, in accordance with Section III of the Code.

MATERIAL RECORD

Type Equip. ASTM A155-75 GR. KC 65, CL. 1 NH

A 515-74B, GR. 65 PIPE

SIZE 32-3/4" O.D. x 1.334" H.V.

CODE ASTM YEAR 1975

MH
 P-139

Customer LIT GRINNELL INDUSTRIAL PIPING

P.O. No. KFR 6988-P SUPP. 2 ITEM 90954

✓ NABCO S.O. No. C-1854-4 Pcs. 1 THRU 20

DRWG No. NG 1202-2 REV. 0 ML-01-001-1

PART NO.	MANUFACTURER OF MATERIAL	HEAT NO.	SLAB OR TEST NO.	CHEMICALS										PHYSICAL			
				C.	MIN.	P.	B.	BIL.	CR.	MI.	MO.	TENSILE	YIELD	ELONG.	DC:DP		
854	USSC 62760	75C499	203191	.24	.84	.004	.024	.21						69,500	37,200	27.5	-
1-0"	P.M. CHECK	JESSOP	1/2 R 3178	.25	.88	.005	.023	.21						74,000	(TESTS)		OK
54	USSC 62760	65C588	201552	.25	.86	.005	.026	.20						73,800	37,600	28.0	-
2-1-0"	P.M. CHECK	JESSOP	1/2 R 3178	.25	.88	.005	.024	.30						74,000	(TESTS)		OK
54	USSC 62760	75C499	203193	.24	.84	.004	.024	.21						69,100	36,600	26.5	-
1-0"	P.M. CHECK	JESSOP	1/2 R 3178	.25	.88	.005	.023	.21						70,400	(TESTS)		OK
54	USSC 62760	75C499	203192	.24	.84	.004	.024	.21						66,100	37,700	29.0	-
1-0"	P.M. CHECK	JESSOP	1/2 R 3178	.25	.88	.005	.023	.21						74,000	(TESTS)		OK

1176-71
 QUALITY CONTROL
 MAKE APPROVED BY
 T. WILSON
 DATE MAY 11 1975
 SHEET 1 OF 9

DATA CERTIFIED CORRECT AS CONTAINED
 IN THE RECORDS OF THE COMPANY

POOR ORIGINAL

ITEM 90951
 WABCO S.O. C-1854-4

NATIONAL ANNEALING BOX CO.
 WASHINGTON, PENNA.

Attachment #3 - pg. 2 of 9 (230)

POOR ORIGINAL

PART NO.	MANUFACTURER OF MATERIAL	HEAT NO.	SLAB OR TEST NO.	CHEMICAL										PHYSICAL			
				C.	MM.	P.	S.	SIL.	CR.	NI	MO.	TENSILE	YIELD	E-ONG	TEMP		
254	USSC 62760	75C499	203190	.21	.21	.004	.024	.21						72,800	38,900	24.0	-
5-	P.M. CHECK	JESSOP	1/4 3178	.25	.81	.005	.023	.21						74,000	(TESTS)		OK
21-0"																	
254	USSC 62760	69C474	198347	.21	.79	.006	.022	.20						69,200	42,000	24.0	-
6-	P.M. CHECK	JESSOP	1/4 3178	.21	.79	.005	.022	.20						70,400	(TESTS)		OK
21-0"																	
254	USSC 62760	65C582	201551	.25	.86	.005	.026	.20						71,800	39,900	28.0	-
7-	P.M. CHECK	JESSOP	1/4 3178	.25	.82	.004	.024	.30						68,300	(TESTS)		OK
21-0"																	
1254	USSC 62760	75C499	203189	.21	.81	.004	.024	.21						72,800	38,600	24.0	-
2-	P.M. CHECK	JESSOP	1/4 3178	.25	.88	.005	.023	.21						68,300	(TESTS)		OK
21-0"																	
354	USSC 62760	69C174	198340	.21	.79	.006	.022	.20						65,600	37,500	27.0	-
1-	P.M. CHECK	JESSOP	1/4 3178	.21	.79	.005	.022	.20						68,300	(TESTS)		OK
21-0"																	
154	USSC 62760	69C474	198341	.24	.79	.006	.022	.20						66,700	38,600	26.0	-
0-	P.M. CHECK	JESSOP	1/4 3178	.24	.79	.005	.022	.20						68,300	(TESTS)		OK
21-0"																	
54	USSC 62760	75C499	203188	.24	.81	.004	.024	.21						75,000	43,700	23.0	-
1-	P.M. CHECK	JESSOP	1/4 3178	.25	.82	.005	.023	.21						67,300	(TESTS)		OK
21-0"																	

FFG-1PI
 QUALITY CONTROL
 APPROVED
 C. WILSON
 DATE MAY 1 1978
 SHEET 2 OF 9

3002 077

POOR ORIGINAL

ART. NO.	MANUFACTURER OF MATERIAL	HEAT NO.	SLAB OR TEST NO.	CHEMICAL										PHYSICAL			
				C.	MN.	P.	S.	SIL.	CR.	NL	MO.	TENSILE	YIELD	ELONG. @ BEND*			
854	USSC 62760	75C499	203187	.24	.84	.004	.024	.21						73,600	140,300	21.0	-
12-	P.M. CHECK	JESSOP	1/8 3178	.15	.88	.005	.023	.21						74,000	(TESTS)		OK
61-8"																	
254	USSC 62760	62C216	198611	.27	.89	.005	.030	.23						80,200	117,300	20.0	-
13-	P.M. CHECK	JESSOP	1/8 3178	.26	.88	.005	.030	.21						70,400	(TESTS)		OK
51-5"																	
354	USSC 62760	62C216	198616	.27	.89	.005	.030	.23						79,400	113,100	21.0	-
4-	P.M. CHECK	JESSOP	1/8 3178	.26	.88	.005	.030	.21						68,300	(TESTS)		OK
51-2"																	
254	USSC 62760	62C216	198617	.27	.89	.005	.030	.23						77,200	112,000	22.5	-
5-	P.M. CHECK	JESSOP	1/8 3178	.26	.88	.005	.030	.21						67,300	(TESTS)		OK
51-5"																	
54	USSC 62760	75C499	203673	.24	.84	.004	.024	.21						74,500	111,700	25.0	-
6-	P.M. CHECK	JESSOP	1/8 3178	.25	.88	.005	.023	.21						70,400	(TESTS)		OK
1-1"																	
54	USSC 62760	75C499	203673	.24	.84	.004	.024	.21						74,500	114,700	25.0	-
7-	P.M. CHECK	JESSOP	1/8 3178	.25	.88	.005	.023	.21						70,400	(TESTS)		OK
1-2"																	
54	USSC 62760	75C499	203195	.24	.84	.004	.024	.21						72,900	110,300	23.0	-
2-	P.M. CHECK	JESSOP	1/8 3178	.25	.88	.005	.023	.21						70,400	(TESTS)		OK
51-1"																	

MHA
 P 139

ITG - IPI
 QUALITY CONTROL
 APPROVED
 T. C. WILSON
 DATE MAY 11 1978
 SHEET 3 OF 9

58. CONTRACT NO.

01000772

ATTACHMENT #3 page 5 of 9

107501AD

Member, Pennsylvania Association of Iron & Steel (250)

P.O. DATE: 62760 10/17/77
 PURCHASE ORDER NO. 62760 10/17/77
 SHIPPERS NO. 57280 12/31/77
 MAIL ORDER NO. LF33405
 INVOICE NO. 163-19720
 VEHICLE QUANTITY BLE 15335
 160

HOMESTEAD WORKS
HOMESTEAD, PA. 15120

NATIONAL ANNEALING BOX COMPANY
P O BOX 321
WASHINGTON PA 15301

NATIONAL ANNEALING BOX COMPANY
WASHINGTON PA

SHIP TO

BEING DULY SWORN ACCORDING TO LAW DEPOSES AND SAYS THAT THE CHEMICAL ANALYSE AND/OR TEST RESULTS SHOWN IN THIS REPORT ARE CORRECT AS CONTAINED IN THE RECORD OF THE COMPANY.

SIGNATURE M. H. HAKSON, CH. II

DATE 12/31/77

POOR ORIGINAL

ASPH A-515-748 GRADE 85 PRESSURE VESSEL QUALITY, DESCALE DRY NO 0 IL

MH
P-139

STATE OF PENNSYLVANIA
COUNTY OF ALLEGHENY
SUBSCRIBED AND SWORN TO BEFORE ME THIS DAY OF Dec 1977

PLATES
MILL SWORN T/R - ANALYSIS

[Signature]

NO.	TYPE	C	MN	P	S	SI	CU	ND	AL	N	V	B	TI	CB	IC	MATERIAL DESCRIPTION		QUAN- TITY	WEIGHT	HEAT NO.	TEST OR PIECE IDENTITY	WELD PT. KSI	TENSILE STR. KSI	ELONGATION %		RED. OF AREA	
																THICKNESS OR SECTION	WIDTH, DIA. OR FT. WT							LENGTH	IN 8"		IN 2"
1	25/64	98	1/2	586	18.1	1/2	1	22760	75C499	203108	TC	43.7	75.0	23.0	11			1	22760	75C499	203191	TC	37.2	69.5	27.5		
1	19/64	91	515	1 1/2	18.5	1/2	1	17252	75C215	198645	TC	30.0	72.3	20.0													

ITG - IPI
QUALITY CONTROL
APPROVED
T. C. WILSON
MAY 1 1978

APPROVED
R. O. A.
BY *[Signature]*

BY *[Signature]*
DEC. 1977

PLATE # 0050 EXT.

NO.	TYPE	C	MN	P	S	SI	CU	ND	AL	N	V	B	TI	CB	IC
5499	HEAT	24	84	001	028	21									
2216	HEAT	27	59	006	036	23									

SHEET 5 OF 7

AVER OR SIZE 08
AVER OR SIZE 08 FIN GRN PRA



1382 080

P. O. DATE: 62753 10/17/77 1854-4
 PURCHASE ORDER NO.
 SHIP TO NO. 40100 1/25/78 MILL ORDER NO. LF13085 INVOICE NO. 163-12607
 VEHICLE IDENTIFY NO. 99760 160

HOMESTEAD IRKS
 HOMESTEAD, PA. 15120

NATIONAL ANNEALING BOX COMPANY
 P O BOX 521
 WASHINGTON PA 15301

NATIONAL ANNEALING BOX COMPANY
 WASHINGTON PA

S
H
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P
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BEING DULY SWORN AND AFFIRMED
 TO LAY DEPOSE AND SAY
 THAT THE CHEMICAL ANALYSIS
 AND/OR TEST RESULTS SHOWN
 IN THIS REPORT ARE CORRECT
 AS CONTAINED IN THE RECORDS
 OF THE COMPANY.

SIGNATURE *[Signature]* M.W. MAXSON, CH. M.

DATE 01/06/78

ASTM A-515-74 GRADE B PRESSURE VESSEL QUALITY, DESCALE DRY NO 0
 IL

STATE OF PENNSYLVANIA
 COUNTY OF ALLEGHENY
 SUBSCRIBED AND SWORN TO BEFORE
 THIS 19 DAY OF JAN 1978

PLATES
 MILL SHOW 'R - ANALYSIS

MH
 P. 139

[Signature]

POOR ORIGINAL

MATERIAL DESCRIPTION				QUAN- TITY	WEIGHT	HEAT NO.	TEST OR PIECE IDENTITY	YIELD ST. KSI	TENSILE STR. KSI	ELONGATION		RED. OF AREA
THICKNESS OR SECTION	WIDTH DIA. OR FT. W.C.	LENGTH	IN 8"							IN 2"		
1 25/64	98 1/2	586	1	22760	65C583	201552	BC	37.6	73.8	28.0		
1 25/64	98 1/2	586	1	22760	69C070	19A300	BC	37.5	65.6	27.0	P. 4	
1 25/64	98 1/2	586	1	22760	69C070	19A301	TC	38.6	66.7	26.0		
1 25/64	98 1/2	586	1	22760	75C499	203189	TC	38.6	72.8	21.0	P. 7	
1 25/64	98 1/2	435	1	16890	68C216	19A607	TC	42.0	77.2	22.5	P. 15	
1 25/64	98 1/2	422 1/2	1	16412	75C499	203673	TC	40.2	70.5	23.0	P. 16-17	

SEUL P. 0050 EXT.

ENQY	TYPE	I	MN	P	S	SI	FU
568	HEAT	25	86	005	028	20	
76	HEAT	28	79	006	022	20	
495	HEAT	20	84	004	024	21	
216	HEAT	27	89	005	030	23	

ITG - IPI
 QUALITY CONTROL
 APPROVED
 T. C. WILSON
 DATE MAY 11 1978
 SHEET 6 OF 9

APPROVED
 NABC. Q.A.
[Signature]

GRAIN SIZE #3
 GRAIN SIZE #4
 GRAIN SIZE #4
 GRAIN SIZE #3



1382 081

CONTRACT NO.

HOMESTEAD WORKS
HOMESTLAD, PA. 19120

NATIONAL ANNEALING BOX COMPANY
P O BOX 521
WASHINGTON PA 19301

P. O. DATE	PURCHASE ORDER NO.	
SHIPMENTS NO.	MILL ORDER NO.	INVOICE NO.
47142	1/05/78	LFL3485
163-12606	160	

NATIONAL ANNEALING BOX COMPANY
WASHINGTON PA

S
H
I
P
T
O

Member, Pennsylvania State Association of Manufacturers
 BEING DEPOSED ACCORDING TO LAW, DEPOSES AND SAYS THAT THE CHEMICAL ANALYSE AND/OR TEST RESULTS SHOWN IN THIS REPORT ARE CORRECT AS CONTAINED IN THE RECORDS OF THE COMPANY.
 SIGNATURE *H. W. MAXSON, CH.*

ASTM A-515-74B GRADE 65 PRESSURE VESSEL QUALITY, DESCALE DRY NO 0
 IL
 PLATES
 MILL SWORN T/R - ANALYSIS

MH
 P-139

DATE 01/06/78
 STATE OF PENNSYLVANIA
 COUNTY OF ALLEGHENY
 SUBSCRIBED AND SWORN TO BEFORE THIS DAY OF *Jan* 1978
[Signature]

POOR ORIGINAL

MATERIAL DESCRIPTION			QUANTITY	WEIGHT	HEAT NO.	TEST OR PIECE IDENTITY	YIELD ST. KSI	TENSILE STR. KSI	ELONGATION %		RED. OF AREA
THICKNESS OR SECTION	WIDTH-DIA. OR FT. V.F.	LENGTH							IN 8"	IN 2"	
1 25/64	98 1/2	586	1	22760	65C588	201551	39.9	71.8	28.0	1.7	1.7
1 25/64	98 1/2	586	1	22760	69C47A	19A347	42.0	69.2	28.0	1.6	1.6
1 25/64	98 1/2	586	1	22760	75C499	203190	38.9	72.8	28.0	1.5	1.5
1 25/64	98 1/2	586	1	22760	75C499	203192	41.7	66.0	29.0	1.4	1.4
1 25/64	98 1/2	586	1	22760	75C499	203193	36.6	69.0	28.5	1.3	1.3
1 25/64	98 1/2	496 1/2	1	15791	75C499	203195	40.3	72.9	23.0	1.1	1.1

FIG - IP
 CONTROL
 C. WILSON
 DATE JAN 11 1978
 SHEET 7 OF 9

APPROVED
 MANCO O.A.
 BY *[Signature]*

NOT FOR
 [Stamp]

T.M.O.	TYPE	C	MN	P	S	SI	CU	QUANTITY	CR	REVISION	SN	AL	V	B	TL	CB	SO
C588	HEAT	25	86	005	026	20											
C47A	HEAT	28	79	006	022	20											
C499	HEAT	28	84	004	024	21											

GR. IN SIZE # 3
 GR. IN SIZE # 4
 GR. IN SIZE # 4



382 082

01.009.0772

P. O. DATE: 62760 10/17/77
 PURCHASE ORDER NO. 62760 10/17/77
 SHIPPERS NO. 55482 11/23/77
 MILL ORDER NO. LF13485
 INVOICE NO. 163-12482
 VERIFICATION CR 522570 160

HOMESTEAD WORKS
 HOMESTEAD, PA, 15120

NATIONAL ANNEALING BOX COMPANY
 P O BOX 521
 WASHINGTON PA 15301

NATIONAL ANNEALING BOX COMPANY
 WASHINGTON PA

BEING DULY SWORN ACCORD
 TO LAW, DEPOSES AND SAYS
 THAT THE CHEMICAL ANALY
 AND/OR TEST RESULTS SHC
 IN THIS REPORT ARE CORR
 AS CONTAINED IN THE REC
 OF THE COMPANY.

SIGNATURE M. W. MAYSER, JR.

DATE 11/27/77

E. ASTM A-515-70B GRADE 65 PRESSUR VESSEL QUALITY, DESCALE DRY NO D
 P. IL

STATE OF PENNSYLVANIA
 COUNTY OF ALLEGHENY
 SUBSCRIBED AND SWORN TO BEFORE
 THIS 27 DAY OF Dec 1977

MH
 P.139

PLATES
 MILL S-ORN T/R • ANALYSIS

Eugene P. Bortner

EM NO.	MATERIAL DESCRIPTION			QUAN-TITY	WEIGHT	HEAT NO.	TEST OR PIECE IDENTITY	YIELD STRENGTH KSI	TENSILE STRENGTH KSI	ELONGATION IN INCHES		REDUCED AREA PERCENT
	THICKNESS OR SECTION	WIDTH DIA. OR FT. WT.	LENGTH							IN	IN	
2	1 25/64	96 1/2	849 1/2	1	17461	75C499	203107 TC	40.3	73.6	24.0	1854	
8	1 19/64	91	586	1		69C47A	198300 TC	37.8	67.8	31.0	1855.4	
0	1 19/64	91	586	1	39226	65C47A	198303 TC	39.1	67.2	27.0		

POOR ORIGINAL

APPROVED
 BY *[Signature]* 12/1/77

NOT FOR
 COS. CONT.

HEAT NO.	TYPE	C	MN	P	S	SI	CU	NI	CR	MO	SN	TI	CD	CO
75C499	HEAT	28	84	004	024	21								
69C47A	HEAT	28	79	006	022	20								

QUALITY CONTROL
 APPROVED
 T. C. WILSON
 DATE MAY 1 1978
 OF 9

GRAIN SIZE #2
 GRAIN SIZE #4

1382 083

JOB CONTRACT NO. 01.001.0172

P. O. DATE: 10/17/77
 PURCHASE ORDER NO.: 62760
 SHIPPERS NO.: 55000
 MILL ORDER NO.: LE11905
 INVOICE NO.: 163-12482
 URR 000730

HOMESTEAD WORKS
 HOMESTEAD, PA. 15120

NATIONAL ANNEALING BOX COMPANY
 P O BOX 521
 WASHINGTON PA 15301

NATIONAL ANNEALING BOX COMPANY
 WASHINGTON PA

BEING DULY SWORN ACCORD TO LAW, OPPOSES AND SAYS THAT THE CHEMICAL ANALYSES AND/OR TEST RESULTS SHOWN IN THIS REPORT ARE CORRECT AS CONTAINED IN THE RECORD OF THE COMPANY.

SIGNATURE: M. W. HANSON, CH.

DATE: 11/27/77

ASTM A-515-70 1/2 GRADE 65 PRESSURE VESSEL QUALITY, DESCALE DRY NO 0 IL

PLATES
 MILL S-03N TIR - ANALYSIS:

MH
 P. 139

STATE OF PENNSYLVANIA
 COUNTY OF ALLEGHENY
 SUBSCRIBED AND KNOWN TO BEFORE THIS 15th DAY OF Dec 1977
 [Signature]

POOR ORIGINAL

M D.	MATERIAL DESCRIPTION			QUAN-TITY	WEIGHT	HEAT NO.	TEST OR PIECE IDENTITY	YIELD P. KSI	TENSILE STR. KSI	ELONGATION IN IN.	RED. OF AREA
	THICKNESS OR SECTION	WIDTH DIA OR FT. WT.	LENGTH								
	1 25/64	90 1/2	847	1	17364	68C216	198643 13	TC 47.3	80.2	20.0	1854
	1 25/64	90 1/2	848	1	17208	68C214	198646 14	TC 43.0	79.0	21.0	
	1 17/64	91	893 1/2	1	16518	75C499	203674	TC 40.2	75.7	20.0	1855

APPROVED
 HALCO
 BY [Signature] 12/1/77

TESTED
 [Signature]

ITG - IPI
 QUALITY CONTROL
 APPROVED
 C WILSON
 DATE 12/1/77
 SHEET 9 OF 9

ANALYSIS: 0050 EXT.

HEAT NO.	TYPE	C	MN	P	S	SI	CU	NI	CR	NO	AS	AL	V	D	TI	CO	CO
68C216	HEAT	27	89	005	030	23											
75C499	HEAT	28	84	004	024	21											

GRAIN SIZE #3
 GRAIN SIZE #2

1382 084

CHERNE CONTRACTING CORPORATION
Nonconformity Report

ATTACHMENT #4

6.94

NOU1425

INFC PG: 1 of 5

REQUIREMENT DEVIATED	ACTUAL CONDITION
ASME section III NCA-3510. As used in Division I, the term N Certificate Holder is defined as the organization assuming responsibility for Code Compliance with respect to material, design, fabrication, installation, examination, testing inspection certification cont.	Attached is a list of materials purchased by the owner and receipt inspected by the owner. Since the owner is not an N-certificate holder receipt inspection of the listed items was not performed in accordance with ASME section III NCA-3510.
<input checked="" type="checkbox"/> HOLD Tag Placed	<u>Quality Control</u> <u>6/11/79</u> Date

CORRECTIVE ACTION

INFC Signature

Date

OC Comments:

Signature

Date

RESOLUTION

- Accept as is Repair
- Rework Reject

Remarks _____

Repair Procedure Number _____

WHITE: Field
YELLOW: Owner/Agent-Complete
PINK: Owner/Agent-Information
BLUE: QA Home Office-Information
CCC946

CONCURRENCE

Engineering	Date	Quality Control	Date
Weld Engr.	Date	NDE Level III	Date
Auth. Insp.	Date	Owner	Date

Repair Check No. _____

Repair/Rework Complete _____

Quality Control _____ Date

Authorized Inspector _____ Date

POOR ORIGINAL

1382 085

REQUIREMENT DEVIATED	ACTUAL CONDITION
AND stamping for items	1CS02AA-10-77
requiring AN N Symbol	1CS02AA-10-79
Stamp AN N Cert. Etc.	1CS02AA-10-81
Holder may subcontract	1CS02AB-10-94
(NCA-3125) for materials	1CS02AB-10-96
design, fabrication,	1CS02AB-10-98
installation examination	1CS02AB-10-93
testing and inspection.	1CS05AA-3-120
The -N- Certificate,	1CS01AA-16-128
Holder shall retain	1CS012AA-3-135
overall responsibility	1CS05AB-3-165
including certification	2CS02AA-10-77
and stamping.	2CS02AB-10-93
	2AF02DC-4-49
	2AF02CD-4-64
	2AF02ED-4-65
	2AF02CA-4-76
	2AF02CF-4-100
	2AF02DE-4-104
	2AF02CF-4-111
	2AF02CF-4-115
	2AF02-4-4-117
	2AF02CF-4-118
	2AF02CF-4-119
	2AF02DF-4-123
	2AF02CG-4-130
	2AF02CG-4-139
	2AF02DG-4-141
	2AF02DG-4-148
	2AF02DH-4-152
	18AF02DB-4-27
	18AF02CD-4-56

[Handwritten signature]

POOR ORIGINAL

WHITE Field
YELLOW Owner/Agent-Complete
PINK Owner/Agent-Information
BLUE QA Home Office-Information
cccc

1382 086

Nonconformity Report

ATTACHMENT # 54
 PG. 3 OF 5
 No. 01425
 01422

REQUIREMENT DEVIATED	ACTUAL CONDITION
	1AFO2CA-4-71
	1AFO2DA-4-80
	1AFO2DE-4-104
	1AFO2CF-4-114
	1AFO2DF-4-123
	1AFO2CG-4-130
	1AFO2DH-4-152
	2AFO2CB-4-15
	2AFO2CB-4-17
	2AFO2CB-4-20
	2AFO2CB-4-21
	2AFO2CB-4-22
	2AFO2CB-4-23
	2AFO2DB-4-26
	2AFO2CC-4-38
	2AFO2CC-4-40
	2AFO2CC-4-43
	2AFO2CC-4-44
	2AFO2CC-4-45
	2AFO2CC-4-46
	1CC01B-6-9
	1CC04AB-12-178
	1CC6DA-16-179
	1CC04AA-12-180
	2CC01B-16-7
	2CC02CA-12-8
	2CC04CB-12-51
	2CC13AB-4-85
	2CC13AA-4-86
	2CC13AB-4-95
	2CC13AB-4-96
	2CC60A-16-163

Handwritten scribbles and lines on the left side of the table.

WHITE Field
 YELLOW: Owner/Agent-Complete
 PINK: Owner/Agent-Information
 BLUE: QA Home Office-Information
 GREEN

1382 087

POOR ORIGINAL

REQUIREMENT DEVIATED	ACTUAL CONDITION
	2CC04AA-12-164
	2CC04AA-12-165
	05X02D-30-16
	15XB1AB-3-56
	15X0711B-20-62
	16X25AB-6-141
	15X06AB-16-221
	25X02B-30-17
	25XB1AB-3-49
	25X07HA-20-54
	25X07HA-20-56
	1M501AD-30 $\frac{1}{2}$ -256
	15I18DB-4-201
	15I18DA-4-203
	MH1M501AB-32 $\frac{3}{4}$ -248
	MH1M501AA-30 $\frac{1}{2}$ -244
	1MH501AC-32 $\frac{3}{4}$ -252
	MH1RY02B-3-75
	MH1RY06A-3-76
	MH1RH01AB-12-71
	ML2RH01AA-12-63
	MH1RH01AA-12-62
	MH1RC36A-3-49
	MH0CC27AD-3-52
	ML2CC04AB-12-162
	ML2AF02CG-4-138
	ML2AF02CD-4-61
	MH1CS18AB-3-140
	MH1SX25AA-6-138
	MH1SXA9A-6-224

[Handwritten scribbles and a large diagonal line across the table area]

WHITE Field
 YELLOW Owner/Agent-Complete
 PINK Owner/Agent-Information
 BLUE QA Home Office-Information
 EEE90

POOR ORIGINAL

1382 088

ATTACHMENT # 5

CHERNE

SINCE 1916

CHERNE CONTRACTING CORPORATION

MARBLE HILL NUCLEAR SITE
POST OFFICE BOX 300
NEW WASHINGTON, INDIANA 47102

TELEPHONE 293-440
AREA CODE 812
TWX 810-280-2384

May 14, 1979

POOR ORIGINAL

Public Service Company of Indiana, Inc.
Box 190
New Washington, Indiana 47162

ATTENTION: Tom McLarty
Q.A. Construction Supervisor

Re: Public Service Company of Indiana, Inc.
Marble Hill Nuclear Generating Station
Units 1 & 2, Contract Y-2739A & B, &-2962
Cherne File #7840-70B-1035

Dear Tom:

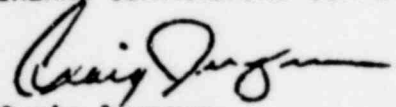
In review of owner furnished material CMTR's for ASME Code compliance we have noted the following discrepancies in general:

1. Material manufacturer/supplier N-certificate number and expiration date missing.
2. Applicable code of manufacturing not identified.
3. no code class or addenda.
4. Statement relative to NCA 3800 for material manufactured not shown when applicable.

Since Cherne is not aware of all facts concerned, we are requesting PSI to review the situation to determine acceptability of the material. In the interim we are placing a hold on the effected material for installation until such time as we receive further notification from PSI.

Sincerely,

CHERNE CONTRACTING CORPORATION



Craig Jergens
Quality Control Manager

1382 090

CJ:kk

CC: J. Mortell
T. Francis

G. Shibayama
G. Rosier

R. Horine ✓
B. Braden

POOR ORIGINAL

ATTACHMENT # 6

Field Originated
 Home Office Origin
 2739 2773A

REQUEST

RIT NUMBER 37

0521795009

Design Drawing/Specification

Other Reference

Description What ASME CODE EDITION AND CODE ADDENDA shall CHERNE BE REQUIRED TO USE WHEN DOING RECEIVING INSPECTION OF OWNER FURNISHED MATERIALS? IF MORE THAN ONE CODE ADDENDA APPLIES TO THE DIFFERENT SYSTEMS TO BE INSTALLED PLEASE ADVISE WHAT CODE ADDENDA IS APPLICABLE FOR THOSE AFFECTED SYSTEMS. WHAT JOB SITE SPECIFICATION WILL BE APPLICABLE WHEN CHERNE IS PERFORMING RECEIPT INSPECTION OF OWNER FURNISHED MATERIALS?

Donald E. Haine
Original

5-3-79

[Signature] 5/3/79

Resolution Receiving inspection shall be done in accordance with ASME Section III, latest edition, with addenda and code cases in effect, as of the order date of the materials to be inspected. Specifications Y-2741 & Y-2962 are the applicable specifications for the furnishing and purchasing of materials for piping systems.

Field Change Request Required

YES NO

M. C. [Signature]
PSI Construction Project Engineer
(Mechanics)

5/21/79

B. K. [Signature]

5/10/79

CC: G. Shidays

1382 091

ATTACHMENT 7

REQUEST TO PSI

RI NUMBER 053

Design Drawing/Specification

Other Reference

Description WHAT ASME CODE ADDENDA WOULD BE IN EFFECT FOR THE PURCHASE OF ALL COMPONENTS SUPPORTS PURCHASED FROM I.T.T. GRINELL? WHAT JOB SPECIFICATION WOULD BE APPLICABLE FOR THOSE ITEMS?

CHEMNE IS IN NEED OF THIS INFORMATION TO DETERMINE RECEIPT INSPECTION REQUIREMENTS.

PLEASE RESPOND AS SOON AS POSSIBLE.

John Smith 5/21/79
Originator

5/21/79
JES

John Smith 5/21/79
SUPERVISOR

Resolution

POOR ORIGINAL

Field Change Request Required

YES NO

PSI Construction Project Engineer
(Mechanics)

PSI Site Design Supv.

CC: G. Shilwaj

1382 092



MARBLE HILL GENERATING STATION
UNITS I AND II

To: Stewart Mechanical Letter No: N/A Date: 05-02-79
757 Grade Lane
Louisville, KY 40213 Reference: S & L Spec. Y-2727
 Attn: Dave Hignite

WE ARE SENDING YOU: Attached Under separate cover
 THE FOLLOWING ITEMS: Specification Preliminary report Final report
 Drawing(s) Photo(s) Copy of document(s)
 Procedure - _____
 Other _____

Copies	Description	Reference
1	EEI Equipment/Material Issue Ticket Nos. 1117, 1126, 1127, 1129, 1130, 1137, 1238.	

THESE ARE TRANSMITTED AS CHECKED BELOW:

<input type="checkbox"/> For your information - file	<input type="checkbox"/> Returned to you
<input type="checkbox"/> For review & comment	<input type="checkbox"/> Approved
<input checked="" type="checkbox"/> For your use	<input type="checkbox"/> Approved as noted
<input type="checkbox"/> For your approval	<input type="checkbox"/> Disapproved
<input type="checkbox"/> As you requested	<input type="checkbox"/> Acknowledge, date & return to sender

1382 094

Remarks: _____

Superseded Document Destroyed Stamped Void

Copy to:	Acknowledgement: N/A	Sender: <i>Suzanne Warren</i> Suzanne Warren
	Date:	

Kindly notify us at once if enclosures or data is not correct.

9 AM 5/2/79



RECEIVING INSPECTION REPORT
MATERIALS

JOB ORDER NO. 1002 ITEM SERIAL NO. — DATE 6-4-79
PART NO. — DRAWING NO. 3-1077 REV. —
QUANTITY 5 pcs. 20'-5" LONG
P. O. NO. 1002-129

I. Size Ordered

Length 100'
Width —
Thickness .210"
Diameter 2 3/8"

Size Received

Length 102'-2" Total 5 pcs.
Width — 20'-5"
Thickness .210" LONG
Diameter 2 3/8"

Visual Condition

Accept

Reject

II. Documentation Requirements

1. Certified Material Test Report

Yes

No

a) Heat Number or Identification
on Test Report L45849

b) Heat Number on Piece(s) L45849

c) Material Spec. SA-106 Gr. B

2. Certificate of Compliance

Yes

No

a) Material Spec. —

Receiving Inspector

Joseph A. Varone

NOTE: Forward to Quality Assurance Manager for review of documentation.

Do not release material.

1382 095

POOR ORIGINAL

ATTACHMENT #9
PAGE 2 of 2

RECEIVING INSPECTION REPORT
MATERIALS

III. Marking Instructions

Items will be identified as accepted by: yellow PAINT JNV

IV. Documentation Review

a) Documentation Review satisfactory. Release to the Stores Area.


6/5/79
Quality Assurance Manager

b) Unadequate/incorrect documentation.

Hold because _____

Quality Assurance Manager

POOR ORIGINAL

1382 096

United States Steel Corporation
 METALLURGICAL TEST REPORT
 WE HEREBY CERTIFY THAT THE CHEMICAL ANALYSES AND/OR TEST RESULTS SHOWN IN THIS REPORT ARE CORRECT AS CONTAINED IN THE RECORDS OF THE COMPANY.

INVOICE NO. 333-03293
 MILL ORDER NO. AE25735
 PURCHASE ORDER NO. 94261
 SHIPPERS NO. 355-00158
 P. O. DATE
 VENDOR IDENTITY
 TUBULAR STEEL
 DATE 9-14-78
 SIGNATURE E. J. Burt Foster / H

POOR ORIGINAL

ITEM NO.	SIZE	WALL	MATERIAL DESCRIPTION	MATERIAL	HEAT/LOT NO.	MIN HYDRO PSI	YIELD STR. PSI	TENSILE STR. PSI	ELONG % IN 2"	PAGE BOTH IN. 1	FLAT	BEND
1	2 3/8	218	ASME SA53-ASME SA53.3 APISL	Smpl. L45296	2500	50600	76400	53.5	FULL			OK
3	2 3/8	218	ASTM A106-ASME SA106	Smpl. L45849	2500	50100	77600	52.5	FULL			OK

ITEM NO.	HEAT NO.	TYPE	C	MB	P	S	SI	CU	NI	CR	MO
1	L45296	CK.	24	61	006	018					
3	L45849	L.	25	102	016	023	20				

QA REVIEWED
 DATE 6/5/78

A.M.I. REVIEWED
 DATE 6/27/78

ATTACHED
 RR10294
 DATE

POOR ORIGINAL

ATTACHMENT 1
PAGE 1 OF 2

FORM NPP-1 DATA REPORT FOR FABRICATED NUCLEAR PIPING SUBASSEMBLIES
(As Required by the Provisions of the ASME Code Rules)

1. Fabricated by Energy Product Grain Plant 1 G&W Mfg. Co. Order No. 107873-601
(Name and Address of Fabricator)

2. Fabricated for Public Service Of Indiana Order No. 1075-89-0
(Name and Address)

3. Customer Public Service of Indiana 4. Location of Plant Marble Hill, Indiana

5. Piping System Identification Essential Service Water
(Brief description of intended use, main coolant etc.)

(a) Drawing No. 107873-601 Prepared by EFG Plant 1

(b) National Board No. _____

6. The material, design, construction, and workmanship complies with ASME Code-Section III, Class _____
Edition 1974, Addenda Date Winter 1975, Case No. _____

Remarks: Manufacturer's Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of this report 48"OD x .500" Nom Wall Pipe
(Name of Part - Item number, Manufacturer's name, and identifying stamp)

7. Shop Hydrostatic Test 550 psi

8. Description of piping inspected 48"OD x .500" Nom Wall Pipe
(Insulation - mark no. - material spec. - nom. pipe size - schedule or thickness - length - fittings - flanges, etc.)

Spec Nos. 5302, 5303, 5402, 5403, 5406, 6204

TF Serial Nos. 107873-601-9, -601-10, -601-11, -601-12, -601-13, -601-14.

ASME SA155 Cl. 2 Gr. KC 65

Project Nos. 4808 & 4923

Customer PO 1075-89-0 Marble Hill Nuclear Generating Station Unit 1 & 2

1382 098

We certify that the statements made in this report are correct and that the fabrication of the described piping conforms with the requirements of SECTION III of the ASME BOILER AND PRESSURE VESSEL CODE.

Date Feb. 7, 1978 Signed EFG Plant 1, G&W Mfgs.
(Fabricator) T. Scher

Certificate of Authorization Expires March 3, 1978 Certificate of Authorization No. N-997

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of Ill. and employed by Philadelphia Wfrs Mutual Ins. Co.

have inspected the piping described in this Data Report of 2-7 1978 Factory Mutual System and state that to the best of my knowledge and belief, the Manufacturer has constructed this piping in accordance with the applicable Subsections of ASME Code, Section III.

By signing this certificate, neither the Inspector nor his employer make any warranty, expressed or implied, concerning the piping in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date Feb 7 1978 Commissioner Illinois State

POOR ORIGINAL

ATTACHMENT # 11

FORM NPP-1 DATA REPORT FOR FABRICATED NUCLEAR PIPING SUBASSEMBLIES (As Required by the Provisions of the ASME Code Rules) PAGE 2 of 2

1. Fabricated by LaBarge Inc., K&W Mill, Wagoner, Okla. Order No. 9016-01 Rev. 1

2. Fabricated for Energy Products Group, Plant #1, Cicero, Ill. Order No. 01-35934

3. Owner Public Service of Indiana Location of Plant Marble Hill

4. Piping System Identification Essential Service Water
(Brief description of intended use, main coolant etc.)

(a) Drawing No. _____ Prepared by _____
(b) National Board No. _____

5. The material, design, construction, and workmanship complies with ASME Code Section III, Class 3
Edition 1974, Addenda Date Summer 1975, Case No. _____

Remarks: Manufacturers' Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of this report _____
(Name of Part - Item number, Manufacturer's name, and Identifying stamp)

6. Shop Hydrostatic Test 550 psi

7. Description of piping inspected SA 515-65 48" O.D. x .500" N.W. x 50' R/L.
(include - mark no. - material spec. - nom. pipe size - schedule or thickness - length)

- fittings - flanges, etc.)

LTD Ident: 9016-01-6 50'-1-3/16" Lg. Spool # S-212

LTD Ident: 9016-01-11 50'-0 1/2" Lg. Spool # S-213

LTD Ident: 9016-01-12 50'-0-3/8" Lg. Spool # S-311

SA 155 KC 65 Class 2 Lot #2

REF. P.O. #1075-89 (Q) 1382-099

We certify that the statements made in this report are correct and that the fabrication of the described piping conforms with the requirements of SECTION III of the ASME BOILER AND PRESSURE VESSEL CODE.
Date 10-20-78 Signed LaBarge Inc, Tub. Div. (Fabricator) *[Signature]*

Certificate of Authorization Expires 7-1-80 Certificate of Authorization No. N-1791

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or its State or Province of Arkansas and employed by Com. Union of Boston, Mass have inspected the piping described in this Data Report on 10-20-78 and state that to the best of my knowledge and belief, the Manufacturer has constructed this piping in accordance with the applicable Subsections of ASME Code, Section III.

By signing this certificate, neither the Inspector nor his employer make any warranty, expressed or implied, concerning the piping in this Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 10-20 19 78
J. J. Haynes Inspector Commission ARK. #524
National Board, State, Province and No.

... sheets in form of lists, sketches or drawings may be used provided (1) size is 6W" x 33", (2) information in items 1, 2 and 3

STEWART MECHANICAL

ENTERPRISES INC

*Air Conditioning - Refrigeration -
Sheet Metal Fabrication*



*Heating and Ventilating
Plumbing and Industrial piping*

757 GRADE LANE
LOUISVILLE, KENTUCKY 40213

5021 361-4408

ATTACHMENT F

	R	A	C
PM			
PL			
GE			
SI			
IS			
IS			
IS			
IS			
IS			
IS			

July 14, 1977

16.03-071477-002

Mr. Frank Hodges
Public Service Indiana
Plainfield, Indiana 46168

RE: Vendor Survey

Dear Frank:

On June 24, 1977 we sent to you a Vendor Quality Questionnaire which we requested that you fill out and return with a non-controlled copy of your Q.A. Manual.

Under the conditions that now exist we must, unfortunately, treat P.S.I. as a vendor for all Safety Category I items provided by P.S.I. that are to be installed by Stewart Mechanical Enterprises. If our survey and approval of P.S.I.'s Quality Assurance Program is not completed by the time these Safety Category I items begin to arrive at the job site, Stewart Mechanical will be placed in the embarrassing position of being unable to accept the items which we are, in effect, being paid by P.S.I. to install.

I realize this places both of us in a position which, I'm sure, neither cares to be. However, under existing circumstances, Stewart Mechanical has no other course (to follow), which would allow us to comply with the requirements of the ASME Code and thus our "Certificate of Authorization" or "Interim Letter".

Your continued attention to this problem is greatly appreciated.

Respectfully,

Joseph L. Butt
Q.A. Manager

1382 100

JLB/mr1
cc: Newberg-Marble Hill

NMH 180777007

1-1

STEWART MECHANICAL ENTERPRISES, INC ATTACHMENT G

Air Conditioning, Refrigeration, Sheet Metal Fabrication, Plumbing and Industrial Piping, Heating and Ventilating



757 GRADE LANE
LOUISVILLE, KENTUCKY 40213
(502) 381-4405

June 2, 1978

Public Service Indiana
Marble Hill Nuclear Generating Station
P.O. Box 190
New Washington, Indiana 47162

Attention: Frank Hodges

RE: Loose (Non Stamped) 36" Pipe Flanges for Essential Service Water System - Marble Hill Nuclear Generating Station

OT-060278-901		A	C
✓ PM			
✓ PE			
✓ QAS	<i>[Signature]</i>		
OM			
JCB	<i>[Signature]</i>		

Frank:

It has come to my attention that although we have discussed verbally the receipt and installation of the material referenced above, no written record has been made of Stewarts inability to receive and install this material.

Under the rules of the ASME Code, Section III, Division 1, Subsection NA, Paragraph NCA 3820 (b), PSI must either be the Holder of a "Quality Systems Certificate (Materials)" or allow Stewart Mechanical to audit and approve and perform periodic surveillances of your "Identification & Verification Program".

Since PSI does not possess a "Quality Systems Certificate" and will not allow SME to audit them, under the rules of the ASME Code Stewart is unable to receive or install these 4 - 36" flanges.

Respectfully,

STEWART MECHANICAL ENTERPRISES, INC.

1382 101

Joseph L. Butt

J.L. Butt
Q. A. Manager

JCB/ojm

cc: Newberg-Marble Hill, Chicago

.NMH 050678108

[Handwritten mark]

STEWART MECHANICAL ATTACHMENT H
ENTERPRISES, INC

In Conditioning & Refrigeration • Heating and Ventilating
Sheet Metal Fabrication • Plumbing and Industrial Piping



757 GRADE LANE
LOUISVILLE, KENTUCKY 40213
(502) 361-4405

July 13, 1978

OT-071378-027

Public Service Indiana
1000 E. Main Street
Plainfield, Indiana 46168

Attention: Mr. Jeff Roberts

RE: Your Letter No. 0710780025
ASME Letter of April 20, 1978
ASME File #N177-453

Jeff:

	R	A	C
PM			
PE			
QAS	<i>[Signature]</i>		
O			

I have received and reviewed the above reference letters. Your letter to me addresses a non-stamped pipe flange with "Certificates of Conformance," while the letter to the ASME references only "Stamped" items with "Data Reports."

While the answer to your inquiries to the ASME are correct (SME is now accepting from PSI, Code Stamped items with data reports) the question should be "under what conditions can an owner, not holding a "Quality Systems Certificate" or a "Certificate of Authorization,"

- 1) Procure non-code stamped material
- 2) Receipt inspect non-code stamped material with "Certificates of Conformance"
- 3) Release approved (by owner) non-stamped material with "Certificates of Conformance" to an installer (Certificate Holder) for installation in a code stamped component.

I am as anxious as you to resolve this question. However, I do not believe that we have, as yet, done so.

Respectfully,

STEWART MECHANICAL ENTERPRISES, INC.

1382 102

Joseph L. Butt
Joseph L. Butt
Quality Assurance Manager

JLB/ojm

cc: B. Hamilton
T. Kueck
B. Gutermuth

LNMH 200778047

CHERNE

SINCE 1911

CHERNE CONTRACTING CORPORATION

MARBLE HILL NUCLEAR SITE

POST OFFICE BOX 300

NEW WASHINGTON, INDIANA 47102

ATTACHMENT I

Noans.

WRIS AMI 7/27/79

TELEPHONE 293-4400
AREA CODE 812
TWX 810-350 2384

May 14, 1979

Public Service Company of Indiana, Inc.
Box 190
New Washington, Indiana 47162

ATTENTION: Tom McLarty
Q.A. Construction Supervisor

Re: Public Service Company of Indiana, Inc.
Marble Hill Nuclear Generating Station
Units 1 & 2, Contract Y-2739A & B, &-2962
Cherne File #7340-70B-1035

Dear Tom:

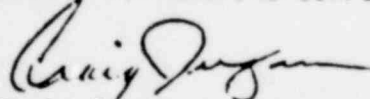
In review of owner furnished material CMTR's for ASME Code compliance we have noted the following discrepancies in general:

1. Material manufacturer/supplier N-certificate number and expiration date missing.
2. Applicable code of manufacturing not identified.
3. No code class or addenda.
4. Statement relative to NCA 3800 for material manufactured not shown when applicable.

Since Cherne is not aware of all facts concerned, we are requesting PSI to review the situation to determine acceptability of the material. In the interim we are placing a hold on the effected material for installation until such time as we receive further notification from PSI.

Sincerely,

CHERNE CONTRACTING CORPORATION



Craig Jergens
Quality Control Manager

CJ:kk

CC: J. Mortell
T. Francis

G. Shibayama
G. Rosier

R. Horine
B. Braden ✓

1382 103

CHERNE

SINCE 1918

ATTACHMENT J

CHERNE CONTRACTING CORPORATION

POST OFFICE BOX 875

MINNEAPOLIS, MINNESOTA 55410

TELEPHONE 844-2850

AREA CODE 612

TWX 910-572-2780

March 7, 1979

Public Service of Indiana, Inc.
1000 East Main Street
Plainfield, Indiana 46168

Attention: Mr. Frank Hodges

Re: Public Service of Indiana, Inc.
Marble Hill Nuclear Generating Station
Units 1 and 2, Contracts Y-2739A & B, Y-296
Cherne File #7840-70B-42

Subject: Cherne Survey of 2/28/79 and 3/1/79
Qualification for Materials Supplier

Dear Mr. Hodges:

As a result of our recent survey, PSI is qualified as a Materials Supplier and has been placed on our qualified nuclear vendor list.

Please address and respond to the finding and comment, as noted in the enclosed Survey Report and Survey Log, by March 30, 1979. Please sign and date the Survey Log and return it to Cherne to indicate the item has been closed.

Please contact me should you require further information.

Sincerely,

CHERNE CONTRACTING CORPORATION

Mark D. Anderson

Mark D. Anderson
QA Engineer

1382 104

cc: G. Rosier
J. Roberts
✓ T. McLarty

CHERNE

SINCE 1910

ATTACHMENT K

ans.
WRP AMC 7/27/79

CHERNE CONTRACTING CORPORATION

MARBLE HILL NUCLEAR SITE
POST OFFICE BOX 300
NEW WASHINGTON, INDIANA 47102

TELEPHONE 293-4401
AREA CODE 812
TWX 810-350-2384

June 6, 1979

Public Service Company of Indiana, Inc.
Box 190
New Washington, Indiana 47162

POOR ORIGINAL

ATTENTION: Tom McLarty
Q.A. Construction Supervisor

Re: Public Service Company of Indiana, Inc.
Marble Hill Nuclear Generating Station
Units 1 & 2, Contract Y-2739A & B, Y-2962
Cherne File 3 7840-70B-1045

Dear Tom:

To date PSI has been providing the cover page of ITT Grinnell furnished NPP-1 Data Reports, for Code Stamped Components provided under Y-2741, to Cherne for component identification and verification purposes. In review of system turnover requirements associated with the Installers N-5 Data Report, we find it necessary to have the complete NPP-1 report including any attached pages when applicable. These pages are generally an as-built and a bill of material.

Confirming my conversations of June 4, 1979, with yourself and Terry Sheets, Cherne feels it would be advantageous for both PSI and Cherne if the original NPP-1 reports were provided. This would avoid additional copying as well as permit Cherne to resubmit the originals as a part of our original N-5 Data Report.

Please advise by June 18, 1979 as to PSI's position in this matter.

Sincerely,

CHERNE CONTRACTING CORPORATION

Craig Jergens

Craig Jergens
Q.C. Manager

1382 105

CJ:kdk

CC: J. Mortell
G. Rosier
G. Shibayama
T. Francis
B. Braden

CHERNE

SINCE 1916

ATTACHMENT L
No ans. w/ps
and 7/22

CHERNE CONTRACTING CORPORATION

MARBLE HILL NUCLEAR SITE
POST OFFICE BOX 300
NEW WASHINGTON, INDIANA 47162

TELEPHONE 223 4401
AREA CODE 317
TWX 810-355 2384

June 6, 1979

Public Service Company of Indiana, Inc.
Box 190
New Washington, Indiana 47162

ATTENTION: Tom McLarty
Q.A. Construction Supervisor

Re: Public Service Company of Indiana, Inc.
Marble Hill Nuclear Generating Station
Units 1 & 2, Contract Y-2739A & B, Y-296
Cherne File # 7840-70B-1046

POOR ORIGINAL

Dear Tom:

This letter is to request from PSI all CMTR's/CoC's or data reports for material or components installed by others such as Stewart Mechanical which Cherne will be incorporating into Safety Related Systems. Cherne requires these documents for verification purposes and for inclusion in the Installers N-5 Data Report. These documents should be identified when applicable, as to inbed or spool number that the documents support.

Please respond by June 20, 1979, as to when these documents will be available and how they will be "turned over" to Cherne.

Sincerely,

CHERNE CONTRACTING CORPORATION

Craig Jorgens
Craig Jorgens
Q.C. Manager

1382 106

CJ:kdk

cc: J. Mortell
G. Rosier
G. Shibayama
T. Francis
✓ Braden
R. Horine

0730 795079

CHERNE

Attachment M

SINCE 1916

CHERNE CONTRACTING CORPORATION
MARBLE HILL NUCLEAR SITE
POST OFFICE BOX 300
NEW WASHINGTON, INDIANA 47162

TELEPHONE 293-4401
AREA CODE 812
TWX 810-350-7704

July 27, 1979

Public Service Company of Indiana, Inc.
P.O. Box 190
New Washington, Indiana 47162

**UNCONTROLLED
COPY**

ATTENTION: Tom McLarty,
QA Construction Supervisor

Re: Public Service Company of Indiana, Inc.
Marble Hill Nuclear Generating Station
Units 1 & 2, Contract Y-2739A & B, Y-2962
Cherne File # 7840-70B-1068
OWNER FURNISHED MATERIAL

POOR ORIGINAL

Dear Tom:

We are experiencing great difficulty in getting DSH numbers and applicable supporting data from your organization for all items procured by Public Service Indiana. This includes hangers, fabricated piping and equipment. At present your DSH is the mechanism used by Cherne in order to release these items for construction.

Attached is a list of 76 component supports which our engineering department wants to release for installation. This list was submitted to your document group almost one (1) month ago and as yet we have not received any of the information requested. This is creating a burden on our scheduling and production forces.

Please note that seven (7) other similar requests have been transmitted in the month of July which are also pending. Your attention and response is needed in this matter by August 3, 1979.

Sincerely,

CHERNE CONTRACTING CORPORATION

1382 107


Craig Jergens
QC Manager

CC: J. Mortell R. Horine F. Hodges (PSI)
 T. Francis G. Shibayama
 A. Sirard B. Fouts

CHERNE

SINCE 1916

CHERNE CONTRACTING CORPORATION

MARBLE HILL NUCLEAR SITE

POST OFFICE BOX 300

NEW WASHINGTON, INDIANA 47162

TELEPHONE 293-4401
AREA CODE 812
TWX 810-350-2384

Document Control
Public Service Indiana, Inc.

Date: 6/29/78

Attn: Terry Sheets

POOR ORIGINAL

Please supply Cherne with the following DSN's and supporting data as applicable for the items listed below.

1AF01002R	2CC15015X	2CS02012R	2CS02027R
5X	17R	13R	28R
2CS08012X	1BR04020R	14R	29R
1FP07003R	2CS01049R	15R	30R
1FP15019X	50C	16R	31R
1FP15013X	02002C	17R	32R
1FP04025X	3R	18R	33R
1MS01018S	4R	19R	34V
1RH01005V	5R	20R	35C
1S106005R	6R	21C	37C
7R	7R	22C	38R
24X	8R	23V	39R
39X	9R	24R	40R
74R	10R	25R	41R
1S118021R	11R	26R	42C
1MS01010S	2SX20002X	2SX41001R	2SX42005R
2SX42008X	1BR03023R	1WF01003R	1WF01004R
1WF01005R	1WF01006R	7R	8R
9R	11R	12R	13R

Thank you,

CHERNE CONTRACTING CORPORATION

Ron Horine
Quality Control Supervisor

RH:kdk

Attachment

1382 108

GERNE CONTRACTING CORPORATION

Document Control
June 29, 1979
Page Two

1CC04AB-12-64
MHOSX03A-30"-66
MH1SXC1A-4-293
MH0CC02B-16-37
MH1SXB1AB-3-50

54
55
56
67

1MS01CD 30 $\frac{1}{2}$ "-30
MHOSX03A-30-67
MH1SC54-AA-3"-291
MH1SXC1A-144
ML2SX07HA-20-54
MH1CC04AB-12-60

1MS01CA 30"-25
-MHOSX24A-30"-71
MH1SXC1A-293
MH2SX07HA-20-56
ML2CC02CB-12-37

2CC05GC-16-66
MH1SXC1A-144-
MH1SX54AA-3"-292
MHOSX24A-30-71-
ML2CC02CB-12-37
MH1CC04AB-12"-60

Those in BLUE ARE RECEIVED

1382 109



**PUBLIC
SERVICE
INDIANA**

S. W. Shields
Vice President - Electric System

ATTACHMENT N

July 28, 1979

Mr. D. J. McDonald, Director of Inspections
The National Board of Boiler and Pressure
Vessel Inspectors
1055 Crippen Avenue
Columbus, Ohio 43229

Dear Mr. McDonald:

In accordance with your telephone conversation with Mr. R. F. Reedy of NUTECH, Public Service Indiana is committed to the following actions as they relate to Mr. Beckwith's letter of July 10, 1979 to Mr. Crews.

1. PSI commits to ASME that it will N stamp all appropriate piping systems in the project.
2. PSI has applied to ASME for an N stamp for Class 1, 2 and 3 piping systems.
3. PSI has also requested an Interim Letter and is sending our ASME Quality Assurance manual to ASME under separate cover. Hartford Steam Boiler is the Authorized Inspection Agency and they have reviewed this manual.
4. PSI has requested Hartford Steam Boiler to furnish full-time inspection on this project as soon as possible.
5. PSI management understands that the Owners' Certificate does not permit the same activities as allowed by the ASME Code for an N Certificate Holder.
6. PSI assures that all personnel involved with N Stamp activities will be fully trained for their ASME duties under the Code.
7. PSI is taking full responsibility for all ASME activities relating to the applicable piping systems.
8. Each of the details of the July 10 letter will be responded to in a report to be mailed to National Board by August 8, 1979.

1382 110



PUBLIC
SERVICE
INDIANA

- 2 -

Mr. D. J. McDonald
The National Board of Boiler and
Pressure Vessel Inspectors

July 28, 1979

9. PSI intends to be fully responsive to the requirements of the ASME Code, the State of Indiana, the National Board and the NRC.

In addition to the other information which was Telexed to you on Friday, July 27, 1979, I have the following statement to add to Item #7:

The ASME Program which will be shown to the ASME Survey Team is the same Program which has been used from the start of all purchasing and construction activities relating to the piping systems which will receive an ASME Code Symbol Stamp. There has been no change to the Program since the start of any of these activities for the piping systems. PSI has been acting on all the activities as the responsible party for the complete system and, therefore, has not been performing as a Material Supplier. Since all material is controlled by PSI as the responsible party, the Code does not require that PSI be designated as a Material Supplier.

I hope this information will be helpful to you pending our report on the July 10 letter which will be forwarded to you by August 8. Should there be any further information you desire in the interim, please let me know.

Very truly yours,

S. W. Shields
Vice President-Electric System

SWS:gm

cc: R.R. Johnson, State of Indiana
Boiler & Pressure Vessel Board
W.G. Reinmuth, U.S. NRC
Victor Stello, Jr., U.S. NRC
J.G. Keppler, U.S. NRC
A.W. Henry, Hartford Steam Boiler
Uldis Potapovs, U.S. NRC
Arlene Spadafino, ASME
E.J. Hemzy, Commonwealth Edison Co.

1382 111