

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

Report No. 99900519/80-01

Program No. 51200

Company: Bechtel Power Corporation
Gaithersburg Power Division
15740 Shady Grove Road
Gaithersburg, Maryland 20706

Inspection Conducted: March 24-28, 1980

Inspectors: *R. H. Brickley* 4/23/80
R. H. Brickley, Principal Inspector
Program Evaluation Section
Vendor Inspection Branch
Date

J. R. Agee 4/25/80
J. R. Agee, Contractor Inspector
Program Evaluation Section
Vendor Inspection Branch
Date

for *R. H. Brickley* 4/25/80
J. C. Glynn, Senior Mechanical Engineer
Inspection & Enforcement, Hqs.
Date

Others
Accompanying-
Personnel: *D. G. Breaux* 4/25/80
D. G. Breaux, Intern Inspector
Program Evaluation Section
Vendor Inspection Branch
Date

Approved by: *C. J. Hale* 4-24-80
C. J. Hale, Chief
Program Evaluation Section
Vendor Inspection Branch
Date

Summary

Inspection on March 24-28, 1980 (99900519/80-01)

Areas Inspected: Implementation of 10CFR 50, Appendix B criteria in the areas of design inspection, potential 10CFR 21 items, and action on previous inspection findings. The inspection involved 75 hours onsite by 3 NRC inspectors.

Results: In the areas inspected there were no deviations or unresolved items identified.

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DETAILS SECTION I

(Prepared by R. H. Brickley)

A. Persons Contacted

- G. Boldt, Mechanical Group Supervisor
- *H. E. Borda, Project Engineer, Plant Design
- A. R. Faulkner, Assistant Chief, Plant Design
- R. C. Fox, Group Supervisor, Plant Design
- C. M. Herbst, Group Leader, Nuclear and BOP
- *B. K. Kanga, Manager, Division Engineering
- *D. C. Kansal, Project QA Manager
- *J. Mutzberg, QA Program Supervisor
- J. K. Parikh, Coordinator, IE Bulletin 79-14
- W. A. Poppe, Mechanical Engineer
- B. G. Shah, Group Supervisor
- J. G. Shivdasani, Group Leader

*Denotes those in attendance at the exit interview.

B. Action on Previous Inspection Findings

1. (Closed) Deviation (Report No. 79-02). Revisions to vendor design drawings were not verified or checked by control measures commensurate with the original.

The inspector examined the corrective actions and preventive measures described in the letters of response dated May 31, 1979, and August 14, 1979, i.e. Change Notice No. 106 to the Project Engineering Procedures Manual, Appendix E (Instructions for Review Supplier Documentation) dated August 17, 1979; Gould - Brown Boveri letter of August 17, 1979, certifying that all prints had been checked and approved; and Quality Surveillance Report PSQ-221A, QSR No. 60 reporting results of a surveillance conducted on August 27, 1979. It should be noted that this project (Davis - Besse 2 & 3) was issued a stop work order by the licensee on July 23, 1979.

2. (Closed) Deviation (Report No. 79-03). Failure to have instructions or procedures governing the home office activities on IE Bulletin 79-14.

The inspector examined the corrective actions and preventive measures described in the letters of response dated October 23, 1979, and January 16, 1980, i.e. Bechtel Project Procedure for IE Bulletin 79-14 Non-Conformance Determination, Evaluation and Disposition for As-Built Safety Related Piping Systems for Hatch Unit 1, Revision 1

dated March 21, 1980; Generic Implementation Program for Operating Plants, Revision 2 dated September 28, 1979; Generic Implementation Program for Construction Plants, Revision 0 dated October 11, 1979; and EDP - 3.16 (Quality Assurance Programs on Small Nuclear Projects) Revision 0 dated November 9, 1979.

3. (Closed) Deviation (Report No. 79-03). Project instructions do not require that changes to specifications be subjected to design control measures commensurate with those applied to the original design.

The inspector examined the corrective actions and preventive measures described in the letter of response dated October 23, 1979, i.e. the revision and issuance of EDPI - 4.49-01 (Project Specifications) on August 24, 1979, wherein changes to specifications are required to be reviewed and approved in the same manner as the original.

4. (Closed) Deviation (Report No. 79-03). Failure to have reproducible signatures or initials on two (2) engineering documents.

The inspector examined the corrective actions and preventive measures described in the letters of response dated October 23, 1979, and January 16, 1980, i.e. Revision 6 of Specification 10466-M-218A(Q) was remicrofilmed and the approval signatures were reproducible, two (2) signatures from Revision 0 of Specification 10466-M-637(Q) were darkened and are now reproducible, and an examination of eleven (11) other specifications was conducted and no similar deficiencies were identified.

5. (Closed) Deviation (Report No. 79-03). Failure to stamp a supplier drawing with the SNUZPS document review stamp as required by project instructions.

The inspector examined the corrective actions and preventive measures described in the letter of response dated January 16, 1980, i.e. EDPI 5.16-01 (Supplier Document Control Procedure) was revised to clarify that acetate reproducibles of Westinghouse drawing revisions which have been previously reviewed and approved by Bechtel need not be stamped and rereviewed by Bechtel.

6. (Closed) Deviation (Report No. 79-03). Failure to control the typed originals of a specification and failure to have a registered professional engineer's signature on a revision to two (2) specifications as required by project instructions.

The inspector examined the additional evidence that was described in the letter of response dated October 23, 1979, and found that, for the reasons stated, the deviation did not exist.

7. (Closed) Deviation (Report No. 79-03). Failure to stamp a superseded drawing "superseded" as required by project instructions.

The inspector examined the corrective actions and preventive measures described in the letters of response dated October 23, 1979, and January 16, 1980, i.e. the subject drawing was removed from the files and nine (9) surveillance audits were conducted, with identified deficiencies corrected.

8. (Closed) Unresolved Item (Report No. 79-02). Further review was needed to verify that a purchase order (including the design specification) is revised to clearly identify applicable ANSI N45.2 daughter standards and that the vendor QA Manual has been approved. The licensee for this project issued a stop work order on July 23, 1979. Under these circumstances this item has been reclassified to a Follow-up Item for examination if and when the project is reactivated.

C. Design Inspection (Protection Against High Energy Line Ruptures in Fluid Systems Outside Containment)

1. Objectives

The objectives of this area of the inspection were to select one or more high energy line systems and determine:

- a. The essential systems that are proximate to any portion of the selected high energy line system.
- b. That the design analysis report combined with the composite drawing and stress isometric confirm that the integrity of the essential system would not be degraded in the event of a rupture at any location.
- c. That break point locations are in accordance with NRC guidelines and have been indicated on the drawings.
- d. That, for high energy line fluid systems located in containment penetration areas, the drawings and design basis provide confirmation that NRC criteria have been met.
- e. That, for those essential systems that are not protected by either the separation or protective enclosure design methods, the applicable drawings identify the break point locations and the physical design features to protect the essential systems.
- f. That the analysis for a postulated break, assuming the loss of off-site power combined with a single active failure, has been performed and documented.

2. Method of Accomplishment

The preceding objectives were accomplished by an examination of:

- a. Flow Steps for Pipe Break Isometrics dated July 13, 1977.
- b. Routine for Performing II/I Hazard Analysis, undated.
- c. The Mechanical/Nuclear Discipline form entitled "Pipe Break Analysis."
- d. Topical Report BN-TOP-2 (Design for Pipe Break Effects) Revision 2, dated May 1977.
- e. Mechanical Standard MS-1 (Piping Class for the SNUPPS) Revision 11, dated February 25, 1980.
- f. Steam Generator Blowdown System:
 - (1) Isometric No. 10466-M-04BM01Q (Piping Isometric S. G. Blowdown System, Reactor and Aux. Bldg) Revision 1, dated January 30, 1978.
 - (2) Calculation No. 197 (Max. Stress Level at Points) Revision 1, dated June 30, 1978.
 - (3) Computer Program M101, Problem No. 197 dated June 22, 1978.
- g. Chemical and Volume Control System:
 - (1) Isometric No. 10466-M-04BG02 (Piping Isometric, CVCS - Max. Charging Flow "A" & "B" Train - Aux. Bldg) Revision 6, dated May 15, 1978.
 - (2) Isometric No. 10466-M-04BG01 (Piping Isometric CVCS - Minimum Charging Flow, Aux. Bldg) Revision 6, dated May 15, 1978.
 - (3) Calculation No. BP-020 Revision 0, dated August 29, 1978.
 - (4) Isometric No. 10466-M-04BG30 (Small Piping Isometric CVCS Relief Valve Piping and Details)
 - (5) Isometric No. 10466-M-04BG11 (Piping Isometric CVCS - Let-down Flow to Reheat Heat Exchanger, Aux, Bldg) Revision 1, dated September 28, 1976.
 - (6) Calculation No. BP-004 (Postulation of Break Points) Revision 1, dated January 3, 1979.

- (7) Computer run - Calculation 29B3, Issue 1, Run No. G7458 dated October 10, 1978, using Program ME101 version C2 released March 22, 1978.
- (8) Calculation No. PBG03 (Pipe Break Analysis) Revision 1, dated September 5, 1979.
- (9) Calculation No. PBG11 (Pipe Break Analysis) Revision 1, dated October 5, 1979.
- (10) IOM (Pipe Break BG System - EM System) dated October 23, 1979, transmitting the isometrics showing the break locations to the Civil Discipline.
- (11) IOM ("BG" System High Energy Pipe Break Review) dated October 20, 1979.
- (12) Hazards Protection Task Force (HPTF) Review Room No. 1203.
- (13) The SNUPPS scale model (used by the HPTF in lieu of composite drawings).

3. Findings

a. General

- (1) The examination of the documents identified in paragraphs C.2.a through C.2.e above revealed that Bechtel followed the NRC guidance contained in Standard Review Plans (SRP) 3.6.1 and 3.6.2, and branch technical positions APCS 3-1 and MEB 3-1.
- (2) The examination of the documents identified in paragraphs C.2.f and C.2.g above revealed that analysis activities followed the requirements contained in the documents identified in paragraphs C.2.a through C.2.e above and covered the areas identified in objectives a. through e. above.

b. Follow-up Item

A complete inspection of the Failure Mode and Effects Analysis (SRP 3.6.1, Subsection 3) was not possible due to time limitations. This area will be examined during a future inspection.

c. Deviations and Unresolved Items

None identified in this area of the inspection.

D. Exit Interview

An exit interview was held with management representatives on March 28, 1980. In addition to those individuals indicated by an asterisk in paragraph A of each Details Section, those in attendance were:

J. M. Amaral, Division QA Manager
P. P. Anas, Chief Plant Design Engineer
M. D. Archdeacon, Assistant Project Engineer
J. M. Komes, Vice President and Division Manager
B. L. Meyers, Project Manager
L. F. Sirianni, Project QA Engineer
J. H. Smith, Project Engineering Manager
A. A. Vizzi, Project Engineering Manager

The inspector summarized the scope and findings of the inspection. Management comments were generally for clarification only, or acknowledgement of the statements by the inspector.

DETAILS SECTION II

(Prepared by J. R. Agee)

A. Persons Contacted

J. A. Arbaiza - Project Quality Engineer
J. C. Catlin - Assistant Controls Supervisor
A. J. Ciccone - Plant Design Supervisor
M. S. Desai - Mechanical Group Supervisor
*R. A. Glasby - Project Engineer
R. A. Flugrath - Project Quality Engineer
M. R. Lindsay - Site Quality Assurance Engineer
*W. M. Mendus - Chief Quality Engineer
J. Milos - Project Quality Engineer
G. Singh - Architechural Engineer

F. R. Sullivan - Architectural Engineer
W. M. Turner - Project Quality Engineer
C. R. Wienke - Controls Systems Engineer

*Attended exit interview

B. Duraspray Fire Retardent

This item concerns chloride contamination of safety related piping and components resultant from droppings or overspray of Duraspray Fire Retardent Materials on which NRC IE Information Notice 30-05 was issued.

1. Objectives

The objectives of this area of the inspection were to:

- a. Examine the results of the evaluation of this item.
- b. Determine whether this item is generic or plant unique.
- c. Determine if this item was properly reported to the NRC.

2. Method of Accomplishment

The preceding objectives were accomplished by:

- a. Review of report compiled by Bechtel contractor entitled "Final Report, Laboratory Services for Residual Chloride Analysis of Fireproofing Material" dated August 29, 1979, with supplement entitled, "Results of Residual Chloride Study" dated September 26, 1979.

- b. Review of the following sections from the Bechtel Gaithersburg Division Specification No. 10466-A-126, Job. No. 10466, entitled "Technical Specification for Cementitious Fireproofing of Structural Steel for the Standardized Nuclear Unit Power Plant System," Revision 4, dated November 6, 1979:
- (1) Section 10.0, Application
 - (2) Section 11.0, Inspection
 - (3) Section 12.0, Cutting and Patching
 - (4) Section 13.0, Removal and Cleaning
- c. Bechtel Gaithersburg letter, SL NRC 80-10, File: 0278.10, Subject: IE Information Notice 80-05, Chloride Contamination of Safety-Related Piping and Components, dated February 28, 1980.

3. Findings

a. General

- (1) Items 2a and 2b are Bechtel documents concerning the use, application, and clean-up of cementitious oxychloride materials (example: Duraspray). Information in these two (2) documents concerns methods for clean-up of the cementitious materials, i.e. (1) by use of deionized water at 150-160° F, and (2) by use of ambient deionized water with small amount of detergent. Each of the two (2) methods are proposed, by Bechtel, as being equally as good as cleaning with nitric acid.
- (2) IE Information Notice 80-05 states in part, "Droppings or overspray of this material (Duraspray) cannot be properly removed with water." Bechtel in the document, item 2c, states " . . . the NRC conclusions regarding use of water in the Duraspray removal process is not understood." According to the cognizant Bechtel engineer interviewed, Bechtel would like NRC to revise IE Information Notice 80-05, to recognize the latest proposed methods of cleaning with (1) deionized water at 150-160° F or (2) ambient deionized water with small amount of detergent.
- (3) Based on the inspector's findings, the clean-up of cementitious oxychloride materials concerns five (5) Bechtel projects.

Bechtel contracted from an independent laboratory additional studies on the cementitious oxychloride materials (Duraspray) clean-up problem and proposed alternate methods for the clean-up process. These cleaning methods, per the data in the documents referenced by items 2a and 2b, above, provide cleaning results comparable to that obtained by the use of nitric acid. Bechtel has submitted this data to NRC for evaluation.

Since the alternate clean up methods appear to be satisfactory and the resolution of this item is proceeding in an orderly manner, no further inspection effort is indicated at this time.

b. Deviations and Unresolved Items

None were identified

c. Containment Isolation Valves

This item concerns potential failure mode for several primary containment purge and inerting valves discovered by valve supplier and subsequently reported to the NRC by LER No. 50-321/1979-081.

1. Objectives

The objectives of this area of the inspection were to:

- a. Determine generic uses of valve.
- b. Determine what activities are being pursued to ascertain the valve will meet operating criteria.

2. Method of Accomplishment

The preceding objectives were accomplished by:

- a. Review of the Final Safety Analysis Report (FSAR), Amendment 32, dated April 1973, Section 5.2.3.3 Primary Containment Purge System.
- b. Review of Inquiry No. SS-2102-107, Revision 1, March 7, 1972, for Furnishing, Fabrication, and Delivery, Primary Containment Isolation Butterfly Valves.
- c. Review of Requisition No. 45537-SST, dated July 20, 1972, for Fisher Control Valves, 20" Fig. 9220, 150 LB, Air Operated.

3. Findings

a. General

- (1) The problem identified, with possible failure of the valve to operate satisfactorily during a LOCA, is a postulated condition and does not represent an incident that has occurred.
- (2) The Inquiry No. SS-2102-107 and the Purchase Order Requisition Number 45537-SST identify a specific Fisher Control Valve figure number, but did not specify a required flow rate, C factor, or required straight run of piping equal to a specific number of pipe diameters upstream of the valves.

Subsequent to procurement of the valves and after their installation, capability of the valves to operate during a design basis event was questioned. The analysis provided by Bechtel, indicates the valves operating at 30° to 50° opening, will handle the required flow capacity, and will close in the required time against a 62 psi differential pressure during a design basis event.

- (3) Bechtel letter, dated February 19, 1980, to Fisher Controls Company (FCCo) has requested FCCo to evaluate non-symmetric loadings on the butterfly valves to demonstrate operability of the valves during a design basis event.
- (4) The Georgia Power Company has issued letters to the NRC dated January 9, 1980, and March 6, 1980, which state reanalysis of the containment isolation valve problem is being made. The reanalysis is scheduled for completion by mid-April 1980.

b. Comments

- (1) The postulated problems identified are unique to only two (2) projects in which the containment vessels are not inerted.
- (2) Bechtel engineering personnel expressed confidence, supported by calculations, that the valves in their installed positions, and at 30° to 50° opening, will fulfill operating requirements and therefore, have not initiated activities to replace the valves or to redesign and modify the piping to provide additional straight runs upstream of the valves.

The FCCo has agreed to provide reanalysis of the valve operating characteristics and requirement, not initially specified. On receipt of these data, Bechtel will resolve the valve operations problem or modify the piping upstream of the valves for the postulated operating problems identified.

No further inspection effort on this item is indicated at this time.

c. Deviations and Unresolved Items

None were identified.

D. NDE for Class 3 Pipe Welds

1. Objectives

The objectives of this area of the inspection were to:

- a. Examine the results of the evaluation of this item.
- b. Determine whether this item is generic or plant unique.

2. Method of Accomplishment

The preceding objectives were accomplished by:

- a. Review of Quality Action Request (QAR) No. F-096, dated February 19, 1979, which required reply by March 16, 1979.
- b. Bechtel Interoffice Memorandums (IOMs), dated March 26, 1979, April 24, 1979, and May 4, 1979, each entitled Bechtel Job 9645, ASME Section III, Paragraph NX-4453.1.
- c. ASME letter dated May 22, 1979, Subject: Section III, Division 1, NX-4453.1

3. Findings

a. General

- (1) The QAR No. F-096 referenced the NRC site-identified unresolved item entitled, "Defect Removal" in which the NRC inspector questioned Bechtel's interpretation of ASME Code, Section III, Division 1, paragraphs NB-, NC-, and ND-4453.1. Ensuing Bechtel IOMs, item 2.b, above,

requested interpretation from Bechtel's Materials and Quality Services, San Francisco, of the Code. The response when received stated in part, ". . . The interpretation is that the ASME Code does require surface examination to be performed on all excavated areas on fully or partially completed butt welds whether the excavation extends through the entire wall or not.

"This interpretation means that the jobsite personnel must withdraw their opposition to the NRC inspector's position of paragraph NX-4453.1, since we should now concur with his interpretation."

- (2) Subsequent to the Bechtel interpretation referenced above, Bechtel received the following interpretation by ASME which states, "No, it is not a requirement of ASME Section III, NX-4453.1 that a liquid penetrant or magnetic particle examination be performed on excavated or ground areas in welds that the Certificate Holder may make to remove questionable areas of welds which have been detected by intermediate examinations performed by the Certificate Holder which are in addition to those required to be performed for acceptance. The Certificate Holder may, at his discretion, perform examinations in addition to those required under Code rules for in-process controls, provided all Code required examinations are performed for acceptance. Grinding and excavations prior to the completion of the welds are not considered to be Code repair and the rules of NX-4453.1 do not apply for such grinding or excavations."
- (3) Although Bechtel received the initial Code interpretation of the rules of NX-4453.1 and agreed to withdraw their objection to the NRC field position on the defect repair problems, they (Bechtel) have requested further clarification of NX-4453.1 from the appropriate ASME Code Committee. According to Bechtel action item QAR No. F-096, the Code response is expected by April 20, 1980.

Since this item appears to be uniquely a site related problem, no further action on this item is considered necessary at this time.

b. Deviations and Unresolved Items

None were identified

E. Rosemount Model 510 DU Trip Units

This item concerns a potential deficiency reported by MP&L letter AECM-79164 which concerns a problem with the gross failure in output function of both master and slave trip units of the Rosemount Model 510 DU Trip Units.

1. Objectives

The objectives of this area of the inspection were to:

- a. Examine the results of the evaluation of this item.
- b. Determine whether this item is generic or plant unique.
- c. Determine if this item was properly reported to the NRC.

2. Method of Accomplishment

The preceding objectives were accomplished by:

- a. Review of Rosemount letter dated August 6, 1979, in which Rosemount identified current (electrical load) requirements for the 510 DU Trip Units.
- b. Review of Management Corrective Action Reports (MCAR's) Nos. 50, 53 and 56.
- c. Review of Bechtel IOM dated November 3, 1979, concerning Job No. 9645, File: 0305/J-301.0B, Rosemount 510 DU Trip Units.
- d. Review of Mississippi Power & Light Company (MP&L) letter to the NRC dated November 20, 1979, subject: File 0262/0498, Final Report fo PRD-79/10, AECM-79/128 concerning a possible reportable deficiency at the Grand Gulf Nuclear Station.
- e. Review of the following Bechtel drawings:
 - (1) J-1336, Sheets 0, 3, 4, 5, 6, 7, 8, Loop Diagram, T48 Enclosure Building, Pressure Control.
 - (2) J-1337, Sheets 0 through 14. Loop Diagram, E61 Trip Unit Fault Monitor.
 - (3) J-1321 P41 Standby Service Water System.
 - (4) J-1361 P81 HPCS Diesel Generator System.
 - (5) J-0430 F51 Control Room HVAC System.

3. Findings

a. General

- (1) In the letter, item 2.a. above, Rosemount identified design and performance limitations of the 510 DU Master Trip Units. At the same time Rosemount issued proposed modifications to the units which they would perform. Since issuance of the letter, Rosemount has modified all units returned to them.
- (2) The identified MCAR's were the Bechtel documents for tracking the deficiencies and corrective activities concerning the Rosemount 510 DU Trip Units. All of these MCAR's have been closed or are in the final stage of being closed indicating uncertainties of the 510 DU Trip Units have been resolved.
- (3) None of the Bechtel drawings listed in item 2.e, above, which had been issued for start-up scope, required revision resulting from modifications to the 510 DU Trip Units.
- (4) The MP&L letter, item 2.d concerning the Rosemount 510 DU Trip Calibration System, states in part, ". . . We have determined that this problem is not reportable within the meaning of 10 CFR 50.55(e). . ."
- (5) From the Rosemount and Bechtel documents reviewed it appears that Rosemount detected and reported its design and equipment deficiencies on a timely basis. The modified equipment shipped to the site has not affected approved start-up scope drawings. Although this was not identified by Rosemount as a plant unique situation it does not appear to be a generic condition that will affect safety of operating plants based on the experience at Grand Gulf. NRC has been notified that the problem is not reportable within the meaning of 10 CFR 50.55(e). This item is considered closed.

b. Deviations and Unresolved Items

None were identified

F. Low Carbon Steel Pipe Elbows

1. General

This item concerns a potential construction deficiency reported September 10, 1979, which states that a pipe supplier, Tube Turns Division, Chemtron Corp., alerted Bechtel that pipe elbows fabricated from specific heat numbers may have been fabricated from a low carbon steel rather than ASTM A106 grade B steel. It goes on to state that Mississippi Power & Light is investigating to determine if any of the suspected elbows with these heat numbers have been supplied to them.

2. Objectives

The objectives of this area of the inspection were to:

- a. Review and evaluate Bechtel's processing of the reported concern and the subsequent action taken.
- b. Evaluate generic considerations.

3. Method of Accomplishment

The preceding objectives were accomplished by an examination of:

- a. Bechtel supplier quality action request 79-6 Revision 3, August 10, 1979, Subject: Tube Turns Division, Chemtron Corporation, Carbon Steel Pipe Fittings Identified as Heat Number W6719.
- b. Tube Turns Division letter to Bechtel dated December 14, 1979, Subject: Tube Turn's Product Recall C-4042, Lot no. W6719.
- c. Bechtel supplier quality action request (SQAR) 79-6 revisions 0,1,2, and 3 summary of action taken October 5, 1979.
- d. Liberty Equipment and Supply Company Part 21 report, on possible defective material shipment to Grand Gulf Nuclear Power Station, dated April 4, 1979.
- e. Tube Turns Division letter to Liberty Equipment and Supply Company dated March 30, 1979, Subject: Recall Notice on Lot Number W6719 Material.
- f. Bechtel letter to Nuclear Project Manager, Mississippi Power and Light Company dated August 30, 1979, Subject: Final Draft of Report for Potential Deficiency as Defined in 10 CFR 50.55(e).
- g. Tube Turns Division letter to NRC dated April 12, 1979.

4. Findings

a. General

- (1) The examination of SQAR 79-6 Rev. 3 summarized 2 areas of action taken with respect to the concern mentioned:
 - (a) Issue No. 79-6-Rev. 0,1,2, dated October 5, 1979, and issue No. 79-6-Rev. 3 dated October 5, 1979, summarized actions taken by division projects relative to the Tube Turns incorrect material problem.
 - (b) Procedural changes have been implemented in the U. S. Steel Facility and in the Tube Turns Facility to prevent a recurrence of the problem.
- (2) The final 10 CFR 50.55(e) report for this deficiency includes the safety implications and corrective action taken.
 - (a) "Carbon percentages above the limits permitted by the WPB grade could conceivably promote cracking in the heat affected zone during the welding of the elbows."
 - (b) "Elbow fittings not installed will be shipped back to the supplier. Elbow fittings installed in safety related systems will be removed and shipped back to the supplier."
- (3) Tube Turns letter to NRC dated April 12, 1979, states "U. S. steel has not been able to determine the exact number of lengths of pipe of incorrect chemistry, but indicate it could be at least four lengths. Each length of pipe is twenty feet and makes from 20 to 30 fittings. Upon confirming that several lengths of pipe were involved, Tube Turns initiated a recall program under which we advised all of our customers who had recieved 4" elbows . . ."
- (4) Bechtel's processing of this item (evaluation and reporting) is consistent with their approved procedures. Due to the amount of questionable material involved, this problem appears relative to only the one project.

b. Deviations and Unresolved Items

None were identified.

G. NAMCO Limit Switch

This item concerns a potential deficiency under 10 CFR 50.55(e) and a 10 CFR Part 21 letter issued by the NAMCO Company concerning the NAMCO EA 180 and EA 740 limit switches.

1. Objectives

The objectives of this area of the inspection were to:

- a. Examine the results of the evaluation of this item.
- b. Determine whether this item is generic or plant unique.
- c. Determine if this item was properly reported to the NRC.

2. Method of Accomplishment

The preceding objectives were accomplished by:

- a. Review of MCAR No. 54 for Job No. 9645 dated September 6, 1979.
- b. Review of MCAR No. 54 attachment entitled, "Sequence of Events Pertaining to NAMCO Model EA 180 Limit Switch Concerns."

3. Findings

a. General

- (1) The attachment to MCAR No. 54, referenced above, contained twenty (20) separate referenced action items in which Bechtel, in concert with MP&L, traced the location and use of NAMCO EA 180 and EA 740 limit switches. MP&L submitted a final report, to the NRC, AECM-79/143, dated December 18, 1979, subject - Final Report for PRD-79/14 per 10 CFR 50.55(e), stating that the NAMCO limit switch condition was not reportable under 10 CFR 50.55(e).
- (2) All Bechtel suppliers responded to requests concerning use of NAMCO Limit switches. Only Fisher Controls supplied valves contained the EA 180 limit switch. Bechtel's engineering evaluation was that, if these valves had failed, no adverse effect to the safety of the plant would have occurred.
- (3) MCAR No. 54 concerning the limit switches has been closed. Based on the review of the documents identified, it appears that the evaluation and conclusions reached are appropriate.

b. Deviations and Unresolved Items

None were identified

H. Management Corrective Action Reports (MCARs)

1. Objectives

The objectives of this area of the inspection were to examine the establishment and implementation of procedures for the evaluation and reporting of potential deficiencies.

2. Method of Accomplishment

The preceding objectives were accomplished by:

- a. Review of the project Nuclear Quality Assurance Manual (NQAM), Policy No. QGG-16.1, Corrective Action Program, Revision 3, dated May 1979.
- b. Review of NQAM Policy QGG-16.2, Significant Reportable Deficiencies, Revision 3, dated May 1979.
- c. Review of Quality Assurance Department Procedures Manual, Procedure No. 16.1-1, Revision 0, dated October 5, 1979.
- d. Review of Project Engineering Procedures Manual (PEPM) Procedure 6.1-28, Section 6.15, Processing Management Corrective Action Reports (MCARs), Revision 2, dated April 17, 1978.
- e. Review of PEPM Change Notice No. 94, title, Exhibit "A" - EDP-4.66, Revision 0, Reporting Deficiencies and Noncompliances to the NRC, dated May 11, 1979.
- f. Review of the following MCARs:
 - (1) MCAR No. 54, possible malfunction of NAMCO Model EA 180 limit switch.
 - (2) MCAR No. 52, deficiency concerns for William Powell supplied valves to meet seismic requirements.
 - (3) MCAR No. 56, deficiency concern for Rosemount 510 DU trip units to have common mode failure of certain trip switches.

- (4) MCAR No. 50, required engineering to evaluate problem of possible gross failure output of both master and slave units of the 510 Du Trip Calibration System.

3. Findings

a. Comments

Each of the MCARs referenced above had identified problem areas with proposed corrective action. Each had identified status for reporting the condition as a possible/probable 50.55(e) item. Each had been compiled, reviewed, and approved by cognizant QA and engineering management personnel in compliance with applicable procedures.

b. Deviations and Unresolved Items

None were identified.

I. Pin Failure on Valve Disc

This involves a follow-up to a previous inspection at Bechtel, Los Angeles Power Division (99900521/80-01) to determine if this item is being processed by each of Bechtel's power divisions. This item involved the failure of a pin in the disc of a ten inch (10") check valve in the reactor core isolation cooling turbine exhaust line at the E.I. Hatch Nuclear Station Unit 2.

The valve manufacturer, Walworth Company, sent a design engineer, and a service representative to determine the cause of the failure. The service representative remained on site during plant startup and reported that there was excessive noise caused by flutter of valve disc against its stop. When the turbine reached 3300 R.P.M. the valve noise stopped.

Startup procedure for the RCIC turbine requires a warm-up period at low R.P.M. before top speed is induced. Startup procedure occurs once or twice a month under normal operations; however, during plant construction 5 to 15 startups may occur each day throughout a month.

Georgia Power Company in cooperation with the turbine manufacturer are studying a procedure change which would amend the low R.P.M. turbine warmup. Georgia Power Company will send Bechtel Gaithersburg their procedural amendments. Bechtel will then research these amendments and report if this change will alleviate the turbine exhaust check valve problem.

Bechtel's addressing of the problem and their subsequent actions appear appropriate and results in no deviations or unresolved items in this inspection. No further follow-up of this item is indicated at this time. (For additional information see Report No. 9990521/80-01, Paragraph D).