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

Region I

Report No. 50-423/81-04

Docket No. 50-423

License No. CPPR-113 Priority -- Category A

Licensee: Northeast Nuclear Energy Company

P. O. Box 270

Hartford, Connecticut 06101

Facility Name: Millstone Nuclear Power Station, Unit 3

Inspection at: Waterford, Connecticut

Inspection conducted: June 15-20 and July 1-10, 1981

Inspectors: J. C. Mattia, Senior Resident Inspector — date signed 8/14/81

Approved by: T. Elsasser, Chief, Reactor Projects Section 1B, DR&PI — date signed 8/17/81

Inspection Summary:
Unit 3 Inspection on June 15-30 and July 1-10, 1981 (Report No. 50-423/81-04)
Areas Inspected: Routine inspection by the Resident Inspector of work activities relative to piping system installation, concrete placement activities, weld rod storage and control, storage and maintenance of equipment, and handling of NSSS equipment. Inspection of licensee action on previous inspection findings and plant inspector tours. The inspection involved 105 inspector-hours, including five off-shift hours.
Results: No items of noncompliance were identified.

Region I Form 12
(Rev. April 77)

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## DETAILS

1. Persons Contacted

Northeast Utilities Service Company (NUSCO)

L. Albee, Project Engineer
B. Carlson, Assistant Project Engineer
J. Crockett, Unit 3 Station Superintendent (Operations)
D. Diedrick, Quality Assurance Manager
E. Foster, Director, Generation Construction
K. Gray, Construction QA Supervisor
R. Laundenat, Manager, Generation Facilities Licensing
K. Murphy, QA Construction Technician
S. Orefice, New Site Construction Superintendent
J. Putnam, Senior Construction Engineer
T. Sullivan, Resident Engineer - New Site Construction
S. Toth, System Superintendent Generation Construction
R. Werner, Vice President, Generating Engineering and Construction

Stone and Webster Corporation (S&W)

W. B. Anderson, Assistant Superintendent Field QC
J. Baron, Rod Room #1 Clerk
J. Carty, Head Site Extension Engineering Officer
D. Chapman, QC Inspector
J. Flynn, Construction Supervisor, Piping
P. A. Gagel, QA Program Administrator
R. Jensen, Head Site Extension Engineering Office Engineer
J. G. Kappas, Superintendent of Construction
W. MacKay, Resident Manager
G. Marsh, Senior Engineer, Welding/NDE
M. R. Matthews, Assistant Superintendent Field QC
S. Misenti, QC Inspector
J. Nims, Receiving and Material Controls Technician
R. Reams, Materials Supervisor
L. Seaberg, Rod Room #3 Clerk
F. Sullivan, Senior Resident Engineer
W. Towne, Receiving and Material Controls Technician
G. G. Turner, Superintendent, Field QC
W. Viau, Materials Control Technician

Westinghouse Corporation

E. Harlow, Site Representative
C. Peterson, Site Representative

Graver Tank Company

G. Sherwood, Supervisor
W. Walker, Field QC Supervisor
W. Welch, Field QC Inspector

The inspector also conferred with other licensee and contractor personnel during the course of the inspection.

2. Plant Tours

The inspector observed work activities in progress, completed work and construction status in several areas of the plant. The inspector examined work for any obvious defects or noncompliance with regulatory requirements or license conditions. Particular note was taken of the presence of Quality Control Inspectors and Quality Control evidence such as inspection records, material identification, nonconforming material identification, housekeeping and equipment preservation. Specifically, the inspector observed preparations for concrete operations for the containment wall, ESF and auxiliary building walls and floors, and the installation of rebar for the ESF and auxiliary buildings.

The inspector also observed the various operations (form erection, rebar installation, concrete placement, design fill placement, concrete curing and membrane installation) for the erection of the Category 1 discharge tunnel.

During one of the plant tours, the inspector noticed that on the outside exposed surface of the containment liner plate (dome portion), there were many welded temporary attachments (approximately ½" of plate material surrounded with fillet welds) that were not ground flush. The inspector questioned the licensee about this. The licensee determined that two Stone and Webster (S&W) engineering and design coordination reports (F-S-3991 and P-S-2909) had approved leaving portions of the temporary attachment, since the fillet welds were made by qualified welders, to qualified procedures, and the plates used were of acceptable material. The engineering disposition was to cut the attachments to a maximum of ½ inch; perform a magnetic particle examination the fillet welds, and document the locations of these temporary attachments. The inspector reviewed the following records concerning this item:

- Field record copy #20 documenting the locations

- Erection control sheet #5736

- Random magnetic particle examination reports for the periods September 4-23, 1980.

The inspector informed the licensee that he had no further questions in this area.

3. Licensee Action on Previous Inspection Findings

(Closed) Unresolved Item (423/81-05-07): Erecting of Reactor Coolant Loop Hot Leg and Crossover Piping Using Temporary Pump and Steam Generator Supports. Stone and Webster issued a field construction procedure (FCP-301, Revision 0) detailing the methods for erecting the hot leg and crossover piping. The procedure was reviewed and concurred with by the Westinghouse representative and the licensee. The inspector also reviewed the installation procedure and informed the licensee that this item is considered resolved and that he had no further questions at this time.

(Closed) Unresolved Item (423/81-05-06): A Westinghouse Commitment in RESAR 3, Section 17.1.17 states that a welding/NDE engineer will be onsite during reactor coolant pipe erection. A Westinghouse welding/NDE engineer is presently assigned to Millstone Unit 3 and this item is considered resolved.

(Closed) Unresolved Item (423/81-02-21): Validation of (Sherwin Williams) Liquid Penetrant Materials in Accordance with Procedural Requirements. Stone and Webster performed a procedure validation in accordance with their requirements specified in their procedures QAD 9.31 and 9.32. The evaluation was performed using Sherwin Williams "Dubl-Chek" liquid penetrant materials. The validation was documented in reports Nos. LPV-81-1 and LPV-81-2 and validated by their Level III examiner on May 6, 1981. This item is considered resolved.

(Open) Unresolved Item (423/79-11-01): Licensee's "Exclusion Listing" System for Specific NRC Bulletins Concerning Equipment. The inspector reviewed the status of the licensee's "exclusion listing" system and was informed that it has not been put into effect. During the exit interview at the Berlin corporate office, the licensee stated that the system will be inplace by October, 1981. This item is still considered unresolved pending NRC review of the licensee's action to institute their "exclusion listing".

(Open) Unresolved Item (423/79-11-02): Establishment by the licensee of a system which provides for review for applicability, corrective action as required, and documented evidence of NRC issued circulars and bulletins that are issued for information only. The inspector reviewed the licensee's actions on some circulars and bulletins ("information only" types) and noted that there are still circulars and bulletins for the years 1977, 1978, 1979 and 1980 lacking objective evidence that they have been properly reviewed by the licensee, A/E or NSSS, as required. This item is still considered unresolved pending NRC review of an effective system for timely review of circulars and "information only" type bulletins.

4. Licensee Action on NRC Issued Circulars and Bulletins

a. The inspector reviewed the records relating to the following NRC circulars to verify receipt, review for applicability and the routing of the circulars to the organizations responsible for action had been accomplished:

-- Circular 77-13 (Surveillance Testing of Reactor Protection Logic Circuitry)

The records did not indicate that the circular was routed to the organizations responsible for action. This circular is considered open.

-- Circular 78-03 (Packaging Radioactive Material for Transport)

The records did not indicate that the circular was routed to the organizations responsible for action. This circular is considered open.

-- Circular 78-05 (Inadvertent Safety Injection During Cooldown)

The records state (memo dated June 1, 1978) that operating procedures should be reviewed to ensure that inadvertent safety injections do not occur on Northeast operating and construction units. There is no evidence that the responsible organization will take the necessary or required action. This circular is considered open.

-- Circular 78-06 (Flooding of ECCS Room)

The records did not indicate that the circular was routed to the organizations responsible for action. This circular is considered open.

-- Circular 78-13 (Inoperability of Service Water Pumps Due to High "Silt" Level)

The records did not indicate that the circular was routed to the organizations responsible for action. This circular is considered open.

-- Circular 78-16 (Improper Manual Operation of Limitorque Type SMB-0, 1, 2 and 3 Valve Actuators)

The inspector reviewed the records and noted that a review had been accomplished and that the Millstone 3 operations organization will incorporate the vendors recommendation in their procedure. The inspector also verified that the operations organization had this item on their followup commitment list dated June 13, 1981 (Commitment Item No. 003143). This circular is considered closed.

-- Circular 78-18 (UL Fire Test Full Scale Vertical Cable Tray Array)

The records did not indicate that Stone and Webster was requested to review the circular for applicability. This circular is considered open.

-- Circular 78-19 (Bypass of Safety Actuation Signals)

The records indicate that the licensee and the A/E had reviewed the circular and its applicability to Millstone 3 and had determined that the circuit design for Millstone 3 would not allow this specific event as outlined in the circular to occur. This circular is considered closed.

-- Circular 79-05 (Moisture Leakage in Stranded Wire Conductors)

The records indicate that the circular was transmitted to Stone and Webster on April 4, 1979 for review and comments, however, the records do not contain a reply and it is not listed on the NUSCO followup commitment list dated June 16, 1981. This item is considered open.

-- Circular 79-10 (Pipe Fittings Manufactured From Unacceptable Materials)

The records indicate that only Stone and Webster reviewed their "scope of supply" and did not find any tube turn defective material. The records lack evidence that Westinghouse was required to investigate their "scope of supply" and determine that no defective material was used. This item is considered open pending review of Westinghouse's response to this circular.

-- Circular 79-12 (Potential Diesel Generator Turbo Charger Problems)

There is no objective evidence that this circular was reviewed for applicability to Millstone 3. This item is considered open.

-- Circular 79-17 (Contact Problem with G.E. SB-12 Switches)

The records indicate that NUSCO sent the circular to Stone and Webster on February 4, 1980 to review applicability for the circuit breakers supplied by G.E. for Millstone 3. There is no Stone and Webster reply, nor is this item on the NUSCO Commitment Follow List, dated June 16, 1981. This item is considered open pending review of Stone and Webster response.

-- Circular 79-18 (Proper Installation of Target Rock Safety Relief Valves)

The records did not indicate that the circular was routed to the organizations responsible for action. This circular is considered open.

-- Circular 79-19 (Loose Locking Devices on Pump Impellers)

The records did not indicate that the circular was routed to the organizations responsible for action. This circular is considered open.

-- Circular 79-20 (Failure of GTE Sylvania Relay Type PM-Catalog 5U12-11-AC)

The records indicate that NUSCO requested on October 10, 1979 that Stone and Wesbter review this circular for applicability to Millstone 3. The NUSCO Follow Commitment List of June 16, 1981 indicates the response due date is July 1, 1981. This item is considered open pending review of the Stone and Webster response.

-- Circular 80-23 (Potential Defects in Beloit Power Systems Emergency Generator)

The records indicate that project engineering requested a review for applicability to Millstone 3 on November 24, 1980. There was no response on file nor, was the item on the NUSCO Commitment Follow List of June 16, 1981. This item is considered open.

-- Circular 80-22 (Confirmation of Employee Qualifications)

The records did not indicate that the circular was routed to the organizations responsible for action. This circular is considered open.

-- Circular 80-21 (Misinterpretations of Regulatory Requirements Applicable to Fuel Handling Activities)

The inspector reviewed the operations Follow Commitment List of June 16, 1981 to verify that their procedures and technical specifications will incorporate requirements of the circular. The Commitment List had this item as No. 003053. This item is considered closed.

b. The inspector reviewed the records relating to the following NRC issued bulletins to verify that receipt, review for applicability, the routing of the bulletin to the organizations responsible for action has been accomplished and that where required appropriate action was taken:

-- Bulletin 77-02 (Failure of "AR" Type Relays)

The records indicate that completion of the replacement of these relays on the solid state protection system (SSPS) modules will be accomplished by mid 1981. The SSPS cabinets are scheduled to be shipped to Millstone 3 by July 31, 1981. This item is considered closed.

-- Bulletin 77-03 (On-Line Testing of Westinghouse Solid State Protection System)

The records indicate that Westinghouse will supply Millstone 3 with an updated technical manual for the SSPS which will include complete testing of the safeguards actuation reset circuitry and therefore, the requirements will be incorporated in the appropriate plant procedures. This item is considered closed.

-- Bulletin 77-08 (Assurance of Safety and Safeguards During An Emergency)

The records indicate that Millstone 3 will be in compliance with this bulletin. This item is considered closed.

-- Bulletin 79-01 and 79-01A (Environmental Qualification of Class 1E Equipment)

The records were not completed. They did not indicate that this bulletin was routed to all the applicable organizations responsible for action. For instance, there is nothing in files that Westinghouse was required to respond to this bulletin for their scope of supply. This item is considered open pending further review by the inspector of the licensee's actions concerning this bulletin.

-- Bulletin 79-06 (Review of Operational Errors and Systems Misalignment During TMI Incident)

The records did not indicate that this bulletin was routed to the organizations responsible for action. This item is considered open.

-- Bulletin 79-13 (Cracking of Feedwater System Piping)

The records did not indicate that the bulletin was routed to the organizations responsible for action. This item is considered open.

-- Bulletin 79-15 (Deep Draft Pump Deficiencies)

The records indicate that this bulletin was properly routed for action. The inspector also verified that this was on the plant operations commitment list of January 6, 1981. This item was also listed on the QA Deficiency Surveillance List and was assigned the following numbers:

-- 3326-ASN-000034 (For Service Water Pumps)
-- 3306-ASN-000033 (For Containment Recirculation Pumps)

This bulletin is considered closed.

-- Bulletin 79-17 (Stainless Steel Weld Areas in Stagnant Borated Water)

A rev was conducted of the files pertaining to this bulletin. The file was lacking a Stone and Webster response to a NUSCO letter sent on November 15, 1979 (NUSCO letter Code No. NEC-3485). The NUSCO letter requested a response by November 30, 1979. The NUSCO Follow Commitment List of June 16, 1981 did not list this commitment. This item is considered open.

-- Bulletin 79-18 (Audibility Problems Encountered on Evacuation of Personnel from High Noise Areas)

The inspector reviewed the records and also verified that this item was on the plant operations Commitment List of June 16, 1981. The number assigned to this item is #003053. This item is considered closed.

-- Bulletin 79-21 (Temperature Effects on Level Measurements)

The records indicate that a NUSCO memo was sent on January 2, 1981 to the Supervisor of Instrumentation requesting review of the bulletin and verification that Millstone 3 complies with the bulletin. The memo requested a response by February 27, 1981. The response was not in the files, nor was it on the Project Engineering Commitment Follow List. This item is considered open pending review of the licensee's action.

5. Warehouse Storage and Equipment Maintenance

a. The inspector inspected the storage of safety related equipment in Warehouses #1, 2, 4, 5 and 6 including the RPV head storage facility for compliance with the Stone & Webster Construction Method Procedure 1.3, entitled, "Material/Equipment Storage". The specific items inspected are as follows:

- Containment Recirc Pump (3RSS-M1B)
- RPV Internals (3RCS-P1A, 3RVS-REV-3 and 3RVS-REV-4)
- Circ Water Pump Motor (3CWS-P1C)
- Motor Control Center (3EHS-MCC-1B2)
- Flux Mapping System (NEU-1CE-LDS)
- Reactor Coolant Stop Valve (NEC-RCPCLS-01)
- Four 8-inch Angle Globe Motor Operated Valves (P.O. 183668)
- Reactor Coolant Pump Motors (3-RCS-M-1C and -1D)
- Service Water Pumps (3-SWP-P1A, -1B, -1C and -1D)
- Auxiliary Feedwater Pump and Turbine (3FWA-T1)
- Various Mechanical Snubbers (P.O. 10950)
- 4" Valve Supplied by Westinghouse (PCV-455C)
- Main Control Board Termination Cabinets (3-CES-TB-MBIP)
- Control Rod Position Racks (NEV-340-CPELDA)
- Control Board Display Assay Cabinets (DWG 1060E27G01)
- RPV Head (NEV-RCPC-RV)
- Nuclear Instrument Panel Console in Level A Storage Area

No items of noncompliance were identified.

b. The inspector randomly inspected several of the above items in storage to verify compliance with Stone and Webster Equipment Maintenance Procedure 1.12, entitled, "Material/Equipment Maintenance." The following are the specific equipment storage history records which were reviewed by the inspector:

- Reactor Coolant Pump Motors (3RCS-M-1C and -1D)
- NSSS Supplied Valve (PCV-455C)
- RPV Upper Internals (3-RVS-REV-3)
- RPV Lower Internals (3-RVS-REV-4)
- RPV Head (3-RVS-REV-2)
- Service Water Pumps (3SWP-P1-A, -B, -C and -D)
- Motor Control Center (3EHS-MCC-1B2)
- Containment Recirc Pump Motor (3RSS-M1B)
- Control Rod Position Racks (NEV-340-CPELDA)

During the review of the storage requirements for the above equipment, the inspector noted that the Westinghouse "Component, Receiving and Storage Criteria", Volume II - Electrical, states that the storage level for the rod position racks shall be Level "B" (no humidity control required), yet the document recommends that humidity shall be less than 70%. The racks are currently stored in a Level "B" facility. The inspector informed the licensee that during this inspection, their Level "A" (controlled humidity) storage area humidity was averaging between 68 & 9%, therefore, in order to meet the Westinghouse humidity criteria, a Level "A" storage is required. The inspector was informed by the Stone and Webster Materials Supervisor that there are other Westinghouse supplied items with the same storage criteria for example, the flux mapping system (NEV-1CELDS). The inspector informed the licensee that this item is considered unresolved pending review of the conflicting storage criteria for the Westinghouse supplied equipment (423/81-04-01).

6. Piping Erection and Welding Activities

a. The inspector examined work activities associated with the erection and welding of the various piping systems in the auxiliary building to verify compliance with Stone and Webster Specification M968, entitled, "Field Fabrication and Erection of Power Piping." The specific activities are as follows:

- Rigging and handling of various spool pieces for component cooling piping system.

- Erection of pipe supports, both temporary and permanent for component cooling piping systems.

No items of noncompliance were identified.

b. The inspector examined work activities associated with the erection and welding of the various piping systems in the engineered safety features building to verify compliance with Stone and Webster Specification M968. The specific activities and weld joints inspected are as follows:

- Weld Joint 3-SIH-004-106-2FW3 which was approximately 1/3 completed. Welding was in accordance with Stone and Webster weld technique W12F. The inspector reviewed the weld data history card for appropriate sign off of various inspection hold points, observed the actual welding and cleaning, visually inspected deposited weld and verified that the appropriate welding material was used.

- Weld Joint 3-SIL-008-16-2FW10 which was in process of inspection of thru-wall repair of final weld joint (Note: Radiography found an unacceptable defect). The inspector observed the inspection performed by a QC inspector prior to repair of the weld. The inspector also observed some of the repair welding, to verify compliance to Stone and Webster weld technique W100G.

- Rigging and handling of piping spool piece 3S1H-13-6-4-2 for preparation of the weld joint fit-up.

- Handling and rigging of auxiliary feedwater piping. The inspector questioned the excessive rusting of the outside of the pipe which had been in outdoor storage for several years. It was explained to the inspector that if the piping system is to be insulated, then the surface is prepared in accordance with the requirements of the Stone and Webster Procedure QAD-10.7. If no thermal insulation is required, then the outer pipe surface is prepared for painting, per the appropriate specifications. The inspector informed the licensee that he had no further questions on this item.

No items of noncompliance were identified.

c. The inspector examined work activities associated with the erection and welding of the various piping systems in the containment building to verify compliance with Stone and Webster Specification M968. The specific weld joints and activities inspected are as follows:

- Grinding of final passes for reactor coolant loop (cold leg) at reactor vessel closure weld for loops "B" and "C". The grinding was in preparation for NDE examinations. The inspector observed various portions of this activity (Beginning, Intermediate and Final).

- Inspected various stages of welding of the reactor coolant hot leg loop "D" (pipe to reactor vessel nozzle). The inspection involved the fit-up, completion of root (consumable insert) and 1/3 of weld joint (approximately 4 layers of weld). The inspector reviewed the weld history data, verified weld shrinkage and pipe movement. Data was measured and recorded in accordance with Procedure (FCP-301) requirements, and the weld deposited was visually inspected. The inspector also verified this welding conformed to Stone and Webster weld technique procedure W13B.

- Observed welding of weld joint 3CHS-003-1-2FW2 which was almost complete (final pass started). The inspector reviewed the weld history data and examined the deposited weld after cleaning. Also verified that the proper weld materials were in use.

- Witnessed the hydrogen annealing being performed on Penetration #126 in accordance with Nonconformance Report #0428 requirements.

- Observed the fit-up of weld joint 3CHS-003-416-2FW10 in accordance with Stone and Webster weld technique procedure W12G. Also observed the QC inspector perform his fit-up inspection.

No items of noncompliance were identified.

d. The inspector examined work activities associated with the erection and welding of the service water piping system in the yard to verify compliance with Stone and Webster Specification M968. The specific activities inspected are as follows:

- Observed welding of service water pipe weld joint No. 3SWP-030-190-3FW3 in accordance with Stone and Webster weld technique procedure W29D. The weld joint was approximately 3/4 welded. The inspector reviewed weld history data, verified that the appropriate welding material was being used, and inspected as deposited weld (after cleaning pass).

- Rigging and handling of service water pipe 3SWP-11-6-7-3 to prepare weld joint for fit-up inspection.

No items of noncompliance were identified.

7. Welding Material Storage and Control

The inspector inspected weld storage facilities onsite (Rod Room #1 and #3) for compliance to Stone and Webster construction methods procedure 6.4, entitled, "Welding Material Control." The inspector audited weld rod issue slips and verified that the information on the slips was consistent with procedural requirements. The inspector also verified that welding material was properly segregated according to type, was being stored in heated rod ovens with calibrated thermometers and were set at the appropriate temperature for the various types of rods. The inspector also inspected unopened containers of welding material to verify that the hermetic seals were not broken.

No items of noncompliance were identified.

8. Welder/Welding Operator Qualification Program

The inspector monitored three welders performing qualification tests (PQM 177, 178 and 193). The inspector also examined their work and discussed their experience and progress with the construction supervisor. For the ongoing activities inspected, no deviations from the Stone and Webster Construction Procedure CMP 6.9, entitled, "Performance Qualification of Welders" were found.

9. Containment Liner Erection Activities

The inspector observed the removal of the temporary welded attachments for the wind girder supports located on the inside of the containment (Liner Plate Ring No. 11). The work was being performed in accordance with the Graver Erection Control Sheet #5529. The removal consisted of arc gouging the attachments, grinding, welding where required, and performing magnetic particle examination of the finished area. The inspector also reviewed some of the magnetic particle examination records for the same examinations performed in accordance with the Graver Procedure MT-5, Revision 3.

No items of noncompliance were identified.

10. Component Cooling Heat Exchanger Support Work Activities

The inspector observed the torqueing of bolts on the component cooling heat exchanger supports in accordance with the Engineering Specification M134 and Drawing EV-42A and B requirements. The inspector also verified that the torque wrench (#04880) and torque multiplier (#05218) were in calibration. The inspector interviewed the QC inspector to verify that he was knowledgeable on the requirements for this specific activity.

No items of noncompliance were identified.

11. Fill Operations for Offgas Line

The inspector observed the backfilling operations in the trench for the offgas line. The inspector also reviewed the fill release cards No. N-105 and N-108 for this activity. The inspector witnessed compaction tests being performed to verify that the specified minimum compaction (95%) is being obtained.

No items of noncompliance were identified.

12. Concrete Repairs

The inspector observed the repairs of the engineered safety features building walls (44.3 and 46.3) in accordance with dispositions on the Nonconformance Reports (Nos. 604 and 668). Based on the review of documents, discussions with inspection personnel and the direct observation of work, the inspector determined the following:

- The excavated area, including exposed rebar, was properly prepared and coated with "weld-crete" bonding material.

- The forms were adequate to facilitate rapid, continuous and complete filling of the space to be grouted.

- Mixing of Embaco 636 grout was in accordance with the vendors requirement.

- The QC inspector at the repair area was knowledgeable of work requirements.

No items of noncompliance were identified.

13. Installation of NSSS Components

The inspector witnessed portions of the rigging and handling of the reactor pressure vessel internals (3-RVS-REV-4) and steam generator (NEU-RCPCSG-2) into the containment. The work activities were governed by the Stone and Webster Field Construction Procedures #295, entitled, "Steam Generator Installation and Rigging" and #304, entitled, "Lower Internals Installation and Rigging." Based upon the requirement of the documents, discussions with Stone and Webster inspection and construction personnel and the direct observations of some of the work activities, the inspector determined the following:

a. Steam Generator

- Procedure requirements were adhered to
- QC inspection personnel were knowledgeable of requirements.

No items of noncompliance were identified.

b. Lower Internals

The inspector was not present during the upending of the lower internals to a vertical position using the polar crane main hoist. During this operation, the brakes on the trolley atop of the bridge girders let go and this caused the trolley to whip back and forth, which caused some rocking of the lower internals. No visual damage was noted to the internals. Stone and Webster issued a nonconformance report #0821 for this event.

The trolley and crane were inspected for damage by a "P-H" crane representative. His inspection indicated that there was no physical damage to the crane. His recommendation was to do a magnetic particle examination of the crane hook prior to performing the lift of the lower internals.

Based upon review of field construction procedure #304, associated procedure change to method of rigging, and risk release #154, direct observations and discussions with construction and inspection personnel, the inspector determined the following for the lifting of the internals into the containment storage location.

- Procedure requirements were adhered to

- Inspection and construction personnel were knowledgeable of requirements for this project

- The crane hook was magnetic particle inspected (Note: A spare hook was used instead of original in order to expedite the lifting of lower internals).

No items of noncompliance were identified.

14. Observations of Concrete Placement Activities

The inspector observed a major portion of the placement of concrete for the containment wall (Placement No. C-3714). The inspector verified that the requirements of Specification C999 for placing of concrete were adhered to. The following specific activities associated with this placement were inspected:

- Concrete pour release card was appropriately completed and approved.

- Inspection personnel were located in close proximity to the truck discharge and the location of placement.

- Appropriate testing (slump, temperature and air) was being performed.

- Delivered concrete met design specifications.

- Consolidation of concrete in the forms was adequate.

- Reviewed replacement (#51002008) and placement (#51002006) QC inspection reports.

No items of noncompliance were identified.

15. Reactor Vessel Outlet Nozzle Safe-Ends

One of the prerequisites per the Stone and Webster reactor coolant loop hot leg piping installation procedure (FCP-301) is that the reactor pressure vessel No. 22LF safe ends be acid etched per attachment 3.6 of procedure. The purpose of the etching is to locate the inconel attachment weld interface so that cracking will not result from overlapping of stainless steel weld beads onto the inconel weld. Of the four nozzles done, only one (Loop "D") met the acceptance criteria (greater than ½"). The vessel manufacturer (Combustion Engineering) repeated the acid etch examination to verify the Stone and Webster test results. The manufacturer's etching results were reviewed by the inspector and they basically repeated Stone and Webster examination. Nonconformance reports (N&D 0787, 0788 and 0789) were issued for these deficiencies on the 3 safe ends. The inspector questioned if this condition was evaluated for reportability in accordance with 10 CFR 50.55(e). The inspector was given a copy of a Westinghouse report dated June 19, 1980 which stated that in March 1980 Combustion Engineering informed them that due to a design change on the 4 loop reactor vessels, the tolerance stackups could not guarantee a ½ inch minimum length of stainless steel on the safe end. The report also stated that it was not reportable to the NRC because the maximum depth of cracks resulting from welding stainless steel to inconel is estimated to be only 3/16 of an inch and not a safety hazard. Per the report, there are 14 reactor vessels shipped to various sites that have this potential discrepancy and all will be examined.

The inspector informed the licensee he had no further questions on this item at the time.

16. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance, or deviations. An unresolved item disclosed during the inspection is discussed in Paragraph 5.

17. Management Meetings

At periodic intervals during the course of this inspection, meetings were held with senior licensee management to discuss the scope and findings of this report.