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

		Regio	in I		
Report No. Docket No.	50-354/80-14 50-355/80-14 50-354 50-355 CPPR-120				
License No.	CPPR-121	Priority		Category	A
Licensee:	Public Service E	lectric and Ga	is Company		
	80 Park Place				
Newark, New Jersey 07101					
Facility Na	me: <u>Hope Creek</u> G	enerating Stat	tion, Units 1 ar	nd 2	
Inspection	at: Hancock's Br	idge, New Jers	sey		
Inspection	conducted: Septe	mber 2 - Octob	ber 5, 1980		
Inspectors:	WAL Sateman	Resident Inst	pector	10/15/	BO
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	fors. D. Reynolds	, Jr., Reactor	· Inspector	date	signed
				date	signed
Approved by	: A. C. mot	ti-		10/21	180
	J. C. Mattia,	Chief, Project	is Section (Act	ing) date :	signed
Approved by	: J. C. Mattia,	Chief, Project	ts Section (Act	$\frac{date}{10/21}$ ing) date	signed 80 signed

## Inspection Summary:

# Unit 1 Inspection of September 2 - October 5, 1980 (Report No. 50-354/80-14):

8104200 094

<u>Areas Inspected:</u> Routine announced inspection by the resident inspector and two unannounced inspections by a regional based inspector of work in progress including PDM vent line bellows repair, lower biological shield sole plate installation, structural steel installation, backfill operations, pipe welding, equipment storage, air testing of drywell penetrations, field drawing control, equipment lifting and handling operations, weld filler material control, and rebar installation. The inspectors also made site tours, reviewed licensee action on previous inspection findings, and took physical measurements using an ultrasonic thickness device, a pyrometer, fillet weld gauges, and vernier calipers. The inspection involved 84 hours onsite by the resident inspector, 8 of which were spent offshift, and 41 hours onsite by a regional based inspector.

Region I Form 12 (Rev. April 77) Results: Of the thirteen areas inspected, no items of noncompliance were identified in nine areas and one item of noncompliance was identified in each of four areas. (Deficiency - failure to follow procedures established for issuance of weld filler material-paragraph 3; Infractions - failure to establish a code basis prior to the start of welding the control rod drive mechanism support housing brackets to the pedestal liner plate-paragraph 4; lack of controls over welding preheat operations to prevent damage to safety related concreteparagraph 5; and failure to make bolted connections in accordance with specification requirements-paragraph 6.)

#### Unit 2 Inspection of September 2 - October 5, 1980 (Report 50-355/80-14):

Areas Inspected: Routine announced inspection by the resident inspector of work in progress including backfill operations, storage of equipment, and concrete repairs. The inspector also made site tours on a regular basis and reviewed licensee action on previous inspection findings. The inspection involved 22 hours onsite by the resident inspector.

Results: One item of noncompliance was identified (failure to make bolted connections in accordance with specification requirements-paragraph 6.)

#### 1. Persons Contacted

Public Service Electric and Gas Company (PSE&G)

A. Barnabei, Site QA Engineer

- V. J. Blenx, Construction Manager Projects
- R. Bravo, Senior Construction Engineer
- R. Donges, Site QA Engineer
- R. Evans, Assistant Manager, Quality Assurance
- A. E. Giardino, Project QA Engineer
- P. Kudless, Principal Construction Engineer
- A. Myer, Site QA Engineer
- R. Robinson, Site QA Engineer
- D. Skibinski, Site QA Engineer
- A. Smith, Project Construction Manager

#### Bechtel Power Corporation (Bechtel)

E. Applegate, QC Engineer B. Bain, Lead Field Welding Engineer A. J. Bryan, Assistant Project QC Engineer E. Cochrane, Field Contract Administration J. Duddy, Field Electrical Engineer A. Falvey, Field Welding Engineer J. Gatewood, Lead Site QA Engineer T. Gohde, Field Civil Engineer T. Gormley, Civil Field Engineer R. Hanks, Project QC Engineer R. Hanselman, Field Welding Engineer M. C. Henry, FCM Staff Assistant W. Hindle, Project Field Engineer C. Holod, Project QC Engineer P. Hudson, QA Engineer C. Kasch, Assistant Project QC Engineer D. Long, Project Superintendent R. Mackey, Resident Engineer M. Macondray, Assistant Project Field Engineer R. McCoy, Lead QC Engineer F. Morsy, Resident Engineer J. Patch, Field Contract Administrator R. Price, Field Contract Administrator D. Reel, QC Engineer L. Rosetta, Field Construction Manager K. Rumsey, Civil QC Engineer D. Sakers, Lead Civil QC Engineer R. Seraiva, Field Superintendent P. Schuetz, Lead Civil Field Engineer S. Vezendy, Lead Welding QC Engineer P. Willis, Civil QC Engineer J. Windsor, Field Superintendent

Pittsburgh - Des Moines Steel Company (PDM)

M. Stiger, Site QA Manager

General Electric Installation and Services Engineering (GEI&SE)

- R. Burke, Project Manager
- C. Clark, Lead Engineer
- D. George, Welding Engineer
- F. Hatmaker, Site QC Supervisor

#### General Electric Nuclear Engineering Division (GENED)

- J. Cockroft, Site Engineer
- C. Brinson, Site QA Manager

Schneider, Inc.

- W. Goebel, Site QA Manager
- P. Hudson, Site Superintendent

#### 2. Site Tour

Daily tours of the site were made to observe the status of work and construction activities in progress. Work activity continues to increase on Unit 1 and remains minimal on Unit 2. The inspectors noted the presence of and interviewed QC and construction personnel. Work items were examined for obvious defects or noncompliances with regulatory requirements or license conditions. Areas observed included:

Unit 1: Vent line bellows repair, backfill operations, air testing of drywell second course penetrations, repairs to piping field welds, rebar installation, storage of equipment, equipment handling, structural steel installation, welding material control, welding and Neoweld preheating system for lower biological shield to sole plate weld joint, pipe welding, and removal and installation of austenitic stainless steel lugs inside the suppression chamber.

Unit 2: Backfill operations, storage of equipment, and concrete repairs.

No items of noncompliance were identified.

## 3. Reactor Vessel Nozzle Replacement - Review of Documentation - Unit 1

The welding operations for the safe end field change replacement were previously described in reports 50-354/80-05 and 50-354/80-08. The inspector reviewed the in process documentation for these welds. During the review of the documentation it was noted that the GEI&SE Joint Process Control Sheet (JPCS) weld history records indicated that the filler metal requisition form was not being utilized in accordance with the GEI&SE QA Manual (paragraph 11.6.3). The welding supervisor was initialing the form for the selection of filler metal and also initialing the form where the weld filler metal issue clerk was the responsible person per the QA Manual. The filler metal requisition form was maintained in the GEI&SE office rather than being used as a working document and as an actual requisition form. GEI&SE also employs a filler metal issue log which is not part of the QA system which is intended as an inventory log to inform the welding engineer of needs for reordering filler metal. This is a working document that can be correlated with the JPCS filler metal requisition form.

Failure to follow the QA procedures governing the issue of weld filler material is an item of noncompliance relative to Criterion V of Appendix B of 10 CFR 50. (354/80-14-01)

#### Reactor Vessel Installation - Installation of Under Vessel Structural Steel - Unit 1

The inspectors reviewed the GEI&SE welding activities in progress on the connections between the control rod drive mechanism (CRDM) housing support brackets and the reactor vessel pedestal liner. These particular welds are shown on GENED drawing 761E724, Rev. 6 and are called out on the drawing to be by others - in this case GEI&SE. In the process of the review it became apparent that GEI&SE and GENED could not state the code basis for the installation and inspection of the weldment. In particular, when questioned as to what code or standard they were using as a basis for installation and inspection of the brackets, GEI&SE and GENED stated ASME Section IX. The inspectors pointed out that ASME Section IX may be sufficient to qualify welders and weld procedures but does not suffice as an installation and inspection code. The inspectors reviewed the documentation available at GEI&SE that related to these welds. In particular GEI&SE Detailed Weld Procedure No. HC-79-1000D, Revision 1 and Procedure Oualification ISE-POR-1 were reviewed. It was apparent after the review that this documentation was not sufficient either as a complete procedure gualification for the welds being made or as an installation and inspection procedure.

The failure to establish a code, standard, or procedure as a basis for installation and inspection prior to starting welding of the CRDM housing support brackets is an item of noncompliance relative to Criterion IX of Appendix B of 10 CFR 50. (354/80-14-02)

## Safety Related Structures (Welding) - Observation of Work and Work Activities - Unit 1

During a routine inspection of structural steel welding activities, the inspector noted that reactor vessel pedestal concrete had been damaged due to heat. Further investigation revealed that prior to making the attachment welds between the box girders (at 100' elevation inside the drywell) and the steel embedments located in the reactor vessel pedestal concrete, a 225 degrees F preheat was required. The method for preheating involved the use of an oxy-acetylene flame directly on the joint groove. Because of lack of controls to prevent damage to safety related concrete while preheating embedments, the preheat flame was allowed to impinge directly on the joint groove from whence it was deflected onto the concrete adjacent to the embedment. In turn the heat from the deflected flame damaged the epoxy paint surfacer and the concrete adjacent to the embedment. The extent of the damage was indeterminate without further investigation but appeared to be limited to areas adjacent to two embedments. The type of damage appeared to be flaking of the concrete in the affected areas.

The inspector discussed this situation with a field welding engineer who stated that preheat of the joint groove could be accomplished in such a manner that the creheat flame would not come in direct contact with the concrete and that preheat temperature could be controlled to preclude the possibility of damaging the concrete in which embedments are located.

The failure to establish controls over welding preheat operations to prevent damage to safety related concrete is an item of noncompliance relative to Criterion IX of Appendix B of 10 CFR 50. (354/80-14-03)

#### Safety Related Structures (Structural Steel and Supports) - Observation of Work and Work Activities - Units 1 and 2

Structural steel bolting methods are specifically discussed in paragraph 8 of Bechtel Specification C-126 (Q), Rev. 6, "Erection of Structural Steel for Category 1 Structures, " in paragraph 2.3 of Project Quality Control Instruction (PQCI) C-2.10, Rev. 8, "Structural Steel Erection," and in the AISC manual. There are three basic bolt tightening methods permitted by these documents: (1) turn-of-nut, (2) calibrated impact wrench, and (3) use of load indicator washers. All three of these methods provide for control of the tightening of every bolt in a bolted connection. Additionally, the requirements in C-126 (Q), PQCI C-2.10, and the AISC manual impose the inspection requirement to perform a random sampling bolt tightness verification of each completed bolted joint.

During inspection of bolting operations involving the structural steel erection inside the containment drywell, the inspector questioned an ironworker as to the method he was using to tighten the bolts in bolted connections. His response was that he was tightening the bolts with an air operated impact wrench. When asked by the inspector if the impact wrench was calibrated, the ironworker stated that the wrench was not calibrated. The inspector pursued this problem with site QA personnel and was informed that the bolted connections were being snugged up using the impact wrench and would be tightened at a later time by turn-of-nut. The inspector questioned the QC personnel involved in this activity and was informed that it was not the intention to tighten each bolt by turn-of-nut method. The QC personnel stated that because the bolts were tightened using an uncalibrated impact wrench that they had to verify the tension in two bolts of each connection by using a calibrated torque wrench and that this would satisfy the tightening and inspection requirements. The inspector then questioned the QC personnel as to the methods in use on this project for tightening bolts. QC stated that the methods in use to tighten bolts are turn-of-nut for bolt sizes for which load indicator washers are not manufactured, use of load indicator washers, and use of impact wrench (uncalibrated) followed by sampling of bolts for torque. The inspector explained to the QC personnel that the intent of C-126 (Q), POCI C-2.10, and the AISC manual is to require not just a random inspection after the bolts have been tightened but more importantly to control the tightening of every bolt prior to the random post tightened inspection.

Because normal practice with the bolt size involved (7/8" diameter) is to tighten them with a load indicating washer, the number of unacceptable bolted joints as indicated by the lack of a load indicating washer, may be minimal. The particular reason for not using load indicating washers in this instance was because the on site supply had been exhausted. In responding to this item of noncompliance the licensee will be expected to justify all bolted joints in safety related structural steel that were not tightened with load indicating washers or by turn-of-nut.

Failure to follow bolt tightening procedures as specified in C-126 (Q), PQCI C-2.10, and the AISC manual is an item of noncompliance relative to Criterion V of Appendix B of 10 CFR 50. (354/80-14-04; 355/80-14-01)

## 7. Reactor Vessel Nozzle Replacement - Review of Documentation - Unit 1

Paragraph 3 of this inspection report described an item of noncompliance that was identified by the inspector during documentation review. Further review of the JPCS weld history records also indicated that the mandatory visual (I.D.) inspection of the roct pass was performed on some welds along with the in process PT examinations of the root pass and in other cases it was not recorded as being performed even though the weld was complete, repair welds were complete and the joint was awaiting re-RT.

The lack of definition as to the sequence in which a mandatory inspection is to be performed is considered by the inspector to constitute an unresolved item. This item is unresolved pending licensee action defining the proper sequence for this inspection. (354/80-14-05)

## 8. Reactor Vessel Installation - Installation of Under Vessel Structural Steel Units 1 and 2

In paragraph 4 of this inspection report an item of noncompliance is described that was identified by the inspector during observation of work activities relating to installation and inspection of the CRDM housing support brackets. Continuing with this subject, GENED stated (letter dated 8/28/80 from J. C. Larrew to H. E. Morris, Bechtel) that mechanical verification of adequate fillet weld throat was required of the fillet welds used to attach the brackets to the pedestal liner. The inspector questioned site personnel as to how this verification will be performed, i.e., what method is proposed for measuring the effective throat of the welds produced? It was stated that a mockup will be made to determine the required information. The acceptance of the effective throat of the welds produced is unresolved pending licensee establishment of a method to measure the throat size and the outcome of these measurements. (354/80-14-06; 355/80-14-02)

### Safety Related Structures (Structural Steel and Supports) - Observation of Work and Work Activities - Unit 1

The inspector reviewed a series of Bechtel drawings regarding erection of structural steel inside the drywell. One of the drawings was C-0973-0, Rev. 5, "Primary Containment Drywell Interior Framing Typical Details and Schedules." This drawing shows in Detail 10 a typical connection between a rolled shape and a radial box girder. Note 3 on this drawing which applies to Detail 10 states:

In case of bolt hole misalignment applied to detail 10, Dwg. C-0973, field has the option of using either oversized or slotted holes in accordance with specification C-126(Q) and the following criteria:

- a) Bolt holes may be oversized and large diameter (A490) bolts may be used. The nominal diameter of the oversized hole shall not exceed by more than 1/16" the nominal diameter of the bolt. The connection shall be bearing type, with threads included in shear planes. The edge distance and center to center distance of the holes shall be in accordance with AISC requirements.
- b) Bolt holes may be slotted and friction type connections may be used provided the following conditions are met:
  - All contact surfaces shall be blast cleaned from paint, rust and other impurities.
  - The proper tension in the bolts shall be accomplished by load indicator washers in accordance with Section 8 of C-126 (Q).
  - The edge distance and center to center distance of of the holes shall be in accordance with AISC reguirements.
  - Only the holes in the web of the rolled section may be slotted.

The inspector observed the connections in the field and noted that they did not conform to the requirements of drawing C-0973-0. The discrepancies identified and pointed out to the licensee were that the angle clips and not the rolled shape were slotted and provisions for friction type connections were not made where slotted holes were in use. Bechtel field engineering reviewed the approved supplier (Levinson Steel) drawings to determine if slotted holes were called for at these connections. The supplier drawings did show slotted holes in the angle clips and not in the rolled shapes at these connections. Bechtel field engineering personnel were not sure that the original design accounted for friction type connections in the drywell structural steel.

The use of slotted holes in the angle clips and the resultant friction type connections are unresolved pending licensee evaluation of the use of slotted holes in the angle clips in lieu of the rolled shape and the lack of provisions taken for bolting up friction type connections where slotted holes exist. (354/80-14-07)

#### 10. Safety Related Structures - Lower Bioshield Soleplate - Unit 1

Bechtel is in the process of welding a 2 inch thick soleplate onto the top of the lower biological shield. The sole plate is fabricated in eight sections which results in eight open joints. The inspector questioned site personnel as to how these joints were to be sealed as they ranged in opening up to one-half inch. The inspector was referred to Bechtel drawing C-0955-0, Rev. 6 which shows that 6 inch grout holes are to be burned into the sole plate every 5 degrees with the centerline of eight of the grout holes being the joints between the eight sole plate sections. This would result in the joints being sealed after the grouting of the top portion of the lower bioshield was completed. Further research into the drawing showed, however, that a Field Change Notice (FCN) had been issued to reduce the number of grout holes by changing the grout hole spacing from every 5 degrees to every 6 degrees. This change in spacing results in four joints no longer being sealed by the use of a grout hole.

This item is unresolved pending licensee evaluation of the need to seal the four joints to prevent possible neutron streaming during plant operation. (354/80-14-08)

#### 11. Safety Related Piping - Special Welding Applications (Repair Welds) - Unit 1

The inspector witnessed the metal removal and partial completion of repair welding of containment spray header pipe (16" OD x 1.258 wall) weld joint LA-1-2-6 to LA-1-3-7 performed by Schneider. The defect removal resulted in removal of 30" of the weld joint down to the root with a resultant open root requiring GTAW root pass welding and SMAW to complete the joint. During the review of Schneider weld history records for the containment spray header repair weld, the Inspector questioned Schneider on the reference in the Schneider Site QA Manual where the criteria (items) for construction welding and QC inspection points were itemized. Sections 8 and 9 of the QA Manual appear to reference each other without any explicit list of items to be checked or surveillance checked. This question was determined to be an unresolved item pending licensee action to determine the specific list of items required to be performed, checked, and surveyed while performing weld repairs. (354/80-14-09)

#### 12. Licensee Action On Previous Inspection Findings

(Closed) Unresolved Item (354/80-05-02: 355/80-05-02): Welding documents classify base metals as P43 whereas actual joints are P43 buttered P8, P3, and P1. ASME Code does not acknowledge substitution of F No's for P No's. Further evaluation by the inspector indicates that although the ASME code does not specifically acknowledge the substitution of F No's for P No's, the use of "buttered" joints is in common usage and although the thickness of the F43 exceeds the normal thicknesses used for "buttered" joints the mechanical properties for the F43 portion exceeds the minimum mechanical property requirements for the safe end. In addition the soundness of the F43 is demonstrated by the radiographic examination of the composite joint.

(Closed) Unresolved Item (354/80-05-03; 355/80-05-03): GE PQR-1 supporting HSCE 79-1-4W lacks sufficient data on supplementary SA537 Class 1 test assembly made to meet notch toughness requirements such as position and dimensions. Bechtel letter F072120 to PSE&G (Mr. Giardino) dated 6/13/80 and GE letter to Bechtel (Mr. Rosetta) dated 6/3/80 provide sufficient data to satisfy ASME Code requirements and are included as attachment to a revision of PQR-1.

(Closed) Noncompliance (354/80-04-01): QC failure to execute the inspection program for pour IB-F/G-W-903 as was evidenced by their awareness of and lack of response to concrete being free dropped in excess of 6 feet through dense rebar. The inspector examined the area of the pour after form removal and noted no apparent problems on the surface of the concrete. Additionally, QC personnel have been retrained and their stop work authority re-emphasized and all superintendents and field engineers directly associated with concrete operations instructed to comply with site procedures.

(Open) Unresolved Item (354/80-04-02): Request for licensee's justification for design, classification, and NDE of drywell to torus vent line bellows corner joint. The licensee submitted letters from PDM, Bechtel, and the Authorized Inspection agency stating that the joint design, classification, and NDE are acceptable. No justification, as requested in the initial unresolved item accompanied the licensee's response. This particular issue has undergone further review and has been found unacceptable by the NRC. In particular the bellows corner joint as presently installed and nondestructively examined is considered not to meet the requirements of Subsection NE of Section III of the ASME Code. The NRC position is that in order for the joint to meet Code requirements it must either:

- Undergo volumetric examination if the joint remains in its present configuration;
- (2) Be provided with reinforcement per Code requirements if surface examination is to be the NDE requirement; or
- (3) Be analyzed to show that the existing material thickness provides Code required reinforcement if surface examination is to be the NDE requirement.

The licensee is evaluating the NRC position.

(Closed) Unresolved Item (354/80-07-04; 355/80-07-02): Request for clarification of fabrication requirements of the biological shield. Bechtel Specification C-139(Q) was revised to specifically delineate the paragraphs of ASME III Subsection ND that are applicable to fabrication of the bioshield.

#### Observation of Welding and Review of Documentation - Sole Plate to Lower Biological Shield (Bioshield) Weld Joint - Unit 1

The sole plate to bioshield welds (ID and OD bioshield to sole plate) consist of single bevel full penetration backing strip welds made to AWS D1.1 requirements. The vertical bioshield is beveled and the sole plate extends past the weld joint thus requiring a 2G position weld. The thickness of the materials being joined requires preheat which is being accomplished with resistance blanket heaters. The root of the weld is being made with E7018 filler metal in accordance with Bechtel P1-A-Lh. Upon completion of the root portion of the weld (approximately ½") the root weld is to be examined by magnetic particle methods and when satisfactory the remainder of the weld will be accomplished using the semi-automatic gasless FCAW process using SFA 5.20 E70T-G Lincoln NR203M filler metal. The NRC inspector reviewed the Bechtel WPS (P1-F), PQR 654, Welder Performance Qualification Records, the Bechtel P.O. requirements for the filler metal, and the Lincoln Certified Test Reports for the filler metal. (Lincoln CMTR dated 6/29/79 for Lincoln Order E-25599 ES-LY and Bechtel P.O. 10855F-18846).

The inspector also reviewed Branch MT procedure MT-HC-77-8-15-2 dated 7/22/80 to be used for the inspection of the root weld of bioshield to sole plate. Branch will use prods on face side edges of the weld joint with 4 inch bias spacing to produce a less than 6 inch path with approximately 600 amps. The prods will be reversed for second check. The Specification calls for blending of possible non-relevant areas. Reviewed Branch personnel qualifications for conformance to the requirements of ASNT-TC-1A.

No items of noncompliance were identified.

#### 14. Reactor Coolant Loop Piping - Observation of Welding Activities - Unit 1

The inspector observed ongoing HPCI pipe welding activities. In particular the intermediate pass welding and flat top grinding was observed for 1-P-BJ-003, FW 5 (10"), intermediate pass welding for 1-P-BJ-001, FW 5, (14") and the fitup, root pass and lower intermediate passes on 1-P-BJ-001, FW 2 (14"). The welds were visually inspected. The inspection indicated that the welds were made in accordance with the traveler requirements, were properly identified and located, the welding procedures utilized were properly qualified, welding conducted in accordance with proper WPS with the proper filler metals, welders were properly qualified and the weld history records were complete.

No items of noncompliance were identified.

# 15. Safety Related Pipe Support and Restraint Systems - Units 1 and 2

The ASME III Code Classes 1, 2, and 3 pipe supports are to be in accordance with ASME III Subsection NF on this project. The licensee has established, as part of their design basis, a NF Code Jurisdictional Boundary for linear

type supports at the weld between the "catalogue item" and the structural steel member rather than at the connection to the building structure. By so classifying the boundary they have interpreted that the structural member welded to the building is a part of the building and not part of the linear type support. NF-1110 (b) and (c) appear to classify component supports as including the weld between the building and the structural member. The licensee is following NF requirements for the design, fabrication, and installation of this "supplementary" steel except that the requirements for third party inspection, code data reports and NDE are not being met. The selection of the NF jurisdictional boundary to not include the supplementary steel, i.e., the steel between the catalogue item and the building structure, is under review by the NRC. (354/80-14-10; 355/80-14-03)

## 16. <u>Safety Related Components - Observation of Work and Work Activities - Units</u> I and 2

The inspector reviewed the following documentation as part of an overall inspection of the Diesel Generator Fuel Oil Storage Tanks:

- -- Bechtel Dwg. M-105-Q2(1)-8
- -- Bechtel Dwg. M-105-07(1)-6
- -- Bechtel Dwg. C-0399-0, Sht. 33, Rev. 3
- -- Bechtel Dwg. C-0399-0, Sht. B-3, Rev. 5
- -- Bechtel Dwg. C-0399-0, Sht. D-2, Rev. 9
- -- Bechtel Dwg. C-0308-0, Rev. 4
- Bechtel Specification M-105(Q), Rev. 4, Diesel Fuel Oil Storage Tanks (ASME III)
- -- Documentation packages for D.G.F.U. Storage Tanks with tag numbers 1 HT 403 RH, 2 ET 403 RH, 1 DT 403

The documentation review included verification that material certifications, NDE records, Code data sheets, and fabrication travelers, were complete and in accordance with ASME III Subsections ND and NF requirements. Additionally, a visual inspection of eight of the sixteen tanks was performed to ensure that the records reflected the as built conditions. This visual inspection included weld size measurements, Code stamp application, and conformance of tank installation to drawing requirements.

No items of noncompliance were identified.

Additionally, the inspector observed the condition of other components installed in both units to ensure routine maintenance activities are being performed. In particular the condition of the HPCI and RCIC pumps and turbines, the installed motor operated valves, and the RHR heat exchangers were noted.

No items of noncompliance were identified.

The inspector observed the handling operations involved in unloading and placement of SACS heat exchanger 1A1E201. This heat exchanger is ASME III Class 3 and was manufactured by Graham. The unit was barged to the site, unloaded by crane onto a low-boy trailer, moved to the power block, and then lifted and set onto its anchor bolts by crane. The inspector reviewed the handling procedure and interviewed several personnel associated with the handling operation.

No items of noncompliance were identified.

#### 17. Containment Penetrations - Observation of Work and Work Activities - Unit 1

As discussed in Inspection Report 80-12, PDM has extended the length of 32 drywell second course penetrations. Because additional welding was performed after the containment overpressure test, testing of each penetration was required. The inspector witnessed the pneumatic testing of penetrations J-11, J-13, and J-37. The test sequence involved a gross leak test (soap bubble) at 5 psig, an overpressure test at 71.5 psig for 1 hour, and a leak test (soap bubble) at 62 psig. The test equipment, instrumentation, and test procedure performance were all observed to be in conformance with PTP-2, the approved PDM test procedure. All 32 penetrations were satisfactorily tested.

No items of noncompliance were identified.

#### 18. Field Drawing Control - Unit 1

The inspector selected at random approximately twelve Bechtel drawings that were located at a field drawing station for the purpose of verifying drawing control. The drawing number, revision, and attached Field Change Requests (FCR's) and Drawing Change Notices (DCN's) were noted and then compared with the master list to ensure that the drawing control system was functioning to keep the field drawings up to date.

No items of noncompliance were identified.

### 19. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items or items of non-compliance. Unresolved items identified during the inspection are discussed in paragraphs 7, 8, 9, 10, and 11.

## 20. Exit Interview

The inspector met with licensee and contractor personnel on each Friday of this inspection report period. At these times the inspector summarized the scope and findings of that week's inspection activities.