U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-219/88-81

Docket No. 50-219

License No. DPR-16

Licensee: GPU Nuclear Corporation
100 Interpace Highway
Parsippany, New Jersey 07054

Facility Name: Oyster Creek Nuclear Generating Station

Inspection At: Forked River, New Jersey

Inspection Conducted: November 14 thru November 23, 1988

Inspectors: S. K. Cahudhary, Senior Reactor Engineer — 1/5/89 date

for R. Lipinski, Structural Engineer, NRR — 1/5/89 date

for R. A. McBrearty, Reactor Engineer — 1/5/89 date

for R. H. Harris, NDE Technician — 1/5/89 date

for M. A. Oliveri, NDE Technician — 1/5/89 date

Approved by: J. R. Strosnider, Chief, Materials and Processes Section, EB, DRS, Region I — 1/5/89 date

Inspection Summary and Conclusions: A routine announced inspection was conducted at Oyster Creek Nuclear Power Station on November 14 through 23, 1988. (Report No. 50-219/88-81).

Areas Inspected: The inspection focused on IE Bulletin 79-02 (Concrete Anchorage) and 79-14 (Pipe Supports). The examinations focused on anchor bolts and supports that were not previously inspected by the utility. The inspection sample was selected from the Emergency Service Water (ESW) and Containment Spray System (CSS). Specific areas examined were anchor bolts (embedment, length, type, i.e., Hilti, Phillips) and supports/hangers to determine their mechanical and structural condition, as installed by the licensee. Inservice inspection activities, including inspections for intergranular stress corrosion cracking, also were inspected.

Results: One unresolved item related to Bulletin 79-02 and 79-14 was identified.

DETAILS

1.0 Persons Contacted (30703)

GPU Nuclear Corporation

*John Rogers, Licensing
Clyde Brookbank, Manager
*Vincent Foglia, Technical Functions
Kathy Barnes, Licensing
D. MacFarlane, Quality Assurance
Arthur H. Rone, Plant Engineer
Donald Ranft, Plant Engineer
Bob Barrett, Operations
*Tom Corrie, Quality Assurance
*Bob Evers, Special Projects
*E. E. Fitzpatrick, Vice President, OC
*George Busch, Licensing
J. Solakwiewicz, Quality Assurance
*G. Rhedrick, ISI Engineer
*T. Patterson, Manager Quality Assurance
E. O'Conner, Manager Special Projects

U.S. Nuclear Regulatory Commission

*J. F. Wechselberger, RI, Resident
J. Golla, RI, Reactor Engineer
*M. A. Oliveri, RI, NDE Technician
*S. K. Chaudhary, RI, Sr. Reactor Engineer
*R. H. Harris, RI, NDE Technician
*R. A. McBrearty, RI, Reactor Engineer

*Denotes those attending the exit meeting.

The inspector also contacted other administrative and technical personnel during the inspection.

2.0 Introduction

At the time of this inspection, the plant was in cold shutdown for the cycle twelve refueling outage (12R). The areas inspected were: licensee activities in response to NRC Bulletins 79-02 and 79-14 covering concrete expansion anchors and "as-built" configuration of pipe supports, respectively, and the in-service inspection of plant equipment and systems. The scope of inspection for these areas is described in paragraphs 3.0 and 4.0 of this report.

3.0 Bulletins 79-02 and 79-14 Followup

In a May 30, 1986 letter from R. F. Wilson (GPU) to T. E. Murley (NRC), the licensee committed that for all systems within the scope of Bulletins 79-02 and 79-14 the original design criteria for the pipe supports, baseplates and anchor bolts would be met prior to restart from the current 12R outage. The purpose of this inspection was to verify implementation of the licensee's program for completion of the bulletin activities. It focused on confirming the acceptability of the "as-installed" condition of the pipe supports and anchor bolts.

3.1 Inspection and Independent Measurements- (Nondestructive Examinations and Quality Record Review for Selected Pipe Supports)

During the period of November 14 through November 23, 1988 an onsite independent inspection was conducted at the Oyster Creek Nuclear Power Station. The inspection was conducted by NRC regional based inspectors and a structural engineer from NRR. The objectives of this inspection were to assess: (1) the adequacy of the licensee's concrete anchor bolt inspection and repair program as required by Bulletin No. 79-02; (2) the adequacy of the licensee's actions regarding the "As-Built" configuration of pipe hanger/supports as discussed in Bulletin 79-14; and, (3) the effectiveness of the licensee's actions to address previous NRC findings. This was accomplished by inspecting a sample of anchor bolts and supports not previously inspected by the licensee, reviewing modification packages, and inspecting supports that were inspected and/or modified by the licensee. Included in the inspection sample were hanger/supports from the Emergency Service Water (ESW) and the Containment Spray (CSS) systems.

3.2 Nondestructive Examination (NDE)

Anchor bolt inspection (46071)

Approximately One hundred and thirty-four (134) concrete anchor bolts were inspected by the NRC inspectors. Specific attributes looked for were the type of anchor, the physical condition of the anchor, the anchor bolt length and minimum embedment depth, protrusion of the bolt above the nut (thread engagement) and the distance from the bolts to the edge of the base plate. The length of the bolt was determined by performing an ultrasonic examination utilizing the licensee's procedure 6130-QAP-7209.32 Rev. 1 in conjunction with NRC procedure NDE-18, Rev. 0 and associated hanger/support drawings. The minimum bolt embedment was determined by adding that portion of the anchor that protrudes above the base plate to the thickness of the baseplate and any grouting, and subtracting the result from the length of the anchor bolt as determined by the ultrasonic examination.

RESULTS:

Attachment I presents the results of the anchor bolt inspections. Because the manufacturer and type of anchol bolts installed could not be identified, the acceptability of the minimum embed depth could not be determined. However, four of the bolts inspected indicated zero embed depth and many others showed small embed depths (less than 1.0 inches).

3.3 Visual Inspection Hanger/Support (57050)

During this inspection the inspectors performed a visual inspection of thirty-nine (39) pipe supports.

"As-Built" drawings, pipe ISO drawings, and hanger/support drawings were reviewed. A visual inspection was performed of the "As Installed" condition in order to verify proper installation, configuration or modification of supports. Attributes looked for included evidence of mechanical or structural damage, welding quality (size, type and location), and conditions such as corroded, bent, missing or broken members. Attachment II is a list of the specific hanger/supports inspected.

RESULTS:

As indicated in Attachment II, visual inspection of the supports identified that many of the welds had undercut and undersized welds. Also, the saddle (item No. 1) on support drawings indicated fillet welds; however, the actual welds do not have a fillet geometry. The "as-installed" support 241-116, H-1 does not have the same configuration shown on the support drawing. The drawing indicates a weld splice in the beam; however, visual inspection of the support revealed no weld. These discrepancies were identified on supports that were not previously inspected by the licensee because the calculated factors of safety for the supports were greater than 20. No discrepancies were identified on supports that have been inspected or modified by the licensee as part of the 79-02 and 79-14 programs.

The inspectors determined that there are no up-to-date drawings that reflect the correct "as-built" configuration of the supports without reference to numerous separate documents. The licensee stated that these documents are tracked by the CAREERS computer system. In practice, this means that documents must be gathered singularly and evaluated for each support drawing. For example, references are made on drawings to engineering changes (ECN), nonconformances (MNCR), or field changes and each document must be evaluated to ascertain if the supports are properly installed. In addition, the reference

drawings used in the walkdown inspection of the supports, including the welding symbols and support dimensions, were drawn by hand and many of the welding symbols are not standard AWS symbols. Also, not all welds are indicated on the drawing.

Conclusions

As indicated above, several discrepant conditions were identified regarding questionable embed depths for anchor bolts, undersized and poor quality welds on pipe supports and missing welds. None of the conditions identified would adversely affect system operability. However, this issue will remain an open item pending (1) licensee evaluation of the discrepant conditions identified to determine their acceptability and (2) final disposition of the discrepant conditions. This item also includes those support discrepancies identified in Unresolved Item 85-14-09 (See Section 5.0) (88-81-01)

3.4 Review of site NDE Procedures and Manuals

The following procedures were reviewed in the regional office during this inspection period for compliance to the licensee's FSAR comments and applicable codes, standards and specifications.

Procedure Title	Number/Revision
INSTALLATION OF DRILLCO MAXI-BOLT CONCRETE ANCHORS	700.5.026, Rev. 5
INSTALLATION OF RAMSET TRUBOLT CONCRETE ANCHORS	700.5.024, Rev. 7
INSTALLATION OF AUK ANCHORS	700.5.027
ULTRASONIC EXAMINATION OF CONCRETE ANCHORS FOR LENGTH DETERMINATION	631-QAP-7209.32, Rev. 1
79-02 CONCRETE ANCHOR BOLT INSPECTION/ REPAIR PROGRAM	A15-51737, Rev. 7

No deficiencies were identified.

4.0 In-Service Inspection (ISI)

4.1 Scope of Inspection

During this outage, the licensee performed visual examinations of the Reactor Pressure Vessel (RPV) internals in accordance with the ASME Code, Section XI using remote, underwater video equipment. The applicable code, as specified by 10 CFR 50.55a(g)(4)(ii), is the 1974 Edition of Section XI through Summer 1975 Addenda of ASME Code. Ultrasonic examinations of feedwater nozzles were performed using an automated computerized examination and data recording and processing system developed by KWU/UTL. Ultrasonic examinations mandated by NUREG-0313 Revision 2 and Generic Letter 88-01 for the detection of integranular stress corrosion cracking in austenitic stainless steel piping systems were performed using the General Electric Company "Smart UT" system. In addition to the above, the licensee performed an underwater visual inspection of the torus inside surface coating.

The following areas were selected for inspection:

- NDE implementing procedures,
- Observations of work in progress,
- ISI Program, and
- Compliance with NUREG-0313 Revision 2 and Generic Letter 88-01.

NUREG-0313, Revision 2/Generic Letter 88-01 (92703)

The licensee responded to Generic Letter 88-01 on August 12, 1988 and the NRC staff had not completed its review of the response at the time of this inspection. The inspector noted that this response was submitted within the schedule identified in the Generic Letter.

By letters dated February 16, 1988; April 5, 1988; and August 1, 1988, the licensee provided information regarding the intergranular stress corrosion cracking (IGSCC) inspection plan for the Oyster Creek Nuclear Generating Station 12 R refueling outage. This subject was also discussed in meetings with the Office of Nuclear Reactor Regulation held on May 26, 1988 and June 28, 1988.

Generic Letter 88-01 requires that the staff positions on inspection schedules, methods and personnel, and sample expansion included in the letter be implemented at the next refueling outage. In its letter of April 5, 1988, the licensee indicated that the 12 R refueling outage was scheduled to start on October 1, 1988, and that there was not sufficient time for the planning and preparation needed to implement Generic Letter 88-01 at the 12 R outage.

During the meeting held on June 28, 1988, the staff requested the licensee to provide additional information including a comparison of its program with Generic Letter 88-01 requirements. The staff reviewed the information and forwarded its conclusions to the licensee by letter dated October 18, 1988 which stated that although the proposed inspection plan for 12 R does not completely meet Generic Letter 88-01, it would be acceptable if all the staff comments discussed in the letter were incorporated.

The areas of discussion were as follows:

1. The inspection of Category G welds. Many Category G welds are not included in the 12 R outage inspection plan.

   Generic Letter 88-01 requires that all Category G welds be inspected during the current refueling outage (12 R). The staff stated that because of the timing of the generic letter some relief may be justified. However, the staff stated that the licensee should make every effort to implement the guidance in Generic Letter 88-01. Also, the licensee was requested to commit to examine all Category G welds at Oyster Creek no later than the end of 13 R outage.

2. The licensee contends that the Reactor Water Cleanup System (RWCU) piping welds outside the second containment isolation valves are outside of the inspection scope.

   Generic Letter 88-01 requires the augmented inspections to be applied to all BWR piping made of austenitic stainless steel that is four inches or larger in nominal diameter and contains reactor coolant at a temperature above 200°F during power operation regardless of Code classification.

3. The licensee's plan took credit for examinations performed in the 10 R outage.

   Examinations performed in 10 R were performed prior to September 1985 by examiners not being requalified. The staff stated that credit for 10 R examinations may be considered if GPUN can show that the examiners had passed the requalification tests on the first try thus indicating they were qualified when they performed the examinations at the facility.

   The inspector found that the 10 R examiners had not taken the requalification tests after September 1985, and therefore were not considered to be qualified when the 10 R examinations were performed.

4. The licensee proposed to modify the sample expansion for recirculation system safe ends, isolation condenser piping outside the second containment isolation valves and RWCU piping inside the second containment isolation valves. For those piping welds the licensee's proposed sample expansion is limited to the same kind of welds in the same system where the flaws are found. This is not consistent with Generic Letter 88-01 which requires that sample expansion be on a weld Category basis regardless of the systems and pipe weld locations.

   The staff stated that an alternate sample expansion scheme may be considered on a case basis if adequately justified in terms of the crack severity, safety impact, quality of inspection, IGSCC history, ALARA, outage schedule, availability of qualified examiners and other relevant factors.

   The above items were discussed during a conference telephone conversation on November 30, 1988 between NRR, Region I and the licensee. It was agreed that the licensee would submit by the end of the year its plans for 13 R regarding the inspection of Category G welds, and that plans regarding RWCU would be submitted to NRR in six months.

   During the current refueling outage (12 R) the licensee scheduled forty welds in the Core Spray, Recirculation and Isolation Condenser systems to receive Induction Heating Stress Improvement (IHSI) treatment to mitigate IGSCC. The following is a breakdown of those welds by system:

SYSTEM	Total No. IHSI Welds	UT After IHSI	NO UT After IHSI
Recirculation	4	4	--
Core Spray	23	9	14
Iso. Cond.	13	5	8

At the exit meeting on November 23, 1988, the inspector advised the licensee that credit for performing IHSI on specific welds could not be taken until the ultrasonic examination of each of those welds was performed. Also the welds cannot be placed in a different Category, based on the performance of IHSI, until completion of the ultrasonic examination. Although the licensee stated in their response to Generic Letter 88-01 that they would not perform post-IHSI ultrasonic examinations, credit for system enhancement can not be given since no baseline is provided for use in future inspections.

Consistent with NRR's October 18 letter, the following systems contain Category G welds which should be examined by the end of refueling outage 13 R:

SYSTEM	Number of Welds in Category "G"
Shutdown Cooling	5
Reactor Water Cleanup	10 inside the drywell 16 outside dyrwell, inside second containment isolation valve 96 outside drywell, outside second containment isolation valve
Core Spray	9 (8 received IHSI)
Isolation Condenser	18 inside drywell (4 received IHSI) 46 outside drywell (32 will be replaced in 13 R)
Closure Head	6

At the time of this inspection the examination of Category "G" welds at Oyster Creek, particularly those on the Isolation Condenser system outside of the drywell where cracking has been detected during the current outage and in the past, was the topic of discussion between the NRC (Region I and NRR) and the licensee.

4.3 Inservice Inspection Program (73051)

Inspection Report No. 50-219/85-31 discussed several welds on the reactor vessel bottom head which were not included in the licensee's 10-year ISI Program (i.e. welds 3-562-A thru F). The inspector determined that the subject welds are included in the latest revision of the program. The licensee had requested relief from the ASME Section XI volumetric examination requirement for the welds and had proposed that an alternative visual examination would be performed in lieu of the volumetric examination. The NRR Safety Evaluation Report dated June 28, 1983 does not address the particular welds for which relief was sought although the accompanying Technical Evaluation Report by Scientific Applications, Inc., the NRR consultant, recommended that the requested relief should be granted. This was discussed during a telephone conversation between the inspector and NRR from the site and the inspector was advised that it was the intention of NRR to grant the relief, and that the licensee would be so advised.

4.4 NDE Implementing Procedures (73052)

The inspector reviewed selected procedures for compliance with the ASME Code and regulatory requirements and for technical accuracy. The following procedures were included in the inspector's review:

- Procedure #UT-30, Revision 15, "Procedures for the Ultrasonic Examination of Austenitic Metal Welds for IGSCC"
- Procedure #UT-31, Revision 9, "Procedure for Manual UT Examination of Weld Overlayed Austenitic Piping"
- Procedure #UT-35, Revision 6, "Procedure for Ultrasonic Planar Flaw Sizing"
- Procedure #UT-43, Revision 9, "Procedure for Ultrasonic Examination of Pipe Welds Using Automated Equipment"
- Procedure #UT-46, Revision 3, "Procedure for Ultrasonic Examination of Weld Overlayed Austenitic Piping Using Automated Equipment"
- Procedure #UT-51, Revision 2, "Procedure for Automated Ultrasonic Examination of Dissimilar Metal Welds"
- Procedure #UT-53, Revision 1, "Procedure for Manual Examination of Dissimilar Metal Welds"
- Procedure #UTL-AUT-04.01, Revision 0, "Automated Phased Array Ultrasonic Inspection of RPV Nozzles"

The inspector determined that the aforementioned procedures were in compliance with the applicable ASME Code and regulatory requirements. The procedures were all approved by the licensee for use at Oyster Creek, and were determined to be technically adequate for their intended use.

Procedure UTL-AUT-04.01, Revision 0 was used by KWU/UTL personnel for the automated examination of feedwater nozzles at the site and was qualified by finding known defects in a full size nozzle mock-up. The mock-up contained EDM notches (the smallest equal to 1/8" deep x 1/4" long), and grindouts located in various portions of the nozzle. The procedure was shown to be capable of detecting the smallest notches and the grindouts and of differentiating between the two types of flaws. The remaining procedures were used by General Electric Company examiners for the detection and sizing of intergranular stress corrosion cracking in austenitic stainless steel piping systems at the plant.

4.5 Observation of Work in Progress (73753)

The inspector observed video tapes of selected underwater remote visual examinations of reactor pressure vessel internals and of the underwater inspection of the torus. Areas selected for inspection included:

- Steam Dryer - performed using a hand held camera
- Steam Separator - performed using the GPUN mini-submarine controlled from the refueling bridge
- Core Spray Spargers - performed using rigid equipment ("NES Rig") attached to the refueling bridge and controlled from the bridge
- Core Spray Annulus Piping - performed using a hand held camera
- Inside surface of the torus - performed by underwater divers using a hand held camera

The inspector's observations were made to assess the quality of the video tapes which were used by the licensee to evaluate the condition of the various components, and to determine whether adequate inspection coverage was attained with regard to applicable code and regulatory requirements.

The video tapes related to the in-vessel inspections displayed a 0.001 inch diameter calibration wire as evidence of the adequacy of the picture quality and to demonstrate that a flaw of that minimum size could be identified by the inspection. The tape of the torus inspection clearly identified objects in the torus and the condition of the inside surface coating which was the object of the inspection.

The mini-submarine inspection tool was used where access was adequate to maneuver and view the inspection surface. The video obtained from the submarine provides a color rendition of the surface and picture clarity and steadiness was observed to be excellent. In other areas the "NES Rig" was used and provided an excellent black and white view of the inspection surface. Inspection with the hand held camera provided a good black and white view of the inspection surface. Inspection with the hand held equipment was slower due to camera movement although the results were adequate to perform an evaluation of the condition of the inspected component.

An indication was identified on the steam dryer and resulted in the issuance of MNCR# 88-345. At the time of this inspection the condition was being evaluated by the licensee.

The torus coating was found to be blistered and the condition was under evaluation by the licensee and its contractor S.G. Pinney Company of St. Lucie, Florida. At the time of this inspection the licensee had not decided what further actions were necessary regarding the blistered surface. At the exit meeting on November 23, 1988, the inspector requested that the licensee keep the NRC apprised of the status of the torus inspections and corrective actions decided upon by the licensee.

5.0 Inspection of Open Items in Inspection Report No. 50-219/88-25

The inspection included review of the items identified in previous NRC inspection reports. The results of this review are presented below.

Item: Violation, 85-14-01: Activities performed for IE Bulletins 79-02 and 79-14 were not covered by documented procedures.

Finding: New documentation pertinent to the activities related to IE Bulletins 79-02 and 79-14 has been generated. The specifications and criteria for performing engineering evaluations related to IEB 79-02 and 79-14 reverification programs have been approved (see Meeting Report No. 50-219/85-37, dated December 16, 1985). (Closed)

Item: Deviation, 85-14-03: Five of twelve seismic Category I systems were not tested for anchor bolt acceptability.

Finding: The licensee informed the inspectors that all of the systems related to IEB 79-02 and 79-14 re-verification program are being tested. The completion of the testing program is expected prior to the restart. (Closed)

Item: Deviation, 85-14-04: No specific design documents applicable to the seismic evaluations of safety-related piping were available.

Finding: The licensee presented the inspector the documents applicable to the seismic evaluations of safety-related piping (FSAR Section 3.9 and Table 3.9-1). These documents had been forwarded to the NRC on November 7, 1985. (Closed)

Item: Unresolved Item, 85-14-05: Adequacy of the baseplate and bolt evaluation for support NC-2-H2 could not be determined.

Finding: This item became inconsequential because the support NC-2-H2L has been abandoned due to installation of the new system (Internal LAI No. 85099.35 dated December 8, 1986). (Closed)

Item: Unresolved Items, 85-14-06: A verification of engineering disposition for calculation number 8.31.208 was not available.

Finding: The support has been reanalyzed and found adequate. The pertinent calculations were audited by the inspector on November 22, 1988 and found acceptable. (Closed)

Item: Unresolved Item, 85-14-07: No documentation was available to verify the conservatism of the seismic span tables.

Findings: The licensee informed the inspectors that although the seismic span tables have been found to be conservative, they have been replaced by dynamic analysis using the Housner spectrum and 3.31.1 code (FSAR commitments). The eleven systems pertaining to tne IEB 79-14 and 79-02 have been inspected by the licensee and modifications of the equipment resulting from the analysis is being implemented at the present. (Closed)

Item: Unresolved Item, 85-14-08: Pipe support analyses of supports with frictional loads did not include those loads in the support calculation.

Findings: Frictional loads have been accounted for in the new analysis. (Closed)

Item: Unresolved Item, 85-14-09: This item pertained to many deficiencies found in "as-installed" configurations of pipe supports.

Findings: The supports identified in Item 85-14-09 have been incorporated into the program which is in progress at the present time. The conclusion of this program is expected to be prior to the next restart of the plant and will be tracked under OI 88-81-01 (see Section 3.5).

Item: During this inspection, the inspectors observed a large crack in the main condenser pedestal. The licensee presented documentation that the crack has been noted by the licensee and has been included in the open MNCR listing dated 11/15/88 and corrective action is planned. (Closed)

6.0 Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items or violations. Unresolved items are discussed in paragraphs 3.5 and 5.0.

7.0 Management Meetings (30703)

Licensee management was informed of the scope and purpose of the inspection at the entrance meeting on September 6, 1988. The findings of the inspection were discussed with the licensee representatives during the course of the inspection and presented to licensee management at the exit meeting (see paragraph 1.0 for attendees).

At no time during the inspection was written material provided to the licensee by the inspector. The licensee did not indicate that proprietary information was involved within the scope of this inspection.

ATTACHMENT II

ISI DRAWING 3E-241-A2-1000

SYS	ITEM NO.	SUPPORT/HANGER	APPARENT DISCREPANCIES
CSS	241-66	H-26	
CSS	241-69	H-30	
CSS	241-93	H-1	# UNDERCUT
CSS	241-95	H-2	# UNDERCUT
CSS	234-96	H-3	# UNDERCUT
CSS	241-97	H-4	# UNDERCUT
CSS	241-99	H-5	
CSS	241-101	H-6	
CSS	241-102	H-7	
CSS	241-103	H-7a	
CSS	241-104	H-8	# UNDERCUT
CSS	241-105	H-9	#
CSS	241-107	H-10	#
CSS	241-108	H-11	#
CSS	241-110	H-11a	
CSS	241-111	H-12	#
CSS	241-112	H-13	#
CSS	241-113	H-13a	#
CSS	241-115	H-14	#
CSS	241-79	H-27	
CSS	241-80	H-29	
CSS	241-91	H-49	
CSS	241-92	H-50	
CSS	241-116	H-1	**
CSS	241-118	H-1	#*
CSS	241-117	H-2	
CSS	241-119	H-3	#*
CSS	241-120	H-6	#
CSS	241-121	H-7	#
CSS	241-122	H-4	#
CSS	241-124	Identified on sketch 2a	
ESW	532-19	H-7	
ESW	532-20	H-8	
ESW	532-21	H-4	
ESW	532-22b	H-14	
ESW	532-57	H-15	
ESW	532-58	H-14a	
ESW	532-59	H-14	
ESW	532-60	H-13	
ESW	532-61	H-12	

COMMENTS: #=Weld symbols which call for weld all around but have weld in the web only

*=Hangers with under sized welds

**=The "as-installed" support 241-116, H-1 does not have the same configuration shown on the support drawing. The drawing indicates a weld splice in the beam; however, visual inspection revealed no weld.

ATTACHMENT I

ISI DRAWING 3E-241-A2-1000

SYS	ITEM No.	SUPPORT/ HANGER	UT LENGTH (INCHES) 1	2	3	4	MIN. EMBED AS FOUND (INCHES)
CSS	241-66	H-26	3.5	3.5	3.5	3.5	.375
CSS	241-69	H-30	3.5	3.5	3.5	3.5	.0
CSS	241-93	H-1	4.5	3.7	4.5	4.5	.75
CSS	241-85	H-2	4.3	3.8	*	*	1.25
CSS	234-96	H-3	*	5.5	5.5	4.7	1.5
CSS	241-97	H-4	*	3.7	3.7	*	1.75
CSS	241-99	H-5	3.5	3.7	3.7	3.5	1.0
CSS	241-101	H-6	5.0	5.5	5.5	5.0	1.0
CSS	241-102	H-7	5.0	5.0	5.0	*	.25
CSS	241-103	H-7a	5.0	5.0	4.2	4.2	.25
CSS	241-104	H-8	4.5	4.7	4.5	4.5	1.125
CSS	241-105	H-9	5.5	5.0	5.0	5.0	1.0
CSS	241-107	H-10	4.3	4.3	3.8	4.5	1.5
CSS	241-108	H-11	4.5	4.5	4.8	4.8	1.25
CSS	241-110	H-11a	4.2	4.2	4.2	4.2	1.5
CSS	241-111	H-12	4.5	4.8	3.5	4.5	.0
CSS	241-112	H-13	*	4.5	*	*	1.5
CSS	241-113	H-13a	1.0	4.3	4.3	1.0	1.75
CSS	241-115	H-14	*	*	*	*	N/A
CSS	241-79	H-27	3.5	3.5	3.5	4.0	.25
CSS	241-80	H-29	6.0	6.0	6.0	6.0	.50
CSS	241-91	H-49	3.0	3.0	3.2	3.5	.875
CSS	241-92	H-50	3.5	3.5	3.5	3.5	.875
CSS	241-116	H-1	4.0	3.5	3.5	4.0	.25
CSS	241-117	H-2	3.5	3.5	3.5	3.5	.375
CSS	241-119	H-3	2.5	3.0	3.0	3.0	.0
CSS	241-120	H-6	3.2	3.5	2.3	3.0	.375
CSS	241-121	H-7	2.5	3.0	3.0	4.0	.0
CSS	241-122	H-4	2.5	2.5	2.5	2.5	.650
CSS	241-124	SK-2a	10	10	10	10	8.0
EWS	532-19	H-7	12	12	3.5	3.5	9.75, 1.375
EWS	532-20	H-8	10	*	*	*	7.25
EWS	532-21	H-4	*	*	3.5	3.5	1.375
EWS	532-22b	H-14	12	12	N/A	N/A	9.75
EWS	532-22a	H-14	10	10	4.0	4.0	5.5, 1.375
EWS	532-57	H-15	12	7.0	7.0	12	8.5, 3.375
EWS	532-58	H-14a	7.0	6.0	7.0	*	3.75
EWS	532-59	H-14	8.5	*	8.5	8.5	5.375
EWS	532-60	H-13	*	8.2	10	7.0	5.75
EWS	532-61	H-12	8.2	8.2	8.2	8.2	5.25

* Could not be ultrasonicaly examined due to surface conditions.