JAN 1 1 1991

Docket No. 50-336
File Nos. RI-90-A-180, RI-90-A-198

[redacted]

Dear [redacted]

information in this record was deleted in accordance with the Freedom of Information Act, exemptions 6+7C
FOIA- 91-162

Subject: Allegations Concerning (1) Wide Range Nuclear Instrumentation Operability, (2) Operator Attentiveness, and (3) Alignment of Reactor Coolant Flow Transmitters.

The Region I office has completed its followup in response to the concerns you brought to our attention on October 8, 1990 and October 26, 1990 alleging that (1) wide range nuclear instrumentation was not operable as required by technical specifications, (2) personnel were not attentive to duties or were sleeping, and (3) alignment of the reactor coolant flow transmitters was not accomplished properly.

We found your allegation concerning the operability of wide range nuclear instrumentation to be unsubstantiated and have documented our findings in NRC inspection report, 50-336/90-22, section 5.3.3. We concluded that at least two of the four instruments were operable during fuel movement, although one channel was spiking.

We also found your allegation concerning two licensee workers who were reportedly found asleep to be unsubstantiated and have documented our findings in section 3.7 of the above noted report. We were unable to confirm that the individuals were inattentive or that they compromised work control.

Finally, we found your allegation concerning the improper alignment of reactor coolant flow transmitters to be unsubstantiated and documented our findings in section 5.3.1 of the above noted report. We concluded that the alignments were completed adequately although a proposed revision to the alignment procedure provided more detailed instructions for use of an improved test rig.

Copies of the above noted reports are attached for your information. We appreciate your informing us of your concerns and feel that our actions in this matter have been responsive to those concerns. Should you have any additional questions, or if I can of of further assistance in this matter, please call me collect at (215) 337-5120.

Sincerely,

Original Signed By

Donald R. Haverkamp, Chief
Reactor Projects Section 4A
Division of Reactor Projects

OFFICIAL RECORD COPY ALLEGATION COL RI-90-A-0198 - 0001.0.0
01/09/91

N/117

bcc/with encl:
J. Stewart (2)
M. Perkins ORC

RI:DRP	RI:DRP	RI:DRP
J. Stewart	D. Haverkamp	E. Wenzinger
1/11/91	1/11/91	1/11/91

APPENDIX 4.0

SAMPLE RECORD OF ALLEGATION PANEL DECISIONS

SITE: RI-90-A-0198

ALLEGATION NO.: MS-2

DATE: 10/25/90 (Mtg. 1 2 3 4 5)

PRIORITY: High Medium (Low)

SAFETY SIGNIFICANCE: Yes No Unknown

CONCURRENCE TO CLOSEOUT: DD BC SC

CONFIDENTIALITY GRANTED: Yes No
(See Allegation Receipt Report)

IS THEIR A DOL FINDING: Yes No

PANEL ATTENDEES:

Chairman - Hebl

Branch Chief - Wenzinger

Section Chief (AOC) -

Others - Stewart

IS CHILLING EFFECT LETTER WARRANTED: Yes No

HAS CHILLING EFFECT LETTER BEEN SENT: Yes No

HAS LICENSEE RESPONDED TO CHILLING EFFECT LETTER: Yes No

ACTION:

1) Sleeping Cp + Fire watch: Routine Resident F/u

2) Flow X-mitter work w/o Precaution & Resident F/u

3)

4)

5)

NOTES:

W/118

ALLEGATION RECEIPT REPORT

Date/Time Received: [redacted] 10/24/90 1300hrs

Allegation No. RI-90-A-0178 (leave blank)

Name: [redacted]

Address: _____

Phone: _____

City/State/Zip: _____

Confidentiality:

Was it requested?	Yes ___	No X
Was it initially granted?	Yes ___	No ___
Was it finally granted by the allegation panel	Yes ___	No ___
Does a confidentiality agreement need to be sent to alleger?	Yes ___	No ___
Has a confidentiality agreement been signed?	Yes ___	No ___
Memo documenting why it was granted is attached?	Yes ___	No ___

Alleger's Employer: N/U

Position/Title: [redacted]

[redacted]ility: MS-2

Docket No.: 50/336

[redacted]ion Summary (brief description of concern(s): (1) Sleeping operator, [redacted] fire watch (2) Flow transmitter work w/o procedure

[redacted] OI is being reviewed under RI-90-A-0174.

[redacted]cerns: 3

[redacted]lying Allegation: J. S. STEWART (first two initials and last name)

[redacted] Activity (a) ✓ Reactor (b) __ Vendor (c) __ Materials (d) __ Safeguards (e) __ Other: _____ (Specify)

[redacted] No. (if applicable): _____

[redacted] (a) Operations (b) Construction (c) Safeguards (d) Transportation (e) Emergency Preparedness (f) Onsite Health and Safety (g) Offsite Health and Safety (h) Other:

[redacted]:

Information in this record was deleted in accordance with the Freedom of Information Act, exemptions: [illegible]
FOIA: 0176

NL 119

OVERTIME AND RCS FLOW ALLEGATION INFORMATION

Alleger set internal mail on 10/22/90 and inspector aware of issues on 10/25/90.

Refer to Memo dated 10/22 :

1. This item is additional information/licensee response to alleger's concerns on RCS flow and RCP speed calibration. Refer to 10/12/90 information.

2. Self-explanatory

3. Overtime Issues:
   a. Service Water Group (alleger believes this is CNF contractor personnel). [redacted]
   b. Alleger received information from a maintenance mechanic and a maintenance electrician.
   c. The inspector identified the source of the alleger's information was a senior reactor operator. The operator involved was a plant equipment operator with the event occurring app ximately 2-3 weeks ago. The inspector plans to discuss the specifics with the senior reactor operator on 10/26. As of 10/25 the operator has a day off.
   d. The alleger received this issue from the same senior reactor operator.

4. Inspector has nothing further to add to this issue.

SAMPLE RECORD OF ALLEGATION PANEL DECISIONS

SITE: MS-2

ALLEGATION NO.: RI-90-17-0204

DATE: 11/21/90 (Mtg. (1) 2 3 4 5)

PRIORITY: High Medium (Low)

SAFETY SIGNIFICANCE: Yes No (Unknown)

CONCURRENCE TO CLOSEOUT: DD (BC) SC

CONFIDENTIALITY GRANTED: Yes No
(See Allegation Receipt Report)

IS THEIR A DOL FINDING: Yes No

IS CHILLING EFFECT LETTER WARRANTED: Yes No

HAS CHILLING EFFECT LETTER BEEN SENT: Yes No

HAS LICENSEE RESPONDED TO CHILLING EFFECT LETTER: Yes No

PANEL ATTENDEES:

Chairman - Wiggins

Branch Chief - ECW

Section Chief (AOC) - Stewart

Others - Briggs, Gray - DRS

ACTION:

1) Forward technical issues to licensee

2) Re contact alleger, inform him that third hand rumor cannot be acted upon, recipient of harassment must approach NRC (Stewart - Action).

3) Inform alleger that co-worker H&I cannot be acted upon by the NRC and we can take no action on letter he received. (Discuss w/alleger - Stewart)

4)

5)

NOTES:

W/123

[redacted] Agenda (blank) [redacted]

RI-90-A-206 - Status Provided to [redacted]
Surveillance completion in Modes 1, 2, 3 (2401)
- turnover to utility, should get response to him in Month

2) RI-90-A-204 (told him H&I to DOL, need more specifics, [illegible] examples of region involvement
- 3rd party harassment [redacted]
- complaint is about [redacted]. Not to DOL - wants written NRC position
- H&I by Quarters - DOL? (copy of Kelly Report)
- Co company - No: he wanted to know this! wants letter from NRC

3) RI-90-A-106
-> turnover to licensee issue on Radiamity Calibration using
not traceable Standards
informed of Status

Information in this record was deleted in accordance with the Freedom of Information Act, exemptions 6 & C FOIA- 91-162

In general
- Turnover his issues to licensee response — in general, we plan to do this, We will try to discuss with him in advance.
- has utility been responding to his concerns
couple
Statements. procedures: directed to take things out of test - has not gotten response (I told him we have given to utility and will respond to him on this.)

(Comments

W/124

ALLEGATION RECEIPT REPORT

Date/Time Received: 10/28/90 noon

Allegation No. RI-90-A-0204 (leave blank)

Name: [redacted]

Address: _____

Phone: _____

City/State/Zip: _____

Confidentiality:

Was it requested?	Yes ___	No X
Was it initially granted?	Yes ___	No ___
Was it finally granted by the allegation panel	Yes ___	No ___
Does a confidentiality agreement need to be sent to alleger?	Yes ___	No ___
Has a confidentiality agreement been signed?	Yes ___	No ___
Memo documenting why it was granted is attached?	Yes ___	No ___

Alleger's Employer: N/U

Position/Title: [redacted]

Facility: NMS-2

Docket No.: 50/336

(Allegation Summary (brief description of concern(s): 1) Procedural adequacies IC 2419C and IC 2421C 2) RPS operability - diesel C [illegible] 3) Procedural compliance 4) [illegible]

Number of Concerns: 4

Employee Receiving Allegation: Habighorst, Mailed to - JS Stewart
(first two initials and last name)

Type of Regulated Activity
(a) X Reactor
(b) __ Vendor
(c) __ Materials
(d) __ Safeguards
(e) __ Other: _____ (Specify)

Materials License No. (if applicable): _____

Functional Area(s):
X (a) Operations
__ (b) Construction
__ (c) Safeguards
__ (d) Transportation
__ (e) Emergency Preparedness
__ (f) Onsite Health and Safety
__ (g) Offsite Health and Safety
__ (h) Other: _____

(NRC Region I Form 207
Revised 10/89)

Information in this record was deleted in accordance with the Freedom of Information Act, exemptions 6&7C
FOIA- 91-165

W/126

CONCERNS FROM A NORTHEAST EMPLOYEE

The resident inspector received an internal memorandum dated [redacted]. The inspector had follow-up discussions on the clarification of the memorandum with the alleger on [redacted]

Issue

The alleger poses concerns and questions on procedural adequacies and implementation. The procedure and section in question are IC 2419C Section 5.5.6. On [redacted] the alleger was tasked with heater junction thermocouple (HJTC) reinstallation using IC 2421C.

The specific issues associated with procedure IC 2419C are:

a. IC 2421C step 5.5.6.1 requires a visual inspection of HJTC connector assemblies on each cable. Notify IC supervision is damage is apparent. The alleger said he identified problems with 3 connectors (Z1 #4 and #7; Z2 #8). The specific problems with the 8-pin connector was not identified to the inspector, however the alleger notified his immediate upgrade supervisor at the job location. The supervisor notified his department head who told the workers to reconnect the HJTC connections. During the work activity a Quality Service Inspector was on location. The inspector asked the alleger if this item was documented in the QSD surveillance form. The alleger did not know.

b. IC 2421C step 5.5.6.1 also requires a visual examination of a grafoil gasket at the Litton Veam connector for signs of degradation. The alleger did not know where to look for this item, and therefore questioned if the procedure should require additional drawings to include the location of the grafoil gasket. The alleger's independent research identified the location of the grafoil gaskets in NUSCo drawing 25207-39128 sheet 2.

c. No procedure drawing is present to identify connectors and there location. This task was accomplished by measurement of relative length of cables by the alleger. According to the alleger the cables have etched ID numbers however, their physical location makes it impossible to acquire the numbers.

d. The caution procedure action prior to step 5.5.6.7 requires the the connectors mate up snug and turn the collar 90 degrees. This action crimps the copper seal and keeps the collar from moving during operation. According to the alleger, the caution step was recently PORC approved as a intent procedure change. A 90

degree turn from hand tight according to the alleger from discussions with NNECo engineering approximates to 25 ft-lbs. On October 30, NNECo engineering identified the correct torque value for the connector collar as 31 ft-lbs as referenced in a 1986 Combustion Engineering letter. The licensee incorporated this into the procedure as a non-intent procedural change on October 30. The alleger does not believe this change to a caution note in procedure IC2421C as a non-intent change.

e. According to the alleger dust covers are installed on the HJTC connectors when disconnected as depicted on procedure figure 8.5 of IC2421C. Inspector review of procedure IC 2421C section 5.5.6 on reconnection of connections did not identify a specific procedural step to remove dust covers on the connectors.

f. IC 2421C step 5.6.4 requires verification of HJTC per IC 2419C. The verification per IC 2419C is normally completed prior to reconnection of cable per IC2421C.

Overall, the alleger believes the licensee is not following procedures based on the condition of IC 2421C, or if the procedure is followed no other technicians are identifying the problems and requesting resolutions.

INSPECTOR ASSESSMENT

[redacted] The inspector believes this item should be turned over to the licensee for response. HJTC connectors are EEQ components and part of the inadequate core cooling (ICC) system.

ADDITIONAL INFORMATION

The alleger heard third hand, that a recent employee to the Millstone 3 IC department was labeled as the [redacted] at Millstone 3. The technician recently transfered from the technical training organization. His previous position was [redacted] associated with Millstone 2. The name of the individual is [redacted] The alleger [redacted] is presenting this for use based on his past H&I issues.

Recommendation: Refer to OI.

5.5.5 CEDM Power Cabling

5.5.5.1 Visually inspect the connector assemblies on each cable for signs of degradation or damage.

a. If the connector must be reworked or replaced, reference IC 2421E, Head Area Cable Support System Connector Assembly Procedure.

5.5.5.2 Reconnect the CEDM power cabling at disconnect panels T323, T326, T333 and T336. Utilize Table 2 and Figure 8.3 to insure proper connections.

5.5.5.3 Reconnect the CEDM power cabling to the CEDM stack on the head. Utilize Table 2 and Figure 8.1 to locate and identify the appropriate CEA assembly.

5.5.6 HJTC Cabling

CAUTION

The HJTC cabling and connectors are environmentally qualified (EEQ) components. Copper seal rings must be installed in the G&H connector assemblies at the probe to mineral cable interface to restore qualification following head cable removal. Seal ring replacement is specifically addressed in the body of the procedure below.

5.5.6.1 Visually inspect the connector assemblies on each cable for signs of degradation or damage.

Visually inspect the Grafoil gasket at the Litton Veam connectors for the HJTC cables for signs of degradation or damage.

a. Notify the Assistant I&C Supervisor if damage is apparent.

5.5.6.2 Reconnect the HJTC cabling at disconnect panels T323, T326, T333 and T336. Utilize Table 2 and Figure 8.3 to insure proper connections.

5.5.6.3 Carefully uncoil the HJTC mineral cables stored in the HACSS trays and route the cables to the appropriate HJTC probe assembly. Reference Figure 8.4 for HJTC mineral cable routing.

5.5.6.4 Obtain new copper seal rings for the G&H connectors at the probe-to-mineral cable interface.

a. Seal rings stock code is 50700943 (Comb. Eng.).

5.5.6.5 QA HOLD POINT - Visually inspect the copper seal rings to ensure they are clean and free from radial scratches and indentations.

5.5.6.6 QA HOLD POINT - Install the copper seal ring on the G&H receptacle to rest on the seal collar.

CAUTION

HAND TIGHT means - the surface of both male and female connectors are mated and snug, then turn the threaded collar 90 degrees. This will crimp the copper seal and keep the collar from moving during operation.

C1.1

5.5.6.7 Carefully mate the G&H connector plug and receptacle, engage the threads and hand tighten.

5.5.6.8 Repeat Steps 5.5.6.6 and 5.5.6.7 for the remaining HJTC probe connections.

5.5.6.9 QA HOLD POINT - Initial and date I&C Form 2421C-1.

5.5.6.10 Secure the HJTC mineral cable to the head cable support unistrut using "TEFZEL, TYZ-27M" radiation resistant ty-raps. Do not exceed three feet between ty-raps. Ty-wrap stock code is 62400850.

5.6 Cable Verification

5.6.1 CEA Position (Reed Switch) Cable Verification

5.6.1.1 Energize the +5.140 VDC reed switch power supplies and the +28 VDC logic power supplies located in the 14'6" East DC Switchgear Room, CEDS Logic Panel (Reference Table 1 items 11 and 12).

5.6.1.2 Energize the metrascope at Control Room Panel CO4F.

5.6.1.3 Establish Communications between the metrascope and the reactor vessel head cable [illegible].

5.6.1.4 Raise and lower the reed switch test magnet assembly along the side of CEA #1 reed switch shroud.

5.6.1.5 Verify that the metrascope display for CEA #1 changes with the magnet position. Record on I&C Form 2421C-1.

5.6.1.6 Repeat Steps 5.6.1.4 and 5.6.1.5 for the remaining reed switches.

5.6.1.7 If any reed switch display does not respond correctly,

5.6.2 CEDM Power Cable Verification

5.6.2.1 Verify that CEDM motor generator output breakers are red tagged open.

5.6.2.2 Disconnect the coil power cables identified on I&C Form 2421C-1 for the CEDM under test.

5.6.2.3 Using a 500 volt meggar, test the cables listed on I&C Form 2421C-1 to ground. Record the "As Found" readings on I&C Form 2421C-1.

5.6.2.4 If the values recorded in Step 5.6.2.3 are within specification, record them "As Left". If any values are not within specification, initiate an AWO to investigate and correct the problem.

5.6.2.5 Measure the coil resistances listed on I&C Form 2421C-1 and record the "As Found" values.

5.6.2.6 If the resistances recorded in Step 5.6.2.5 are within the "Desired" values, record them "As Left".

5.6.2.7 If the resistance values are not within tolerance, initiate on AWO to investigate and correct the problem.

5.6.2.8 Reconnect the coil power cables disconnected in Step 5.6.2.2, initialing the appropriate blocks on I&C Form 2421C-1.

5.6.3 Verification of ICI cables is performed under SP 2407.

5.6.4 Verification of heated junction thermocouple probes is performed under IC 2419C.

NOT DONE AND Also in WRONG Seq.

out of Seq.

5.7 EEQ Maintenance Activities

5.7.1 Required EEQ Maintenance activities are identified in Attachment 9.1. Assure that these tasks are accomplished during Head Cabling removal and installation.

2421C 5.6.4. step

6. RESTORATION

6.1 Ensure that all data sheets are properly completed.

6.2 Inform Operations that IC 2421C is complete.

6.3 Ensure that all lifted leads/removed weidmuller pins have been replaced.

7. TABLES

7.1 Table 1, Equipment Tag Out

7.2 Table 2, Cable Connections

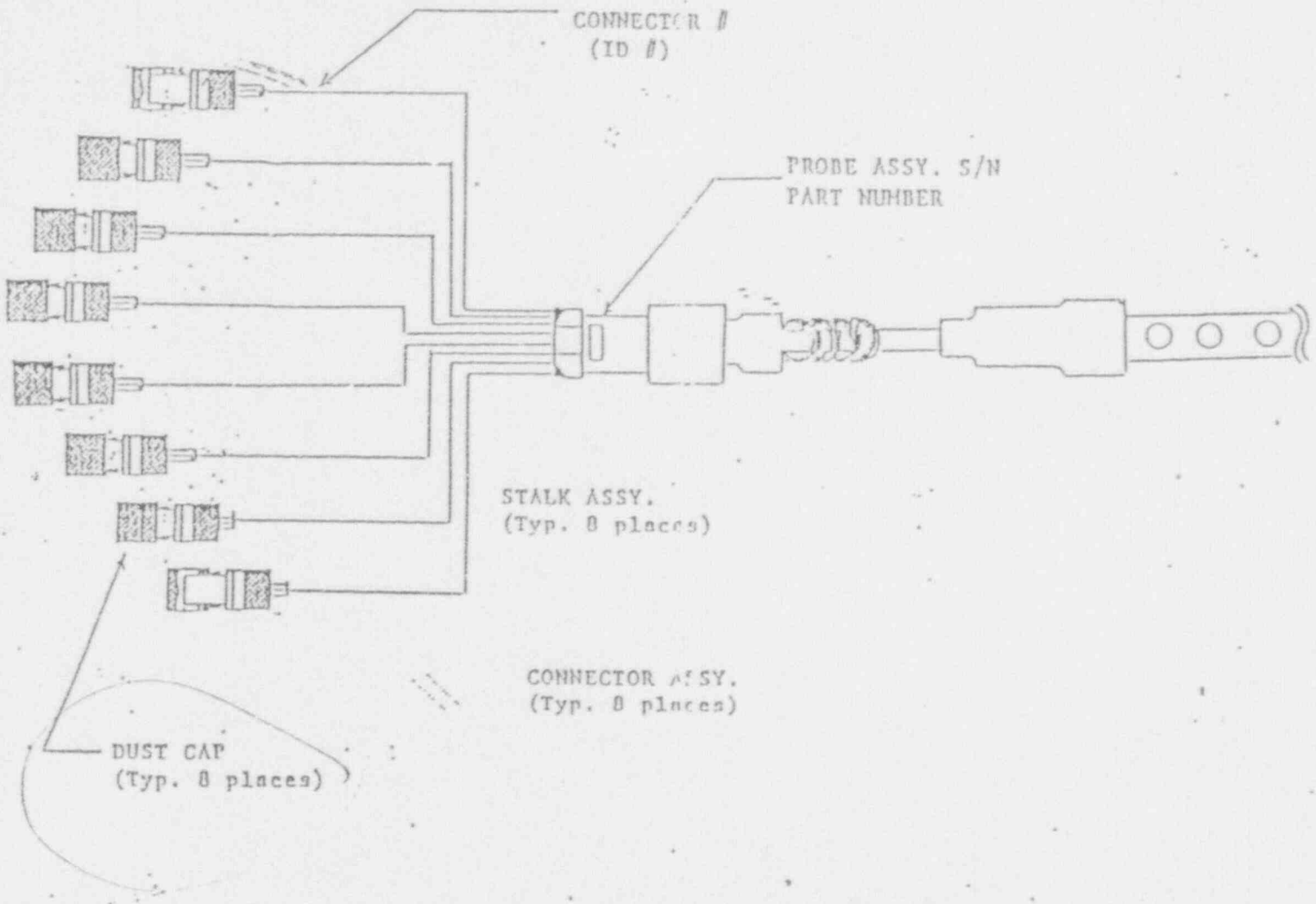

FIGURE 8.5

HJTC PROBE ASSEMBLY MP-2

ATTACHMENT 9.1

EEQ COMPONENT
MAINTENANCE REQUIREMENTS

EQUIPMENT (PMMS ID): HEAD ASSEMBLY CABLING/CONNECTOR ASSEMBLIES

A. INCORE DETECTOR ASSEMBLY CABLING

B. HEATED JUNCTION THERMOCOUPLE ASSEMBLY CABLING

C. HEAD VENT SYSTEM CABLING

MANUFACTURER: LITTON VEAM/G&H/KERITE/ITT

MODEL NUMBER: REFERENCE IC 2421E FOR SPECIFIC PART NUMBERS

SERVICE:

A. INCORE DETECTOR ASSEMBLY: CORE EXIT THERMOCOUPLE INPUT TO INADEQUATE CORE COOLING CABINET (ICC).

B. HEATED JUNCTION THERMOCOUPLE ASSEMBLY: REACTOR VESSEL LEVEL MONITORING SYSTEM (HJTC).

C. HEAD VENT ASSEMBLY: REACTOR VESSEL HEAD VENT SYSTEM.

ENVIRONMENTAL BOUNDARIES:

A. HJTC CONNECTORS (G&H) ARE AN INTEGRAL PART OF THE MINERAL CABLE ASSEMBLY. COPPER SEAL RING PROVIDES WATERTIGHT BOUNDARY BETWEEN MATING CONNECTORS.

B. INCORE DETECTOR AND HEAD VENT CONNECTOR TO FIELD CABLE INTERFACE.

ATTACHMENT 9.1

EEQ COMPONENT
MAINTENANCE REQUIREMENTS
(continued)

MAINTENANCE REQUIREMENTS:

A. NEW COPPER SEAL RINGS SHALL BE INSTALLED IN THE HJTC G. H CONNECTORS EACH TIME THE CONNECTOR IS REMATED.

B. THE HJTC AND ICI THERMOCOUPLE ELECTRICAL PENETRATION FIELD CABLE INTERFACE SHALL BE SEALED WITH RAYCHEM WCSF-N.

MISCELLANEOUS:

1. CONNECTOR ASSEMBLIES SHALL BE VISUALLY INSPECTED FOR SIGNS OF DEGRADATION OR WATER INTRUSION EACH TIME THEY ARE DISCONNECTED FOR REFUELING ACTIVITIES.

2. IF CONNECTOR ASSEMBLIES MUST BE RE-WORKED OR REPLACED, IC 2421E SHALL BE UTILIZED AS THE ASSEMBLY PROCEDURE.

3. THE LITTON VEAM CONNECTOR AT THE HACSS DISCONNECT PANEL FOR THE HJTC CABLING HAS BEEN RETROFITTED WITH A GRAFOIL GASKET TO ENSURE QUALIFICATION.

APPROVED I&C DEPT. MAINTENANCE TASK:

1. REMOVAL AND RESINTALLATION OF HEAD CABLING.

2. ALL ELECTRICAL TESTING AND TROUBLESHOOTING ACTIVITIES ASSOCIATED WITH THE HEAD CABLING.

3. RE-MAKE AND NEW INSTALLATION OF CONNECTOR ASSEMBLIES AS DIRECTED BY IC 2421E.

1. OBJECTIVE

1.1 To verify the integrity of the Heated Junction Thermocouple probe (HJTC) assemblies upon;

1.1.1 Initial receipt of probe assemblies, or;

1.1.2 Removal from the reactor head assembly pressure boundary, or;

1.1.3 Reinstallation following refueling outages.

2. ACCEPTANCE CRITERIA

2.1 All temperature display readings, test voltages and continuity checks defined within this text meet the specified criteria.

3. TECHNICAL SPECIFICATION REFERENCES

3.1 None

4. PREREQUISITES

4.1 All required test equipment is available and within its calibration frequency.

4.2 Access to the probe assemblies is available.

5. INITIAL CONDITIONS

5.1 The SS/SCO has authorized the test and has signed I&C Form 2419C-1 or 2419C-2 as applicable.

5.2 120 Vac power is available at the test location. The HJTC test box requires this 120 Vac source power.

5.3 The necessary Radiation Work Permits (RWP) have been obtained if the probe checks are to be performed in a contaminated area.

6. PRECAUTIONS

6.1 Use caution when working with the HJTC probe cabling and connectors. Do not bend or kink cabling.

6.2 Observe all RWP requirements, the HJTC probe assemblies are highly irradiated once installed and exposed to primary coolant.

6.3 Do not exceed 50 Vdc when performing insulation resistance checks.

(2)

MEETING WITH [redacted]

Concern

The alleger's concern surrounds the operation of channel 'C' of the reactor protection system. Specifically, the concern is the operation of the reference voltage output. The reference test voltage was not maintaining its acceptance criteria of +/-.003 vdc. The reference test voltage is for the reactor protection system calculators for TMLP trip, RCS flow signal process, and for a DVM output at the RPS panel.

Recently, the alleger completed the RCS flow calibration under procedure SP-2404A. The alleger submitted an ICR to document an out-of-specification for the test voltage output. The output values were -.004 vdc and +.005 vdc.

The alleger was questioning the operability of channel 'C' of the RPS with historic out-of-spec test voltage outputs.

Historically, the alleger provided dates and times that the reference voltage was out-of-specification:

Date	Authorized Work Order
3/9/90	M2-90-02559
5/5/90	M2-90-02736 M2-90-05237 M2-90-05480
8/30	Surveillance for SP-2401F and SP-2401G

Reference drawings are 25203-39069 sheet 40, and 25203-25193 sheet 6 to identify the reference test voltage application.