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VPNPD-90-501
NRC-90-131

December 21, 1990

Document Control Desk
U. S. NUCLEAR REGULATORY COMMISSION
Mail Station P1-137
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Gentlemen:

DOCKET NOS. 50-266 AND 50-301
TRANSMITTAL OF UPDATED INFORMATION ON DCRDR
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

This letter will provide you with an update on the status of the resolution of Human Engineering Discrepancies (HEDs) that were documented during the Detailed Control Room Design Review (DCRDR) performed at Point Beach Nuclear Plant (PBNP). An HED resolution schedule, along with copies of all the HEDs, was submitted with the PBNP DCRDR Summary Report on March 31, 1987. The resolution schedule and selected HEDs were revised and submitted in response to the NRC audit of the PBNP DCRDR on March 29, 1988 (VPNPD-88-186). The resolution schedule and selected HEDs were updated in a letter dated December 27, 1989 (VPNPD-89-679).

We received the NRC Safety Evaluation Report (SER) for the DCRDR in a letter dated May 11, 1990. In that letter, we were requested to inform the NRC staff, in writing, of any significant changes in the estimated completion schedule and when the safety-significant HEDs (priorities of 1 or 2) have been completed. The attachment to this letter provides information pertaining to these items and also summarizes the status of all HEDs.

The information provided in the attachment has been organized by HED resolution category. All HEDs were categorized by the general form of their resolution and the resolution schedule was then based on these categories. Table 1 in the attachment provides a summary of the status of each of the different categories, based on the total number of HEDs in each category. Dealing with numbers of HEDs does not really give a clear picture of the amount of work completed because the scope of an HED can vary significantly and the same discrepancy may be repeated on several HEDs. The tabular summary does, however, indicate substantial work has been accomplished in each category. Detailed information regarding the

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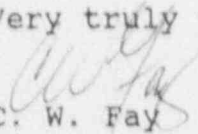
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resolution status in each category is also provided in the attachment.

As discussed in the attachment, a number of the HEDs has been revised. Copies of these revised HEDs are enclosed with this letter.

We would be pleased to answer any questions you may have regarding the above information.

Very truly yours,


C. W. Fay
Vice President
Nuclear Power

Enclosures

Copies to NRC Regional Administrator, Region III
NRC Resident Inspector

TABLE 1
SUMMARY OF HED RESOLUTION STATUS

<u>Resolution Category</u>	<u>Scheduled Completion Date(1)</u>	<u>HEDs Resolved/ Total HEDs</u>	<u>Completion Date for Remaining HEDs</u>
Lighting	12/31/91	9/11	12/31/91
Computer	12/31/91	14/14	--
Training	12/31/90	31/31	--
Procedural Change	12/31/90	109/112	12/31/91
Enhancement	12/31/91(2)	28/34	12/31/91
Annunciator	12/31/90	21/30	12/31/91
Instrument Air Mod	12/31/89	7/7	--
Labeling	12/31/90	63/86	12/31/91
Relocation	12/31/90	7/8	12/31/91
Control Room Mod	12/31/90	27/28	12/31/91
Meter Face Mod	12/31/91	1/58	12/31/91
Communication	12/31/90	2/12	12/31/91
New Instrumentation	12/31/90	30/43	12/31/91
Control Mod	12/31/93(3)	28/41	12/31/93
		<u>377/515</u>	

- (1) These dates are taken from the December 27, 1989 submittal.
- (2) As discussed in our December 1989 submittal, the resolutions and completion dates for four Enhancement HEDs (HEDs 339, 10, 563, and 766) were changed. The new completion date for these HEDs is 12/31/91. The completion date for all other Enhancement HEDs was 12/31/90.
- (3) Control modifications were expected to be implemented by 12/31/90 with the exception of installation of instrument bus static transfer switches (see HED 321). All other control modifications are now expected to be implemented by 12/31/91.

December 21, 1990

STATUS OF DCRDR HED RESOLUTIONS
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

Lighting

The lighting situation in the control room was discussed in the December 27, 1989 submittal. In that submittal, we stated that, with one exception, we would leave normal lighting levels as they are now, even though the lighting survey we performed in July 1989 showed that these levels are slightly lower than NUREG-0700 minimum levels. The exception made was to install additional fixtures in front of each unit's Auxiliary Safety Instrumentation Panel (ASIP) by the end of 1991. We also stated that we would power a group of additional fixtures from the second emergency diesel generator by the end of 1991 (all AC fixtures used for emergency lighting are currently powered by one of the two diesel generators). These actions will improve normal and emergency lighting in front of the ASIPs, increase lighting levels when both diesels are in service, and improve emergency lighting availability.

All Lighting HEDs are priority 9, the lowest HED priority. The number of HEDs in this category is rather arbitrary since the results of the entire DCRDR survey could have been put on one HED. The two HEDs not considered resolved (see Table 1) are those that specifically mention the areas in front of the ASIPs.

Computer

Three of the 14 Computer HEDs had not been resolved at the end of last year. The proposed resolutions to these low priority HEDs were recently revised after the discrepancies the HEDs describe were evaluated by plant personnel. The revised resolutions basically state that no further action will be taken. Copies of the revised HEDs are enclosed.

Training

Seven Training HEDs had not been resolved at the end of last year. HED 655 was addressed with related Procedural Change HEDs. A copy of HED 655 is enclosed. The six other HEDs have all been satisfactorily resolved this year.

Procedural Changes

Resolutions to 11 of the 112 Procedural Change HEDs were not completely implemented at the end of last year. Status of the

remaining 11 HEDs is as follows:

- o Resolutions to HEDs 473, 588, and 799 were implemented this year without changes.
- o Implementation of the resolution of HED 439 is in progress. This is a priority 9 HED that involves revision of EOP nomenclature to match that used on the new control board labels, which were recently installed.
- o Three of the 11 HEDs, nos. 399, 614, and 667, along with HED 655 from Training, all addressed the same item. The proposed resolution for these HEDs was recently revised after further review of the discrepancy by PBNP Operations personnel. Copies of the revised HEDs are enclosed.
- o PBNP Operations also reviewed HEDs 608 and 634, and the proposed resolutions were changed as a result. Copies of these HEDs are enclosed.
- o HED 457 is a priority 3 HED that requires a loading study to be performed before the need for a procedure change can be determined. Higher priority work has delayed the performance of the loading study into 1991.
- o HED 497 is a priority 3 HED that requires the calculation of PBNP-specific adverse containment setpoints for reactor vessel level before the appropriate procedure changes can be made. The person who was working on these calculations left the company this year, delaying the resolution of this HED. We expect to have this HED resolved by the end of 1991.

Enhancement

As Table 1 indicates, the resolutions and completion dates of four HEDs originally in the Enhancement category were changed in our December 1989 submittal. A new ventilation control panel will be installed by the end of 1991 to resolve HED 339, which has a priority of 8. HEDs 10, 563, and 766 will be handled with meter face modifications, with are scheduled to be completed by the end of 1991. The priorities of these HEDs are 7, 9, and 1, respectively. HED 766, a high priority HED, requires meter face changes and a procedure change to be completely resolved. The procedure change has been made and the meter face changes will be made in 1991, in accordance with the previous schedule for that category.

Nine Enhancement HEDs were unresolved at the end of last year. The recent replacement of the control board mimics has resolved seven of these HEDs. The two remaining HEDs, both priority 8, require

the installation of a few labels and some demarcation and will be completely resolved in early 1991.

Annunciators

The resolutions and categories of four HEDs originally in the Annunciators category were changed in our December 1989 submittal. HED 229 was changed to No Action, and HEDs 293, 327, and 353 were changed to Control Room Modification. Resolutions to HEDs 293 and 353 have been completely implemented this year. The resolution to HED 327 involves modifications to both units. Work has been completed on Unit 2 but not on Unit 1. Unit 1 will be modified next year during its refueling outage. HED 327 is a priority 2 HED that involves modification of the "AFW Pump Disabled" alarm so that it comes in when the pump discharge MOV switches are not in their full-in position.

The eight remaining Annunciator HEDs that were not resolved at the end of last year all require replacement of the existing annunciator tiles. All of these HEDs are low priority; seven have priorities of 9 and one has a priority of 7. We anticipated that we would have the new tiles in place by the end of this year. However, delays and errors in tile fabrication have caused this project to be deferred into next year. We are currently getting new tiles fabricated and do expect that they will be in place by the end of 1991.

Instrument Air Modifications

As we stated in our December 1989 submittal, all HEDs in this category have been resolved.

Labeling

Fifty of the 86 Labeling HEDs were resolved at the end of last year. Resolutions to 13 more HEDs were implemented this year. Status of the remaining 23 HEDs is as follows:

- o As stated in our December 1989 submittal, nine Labeling HEDs addressed meter faces and would be handled with meter face replacement in 1991.
- o Two HEDs, both priority 9, address annunciator tile type styles and will be handled with annunciator tile replacement, which will be completed by the end of 1991.
- o HED 120, a priority 9 HED, notes that a red "caution" label should be yellow, as recommended by NUREG-0700. We decided that, at PBNP, red can be used for caution labels and the label will not be changed. A copy of the revised HED is enclosed.

- o HED 79, a priority 9 HED, generically addresses label placement. We changed the statement in the HED resolution about labels being placed below meters; meters will be labeled on the meter face, as they are now. HED 202, another priority 9 HED, said labels would be placed above vertical meters. Labeling of vertical meters will stay as it is now, on the meter face in a vertical direction. Copies of the revised HEDs are enclosed.
- o Of the 11 remaining HEDs, eight are low priority (priority 3 or 9), two are intermediate priority (priority 3 and 4, respectively) and one is priority 2. HED 812, the high priority HED, calls for the placement of labels indicating which power supply or supplies serves every control. This has been accomplished for most of the controls with the incorporation of power supply information on the new component labels. We expect to completely resolve this HED in 1991.

Relocation

Resolutions have been implemented to all but one of the eight Relocation HEDs. HED 311 is a priority 3 HED that recommends the relocation of some meters and switches on the plant's Auxiliary Safety Instrumentation Panels (ASIPs). Modifications should be implemented by the end of 1991.

Control Room Modifications

Resolutions to 18 of the 28 HEDs in this category were in place at the end of 1989. Since then, resolutions to eight more HEDs have been implemented. The status of the remaining HEDs is as follows:

- o HED 318 is a priority 1 HED that was to be resolved with the installation of physical guards around some relays inside the Auxiliary Safety Instrumentation Panels (ASIPs). After some investigation, it was decided that this idea was not feasible, and guards will not be installed. A copy of the revised HED is enclosed.
- o HED 385 is a priority 5 HED that will be resolved with the installation of a humidification system in the control room. The modification is being pursued and we expect that installation will be completed some time early next year.

Meter Face Modification

In our December 1989 submittal, we stated that resolution of meter face HEDs would be completed in 1991. This change in completion date was made with the expectation that some meter face replacements would be accomplished this year during each unit's

refueling outage and those meters that were undergoing range changes would be addressed the following year.

We did change out approximately 100 meter faces on Unit 1 this year, but, because of operator complaints about the new design, new meter faces will be fabricated and replacement will start over in 1991. We were not able to obtain new meter faces in time to do any Unit 2 meters this year. Because of this delay, HED 766, a priority 1 HED addressing eight meters (four per unit), will not be completely resolved this year. Because of our need to defer work on meter range changes into next year, resolutions to three other high priority HEDs (HEDs 347, 762, and 641), addressing a total of 12 meters, will not be implemented by the end of 1990. We do expect all meter face modifications to be completed by the end of 1991.

Communication

Resolutions to two of the 12 Communications HEDs were in place at the end of last year. Eight of the remaining HEDs, several of them high priority, will be resolved with the installation of an uninterruptible power supply for the Gai-tronics and operations radio systems, which we expect will be completed by the end of this year or early next year. The remaining two HEDs are low priority items that will be resolved by the end of 1991.

New Instrumentation

In our December 1989 submittal, we stated that nine of the 43 HEDs in this category had been resolved. Since then, resolutions to 21 more HEDs have been completely implemented. The status of the remaining HEDs is as follows:

- o HED 331 is a priority 8 HED that will be resolved with the installation of new meter crystals. This HED will be handled with meter face replacement HEDs, which are scheduled for resolution by the end of 1991.
- o HED 355 is a priority 3 HED that will be resolved with the installation of a voltmeter. The modification request is being processed and the installation should be completed by the end of this year or early next year.
- o HEDs 351, 422, 423, 559, and 688 are all to be resolved by the installation of run-time indicators for some auxiliary building sump pumps. The HED priorities range from 1 to 4. Installation is in progress but may not be finished by the end of the year.
- o HEDs 340, 345, 444, 578, 690, and 720 are all to be resolved by the installation of radwaste steam valve position indication lights. The HED priorities range

from 1 to 6. Indication for the Unit 2 valve was installed this fall, but indication for the Unit 1 valve will not be installed until the 1991 spring refueling outage.

Control Modification

We stated in our December 1989 submittal that resolutions to 25 of the 41 Control Modification HEDs had been implemented at the end of last year. This year, resolutions to three more HEDs have been installed, leaving a total of 13 HEDs unresolved. The status of the remaining HEDs is as follows:

- o HED 321, a priority 3 HED that calls for the installation of instrument bus static transfer switches, has a resolution date of 12/31/93.
- o HED 180 is a priority 9 HED that will be resolved with the installation of new meter crystals. This HED will be handled with meter face replacement HEDs, which are scheduled for resolution by the end of 1991.
- o None of the remaining 11 HEDs are high priority. They are all in various stages of resolution but are not yet completely closed out. Because they are low priority items, resolution has typically been postponed in favor of higher priority work. We do expect that all remaining HEDs will be resolved by the end of 1991.

HUMAN ENGINEERING DISCREPANCY RECORD
POINT BEACH NUCLEAR PLANT
HED NO.: 79

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I. IDENTIFICATION

Date of Printout: 12/14/90

ORIGIN: CONTROL ROOM SURVEY - NUREG 0700

GUIDELINE/CHECKLIST NO.: 6.6.2.1A

GUIDELINE AREA: LABELS AND LOCATION AIDS

PROBLEM CATEGORY: LABEL LOCATION

PROBLEM SUB-CATEGORY: PLACEMENT

LOCATION :

CONTROL ROOM AREA: MAIN CONTROL ROOM

PANEL: NOT LOCATION APPLICABLE

SYSTEM: VARIOUS

EQUIPMENT: LABELS

DESCRIPTION OF DISCREPANCY:

THE PLACEMENT OF LABELS ON CONTROL PANELS DOES NOT CONFORM TO THE GUIDANCE SHOWN IN EXHIBIT 6-1 BEING ABOVE THE PANEL ELEMENT.

PREPARED BY: HARLEY DATE: 05/22/85

PROPOSED RESOLUTION:

GUIDELINE FOUND IN THE PBNP HF STANDARDS DOCUMENT FOR LABEL PLACEMENT WILL BE FOLLOWED. ALL INDICATORS WILL BE LABELED BELOW. ALL CONTROLS WILL BE LABELED ABOVE. METERS WILL BE LABELED ON THE METER FACE.

RECOMENDATION BY: CRDR TEAM

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II. EVALUATION

HED EXPERIENCED BEFORE? NO
ACCIDENT RELATED? NO
TECHNICAL SPECIFICATIONS? NO
ERROR RECOGNITION / RECOVERY EXPECTED? YES

SUBJECTIVE PRIORITY RATING: 7.7

HED PRIORITY: 9

HED CATEGORY: LABELING

REVIEWED AND APPROVED - CRDR TEAM MADE BY S. A. Schellin

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NOTES:

(RESOLUTION REVISED 12/14/90)

HUMAN ENGINEERING DISCREPANCY RECORD
POINT BEACH NUCLEAR PLANT
HED NO.: 120

I. IDENTIFICATION

Date of Printout: 12/14/90

ORIGIN: CONTROL ROOM SURVEY - NUREG 0700

GUIDELINE/CHECKLIST NO.: 6.6.3.9B

GUIDELINE AREA: LABELS AND LOCATION AIDS

PROBLEM CATEGORY: LABEL CONTENT

PROBLEM SUB-CATEGORY: ACCESS OPENING, DANGER, WARNING, AND SAFETY INSTRUCTION LABELING

LOCATION :

CONTROL ROOM AREA: MAIN CONTROL ROOM

PANEL: 1C04

SYSTEM: ROD CONTROL

EQUIPMENT: LABELS

COMP NO: HED120-01 COMP DESC: CAUTION-DO NOT RESET ALARM...

CONTROL ROOM AREA: MAIN CONTROL ROOM

PANEL: 2C04

SYSTEM: ROD

EQUIPMENT: LABELS

COMP NO: HED120-02 COMP DESC: CAUTION-DO NOT RESET ALARM...

DESCRIPTION OF DISCREPANCY:

THE COLOR OF THIS CAUTION NOTICE SHOULD ACCORDING TO STANDARDS IN NUREG 5.1.6C BE YELLOW, NOT RED. ...UNTIL CAUSE IS VERIFIED. IF CAUSE IS LOGIC FAILURE (LIGHT DSI ON KI) RESET MAY CAUSE ROD DROP UNTIL PROBLEM IS CORRECTED*

PREPARED BY: TOBEY DATE: 05/23/85

PROPOSED RESOLUTION:

THE DECISION HAS BEEN MADE THAT, AT PBNP, "CAUTION" NOTICES WILL BE RED. DIFFERENT COLORS WILL NOT BE USED TO TRY TO DISTINGUISH BETWEEN "CAUTION" NOTICES AND WHAT COULD BE CONSIDERED "UNSAFE" OR "DANGER" NOTICES.

RECOMENDATION BY: CRDR TEAM

II. EVALUATION

HED EXPERIENCED BEFORE? NO
ACCIDENT RELATED? NO
TECHNICAL SPECIFICATIONS? NO
ERROR RECOGNITION / RECOVERY EXPECTED? YES

SUBJECTIVE PRIORITY RATING: 8.5

HUMAN ENGINEERING DISCREPANCY RECORD
POINT BEACH NUCLEAR PLANT
HED NO.: 120 CONTINUED

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HED PRIORITY: 9

HED CATEGORY: NO ACTION

REVIEWED AND APPROVED - CRDR TEAM LEADER by S. A. Schellin

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NOTES:

(RESOLUTION AND CATEGORY REVISED 12/14/90)

HUMAN ENGINEERING DISCREPANCY RECORD
POINT BEACH NUCLEAR PLANT
HED NO.: 102

I. IDENTIFICATION

Date of Printout: 12/14/90

ORIGIN: CONTROL ROOM SURVEY - NUREG 0700

GUIDELINE/CHECKLIST NO.: 6.6.2.3A2

GUIDELINE AREA: LABELS AND LOCATION AIDS

PROBLEM CATEGORY: LABEL LOCATION

PROBLEM SUB-CATEGORY: SPATIAL ORIENTATION

LOCATION :

CONTROL ROOM AREA: MAIN CONTROL ROOM

PANEL: NOT LOCATION APPLICABLE

SYSTEM: ALL

EQUIPMENT: LABELS

DESCRIPTION OF DISCREPANCY:

METERS WHICH INDICATE FLUID LEVELS BY PLANT CONVENTION, ARE VERTICAL ORIENTED DISPLAYS. THE LABELS ON THE METER FACES TECHNICALLY VIOLATE THE GUIDANCE INDICATING LABELS SHOULD BE HORIZONTAL

PREPARED BY: TOBEY DATE: 06/05/85

PROPOSED RESOLUTION:

VERTICAL METERS WILL CONTINUE TO BE "LABELED" VERTICALLY ON THE METER FACE. LABELS EXTERNAL TO THE METER FACE WILL NOT BE USED, EXCEPT IN THOSE CASES WHERE ALL OF THE DESIRED INFORMATION DOES NOT FIT ON THE METER FACE.

RECOMENDATION BY: CRDR TEAM

II. EVALUATION

HED EXPERIENCED BEFORE? NO
ACCIDENT RELATED? NO
TECHNICAL SPECIFICATIONS? NO
ERROR RECOGNITION / RECOVERY EXPECTED? YES

SUBJECTIVE PRIORITY RATING: 7.7

HED PRIORITY: 9

HED CATEGORY: NO ACTION

REVIEWED AND APPROVED - CRDR TEAM AND ENGINEERED by S. A. Schellin

NOTES:

(RESOLUTION AND CATEGORY REVISED 12/14/90)

HUMAN ENGINEERING DISCREPANCY RECORD
POINT BEACH NUCLEAR PLANT
HED NO.: 318

I. IDENTIFICATION

Date of Printout: 12/13/90

ORIGIN: OPERATOR QUESTIONNAIRES AND INTERVIEWS

GUIDELINE/CHECKLIST NO.: 6.1

GUIDELINE AREA: CONTROL ROOM WORKSPACE

PROBLEM CATEGORY: N/A

PROBLEM SUB-CATEGORY: N/A

LOCATION :

CONTROL ROOM AREA: MAIN CONTROL ROOM

PANEL: 1&2C20

SYSTEM: INSTRUMENTATION

EQUIPMENT: RELAYS

DESCRIPTION OF DISCREPANCY:

IN THE ASIP PANELS ALL RELAYS STICK OUT INTO THE WALKWAY (INSIDE THE BOARD)
AT VARIOUS ELEVATIONS FROM ANKLE HEIGHT TO SHOULDER HEIGHT. THIS CREATES AN
EXTREMELY HIGH POSSIBILITY OF A RELAY BEING BUMPED OR BROKEN, WHICH MAY OR
MAY NOT
CAUSE INADVERTANT OPERATIONS. O.Q.P.3

PREPARED BY: HANNEMAN DATE: 11/15/85

PROPOSED RESOLUTION:

THERE ARE NO POTTER-BRUMFIELD RELAYS IN THE UNIT 1 ASIP. ALL SUCH RELAYS
USED IN UNIT 2 ARE USED IN ANNUNCIATOR CIRCUITS ONLY, SO DISTURBING THESE
RELAYS WILL NOT DIRECTLY RESULT IN A PLANT/SYSTEM TRANSIENT. PLACEMENT OF
PHYSICAL GUARDS ...(SEE NOTES)

RECOMENDATION BY: CRDR TEAM

II. EVALUATION

HED EXPERIENCED BEFORE? NO
ACCIDENT RELATED? YES
TECHNICAL SPECIFICATIONS? YES
ERROR RECOGNITION / RECOVERY EXPECTED? NO

SUBJECTIVE PRIORITY RATING: 4.8

HED PRIORITY: 1

HED CATEGORY: NO ACTION

REVIEWED AND APPROVED - CRDR TEAM MADE AVAILABLE by S. A. Schellin

NOTES:

... OF APPRPRATE SEISMIC DESIGN AROUND THESE RELAYS IS NOT FEASIBLE BECAUSE

HUMAN ENGINEERING DISCREPANCY RECORD
POINT BEACH NUCLEAR PLANT
HED NO.: 318 CONTINUED

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DOING SO WOULD PREVENT OPERATORS FROM ACCESSING THEM TO DEFEAT NUISANCE
ALARMS AND WOULD ALSO HINDER I&C CALIBRATION.

HUMAN ENGINEERING DISCREPANCY RECORD
POINT BEACH NUCLEAR PLANT
HED NO.: 399

I. IDENTIFICATION

Date of Printout: 12/13/90

ORIGIN: VERIFICATION

GUIDELINE/CHECKLIST NO.: 6.5

GUIDELINE AREA: VISUAL DISPLAYS

PROBLEM CATEGORY: N/A

PROBLEM SUB-CATEGORY: N/A

LOCATION :

CONTROL ROOM AREA: MAIN CONTROL ROOM

PANEL: NOT LOCATION APPLICABLE

SYSTEM: CVC

EQUIPMENT: INDICATORS

DESCRIPTION OF DISCREPANCY:

(EOP 0.1-11A) NO RCP SEAL INJECTION FLOW GAL/MIN INDICATION AVAILABLE IN THE CONTROL ROOM.

PREPARED BY: TOBEY DATE: 12/10/85

PROPOSED RESOLUTION:

THE DISCREPANCY IS DECEPTIVE BECAUSE THE EOP ITSELF DOES NOT DIRECTLY REFERENCE RCP SEAL FLOW INDICATION. FLOW INDICATION IS AVAILABLE LOCALLY IN THE AUX BUILDING. LABRYRINTH SEAL PRESSURE DIFFERENTIAL INDICATION IS AVAILABLE IN THE CR ... (SEE NOTES)

RECOMENDATION BY: CRDR TEAM

II. EVALUATION

HED EXPERIENCED BEFORE? NO
ACCIDENT RELATED? YES
TECHNICAL SPECIFICATIONS? NO
ERROR RECOGNITION / RECOVERY EXPECTED? YES

SUBJECTIVE PRIORITY RATING: 5.3

HED PRIORITY: 3

HED CATEGORY: NO ACTION

REVIEWED AND APPROVED - CRDR TEAM:

DATE: / /

NOTES:

... AND CAN BE USED TO SEE IF THERE IS SEAL INJECTION FLOW. THIS IS

HUMAN ENGINEERING DISCREPANCY RECORD
POINT BEACH NUCLEAR PLANT
HED NO.: 399 CONTINUED

SUFFICIENT INFO WHEN THE EOPS ARE IN USE. OPERATORS USE SEAL DIFF PRESSURE
DAILY AND KNOW THAT IT CAN BE USED TO ASCERTAIN SEAL FLOW. (CATEGORY &
RESOLUTION REVISED 11/26/90)

HUMAN ENGINEERING DISCREPANCY RECORD

POINT BEACH NUCLEAR PLANT

HED NO.: 608

I. IDENTIFICATION

Date of Printout: 12/13/90

ORIGIN: VALIDATION

GUIDELINE/CHECKLIST NO.: 6.5

GUIDELINE AREA: VISUAL DISPLAYS

PROBLEM CATEGORY: N/A

PROBLEM SUB-CATEGORY: N/A

LOCATION :

CONTROL ROOM AREA: MAIN CONTROL ROOM

PANEL: 1C04

SYSTEM: SIS

EQUIPMENT: INDICATORS

CONTROL ROOM AREA: MAIN CONTROL ROOM

PANEL: 2C04

SYSTEM: CVC

EQUIPMENT: INDICATORS

DESCRIPTION OF DISCREPANCY:

(RESIDUAL DEBRIEF, CSP-S.1) CSP-S.1 INSTRUCTS OPERATORS TO BORATE AT THE MAXIMUM RATE. MAX FLOW FROM THE PUMP IS 40 GPM. HOWEVER, THE METER CAN ONLY READ 0-15 GPM.

PREPARED BY: SCHMIDT DATE: 12/15/85

PROPOSED RESOLUTION:

IT IS NOT NECESSARY TO MONITOR FLOW RATE TO PERFORM THIS STEP. THIS SHOULD BE NOTED DURING TRAINING ON THIS PROCEDURE. OPERATIONS DISTINGUISHES BETWEEN "BORATE" AND "EMERGENCY BORATE". SINCE THIS STEP SAYS BORATE, THAT IS WHAT WILL BE DONE.(SEE NOTES)

RECOMENDATION BY: CRDR TEAM

II. EVALUATION

HED EXPERIENCED BEFORE? YES
ACCIDENT RELATED? YES
TECHNICAL SPECIFICATIONS? NO
ERROR RECOGNITION / RECOVERY EXPECTED? YES

SUBJECTIVE PRIORITY RATING: 5.6

HED PRIORITY: 2

HUMAN ENGINEERING DISCREPANCY RECORD
POINT BEACH NUCLEAR PLANT
HED NO.: 608 CONTINUED

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HED CATEGORY: NO ACTION

REVIEWED AND APPROVED - CRDR TEAM:

DATE: / /

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NOTES:

(CATEGORY AND RESOLUTION REVISED 11/26/90)

HUMAN ENGINEERING DISCREPANCY RECORD

POINT BEACH NUCLEAR PLANT

HED NO.: 614

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I. IDENTIFICATION

Date of Printout: 12/14/90

ORIGIN: VERIFICATION

GUIDELINE/CHECKLIST NO.: 6.5

GUIDELINE AREA: VISUAL DISPLAYS

PROBLEM CATEGORY: N/A

PROBLEM SUB-CATEGORY: N/A

LOCATION :

CONTROL ROOM AREA: MAIN CONTROL ROOM

PANEL: NOT LOCATION APPLICABLE

SYSTEM: RCS

EQUIPMENT: INDICATORS, SEAL INJECTION

DESCRIPTION OF DISCREPANCY:

(EOP-0-24B) IN CHECKING IF SEAL INJECTION IS NORMAL, THERE IS NOT A GAL/MINUTE SEAL INJECTION FLOW METER IN CR (THE LABRYINTH SEAL DP 2PI-131B, 124B CAN BE USED INSTEAD).

PREPARED BY: TOBEY

DATE: 12/15/85

PROPOSED RESOLUTION:

FOR AN EXPLANATION OF WHY RCP SEAL FLOW INDICATION IN GPM IS NOT NEEDED IN THE CONTROL ROOM, SEE HED 399.

RECOMENDATION BY: CRDR TEAM

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II. EVALUATION

HED EXPERIENCED BEFORE? NO
ACCIDENT RELATED? YES
TECHNICAL SPECIFICATIONS? NO
ERROR RECOGNITION / RECOVERY EXPECTED? YES

SUBJECTIVE PRIORITY RATING: 6.2

HED PRIORITY: 3

HED CATEGORY: NO ACTION

REVIEWED AND APPROVED - CRDR TEAM:

DATE: / /

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NOTES:

(RESOLUTION REVISED 12/7/87, RESOLUTION AND CATEGORY REVISED 12/14/90)

HUMAN ENGINEERING DISCREPANCY RECORD
POINT BEACH NUCLEAR PLANT
HED NO.: 634

I. IDENTIFICATION

Date of Printout: 12/13/90

ORIGIN: VERIFICATION

GUIDELINE/CHECKLIST NO.: 0.0

GUIDELINE AREA: GUIDELINE AREA NOT FOUND

PROBLEM CATEGORY: N/A

PROBLEM SUB-CATEGORY: N/A

LOCATION :

CONTROL ROOM AREA: MAIN CONTROL ROOM

PANEL: 2C03

SYSTEM: RCS,CCW

EQUIPMENT: PROCEDURE

DESCRIPTION OF DISCREPANCY:

(EOP-1.1-22) POSSIBLY NEED CAUTION PRIOR TO STEP THAT NOTES THE POTENTIAL
DAMAGE FROM THERMAL SHOCK TO RCP SEALS ON RESTART OF SEAL INJECTION OR CCW IF
BOTH WERE LOST. NEED TO CUT IT IN SLOWLY. ALSO NOTE OP-4B DOES NOT COVER
RECOVERY OF
SEAL/CCW ON LOSS.

PREPARED BY: TOBEY DATE: 12/15/85

PROPOSED RESOLUTION:

ALL RCP INFORMATION WILL BE CONTAINED IN OP-4B AND OP-4B WILL BE THE
PROCEDURE REFERENCED IN THE EOPS. OP-4B IN TURN REFERENCES AOP-1B, "RCP
MALFUNCTION" AND THE RCP TECH MANUAL. THE HOT SEAL/SEAL WATER ESTABLISHMENT
PROCEDURE IS ...(SEE NOTES)

RECOMENDATION BY: CRDR TEAM

II. EVALUATION

HED EXPERIENCED BEFORE? NO
ACCIDENT RELATED? YES
TECHNICAL SPECIFICATIONS? NO
ERROR RECOGNITION / RECOVERY EXPECTED? NO

SUBJECTIVE PRIORITY RATING: 6.0

HED PRIORITY: 1

HED CATEGORY: NO ACTION

REVIEWED AND APPROVED - CRDR TEAM:

DATE: / /

NOTES:

... ADEQUATELY COVERED IN AOP-1B. (CATEGORY AND RESOLUTION REVISED 11/26/90)

HUMAN ENGINEERING DISCREPANCY RECORD

POINT BEACH NUCLEAR PLANT

HED NO.: 655

I. IDENTIFICATION

Date of Printout: 12/14/90

ORIGIN: VERIFICATION

GUIDELINE/CHECKLIST NO.: 6.5

GUIDELINE AREA: VISUAL DISPLAYS

PROBLEM CATEGORY: N/A

PROBLEM SUB-CATEGORY: N/A

LOCATION :

CONTROL ROOM AREA: MAIN CONTROL ROOM

PANEL: NOT LOCATION APPLICABLE

SYSTEM: RCS

EQUIPMENT: INDICATORS

DESCRIPTION OF DISCREPANCY:

(EOP-0-24B) INDICATION OF SEAL FLOW TO RCP, LINEAR ANALOG METER. NO METER EXISTS FOR THIS IN CONTROL ROOM.

PREPARED BY: TOBEY

DATE: 12/20/85

PROPOSED RESOLUTION:

SEE HED 399.

RECOMENDATION BY: CRDR TEAM

II. EVALUATION

HED EXPERIENCED BEFORE? NO

ACCIDENT RELATED? NO

TECHNICAL SPECIFICATIONS? NO

ERROR RECOGNITION / RECOVERY EXPECTED? YES

SUBJECTIVE PRIORITY RATING: 5.7

HED PRIORITY: 9

HED CATEGORY: NO ACTION

REVIEWED AND APPROVED - CRDR TEAM AND SIGNED by S. A. Schellin

NOTES:

(RESOLUTION AND CATEGORY REVISED 12/14/90)

HUMAN ENGINEERING DISCREPANCY RECORD
POINT BEACH NUCLEAR PLANT
HED NO.: 667

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I. IDENTIFICATION Date of Printout: 12/14/90

ORIGIN: VERIFICATION

GUIDELINE/CHECKLIST NO.: 6.5
GUIDELINE AREA: VISUAL DISPLAYS
PROBLEM CATEGORY: N/A
PROBLEM SUB-CATEGORY: N/A

LOCATION :
CONTROL ROOM AREA: MAIN CONTROL ROOM
PANEL: NOT LOCATION APPLICABLE
SYSTEM: RCS
EQUIPMENT: INDICATORS

DESCRIPTION OF DISCREPANCY:
(EOP-0.1-11A) RCP SEAL INJECTION FLOW. NO INSTRUMENTATION FOR THIS IN CR.

PREPARED BY: TOBEY DATE: 12/20/85
PROPOSED RESOLUTION:
FOR AN EXPLANATION OF WHY RCP SEAL FLOW INJECTION INDICATION IS NOT NEEDED IN
THE CONTROL ROOM, SEE HED 399.

RECOMENDATION BY: CRDR TEAM

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II. EVALUATION

HED EXPERIENCED BEFORE? NO
ACCIDENT RELATED? YES
TECHNICAL SPECIFICATIONS? NO
ERROR RECOGNITION / RECOVERY EXPECTED? YES

SUBJECTIVE PRIORITY RATING: 5.2

HED PRIORITY: 3

HED CATEGORY: NO ACTION

REVIEWED AND APPROVED - CRDR TEAM: DATE: / /

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NOTES:
(RESOLUTION REVISED 12/7/87, RESOLUTION AND CATEGORY REVISED 12/14/90)

HUMAN ENGINEERING DISCREPANCY RECORD

POINT BEACH NUCLEAR PLANT

HED NO.: 786

I. IDENTIFICATION

Date of Printout: 12/14/90

ORIGIN: CONTROL ROOM SURVEY - NUREG 0700

GUIDELINE/CHECKLIST NO.: 6.7.2.4.1

GUIDELINE AREA: PROCESS COMPUTERS

PROBLEM CATEGORY: CATHODE RAY TUBE (CRT) DISPLAYS

PROBLEM SUB-CATEGORY: DATA PRESENTATION FORMAT

LOCATION :

CONTROL ROOM AREA: MAIN CONTROL ROOM

PANEL: NOT LOCATION APPLICABLE

SYSTEM: COMPUTER

EQUIPMENT: COMPUTER

DESCRIPTION OF DISCREPANCY:

SOME COLUMN LABELS WRAP FROM LINE TO LINE AND BECOME HARD TO READ. EXAMPLE:
T-A-N-(WRAP TO:) K

PREPARED BY: TOBEY

DATE: 08/29/86

PROPOSED RESOLUTION:

A GREAT DEAL OF EFFORT WOULD BE REQUIRED TO REWORK THESE DESCRIPTIONS, AND OPERATORS DO NOT PERCEIVE THIS SITUATION TO BE A PROBLEM. REWRITING DESCRIPTIONS SO THAT COLUMN LABELS DO NOT WRAP FROM LINE TO LINE SOMETIMES RESULTS IN THE USE ... (SEE NOTES)

RECOMENDATION BY: CRDR TEAM

II. EVALUATION

HED EXPERIENCED BEFORE? NO

ACCIDENT RELATED? NO

TECHNICAL SPECIFICATIONS? NO

ERROR RECOGNITION / RECOVERY EXPECTED? YES

SUBJECTIVE PRIORITY RATING: 6.0

HED PRIORITY: 9

HED CATEGORY: NO ACTION

REVIEWED AND APPROVED - CRDR TEAM:

DATE: / /

NOTES:

... OF NON-STANDARD DESCRIPTIONS OR UNUSUAL SPACING BETWEEN WORDS. NO

HUMAN ENGINEERING DISCREPANCY RECORD

POINT BEACH NUCLEAR PLANT

HED NO.: 786 CONTINUED

FURTHER ACTION ON THIS ITEM WILL BE TAKEN. (RESOLUTION AND CATEGORY REVISED
12/15/90)

HUMAN ENGINEERING DISCREPANCY RECORD

POINT BEACH NUCLEAR PLANT

HED NO.: 793

I. IDENTIFICATION

Date of Printout: 12/14/90

ORIGIN: CONTROL ROOM SURVEY - NUREG 0700

GUIDELINE/CHECKLIST NO.: 6.7.3.2F

GUIDELINE AREA: PROCESS COMPUTERS

PROBLEM CATEGORY: PRINTERS

PROBLEM SUB-CATEGORY: ALARM MESSAGES

LOCATION:

CONTROL ROOM AREA: MAIN CONTROL ROOM

PANEL: NOT LOCATION APPLICABLE

SYSTEM: COMPUTER

EQUIPMENT: COMPUTER

DESCRIPTION OF DISCREPANCY:

MESSAGE ALARM TERMINOLOGY IS NOT THE SAME AS THAT ON ALL ANNUNCIATOR WINDOWS,
ESPECIALLY FOR ANALOG INFORMATION.

PREPARED BY: TOBEY

DATE: 08/29/86

PROPOSED RESOLUTION:

SEE HED 786.

RECOMENDATION BY: CRDR TEAM

II. EVALUATION

HED EXPERIENCED BEFORE? NO

ACCIDENT RELATED? NO

TECHNICAL SPECIFICATIONS? NO

ERROR RECOGNITION / RECOVERY EXPECTED? YES

SUBJECTIVE PRIORITY RATING: 7.0

HED PRIORITY: 9

HED CATEGORY: NO ACTION

REVIEWED AND APPROVED - CRDR TEAM MADE BY S. A. Schellin

NOTES:

(PROPOSED RESOLUTION AND CATEGORY REVISED 12/13/90)

HUMAN ENGINEERING DISCREPANCY RECORD

POINT BEACH NUCLEAR PLANT

HED NO.: 794

I. IDENTIFICATION

Date of Printout: 12/14/90

ORIGIN: CONTROL ROOM SURVEY - NUREG 0700

GUIDELINE/CHECKLIST NO.: 6.7.1.4H

GUIDELINE AREA: PROCESS COMPUTERS

PROBLEM CATEGORY: COMPUTER ACCESS

PROBLEM SUB-CATEGORY: DATA ENTRY-KEYBOARDS

LOCATION :

CONTROL ROOM AREA: MAIN CONTROL ROOM

PANEL: NOT LOCATION APPLICABLE

SYSTEM: COMPUTERS

EQUIPMENT: COMPUTERS

DESCRIPTION OF DISCREPANCY:

REGARDING KEYBOARD KEYS. THE PLASTIC CASE COVERING EACH KEY CAUSED ENOUGH GLARE THAT IT IS HARD TO READ KEYS AS THEY ARE BEING ENTERED.

PREPARED BY: TOBEY

DATE: 08/29/86

PROPOSED RESOLUTION:

MOST OPERATORS DO NOT THINK THERE IS A PROBLEM WITH GLARE ON THE KEYBOARDS. THE COMPUTER CONSOLES ARE SCHEDULED TO BE CHANGED OUT IN 1991. ANY PROBLEMS WITH GLARE ON THE NEW KEYBOARDS WILL BE DEALT WITH AT THAT TIME.

RECOMENDATION BY: CRDR TEAM

II. EVALUATION

HED EXPERIENCED BEFORE? NO
ACCIDENT RELATED? NO
TECHNICAL SPECIFICATIONS? NO
ERROR RECOGNITION / RECOVERY EXPECTED? YES

SUBJECTIVE PRIORITY RATING: 7.0

HED PRIORITY: 9

HED CATEGORY: NO ACTION

REVIEWED AND APPROVED - CRDR TEAM MADE BY S. A. Schellin

NOTES:

(RESOLUTION AND CATEGORY REVISED 12/13/90)