BEAVER VALLEY POWER STATION

UNIT NO. 1

DETAILED CONTROL ROOM DESIGN REVIEW

SUPPLEMENTAL REPORT

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DCRDR Supplemental Summary Report

1.0 Introduction

This DCRDR Supplemental Summary Report is provided as an addendum to the DCRDR Summary Report submitted to the NRC on November 29, 1985. The Supplemental Report is submitted in response to the NRC's Interim Technical Evaluation Report on Control Room Design Review (TAC 56102), dated April 10, 1987. The Technical Evaluation Report (TER) was prepared by Science Applications International Corporation (SAIC) and is based on all DCRDR information transmitted to the NRC from Duquesne Light Company (DLC) and information obtained at a meeting between the NRC and DLC, held on February 13, 1986.

In the TER, the NRC addresses the progress that DLC has made towards completing the DCRDR requirements in Supplement 1 to NUREG-0737. The DCRDR requirements in Supplement 1 to NUREG-0737 are as follows:

1. Establishment of a qualified multidisciplinary review team.

2. Function and task analyses to identify control room operator tasks and information and control requirements during emergency operations.

3. A comparison of display and control requirements with a control room inventory.

4. A control room survey to identify deviations from accepted human factors principles.

5. Assessment of human engineering discrepancies (HEDs) to determine which are significant and should be corrected.

6. Selection of design improvements.

7. Verification that selected design improvements will provide the necessary correction.

8. Verification that improvements will not introduce new HEDs.

9. Coordination of control room improvements with changes from other programs such as the safety parameter display system (SPDS), operator training, Reg. Guide 1.97 instrumentation, and upgraded emergency operating procedures (EOPs).

The TER is organized into sections which generally correspond to each of these requirements. In each section, the NRC identifies requirements, or parts thereof, that DLC has met. There are, however, several items of concern expressed in the TER. The purpose of this response is to address each of these items and

to assure the NRC that the BVPS-1 DCRDR has or is meeting all of the requirements of Supplement 1 to NUREG-0737 and is implementing a DCRDR that conforms to and is consistent with the guidelines set forth in NUREG-0700.

In order to facilitate the NRC's evaluation of this Supplemental Report, it is organized into subsections, which correspond to the TER organization. In each subsection, the items of concern are summarized, and the DLC responses to the items are presented. The DLC responses to the NRC items of concern are contained in the following section, Section 2.0. As needed, Appendices containing supporting documentation and data are included.

SECTION 2.0

RESPONSES TO NRC ITEMS OF CONCERN

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BVPS - 1

2.0 Response to NRC Items of Concern

This section contains the DLC responses to NRC items of concern regarding the BVPS-1 DCRDR. As stated in the Introduction, this section is organized the same as the sections of the TER which generally correspond to the DCRDR requirements set forth in Supplement 1 to NUREG-0737.

2.1 Establishment of a Qualified Multidisciplinary Team

The NRC audit team concluded that the review team had the proper mix of disciplines recommended in NUREG-0700 and that team assignments were adequate for conducting a satisfactory DCRDR. The NRC, on the other hand, has several concerns related to the role of DLC management in the assessment and resolution of HEDs and the interaction between management and the DCRDR team during assessment and resolution of HEDs. These are:

- Provide information which clearly defines the role and level of management involvement in the review and approval of design change corrective actions.
- Provide information clarifying whether management decisions regarding corrective actions were open to discussion among DCRDR team members.
- Provide information assuring the NRC that management would not reject a corrective action and decide not to correct an HED without discussing alternative corrective actions as well as consequences of no action.

Each of these concerns is repeated below and the DLC response immediately follows each concern.

Concern:

Provide information which clearly defines the role and level of management involvement in the review and approval of design change corrective actions.

Response:

The following defines the role and level of management involvement in the review and approval of the BVPS-1 DCRDR design change corrective actions and the input received by management when deciding on the corrective actions.

The role of management during the review and approval of the design change actions was to ensure that the design change were appropriately selected to fulfill the purpose of the DCRDR.

The level of management involvement began at the supervisory level which included a review of the technical details and continued through succeeding higher levels of the Nuclear Group management.

During the management reviews, the DCRDR team leader was available to provide input to management and to explain the criteria on which the design changes were based. Each of the design changes identified on the drawings which were enclosed with the Summary Report, were reviewed in detail by management with the review team leader. No changes to the corrective actions as recommended by the DCRDR team were suggested at that time. These are as reported in the Summary Report and as discussed at the NRC/DLC meeting of February 13, 1986.

Subsequent to the meeting of February 13, 1986, the HEDs and Corrective Actions were reviewed to determine the relative significance to plant safety. This review was conducted in response to a concern expressed by the NRC staff at the February 13 meeting that the DLC schedule for implementing corrections did not sufficiently reflect the safety significance associated with the HED. As a result of this review the appropriateness of some of the corrective actions were questioned primarily because it was determined that the associated HEDs did not have significant adverse consequences. These HEDs for which DLC has revised the corrective actions are described in Appendix A.

Concerns

Provide information clarifying whether management decisions regarding corrective actions were open to discussion among DCRDR team members.

Provide information assuring the NRC that management would not reject a corrective action and decide not to correct and HED without discussing alternative corrective actions as well as consequences of no action.

Response

Since these two concerns are so closely related, they are both addressed in this response. The DCRDR team leader and other team members, including the human factors specialist, have been involved in every decision regarding modifications to corrective actions. In every case where a modification to a corrective actions was recommended, including recommendations for no action, the proposed modification was reviewed by the DCRDR team leader, the human factors specialist, and, as appropriate, other DCRDR team members. Subsequently, revised corrective actions were discussed at scheduled meetings attended by representatives from the DCRDR team, engineering, operations and maintenance. Also attending the discussions were representatives from planning, licensing, training, and procedures development as needed. At all times, the DCRDR representative was able to discuss and recommend alternative corrective action as well as provide information regarding the consequences of no action.

In addition to these meetings, the DCRDR team leader participates in discussions on corrective actions, including proposed modifications, with personnel responsible for implementing corrective actions from engineering, operations, licensing, training, and procedures development. The overall process for implementing corrective actions as well as addressing proposed modifications to corrective actions has included DCRDR team participation at all levels.

DLC would like to note, also, that the participation of the DCRDR team and specifically involvement of the human factors specialist will continue until all HEDs are resolved in accordance with the regulatory requirements.

2.2 System Function and Task Analysis (SFTA)

The NRC concluded that the BVPS-1 SFTA conformed to the guidelines of NUREG-0700 and that DLC has satisfied this requirement of NUREG-0737, Supplement 1.

2.3 Control Room Inventory

The NRC concluded that the BVPS-1 method for comparing the existing control room equipment with the needed instrumentation identified during the SFTA should satisfy this requirement of NUREG-0737, Supplement 1. The NRC also noted in the TER that although not required by Supplement 1 to NUREG-0737, DLC performed a validation of control room functions similar to the guidelines of NUREG-0700.

There are two closely related items of concern regarding completion of the control room survey requirement of Supplement 1 to NUREG-0737. These are:

- Provide assurance that all operator tasks required by EOPs are exercised during the real-time validation of EOPs on the simulator.

- Provide assurance that a validation effort will be conducted with the ICCS panel and that the NRC will be provided with the results.

The following DLC response addresses these concerns.

Response

Our response to these two NRC concerns is provided in two parts: (a) a general discussion of the validation program for the EOPs and how operator tasks required by the EOPs were exercised and (b) a specific discussion of the control room monitors and validation effort relating to the Inadequate Core Cooling (ICC) Instrumentation System. These discussions include an overview of the programs to validate the EOPs and to show the relationship between the DCRDR and the EOP generation and maintenance programs which is described in the BVPS (BVPS-1 & 2 Common) Procedure Generation Package (PGP).

a. By letter dated April 8, 1987 DLC transmitted to the NRC the PGP for BVPS. The PGP includes a description of the extent to which the initial EOPs were exercised during the real-time validation on the simulator. It should be noted that DCRDR team members were actively engaged in the development of the validation programs and had the lead responsibility for generating the evaluation criteria and the accident scenarios for the validation on the simulator. For the Staff's convenience, a copy of Pages 10 and 11, Section VA, of the PGP are provided in Appendix N. This section explains that the scenarios which were run on the BVPS simulator were used to

validate most but not all of the EOPs. The reason that not all of the EOPs can be exercised in real-time simulation that the computer model does not cover all the plant conditions which must be simulated to exercise. Therefore, DLC cannot provide assurance that all the operator tasks required by the EOPs will be exercised during the real-time validation for the EOPs on the simulator. However, as described in the PGP, all the EOPs were initially validated by the table-top and walk-through methods and the majority of the EOPs were also validated by using accident scenarios run on the BVPS Simulator. The parts of the EOPs that could not be completely exercised during real-time simulations were subsequently validated by the table-top and the walk-through methods addressing the scenario which was in progress.

Based on the above, DLC provides assurance that all the operator tasks required by the initial issue of the EOPs were validated and that revisions to the EOPs will be processed according to the BVPS PGP.

(b) The existing instrumentation in the control room provides separate indication capability for the Reactor Vessel Level Indication System (RVLIS), the Subcooling Margin Monitor (SMM) and the Core Exit Thermocouples (CETC). Preliminary work was begun during the fifth refueling outage on the Inadequate Core Cooling (ICC) upgrade of the CETC System. The installation of the ICC Instrumentation System Upgrade is scheduled to be completed during the sixth refueling outage (scheduled to begin December 11, 1987) and provides a new microprocessor cabinet integrating RVLIS with the CETC and the SMM. Redundant plasma displays are included in the upgrade and will be used as the primary display for the reactor vessel level and the subcooling margin and as the backup CETC indication. The existing Reactor Vessel Level Monitor also utilizes plasma displays for indication.

As stated in the discussion for HED-500 (Please see Appendix G) the ICC Instrumentation System display and pushbutton control locations were reviewed by the DCRDR team and the recommended locations were forwarded to our Engineering Unit. There are two display sets. One display set (Train A) will be located on vertical board B replacing the existing SMM with the corresponding

pushbutton control keypad located on bench board B. The other display set (Train B) and its control keypad will be installed in the location of the APDMS panel to the left of the control boards. The displays denote alarmed conditions in reverse video. The upgraded ICC displays provide information that is presently available to the operators. As indicated above, the Train A display will be on Vertical Board B which is centrally located on the control boards.

The validation of the ICC portion of the EOPs was completed during the training of the operators on the new EOPs. During this validation the simulated plant responses to an ICC condition were produced on the simulator to allow the steps of the Function Restoration Procedure C.1, Response to Inadequate Core Cooling, to be exercised. Although the upgraded ICC displays were not installed at the simulator, we believe that the results of the above EOP validation would have been the same had the upgraded ICC displays been installed since the EOP strategy is not changed. In addition, we have reviewed the discrepancies resulting from the above validation and have found that no discrepancies were written against the existing instrumentation for ICC. We believe that this same result would also be generated for the upgraded instrumentation because of the similarity of the display information and the method and characteristics of the displays, i.e., both being plasma displays of comparable quality and size.

In summary,

1. There are no functional differences between the displays of the existing and upgraded ICC relating to operator tasks.

2. The displays of the upgraded ICC provide information that is presently available to the operators.

3. The displays of the existing and upgraded ICC are plasma displays and are approximately the same size.

4. The displays of the ICC will be consolidated and more centrally located than the existing ones.

5. The EOP strategy for ICC will not be affected by the incorporation of the upgraded ICC.

Based on the above, we believe that the validation of the control room functions has been completed for the ICC procedures and that the incorporation of the upgraded ICC displays will not introduce new HEDs. Notwithstanding, any EOP changes which may be incurred by the incorporation of the upgraded ICC Instrumentation System will be processed according to the provisions of the BVPS PGP.

2.4 Control Room Survey

As stated in the Summary Report, DLC performed a supplemental control room survey. Each NUTAC survey item was compared on a one to one basis with the NUREG-0700 guidelines. If the NUTAC survey item did not incorporate (1) the identical criteria and (2) the same method of survey as that set forth in the NUREG-0700 guideline, then the NUREG-0700 guideline was rechecked. HEDs that had been identified during the survey using the NUTAC items were reviewed individually against the NUREG-0700 guidelines in order to identify the specific NUREG-0700 guideline/criteria violated and to verify HEDs identified during the Operating Experience Review.

In summary, DLC conducted a quantitative control room survey conforming to the guidelines and criteria set forth in NUREG-0700. The only limitation to the survey have been the following areas:

1. The SPDS and the PVC had not been installed in the control room at the time of the initial survey.

2. Environmental surveys were to be completed after the combined BVPS-1 and BVPS-2 control room was completed.

Also, as noted by the NRC in their item of concern, there were certain guidelines whose quantitative assessment had not been completed at the time of the February 1986 meeting. DLC is confident that the following items of concern relating to the control room survey, that were expressed by the NRC in the TER, have been addressed:

- Address all the concerns associated with the guidelines presented in Appendix A. Any HEDs resulting from this process should be submitted to the NRC for review along with descriptions of proposed resolutions.

- Conduct a survey of the control room environment after the wall that separates Units 1 and 2 is removed. Results of this survey should be forwarded to the NRC.

- Conduct a survey of the communication system using the criteria presented in Section 6 of NUREG-0700. Results of this survey should be forwarded to the NRC.

- Provide assurances that control room CRTs and associated equipment (associated with the SPDS and the PVC) will be surveyed using the criteria presented in Section 6.7 of NUREG-0700.

Each of these concerns is repeated below and immediately followed by the DLC response. In developing the responses to each of the NRC concerns and the associated items listed in Appendix A to the TER, DLC reviewed and rechecked each item listed by the NRC or has indicated that the item will be checked in the proposed followup surveys. With the completion of the follow-up surveys, DLC will have completed a control room survey based on all of the guidelines set forth in Section 6 of NUREG-0700 using methods suggested by the NRC and the specific criteria contained in each guideline.

Concern

Address all the concerns associated with the guidelines presented in Appendix A. Any HEDs resulting from this process should be submitted to the NRC for review along with descriptions of proposed resolutions.

Response

DLC has reviewed specifically each of the guidelines presented in the TER Appendix A. The results of these reviews are contained in Appendices B, C, D, E, and F which correspond respectively to TER Appendices A-1, A-2, A-3, A-4, and A-5.

During the course of addressing each of these guidelines, no new HEDs were identified.

Concern

Conduct a survey of the control room environment after the wall that separates Units 1 and 2 is removed. Results of this survey should be forwarded to the NRC.

Response

A comprehensive survey, based on all related NUREG-0700 guidelines, will be conducted on the combined BV-1 and BV-2 control room environment. Included in the study of the combined control room environment will be survey of the following:

- HVAC
- Ambient Noise
- Lighting

The survey will be conducted by a multidisciplinary DCRDR team with a human factors consultant taking the lead in implementing the surveys and identifying HEDs. Results of the surveys will be forwarded to the NRC.

Concern

Conduct a survey of the communications system using the criteria presented in Section 6 of NUREG-0700. Results of this survey should be forwarded to the NRC.

Response

A comprehensive survey, based on all related NUREG-0700 guidelines,will be conducted on the combined BV-1 and BV-2 control room communications. The survey will be conducted by a multidisciplinary team with human factors consultant taking the lead in implementing the survey and identifying HEDs. Results of this survey will be forwarded to the NRC.

Concern

Provide assurances that control room CRTs and associated equipment (associated with the SPDS and the PVC) will be surveyed using the criteria presented in Section 6.7 of NUREG-0700.

Response

DLC will survey the SPDS and PVC CRTs and associated equipment (printers and keyboards) using the guidelines in Section 6.7 of NUREG-0700. The results of the CRT survey will be submitted to the NRC.

2.5 Review of Operating Experience

As noted by the NRC, DLC conducted a review of operating experience consisting of a review of plant historical documentation and a survey of operating personnel by questionnaire and interview, although the operating experience review (OER) is not a requirement of Supplement 1 to NUREG-0737, the NRC concluded that the OER provided a valuable contribution to the DCRDR.

There are, however, two items of concerns identified by the NRC. These are listed below with the DLC response.

Concern

While the review of plant historical data was extensive, no effort was made to review industry-wide documents, such as Significant Operating Event Reports (SOERs). In order to receive the fullest benefit from this historical review, DLC could expand the scope of its review to include industry-wide documentation as suggested by the guidance of NUREG-0700.

Response

A review of LERs from nuclear power plants with similar designs as that of BVPS-1 and BVPS-2 was conducted as part of the BVPS-2 DCRDR. These plants were North Anna Unit 1 and Surry Unit 1.

In summary, a total of 651 LERs were reviewed by the DCRDR team and by DLC operations personnel (a complete description of this LER review is contained in the BVPS-2 Summary Report). Of the 651 LERs, 12 were identified as requiring further DCRDR review. Further review of the 12 LERs and their associated HEDs by the BVPS-2 DCRDR team resulted in the following determinations. Eleven (11) required no corrective action. One HED, related to the inadvertent opening of an accumulator drain valve, was resolved by use of demarcation, hiarchial labelling, and component labelling.

The 12 LERs were reviewed also as part of the BVPS-1 DCRDR. In no case was there an HED identified. Three of the LERs were related to equipment failures and appropriate operator actions were taken in response to the failure. One was not a DCRDR-related problem. Two could have been caused in part by inadequate labelling, but the BVPS-1 control room labelling clearly identifies the panel elements involved in the LERs. Further, the grouping and location of these panel elements is consistent with NUREG-0700 guidelines. The others were either operator error or administrative oversights. In each of these LERs, the BVPS-1 control room contains adequate instrumentation, alarms and/or procedures to prevent the operator error from occurring.

Concern

Convert the 46 problem areas identified during the operating experience review into HEDs and process the HEDs accordingly, including descriptions of proposed resolutions.

Response

The forty-six (46) problem areas corresponding to an operator questionnaire question or operator interview item were reviewed. The review shows that within the forty-six problem areas, there are sixty-four (64) specific items which were identified during the DCRDR for follow-up action. As requested by the NRC Staff each of these action items is designated an HED. These HEDs are assigned numbers 500 to 563 and will be processed by the DCRDR Team, utilizing the BVPS-1 HED assessment model.

For over half of these HEDs reference is made to an HED(s) previously reported in the DCRDR Summary Report. These will also be reviewed by the DCRDR team to insure that the referenced HED adequately addresses the new HED. A summary of the status of these HEDs is provided below and a detailed description of each HED is provided in Appendix G.

61 of the HEDs are considered resolved pending NRC acceptance.

2 of the HEDs will be checked during the lighting survey.

1 of these HEDs will be checked during the auditory environment survey.

2.6 Assessment of HEDs to Determine Which are Significant and Should be Corrected

The NRC stated in the TER that based on the guidance of NUREG-0700 and the requirements of Supplement 1 to NUREG-0737, all HEDs should be assessed for significance. Further, the TER states that the potential for operator error and consequences of that error in terms of plant safety should be systematically considered in that assessment. Finally, the TER states that both individual and aggregate effects of HEDs should be considered. The NRC found the DLC assessment process acceptable. However, since it did not result in the establishment of a schedule that sufficiently distinguished among Priority 1, 2, or 3 HEDs or provide specific implementation dates for each priority of corrective action, the process was determined to be unacceptable to the requirements of Supplement 1 to NUREG-0737.

Response

The DLC process gives schedular priority to the Priority 1 HEDs, which were those HEDs that were directly related to or could impact on the performance of accident-related operator tasks identified in the SFTA. On the other hand, DLC acknowledges that specific implementation dates for all classifications of priorities were not established. The reason is that some corrective actions take longer due to an extensive number of variables including engineering design and analysis and, in some cases, equipment acquisition lead times. Therefore, even though a corrective action has the highest schedule priority, it may not be completed as quickly as a corrective action with a lower priority.

To resolve the schedule priority issue, DLC is submitting a total schedule for the corrective actions for each HED. In that schedule, all HED corrective actions that have been developed and approved by the NRC, except as noted in this Supplemental Report, have already been completed or are scheduled to be implemented by the completion of the sixth refueling outage scheduled to begin by December 11, 1987. Each HED identified in subsequent DCRDR investigative activities will be submitted to the NRC along with its proposed corrective action, priority, and date of implementation.

Further information for the HED Tracking System is provided in Section 2.7. Appendix O contain the HED Computer Tracking Printout.

2.7 Selection of Design Improvement

The NRC concluded that the BVPS-1 process for selecting HED resolutions was adequate. However, DLC still needs to provide additional information on the process for tracking HED resolutions to satisfy this requirement of NUREG-0737, Supplement 1. The specific NRC concern and the DLC response follow.

Concern

Provide a detailed description of the process to be used for tracking HED resolutions.

Response

Tracking HED resolutions has been assigned to the BVPS-1 Nuclear Safety Department. In order to fulfill the requirements of the assignment, the Nuclear Safety Department is responsible for the following:

1. Assign the HED resolution to the appropriate group (e.g., engineering, operation, etc.) for implementation.

2. Follow the progress of the resolution with the assigned group and update the resolution status in the HED database.

3. Consult with groups responsible for HED resolutions, on an as needed basis, to discuss modification or revisions to proposed resolutions.

4. Assemble DCRDR team as needed to discuss/develop revisions or alternatives to proposed revisions.

5. Verify that resolutions have been completed as planned and that no new HEDs have been introduced. The DCRDR team will be assembled, as necessary, to perform this verification.

6. Document and report any deviations to the proposed resolution (e.g., corrective action revisions or schedule changes).

7. Obtain NRC approval for any revisions to previously approved resolutions.

8. Maintain/update the HED database.

To facilitate tracking of HED resolutions, an HED database and reporting system has been established. A description of the database and reporting system is contained in the following paragraphs.

HEDs are tracked utilizing a portion of the original database. The fields added for tracking purposes are Group, Status, Revised Resolution, NRC Approval, and Implementation Date. The Group field was added to include assignment of an HED for resolution. Within the Group category several codes were used; OPS referring to HEDs requiring follow-up and implementation by the Operations group, ENG for engineering support, PROC for HEDs related to procedural problems, TRNG for HEDs affecting training and NSD for HEDs requiring followup by the Nuclear Safety Department. The Status field was added to track the resolution of the HED. The codes used at this time are CLOSED for those HEDs that the NRC approved as not requiring further corrective action and those HEDs which all corrective action are complete. A HOLD category is used for HEDs awaiting NRC approval of the Supplemental Report or awaiting implementation of scheduled actions. An OPEN category is available for HEDs that may require additional review. The Implementation Date corresponds to the Status category. For those HEDs closed, the date corrective actions were complete. For HEDs on hold, the date corrective actions are scheduled to be complete. The revised resolution category is a description of revised corrective actions. At this time any HEDs which carry a revised resolution have a corresponding HOLD category awaiting NRC approval of the revised corrective actions.

The NRC approval category is either yes or no depending on whether the NRC has approved corrective actions or revised corrective actions.

2.8 Verification that Selected Design Improvements Will Provide the Necessary Improvement Without Introducing new HEDs

The NRC concluded that DLC has satisfied this requirement of the Supplement 1 to NUREG-0737 for those HEDs where a specific corrective action has been defined. However, the NRC noted that many HEDs are being studied and that some aspects of the DCRDR have not been implemented; therefore, the verification process should be continuously applied until all HED resolutions are developed.

Concern

Provide information to assure the NRC of the continuation of verification that selected design improvements will provide the necessary correction without introducing new HEDs.

Response

DLC has verified that selected HED resolutions provide the necessary improvements without introducing new HEDs for all HEDs resolved since submittal of the Summary Report. The only HEDs whose resolution will need verification will be those that are identified in the environment, communication, and CRT surveys.

It is the intention of DLC to process those HEDs exactly as all previously defined HEDs have been processed. The DCRDR team is still intact. The services of a HFS continue to be retained. And, as noted in the response in Subsection 2.7, the DCRDR team leader and the team are to retain responsibility for all DCRDR activity until all aspects of the investigative phase is complete and HED resolutions have been implemented.

2.9 Coordination of Control Room Improvements with Changes from Other Programs

The NRC acknowledges in the TER that DLC has established a program for integrating the activities of the SPDS, EOPs, Regulatory Guide 1.97 Instrumentation, and the ERF. However, the NRC expressed three concerns, described below, related to the implementation of the SPDS and EOPs and the extent and schedules for EOP and Trainig resolutions to HEDs. DLC has prepared a specific responses to those concerns. DLC would also like to note than on page 20 of the TER, the NRC stated that "operators are exposed to changes on the simulator before it is installed in the control room during the next outage". This statement is true in part as it may relate to EOP and SPDS implementation. However, it is largely untrue as it relates to design changes eminating from the DCRDR. Normally, changes to the simulator follow control room changes. However, DLC does conduct classroom operator training in conjunction with DCPs.

Concern

Provide information as to how, and on what schedule, the SPDS is being integrated with the new EOPs and the operator training program.

Response

The primary user of the SPDS during emergency operations would be the STA. Specific training for the assigned STAs in the use of the SPDS is provided during simulator training. The operators have accepted the SPDS and utilize it during normal operations by keeping the plant status displayed on the overlead CRT. In addition, the operational limits display is utilized often. Also, training on the SPDS is provided to the operators at the simulator. It is not DLC's intent to integrate the use of the SPDS with the new EOPs.

Concern

Provide information regarding the extent to which EOPs and training elements are used to resolve HEDs.

Response

Twenty (20) HEDs were resolved by procedural revision. These HEDs were identified in Appendix L of the DLC Summary Report. A summary of how procedural revisions were identified or the corrective action is described in the following paragraphs.

One (1) of the HEDs (HED 410) referred simply to a typographical error in an EOP. The correction was made. Nine (9) HEDs (34, 379, 380, 381, 415, 417, 419, 426, and 428) were related to discrepancies in the procedures such as missing data on equipment location, improper sequences for verifying valve position, inconsistencies in use of abbreviations, and deviations from established formats. The corrective actions were directly related to procedures revision and have been implemented.

Seven (7) of the HEDs (HEDs 162, 159, 201, 158, 163, 165 and 420) were cases where a control room display could not be satisfactorily used to read a parameter value required to perform an EOP. In each of these cases, the value, which had been calculated by engineering, was stated at an unecessary degree of precision, and it could not be accurately read on the displays. In each case, engineering reviewed their analysis and identified a more conservative value that could be read on existing instrumentation. For example, PRZR pressure values of 2335 and 2315 could not be accurately read on the pressure indicator which must cover a range of 1700 to 2500. Rounding off the required reading to a more conservative value and revising the procedure is a better solution that adding numerous displays with special ranges and scales designed for use in only specific situations. The corrective action has been made.

Two (2) of the HEDS were related to the difficulty of use of the EOPs because the EOPs and all attachments were bound into one volume. The corrective action, which has been implemented, was to bind the three different series of EOPS into separate volumes.

One of the HEDs (HED 155) was related to an EOP verification requirement which could not be accomplished using the control room instrumentation. THe procedures were reviewed to determine (1) if the verification was necessary or (2) could purpose of verification be accomplished given existing control room instrumentation. The later proved to be the case.

DLC adopted at the outset of the DCRDR a corrective action selection strategy to use procedural revision only when it clearly resolved the HED and did not place any additional burden on control room operators. The above descriptions of the extent of the use of procedural revisions as corrective actions documents that this strategy has been followed.

Seven (7) HEDs were resolved by training. These HEDs were identified in Appendix P of the DLC Summary Report. A summary of how training was identified as the corrective action is described in the following paragraphs.

One (1) of the HEDs (HED 311) refers to the nadequacy of a training program. Therefore, the corrective action was to improve the quality and extent of the training program.

One (1) of the HEDs (HED 432) had to do with the observation of a inappropriate operating practice that could expose plant personnel to an electrical hazard (observation took place during simulator exercise). Additional training on operating practices was determined to be the solution.

One (1) of the HEDs (HED 433) was related to an observation that operators had difficulty using specific reference technical data that was contained in tables. Training on how to look up data in the tables was the selected corrective action.

Four (4) of the HEDs (HEDs 119, 153, 259, and 427) referred to incorrect usage of (1) an entire type of instrumentation (i.e., Hagan controller) or (2) special instrumentation (e.g., base adjust or the tap changers). Training was identified as the best way to ensure that operators used the instrumentation properly.

DLC would like to point out that although the training resolution is the best for each of these HEDs, the use of training is enhanced by the installation of the simulator which has been in use since 1986. Now the operator can get directly related hands-on experience in the use of Unit 1 specific instrumentation.

Concern

Provide information regarding expected date for the following:

- Implementation of SPDS
- Implementation of EOP revisions used to resolve HEDs
- Implementation of revised training elements used to resolve HEDs.

Response

Date of Implementation of SPDS

The Unit 1 control room SPDS has been installed. Integration of the SPDS with EOPs is addressed is the first response in this section. DLC recognizes that the SPDS has not been fully integrated with the control room in terms of human engineering. As per Section 2.4, Control Room Survey, DLC will conduct a survey of the SPDS CRT and asscciated equipment using the guidelines of Section 6.7 of NUREG-0700.

Date of Implementation of EOP Revisions Used to Resolve HEDs

EOP revisions used to resolve HEDs have been made.

Date of Revised Training Elements Used to Resolve HEDs

Revised training elements are normally covered in operator requalification training (received annually in accordance with NRC requirements). This includes both revised training elements used to resolve HEDs and training established to support other control room modifications.

In situations where hardware or operational modifications are extensive, special training is conducted.

2.10 Analysis of Proposed Design Changes

The NRC stated that as required by Supplement 1 to NUREG-0700, DLC has provided a record of all HEDs documented during the DCRDR in Appendices G through U of the DLC Summary Report and included a brief description of the HED, the guideline source, location, priority and the proposed solution. The NRC did have some concern.

Of those documented HEDs submitted as part of the Summary Report, several of the proposed solutions could not be evaluated because of (1) the brief descriptions provided for the HED and its resolution or (2) incompleted studies that are associated with the HEDs. Discussions with the licensee at the February, 1986 meeting helped to resolve many of the questions that the NRC review team had regarding the HEDs. However, the NRC has concerns related to (1) HEDs that have corrective actions that are inadequately explained. (2) Those HEDs identified in the Summary Report as undergoing further study such as the LMD study and (3) HEDs from the simulator exercise (SIMEX) and the SPDS, which do not identify the human factors guidelines of NUREG-0700 that were used to generate these HEDs. The specific concerns and the DLC responses are listed below.

The NRC also addressed schedule considerations in this section. Schedule is addressed in Subsection 2.6 of this Supplemental Report.

In summary, there are two items of concern in this area. Each is presented below and immediately followed by the DLC response.

Concern

Provide results of ongoing studies for those HEDs still being examined as listed in TER Appendix C.

Response

There were two sets of HEDs listed in TER Appendix C for which the NRC requires a report on the results. There are (1) HEDs that were studied further as part of the LMD study and (2) HEDs that required additional review because of the DCRDR team was not confident that the discrepancy was fully understood and/or that optimal solutions to the discrepancy had been developed. The HEDs are listed in TER Appendices C-1 and C-2, respectively.

All of these HEDs have undergone review and further study. Detailed descriptions of the results of the HEDs reviewed in the LMD study are contained in Appendix H. In Appendix H, each HED is listed by number; the associated NUREG-0700 guideline is identified; and the HED and its resolution are discussed.

It should also be noted that during the LMD study, all guidelines in Section 6.6 of NUREG-0700 and selective other guidelines were checked. The results of this additional survey activity are contained in Appendix M.

The results of the HEDs that underwent further study, but were not related to LMD, are contained in Appendix I. DLC would like to point out, however, that the HEDs listed in TER Appendix C-2 were not the HEDs in the Summary Report that were designated to receive further study. The HED list should have been as follows:

38, 111, 430, 435

Also, NUREG-0700 guideline 6.5.3.1.D was identified as to be checked. As can be seen, only HED 430 and 435 were included in the list that the NRC presented. DLC has conducted further review and study of the four HEDs listed above and the guideline to be checked. The results are contained in Appendix I. DLC also rechecked each of the HED listed by the NRC in TER Appendix C-2. These results also are contained in Appendix I.

Concern

Provide detailed descriptions of the resolutions for all HEDs listed in:

- Appendix B, Section B-2
- Appendix D

Response

The HEDs contained in TER, Appendix B-2 are those that had proposed corrective actions that could not be evaluated by the NRC. The reason for not being able to evaluate the corrective action stated by the NRC is that, "The description of the corrective action cannot be evaluated because the description is too brief, ambiguous, or general." DLC has expanded the descriptions of the proposed corrective actions for each of these HEDs. The expanded descriptions of proposed corrective actions is contained in Appendix J.

The HEDs contained in TER Appendix D are those that referenced the Simulator Exercise (SIMEX) or the SPDS review and not a specific NUREG-0700 guideline. As described in the TER:

> These HEDs reference Simulator Exercise (SIMEX) or SPDS, yet provide neither a guideline number from NUREG-0700, Section 6 nor a description of the exact criteria violated (TER, P. 39)

Each of these HEDs is listed in Appendix K and the appropriate NUREG-0700 guidelines is identified. In addition, DLC has included a description of the HED and its resolution.

2.11 Justification for HEDs to be Left Uncorrected

Concern

The NRC noted that all HEDs for which no corrective action will be taken, listed in Appendix T, were discussed at the February meeting in detail with the reasons or justification for DLC's explanations found to be adequate. The item of concern is that there remain nine (9) HEDs, listed in Section E-2 of TER Appendix E, that need to be re-addressed by DLC. This information should be provided in a supplement to the Summary Report.

Response

Each of the justifications for taking no corrective actions has been reviewed. DLC found that in each case, the decision to take no corrective action was appropriate. However, the justification did not provide the NRC with adequate information. Each justification has been revised and expanded. They are contained in Appendix L.

APPENDIX A

DETAILED CONTROL ROOM DESIGN REVIEW

SUPPLEMENTAL REPORT

BVPS - 1

A P P E N D I X A

HEDS WHERE CORRECTIVE ACTIONS HAVE BEEN REVISED SINCE THE SUBMITTAL OF THE SUMMARY REPORT

APPENDIX A

HEDs Where Corrective Actions Have Been Revised Since The Submittal of the Summary Report

HED	Guideline	Discussion
120	6.4.3.3c(4)	This HED is that pushbutton legends are not coded for position and could cause confusion during multiple lamp replacement. The DCRDR team recommended to code the pushbuttons and emphasize the problem in training. The resolution was revised to take no action because the operator practice is to remove one failed lamp at a time. We also believe that the probability of more than one lamp failure on a single panel within a relatively short period of time is small. Also, it is noted that the largest groups of pushbuttons occur on four separated subpanels which are for the turbine and reheater systems. The operations manual has diagrams for these subpanels that can be used as a reference if there is confusion concerning the proper replacement location of two or more covers. The remaining groups of pushbuttons are on the Hagan Controllers. Each Hagan has only four pushbuttons.

HED	Guideline	Discussion
309	6.7.2.4a(2)	This HED addresses a computer code for Radiation Monitoring which has no meaning to the operators. The code does not correlate with CPM on the Radiation Monitoring Recorders. The DCRDR team recommended to modify the computer software by converting the code to CPM or other usable format. The team recommendation was reviewed and it was determined that the operators do not need the correlation. Therefore,, the software modification is not feasible. The revised resolution is to take no further action.

HED	Guideline	Discussion
79	6.3.4.2b(1-4)	This HED identified that the annunciator controls are not distinctly set off from the other controls on the bench board. The DCRDR team recommended that the silence button color be change to white and that the background to the silence button be shaded. The feasibility of changing the silence button color to white was reviewed. We are concerned about discoloration caused by wear and surface impregnation of dirt and skin oil. Therefore, the above recommendation is modified to painting a white background to the silence button. The modification is more practical and will still provide for easy operator recognition of the silence button location.

HED	Guideline	Discussion
51 & 52	6.2.2.2a&b 6.2.2.6b&c	These HEDs identified that (1) the Fire & Radiation Monitor buzzers sound the same and could cause confusion and (2) the Radiation Monitor buzzer is extremely intense and cause operator discomfort. The DCRDR team recommended the removal of the Radiation Monitor buzzer since an annunciator exists in the control room. The recommendation has been revised. Operations has requested that the Radiation Monitor buzzer be modified to provide a distinct but less severe tone. This modification will be implemented since it satisfies the concerns of HEDs 51 and 52.

HED	Guideline	Discussion
45	6.2.1.2b(5)	This HED identified the long page phone cords as being a potential tripping hazard. The DCRDR team recommended that retractable cords be installed. The revised resolution is to take no action for the following reasons: 1. The existing cords provide immediate access and free operator movement about the boards. 2. Operators move safely about with the existing cords. No tripping incident has been identified. 3. Frequently extending and retracting the cords would create a nuisance for the operators. 4. The frequent use of the phones raises concern about the retracting mechanism working properly. Also, maintenance problems during an extended period of use is a concern.

HED	Guideline	Discussion
403	6.9.2.2d	This HED addresses the discharge and suction valve controls for pumps RH-P-1A and 1B as not being in conventional order. The discharge and suction valves are arranged top to bottom respectively. The DCRDR team recommended to swap the positions for each pair of controls. The valve controls are located immediately below their respective pump control. The revised resolution is that no action be taken for the following reasons: 1. Supplemental labels clearly identify the discharge and suction valve controls. 2. The control positions relate to valve arrangement in that the suction valves are lower than the discharge valves in the field.

HED	Guideline	Discussion
119	6.4.3.3c(3)	This HED addresses inadvertent actuation of some pushbuttons during their lamp replacement. The DCRDR team recommended resolution was to emphasize the problem in training. To determine if actuation during lamp replacement is a problem the operation of the lighted pushbuttons was reviewed. The pushbuttons operate in conjunction with controllers. To light a pushbutton its controller must be in the proper operating mode. In that mode, the failed lamp is discovered and would be replaced. During the replacement the operator could depress the pushbutton too far and actuate it. However, the controller will not change mode since it is already in the mode to light the pushbutton. Therefore, it was concluded that there is no problem with inadvertent actuation upon lamp replacement. Consequently, the revised resolution is that this HED is not a problem.

HED	Guideline	Discussion
210	6.5.3.3b(1)	This HED addresses the organization of Status Panel 176. There are five (5) background colors of status lights and four (4) rows on the panel. Four of the colors correspond to the instrumentation channel color code convention. The other color is black and is used for permissives, trip blocks and trip bypasses. Because the row color pattern is not maintained over about one-quarter of the panel, the DCRDR team recommended that the panel be reorganized. The team also recommended that the P9 permissive be moved between the P8 and P10 permissives. The organization for the status panel was reviewed. The status lights, including the P9 permissive were determined to be systematically grouped by functions. To maintain the functional groups and satisfy the row color coding on this panel is significantly difficult and does not lead to significant improvements over the existing organization. Therefore, the resolution to this HED was revised to take no further action.

HED	Guideline	Discussion
154	6.5.1.1e(2)	This HED addresses the lack of position status indication for the normal pressurizer spray valves. Step 20b of the EOP, E-9, requires the operator to check if the valves are closed. The valve controls provide demand signal only. The DCRDR team recommended that spray flow or valve position indication be provided in the control room. This HED was reviewed and because of the large scope and questionable benefits vs. costs, further action for 6R has been cancelled. It is noted that by having the normal spray valves remain open does not cause a loss of mass of the reactor coolant. The EOP steps following step 20b will determine if the steam generators are faulted, if there is a steam generator tube rupture, or if the reactor coolant system is intact. The status of the normal spray valves will not significantly affect the adverse consequences of these accidents. The driving force for the normal spray is provided by the reactor coolant pumps in loops A and C of the reactor coolant system. If the RCPs are stopped during one of the above conditions, the effect of normal spray for reducing reactor coolant system pressure will be attenuated. If the reactor coolant pumps are not stopped, the pressure reducing transient will be accelerated for these conditions and the reactor coolant system pressure will be more rapidly reduced. Consequently, safety injection will be initiated sooner and core cooling will be enhanced. Finally, for the longer term, temperature indication for each of the two spray lines is available in the control room. If failed spray valves are the only cause of the reactor coolant pressure reduction, the operator can determine this either by the spray line temperature

HED	Guideline	Discussion
		indications and/or by stopping the reactor coolant pumps suplying the failed spray valves. In addition, Step 20b of the EOP, E-0, instructs the operator to stop the reactor coolant pumps supplying the failed spray valves if the valves cannot be closed.

HED	Guideline	Discussion
386	6.9	This HED addresses the ordering of the source, intermediate, and power range trip block controls. The DCRDR team recommended that they be ordered source, intermediate, and power from top-to-bottom. The resolution was revised. Upon review, it was determiend tht the appropriate ordering should meet operator expectations based on power ascension. Consequently, the resolution is to order the trip block controls source, intermediate, and power from bottom-to-top.

HED	Guideline	Discussion
179	6.5.1.5b	This HED addresses the graduation heights of the control rod position indicators (analog system) on vertical board B. The DCRDR team resolution recommended improved instrumentation based on problems with readability and instrument drift. The assigned priority for this HED was primarily based on it being accident related. The revised resolution to this HED is based on the following. The demand and analog rod position signals are displayed on the benchboard and vertical board, respectively. They are also monitored by the unit computer which provides a visual printout and an audible alarm whenever an individual rod position signal deviates from the other rods in the bank by a preset limit. The alarm is set with appropriate allowance for instrument error. The demand and analog position indication systems are separate and each serves as a backup to the other. In addition, the problem with readability is inconsequential for accident conditions because each analog control rod position display is provided with a rod bottom light to indicate full rod insertion upon reactor tip. Therefore, because of the backup indication, the computer printouts and deviation alarm for relative rod position, and the availability of rod bottom lights, the revised resolution for this HED is to recommend that no corrective action be taken.

HED	Guideline	Discussion
335	6.8.1.1b	This HED addresses the association of the power operated relief valves (PORVs) with their corresponding PORV block valves. (The HED description also indicates that with mimics this discrepancy may not be a problem). The three PORVs are in a horizontal row across the front edge of BB-B. Their block valves are in a vertical row above the PORV on the left. The problem is compounded by the fact that there is one selector switch separating the groups and the ordering of the PORVs and block valves in their respective rows is different. The relationships between PORVs and block valves would be extremely difficult to ascertain except that mimic lines have been extended from each PORV to its respective block valve. The lines clearly indicate the association as they are easily followed due to the different color patterns employed. Initially DLC was going to relocate the PORVs so that would be in a vertical row with each PORV directly to the right of its block valve. This resolution would have entailed relocating 18 selector switches and making more than nine (9) new cuts in the board. It was determined that this corrective action was too drastic a reorganization given that the existing mimic lines eliminate any problems of association.

HED	Guideline	Discussion
337	6.8.1.1b	This HED involves three criteria violations: 1) displays are not optimally arranged to represent function, (2) demarcation has been used to identify controls but there is no demarcation for displays, and (3) the CNMT Instrument Air and Bearing Oil Pressure indicators are difficult to see over the benchboard because they are too low on the vertical boards. The initial resolution was to raise the CNMT Instrument Air and Bearing Oil Pressure displays up one row of displays where they could be seen. However, this resolution violated another criteria in that there would be a string of nine connected vertical meters providing information on (1) steam chest pressure, (2) first stage turbine pressure (3) bearing oil pressure, (4) station air, (5) station instrument air, and (6) containment instrument air. Even with demarcation, it would be too difficult for the operator to locate and focus on a particular parameter within this configuration. Further this solution created additional difficulties in locating steam chest pressure and first stage pressure indicators. The revised resolution is to switch the locations of the containment instrument air and bearing oil pressure indicators with the two steam chest pressure indicators. To further distinguish functional grouping and control association, demarcation will be used with containment and station air controls and displays. This resolution is a considerable improvement. Moving the Steam Chest Pressure meters down, where they cannot be readily seen from the benchboard position of the operator does not create a problem since steam chest pressure is neither an accident related or frequently checked parameter. Also there are annunciator associated with steam chest pressure.

HED	Guideline	Discussion
344	6.8.1.1b	The HED is that the row of acoustic monitors in vertical board BV-1 are not in the same order as their corresponding PORVs on benchboard BB-2. The initial resolution was that the problem would go away since moving the PORVs was considered as a resolution to HED 335. The resolution to this HED needed to be re-evaluated because the resolution for HED-335 was revised. The revised resolution for HED-344 is based on the operating practice and procedures for the pressurizer PORVs and their respective block (isolation) valves. The arrangement for these valves during power operation is for two of the three block valves to be closed to isolate the lines for the corresponding PORVs. The PORVs do not open during power operation. Their design function is to avoid lifting the pressurizer safety valves during certain transient conditions. Therefore, even though the valve arrangement during power operation would allow one PORV to pass flow, this does not occur. There is another arrangement of those valves which is used if the reactor coolant system (RCS) temperature is $\leq$ 275°F and the overpressure protection system is in service. During this water solid RCS condition, two PORVs are in service and their block valves are open. An annunciator in the control room alerts the operator when a PORV is open. If the open PORV happens to be one whose block valve is closed, no flow in that line would be anticipated and subsequently, we would anticipate no acoustic monitor display indication of flow. If the alarm comes in during operation the operator will first check the qualified PORV status indications (red-green lights) on the benchboard and will take the appropriate action in response to the alarm. In addition to the valve status lights and the acoustic monitor displays (if flow exists), the operator has

HED	Guideline	Discussion

temperature indication for the common discharge line of the PORVs/block valves. It is also noted that due to 10 CFR 50, Appendix R considerations, there is a preferred PORV/block valve pair for use during power operation. The preferred PORV control switch and acoustic monitor display occupy the center positions of their arrangements. Therefore, under the preferred operating practice at power, the center control and display would be anticipated to idnicate open/flow conditions should a transient occur.

Based on the above description of operating practice and procedure and the availability of an annunciator, qualified status indication, the acoustic monitor display and temperature indication, we believe that the current arrangement of the acoustic displays presents operating difficulties for the operator. However, to enhance operator recognition of the PORV control/acoustic monitor display relationships for the operation when two PORVs are in service, we will provide markings for the acoustic monitor displays of the same color patterns that are used for the PORV/block valve mimic lines on the benchboard. (See HED-335 this Appendix). These markings will be in addition to the PORV mark numbers which clearly distinguish the related acoustic monitor display.

HED	Guideline	Discussion
384	6.9.1.1	The HED was identified because the Steamline SI Block control is on benchboard BB-1 and there is a status light indicating steamline isolation and SI block on the status panel 623 which is on benchboard BC-2. The resolution was to relocate the status indicator to status panel 176 on BB-1. Further review of the HED indicates that both the block control and the SI blocked light indicators are located properly. The control is functionally grouped with related block valves which should be on BB-1. The light indicator is not monitored during control manipulation and is not needed on BB-1 to indicate that block is in effect on; the control position accomplishes that. An SI block and steamline isolation is needed on BC-2 where steamline and FW controls are located. Therefore, no action is required regarding this HED.

HED	Guideline	Discussion
394	6.8.1.1b	The HED is that MOV-BR-105A&B which are boron recovery evaporator feed valves are not grouped with the boron evaporator feed pumps and other boron evaporator pump and valve controls. Therefore, the criterion violated is associated with guidelines 6.8.1.1b rather than 6.9. This change will be made in the database. The initial resolution was to move valve controls to the benchboard kickup directly above the evaporator feed pump controls. This resolution would violate the NUREG-0700 criteria regarding functional reach (6.1.2.2d(2). The revised resolution is that no action be taken for the following reasons: 1. The instrumentation is not related to nor does the system impact on any of the accident-related tasks identified in the SFTA. 2. The proposed resolution introduces a new HED. 3. The cost is prohibitive given the insignificance of the HED and the unacceptability of the proposed solution.

HED	Guideline	Discussion
260	6.5.1.1b	The HED is that there is no indication for LW-TK-7A&B level or for the tank circulating pumps in the control room. (This HED is same as HED 400) It is believed that the indicators are needed in the control room, although tank and associated equipment control is responsibility of the plant operator, since there have been several tech. spec. violations related to filling and discharging tanks. Further review of the LERs and reports associated with problems with the tanks revealed that the improper discharges have been due primarily to improper valve alignment or other procedural errors by the AO, such as not running the recirculation pumps for the required duration prior to discharge. In neither case would a control room indication have prevented the problem. The problem lies outside the control room and is not a DCRDR issue.

HED	Guideline	Discussion
208	6.5.3.1b	There are two issues addressed in this HED. The first issue addresses the organization of Status Panels 622 and 623. There are five (5) background colors associated with each panel. Four colors correspond to the instrumentation channel color code conventions and the other is black and is used for system status such as "condenser available" or logic status such as "2/3 Overpower ΔT Run Back". In general, the overall pattern of colors is maintained in columns for 622 and rows for 623. However, there is a lack of consistency or layout of the status lights with the black background, especially on Panels 622. Therefore, the DCRDR team recommended reorganization of the panels. The status panels were reviewed and it was determined the non-black background status lights were systematically grouped by functions and ordered/located in accordance with the guidelines in NUREG-0700. Therefore, breaking up these systematic groups in order to reorganize the black background status lights would cause a significant problem. Also, the black background is not associated with a single functional group but used for several single unrelated parameters or conditions. Therefore, the separation of the black background status lights correctly emphasizes the relationship of the status lights. Therefore, no action is recommended. The second part of this HED addresses the light intensity of green legend lights. This concern was visually identified as a potential concern. It was visually rechecked after it had been identified and subsequently determined not to be a problem. Notwithstanding, light intensity will be measured during the lighting survey. To ensure that this specific concern is addressed during the lighting survey, it has been assigned number HED-564.

HED	Guideline	Discussion
157	6.5.1.2a	The HED is that most of the volt meters associated with the electrical distribution are scaled 0-130V or 0-300V. Operators must make conversions when the bus has higher voltage The initial resolution was to change meters to a standard range scale (0-130V). The revised resolution is to take no action based on the following. 1. For accident related operations, the operator is instructed to verify bus energized or normal voltage for those busses with higher voltges. The operators are experienced to relate needle position to these conditions. Therefore, direct numerical conversion is not necessary. 2. For emergency diesel operation, the perato ris required to read the umerical valvues for the emergency bus voltages (the AE & DF buses) and can do so directly from the meters. 3. The voltmeters are standard voltmeters commonly used on electrical distribution panels.

HED	Guideline	Discussion
164	6.5.1.2a	The HED is that EOP E-1, step 22b-AER requires operator to verify CNMT sump level (using LR-RS-151) less than 74". Initially the EOP referenced use of the vertical meter LI-RS-151A rather than the level recorder LR-RS-151. The vertical meter scale is set up on a base of 18 (i.e., 18, 36, 54, etc) for major graduation with one intermediate scale marked and two minor scale markers between major scale markers. The initial resolution was to change the scales on the meter face. The revised resolution was to require the operator to use the level record which is below the vertical meters and has a scale with a progression of valves of 10 and has 9 graduations separating numerals. The procedure has been revised and no further action is required.

HED	Guideline	Discussion
93	6.4.1.1c(1)	The basic HED is that the diesel fire pump switch is a pushbutton while the train A fire pump (not diesel) control is a J handle. In addition, the diesel fire pump pushbutton is located near the control room pressurization pushbutton. Therefore, there is a possibility of the operator confusing the two controls (see HEDs 96 and 105). The original resolution was to replace the diesel fire pump pushbutton control with a J handle like the train A fire pump control. The review of the HED by operations revealed that the operators did not like the change because they need to distinguish between the two fire pumps and having both pump controls the same could lead to an error. The revised resolution has been to place a guard over the CR pressurization pushbutton to prevent inadvertent actuation. The fire pump controls remain as is. This corrective action resolves HEDs 96 and 105 as well as HED 93.

HED	Guideline	Discussion
178	6.5.1.5b 6.5.1.3a 6.5.1.5a	The HED is that the graduation heights as well as the numeral height on cooling tower temperature vertical meters do not meet the criteria in the two NUREG-0700 guidelines. Also, scale does not meet minimum separation criteria for distance between scale markers. However, both vertical meters can be easily read and the scales comply with the NUREG-0700 guidelines. The initial resolution was to change the faces on the two meters. The revised resolution is to take no action for the following reasons: 1. The meters and the variable values displayed have no relationship to the accident-related operator tasks identified in the SFTA. 2. The meters are readable to the level of precision required. 3. The cost is prohibitive given the insignificance of the HED.

HED	Guideline	Discussion
401	6.4.1.1c(1)	The control for HSS-GW-110 which is a sample selector switch for gaseous waste decay tanks is a T handle type control. The T handle is normally used in the control room to identify pumps and compressors. The resolution is to replace the T handle with a selector type knob with detent positioning. DLC considered the need to implement this resolution as minimal. There is little likelihood of an inadvertent actuation due to location of overall configuration of control (i.e., it has multiple indicating lights associated with tank in service). Consequences of operator error are minimal. Nothing will happen if gaseous waste is not being processed. There are annunciators for high pressure in the tanks if processing is being conducted and the control is inadvertently manipulated. The gaseous waste system is not operated during emergency conditions. During normal operation detailed procedures are followed and deliberate steps are taken. Finally, it was determined that to replace the T handle with a selector type handle requires changing out of theentire switch and rewiring. Based on the above the implementation of the resolution to this HED is considered to be impractical. Therefore, the resolution is changed to take no action.

HED	Guideline	Discussion
444	6.9.1.1c	The problem is that when operators are running up the turbine and reach or overrun a preset load limit, the operators may attempt to increase the load limiter rather than correctly addressing the problem by backing off the setter until they are off limit and then reseting the load limiter valve. The problem is complicated in that the load limiter status light on the special turbine display panel on vertical board VC-3 is not readily associated with other load related displays and controls. That the status light was not optimally located had been recognized and training addresses the situation. In the initial resolution, it was recommended to have the setter LED blink if load limits were violated. This resolution as well as a resolution to move the status light were not selected in that they did not really address the problem of the operator not knowing how to get off limit, and they required modification to the electronics of the special Westinghouse turbine panel. The revised resolution is to establish a written procedure for the required task.

HED	Guideline	Discussion
377	6.7.2.4a(1)	The HED is that several computer programs could be enhanced to provide better data including (1) calculation of secondary heat balance, (2) boron follow, (3) zenon follow, and (4) tilting factor review. The initial resolution was to upgrade software although each of the above functions have been adequately performed (all calculations and functions are not totally performed by the computer). Upon further review of the software upgrade requirements associated with having these functions totally performed by the P250, it was determined that (1) the upgrade would be exceptionally expensive given the complex programming and software V&V efforts required and (2) running larger and more sophisticated calculation programs on a time sharing basis with plant variable processing could adversely impact computer response time, availability, and reliability. For these reasons it was decided to continue to perform these functions in the same manner that they have been performed. The new resolution is to take no action.

HED	Guideline	Discussion
315	6.7.3.1c	The HED is that some message information is presented in detector volts which must be converted by the operators. The initial resolution was to modify the computer software to convert detector volts to the units preferred by operators Further review of the problem has lead to a revised resolution to take no action. The reason for revising the resolution are as follows. (1) The detector volt information is infrequently used by the operator therefore the operators do not have to make the conversion often. (2) The conversion effort is minimal (which is acceptable according to the guideline), and operators are trained to make it. (3) The information is not relied upon in accident-related situations. (4) The information is in a directly useable form for technician troubleshooting problems. (5) The software upgrade would be complex, requiring extensive programming and V&V.

HED	Guideline	Discussion
317	6.7.3.1d	The HED, which is tied in with HED 310, is that the P250 computer and printer get backed up after a trip and the post-trip data is being processed and printed. During this time, the operators cannot interrupt to make queries on plant/variable status. The initial resolution was to modify the software to provide operators with an interrupt priority to query the system for plant status data. The resolution has been revised to take no action because the PVC and the SPDS have been installed. A primary function of the PVC is to provide the operators with variable/parameter status data. There is no longer a problem in getting the required information.

HED	Guideline	Discussion
321	6.7.3.3d(1)	The HED is that one report format has 19 columns of alphanumeric data which is continuously printed from page to page. It is difficult for operators to read and locate specific information. The initial resolution was to modify the report format to print block identification data at the top of each page. The revised resolution is to take no action because the PVC and SPDS have been installed. A primary function of the PVC is to provide the operators with variable/parameter status data. There is no longer a problem in getting the required information.

HED	Guideline	Discussion
395	6.4.1.1c(1)	The control for HSS-1BR-2, which is a recirculation or drain valve selector switch for the Boron Recovery System Evaporator Bottoms, is a T handle type control. The T handle is normallyused in the control room to identify pumps and compressors. The DCRDR team resolution was to replace the T handle with a selector switch type handle. The resolution to this HED was reviewed. It was determined that inadvertent operation of this control would have minimal consequences. It is also highly unlikely that the control would be inadvertently operated because there are multiple indicating lights forthe valves in service. The lights arelocated directly above the control. When set up for recirculation the bottoms pump in service will discharge to the bottoms cooler back to thecoolant recovery tankss for recirculation through the bottoms cooler and filters back to the suction of the pump. When set up for draining thebottoms pump discharges via the bottom cooler and filters to the bottom shold tank. If HSS-1BR-2 were inadvertently set to the drain position and if the pump was turned on and allowed to run, the following annunciators are available in the control room. 1. Boron Evaporator Bottoms Hold Tank Level High Low. 2. Boron Evaporator Bottoms Pump Thermal Overload. 3. Boron Evaporator BottomsPump Discharge Pressure Low. The Boron Recovery System is not operated during emergency conditions. It was also determined that to replace the T handle with a selector switwch type handle requires changing out the entire switch and rewiring.

HED	Guideline	Discussion
		Based on the above, the implementation of resolution to this HED is considered to be impractical. Therefore, the resolution is change to take no action.

APPENDIX B

DETAILED CONTROL ROOM DESIGN REVIEW

SUPPLEMENTAL REPORT

BVPS - 1

A P P E N D I X B

EXPLANATION OF NUREG-0700 GUIDELINES CHECKED IN THE QUESTIONNAIRES/INTERVIEWS INSTEAD OF THE SURVEY (SEE TER APPENDIX A-1)

NUREG-0700 Guideline 6.2.1.4a(1), Walkie-Talkie Radio Transceivers

a. SOUND QUALITY - Within the engineering constraints imposed by radio frequency spectrum availability and by design for easy portability, walkie-talkies should realize the same quality desired throughout all of the communications systems, namely:

   (1) Good frequency response, preferably to telephone standards of 200 to 3300 Hz.

Summary Report Finding

No documentation of frequency response but operators did not indicate any problems.

Supplemental Report

Frequency response of walkie-talkie radio transceivers will be addressed during the communications survey.

NUREG-0700 Guideline 6.2.1.6a(1) Announcing Systems

a. INTELLIGIBILITY AND COVERAGE - These are the key factors in announcing system effectiveness. The system must provide rapidly intelligible messages to all areas where personnel subject to page may be located.

(1) Intelligibility requires the integration of carefully selected components (microphones, amplifiers, and loudspeakers) into an overall system providing good frequency response in the audio band which is critical for intelligibility. At a minimum, telephone quality is required (200 to 3300 Hz); higher intelligibility is achieved by a band of 200 to 6100 Hz.

Summary Report Finding

Specifications not checked - operators did not indicate any problem.

Supplemental Report

Intelligibility of the Announcing System will be addressed during the Communications Survey.

NUREG-0700 Guideline 6.2.2.6b Auditory Signal Systems

b. COMFORT - Auditory signal intensity should not cause discomfort or "ringing" in the ears.

Summary Report Finding

Based on the operators responses HED-52 was identified. Rad monitor alarm is extremely intense and causes operator discomfort.

Supplemental Report

Guideline 6.2.2.6.b addresses the comfort aspect of auditory signals by recommending that auditory signal intensity should not cause discomfort or "ringing" in the ears. We interpreted this Guideline as recommending a subjective evaluation. Therefore, we believe that requesting operator response to this item was a reasonable approach. We do not believe it necessary to re-evaluate this item except as recommended under Guidelines 6.2.2.6.c.

NUREG-0700 Guideline 6.2.2.6c Auditory Signal Systems

c. MAXIMUM INTENSITY - Auditory signal intensities should not exceed 90 dB(A), except for evacuation signals, which may be up to 115 dB(A).

Summary Report

Same as 6.2.2.6b

Supplemental Report

Guideline 6.2.2.6c will be addressed during the communications survey.

NUREG-0700 Guideline 6.3.1.5a Annunciator Warning Systems

a. AUDITORY SIGNAL - Cleared alarms should have a dedicated, distinctive audible signal which should be of finite duration.

Summary Report

No discrepancy identified based on operators interviews.

Supplemental Report

No discrepancies identified based on survey performed to this guideline. Computer printout has been revised.

NUREG-0700 Guideline 6.3.2.1a

a. INTENSITY - The annunciator warning signal should be such that operators can reliably discern the signal above the ambient control room noise. A nominal value of 10 dB(A) above average ambient noise is generally adequate.

Summary Report

No discrepancy was identified based on interviews or operator assisted check but was not checked to survey item recommending that a nominal value of 10 dB(A) above average ambient noise is generally adequate>

Supplemental Report

Because of the approximate nature of this guideline and anticipating changes to the control room which could affect sound levels, we believed that operator input to this concern provided adequate assurance that signals have been and would continue to be detected. Notwithstanding, we will address this guideline during the sound survey.

NUREG-0700 Guideline 6.3.3.3f Annunciator Warning System

f. BLANK TILES - Blank or unused annunciator tiles should not be illuminated (except during annunciator testing).

Summary Report

No discrepancy identified based on Operator Questionnaire and Survey.

Supplemental Report

No discrepancy on data from survey performed to Guideline 6.3.3.3f. Computer data has been revised.

NUREG-0700 Guideline 6.3.4.1C(1),(2),(3) Annunciator Warning Systems

c. RESET

(1) If an automatic cleared alarm feature is not provided, a control should be provided to reset the system after an alarm has cleared.

(2) The reset control should silence any audible signal indicating clearance and should extinguish tile illumination.

(3) The reset control should be effective only at the work station for the annunciator panel where the alarm initiated.

Summary Report

No discrepancy identified based on Operator Interviews.

Supplemental Report

Computer data for this item was not properly entered. No discrepancy identified based on data from survey performed according to Guidelines 6.3.4.1C(1),(2), & (3). Computer data has been revised.

NUREG-0700 Guideline 6.4.4.4d Rotary Control Specifications

d. TORQUE - Knob torque on continuous adjustment rotary controls should be within the range of 4.5 to 6.0 inch/ounces.

Summary Report

No discrepancies identified based on Operator Questionnaire and Survey.

Supplemental Report

No discrepancies identified based on data from Operator Questionnaire and Operator Interview.

The control room was surveyed to identify all the continuous adjustment rotary controls. The only continuous adjustment rotary controls are associated with the Hagan Controllers. These controllers are standard type of control room controls. The operators were subsequently asked if they had any problems with adjustment knob resistance and they indicated that there were none. The DCRDR team believes that since (1) the Hagans controllers are standard equipment, (2) the operators did not indicate any control knob resistance problems, and (3) there is general familiarity with this type of controller, that the above review would identify any problems. In addition, any unique problems with a particular controller would be more readily identified through operator experience with it. Therefore, torque measurements are not believed necessary for the standard set of this type of control.

Nureg-0700 Guideline 6.5.1.1c Principles of Display

c. UNNECESSARY INFORMATION - Efficient performance requires not only display of all needed information but also avoiding the display of extraneous information in the prime operating area.

Summary Report

Guideline 6.5.1.1c was addressed primarily by operator assistance to identify unused instrumentation. Discrepancy status was inadvertently omitted for this item since HED 431 was identified .

Supplemental Report

Guidelines 6.5.1.1C was interpreted to apply to instrumentation which was intentionally made inoperable because it was no longer required. As such HED-431 was identified by operator assistance. This guideline was also checked during the control/display relationship survey which was also operator assisted. To go beyond the above interpretation for this guideline would require an extensive study and potential design of the control boards. At least the following would have to be established before such a study could begin. (1) a precise definition of unnecessary or extraneous information both in the guideline and for the BVPS-1, (2) an extensive and exhaustive study of the BVPS-1 systems, support systems, and instrumentation and (3) an extensive and exhaustive study of control and display requirements for all operating procedures and plant transients and accident conditions. Therefore, based on the above, we believe that Guidelines 6.5.1.1c has been adequately addressed.

NUREG-0700 Guideline 6.5.1.1e(1) Principles of Display

e. DEMAND INFORMATION VERSUS STATUS INFORMATION - Demand information shows that equipment has been commanded (by control settings or otherwise) to a particular state or level. It shows only what is demanded-not what is actually being realized. Status information shows the state or level actually in effect.

(1) To prevent operator confusion, it is essential that displays be identified as to whether they reflect demand or actual status.

Summary Report

Guideline 6.5.1.1.e(1) was addressed by survey and operator interview.

Supplemental Report

The item in question is a redundant entry in the computer data bank and has been deleted. HED 153 provides the results for this guideline which was performed with operator assistance and Checklist Item DC-6. DC-6 is believed to be the same as Guideline 6.5.1.1e(1). DC-6 is worded as follows:

"It is clear whether display information is demand or status information."

Based on the above, we believe that this guideline has been adequately addressed.

NUREG-0700 Guideline 6.5.1.1e(2) Principles of Display

(2) Visual display of actual system/equipment status should be displayed for all important parameters.

Summary Report

Guideline 6.5.1.1e(2) was addressed by operator interview and via the verification of task performance capability and validation of control room functions. There is no entry for the status of the discrepancies.

Supplemental Report

The above cited entry has been revised to reference HEDs-154, 155 and 156. HED-153 also provides information relative to evaluating this guideline. The operator interviews did not identify specific displays which could be of concern. We believe that this guideline was adequately addressed by the methods employed along with the results from Guideline 6.5.1.1e(1), HED-153.

NUREG-0700 Guideline 6.5.1.1f Principles of Display

f. DISPLAY FAILURE - When panel instruments, such as meters, fail or become inoperative, the failure should be apparent to the operator (e.g, through off-scale indication)

Summary Report

No discrepancies were identified through operator questionnaire or interview.

Supplemental Report

The design of instrumentation is such that indication will be outside the normal operating range as a result of electrical failure. Other unspecified causes have been postulated to result in conditions for which the instrumentation may provide inaccurate readings but not necessarily offscale. This concern has been addressed in past and present operator training to utilize all available instrumentation when assessing plant conditions and not to rely on any one instrument so as not to be misled by any one instrument. Therefore, based on the above, we believe that guideline 6.5.1.1f has been adequately addressed.

NUREG-0700 Guidelines 6.5.1.3a, b(1), b(2), b(3) Readability of Display Faces

a. CHARACTER HEIGHT - Character height should subtend a minimum visual angle of 15 minutes, or 0.004 x viewing distance. The preferred visual angle is 20 minutes, or 0.006 x viewing distance.

b. TYPE STYLE - Exhibits 6.5-1 and 6.5-2 present two recommended sets of characters. The recommendation is based on satisfactory testing and use by the military services. In general, character size and style should meet the following:

(1) Type styles should be simple
(2) Type styles should be consistent
(3) Only upper-case letters should be used

Summary Report

HEDs 169 and 170 identified general discrepancies for these guidelines based on the survey performed to BVPS-1 checklist items LMD-2 and LMD-1 respectfully. The resolution of HEDs was based on the operators response indicating that they had no difficulty reading the meter faces.

Supplemental Report

A copy of LMD-1 and LMD-2 are provided. We believe that these checklist items are sufficiently similar to the 0700 guidelines so that similar HEDs would be identified. The variation in character size and style on display faces is not distracting to the operators since the displays have associated labelling, and the operators are familiar with the variable units indicated on the display faces. In addition, the cost of making all display forces uniform and subsequently recalibrating the instrumentation is not considered to be warranted since the operators have indicated that these discrepancies do not cause any difficulty in display readability. Based on the above, we believe that the 0700 Guidelines have been adequately addressed.

LABELING, MIMICS, AND DEMARCATION CHECKLIST

ITEM	N/A	YES	NO
A. Labeling LMD-1: Labels are consistent in type style. Letters appearing on control boards are all uppercase, simple, without prominent serifs or slants, have separations between letters, words, and lines approximating samples and have type styles somewhere between these samples. NOT THINNER THAN THIS (Stroke width to character height = 1:8. letter width to height = 3:5 **NOT THICKER THAN THIS** (Stroke width to character height = 1:6 letter width to height = 1:1 Style for numbers is similar to 1 2 3 4 5 6 7 8 9 0			

COMPLETED BY: _____ DATE _____

ITEM	N/A	YES	NO

LMD-2: Labels are hierarchically coded by size for panels, systems/subsystems, functional groupings/mimics, components, and position indiction and do not repeat information contained at higher levels (an exception is component identification numbers).

Alphanumeric characters are of the following minimum heights:

	Maximum Viewing Distance	Minimum Height
Position indications	36"	5/32"
Component labels	50"	7/32"
Annunciator windows (locally acknowledged)	57"	1/4"
Labels for functional groupings small mimics and subsystems (if present)	72"	5/16"
Labels for panels, systems, large mimics, annunciator windows (globally acknowledged)	115"	1/2"

LMD-3: Labels are consistently positioned either above (preferred to avoid visual obstruction when operting control) or below devices they describe and are readily associated with corresponding controls and displays.

LMD-4: Roman numerals are not used.

COMPLETED BY: _____ DATE _____

NUREG-0700 Guideline 6.5.1.5b & e Scale Marking

b. GRADUATION HEIGHT - Graduation heights as a function of viewing distance should be as indicated in Exhibit 6.5.4 in NUREG-0700.

e. LINEAR VS. LOGARITHMIC SCALES - Logarithmic scales should be avoided unless needed to display a large range of values.

Summary Report

HEDs are identified based on survey performed to Guideline 6.5.1.5b.

Supplemental Report

We believe that this item may have been intended to reference 0700 Guideline 6.5.1.5e. However, Guideline 6.5.1.5e was also addressed by survey in addition to interviewing the operators. We therefore believe that both 6.5.1.5b and e have been adequately addressed.

NUREG-0700 6.5.5 General

Summary Report

The HEDs listed as 6.5.5 General were identified by the operator questionnaire and interviews except one HED which was identified during the survey process.

Supplemental Report

The summary report credits "6.5.5 general" as the criteria violated for HEDs 251, 256, 257, 259, 260, 261 and 262. Each HED was identified initially by means of operator questionnaires and/or interviews. Subsequently, the specific NUREG-0700 guideline was identified and each HED was verified during the check of the guideline in the control room survey. Specific NUREG-0700 guidelines associated with these HEDs are as follows:

HED	Guideline
251	6.6.3.1b
256	6.5.1.2d(2)
257	6.5.1.1d
259	6.9.3.1a
260	6.5.1.1b
261	6.5.1.1b
262	6.5.1.1b

APPENDIX C

DETAILED CONTROL ROOM DESIGN REVIEW

SUPPLEMENTAL REPORT

BVPS - 1

A P P E N D I X C

Explanation of NUREG-0700 Guidelines

(Marked N/A in Summary Report (See TER Appendix A-2)

APPENDIX C

Explanation of NUREG-0700 Guidelines Marked N/A in Summary Report (See TER Appendix A-2)

Guideline	Explanation
6.1.1.3f(2 & 3)	No facing equipment in control room
6.1.2.3a(1) through 6.1.2.3h(3)	No sitdown consoles in control room
6.1.2.4a through 6.1.2.4c	No sit-stand consoles in control room
6.1.3.2a & b	No unit mirror imaging
6.1.5.5c	No control room areas that are not a part of or adjacent to primary operating area. For those adjacent areas, criteria will be checked in ambient noise survey.
6.2.1.2e	Telephone transmitters are used as microphones to announcing system - no separate microphones.
6.3.1.2a(2)	The checking of guideline 6.3.1.2a(2) and the resolution of HED 54 (multiple input alarms) and HED 83 (need for alarm reflash) are all related. DLC attempted to resolve all three by having operators review each annunciator window. The results were mixed and appeared to reflect too much on individual operator opinion and their degree of knowledge of the logic of the annunciator system engineering. In order to obtain a more systemmatic evaluation of the guideline and the HEDs, DLC will analyze the documentation on each alarm and determine violations to guideline 6.3.1.2a(2) and complete resolution to HEDs 54 and 83. The analysis will be completed by May 30, 1988. The results will be sent to the NRC by July 15, 1988.

Guideline	Explanation
6.3.1.5B(1 & 2)	Cleared alarm goes solid white which is consistent with the visual signal for cleared alarm in 6.3.1.5b(3).
6.4.2.2c (1, 3 & 4)	No size coding is used for controls.
6.4.3.1a	No extensive rows or matrices of pushbutton controls.
6.4.4.2b 6.4.4.4e(1-5)	No low-torque designed J-handles. No rotary selectors with knob skirts
6.4.5.2a through 6.4.5.2b(2)	No slide switches
6.4.5.4a-e	No rocker switches
6.5.1.6d(2)	Checked under guideline 6.5.1.6d(1). Encode "See 6.5.1.6d(1)."
6.5.5.1a(2)	Width-Height ratio on drum type canters checked. No discrepancies.
6.7.1.2a(1 & 2)	Was checked via questionnaires/interviews with operators and during survey. See HEDs 309 and 317.
6.7.1.5a	No dedicated controls
6.7.1.5c	No master controls
6.7.1.6	No control devices other than keyboard
6.7.2.1 through 6.7.2.8	Guidelines were marked N/A because there were no CRTs in control room when initial survey conducted. These guidelines will be checked either in illumination survey or as part of computer survey.

Guideline	Explanation
6.7.3.1a(1)	Guideline has been checked. No discrepancies.
6.7.3.1b(1)	No CRT at time of surveys. Guideline will be checked in computer survey.
6.7.3.1b(2)	Printer is not remote to the operator.
6.7.3.1b(3)	No CRT at time of survey. Guidelines checked in SPDS/PVC survey.
6.7.3.3a	No functions represented by graphics at time of survey. Guideline rechecked in SPDS/PVC Survey.
67.3.3b	No interpolation required on printouts at time of survey. Guidelines rechecked in SPDS/PVC Survey.
6.7.3.3b	No interpolation required on printouts at time of survey. Guidelines rechecked in SPDS/PVC survey.
6.7.3.3c	Graphs not used to display information.
6.8.1.2	Guideline contains introductory information.
6.8.1.3c	No color shading used in control room. However, shading has been recommended as partial solution to some HEDs.
6.8.2.2b	No other operator expectations were identified.
6.8.2.4a	No repetition of workstations.
6.8.3.3	No mirror imaging.

APPENDIX D

DETAILED CONTROL ROOM DESIGN REVIEW

SUPPLEMENTAL REPORT

BVPS - 1

A P P E N D I X D

EXPLANATION OF NUREG-0700 GUIDELINES LISTED BUT NO ACTION TAKEN (SEE TER APPENDIX A-3)

APPENDIX D

Explanation of NUREG-0700 Guidelines Listed But No Action Taken (See TER Appendix A-3)

Guideline	Explanation
6.1.2.2f	As indicated, this guideline was checked by numerous methods including the control room survey. No discrepancies were identified. "None" should have been typed in discrepancy column.
6.2.1.8b	Will be checked again in communication survey of joint control room.
6.2.2.5a	Will be checked again in communication survey of joint control room.
6.2.2.5b	Will be checked again in communication survey of joint control room.
6.2.2.6a	Will be checked again in communication survey of joint control room.
6.4.1.1a(1) through 6.4.1.1b(3)	All were checked during V&V. No discrepancies found. All should be marked "None"
6.4.4.5b (1 & 2)	Rotary selector switches were checked in survey. Detents were present and operated properly. No discrepancies found. Both guidelines should be marked "None".
6.5.1.1b	Guideline was checked via 3 methods associated with procedures V&V. Two HEDs (151 & 152) were identified.
6.5.1.1c	Guideline was checked via operator interviews and in control room survey. Several displays/controls are being removed during 6R (See HED 30 and 431).
6.5.1.1d	Issue of redundancy was addressed in instrument V&V. See HED-257.
6.5.1.1e(1)	Guideline checked via survey and operator interview. HED 153 was identified and is listed in Appendix U.
6.5.1.1e(2)	Guideline checked via operator interview, procedures walkthrough and simulator exercise. HED 154, 155 and 156 were identified and listed in Appendix U.
6.5.1.2a	Guideline was checked via operator questionnaire, survey and procedures V&V methods; 10 HEDs identified and listed in Appendix U.

6.5.1.2c	Guideline was checked during Instrumentation V&V. No discrepancies found. Guideline should be marked "None".
6.5.1.4e	Guideline was checked EOP V&V. No discrepancies. Guideline should be marked "None".
6.5.3.3b(5)	Guideline was checked in survey. No legend indicators have more than 3 lines of text. Operator aids on panel 380 have 4 lines of text but they are manual status panels used by operators to identify system/equipment status. No discrepancies. Guideline should be marked "None".

APPENDIX E

DETAILED CONTROL ROOM DESIGN REVIEW

SUPPLEMENTAL REPORT

BVPS - 1

A P P E N D I X E

EXPLANATION OF NUREG-0700 GUIDELINES LISTED AS TO BE CHECKED (SEE TER APPENDIX A-4)

APPENDIX E

Explanation of NUREG-0700 Guidelines Listed As To Be Checked (See TER Appendix A-4)

Guideline	Explanation
6.1.5.5a&b	Both guidelines will be checked in the ambient noise survey.
6.5.3.1d	Light indicators were evaluated against criteria and none alerted operators to unfavorable status in lieu of annunciator. No discrepancies.

APPENDIX F

DETAILED CONTROL ROOM DESIGN REVIEW

SUPPLEMENTAL REPORT

BVPS - 1

A P P E N D I X F

EXPLANATION OF NUREG-0700 GUIDELINES MISSING FROM BV-1 CHECKLIST (SEE TER APPENDIX A-5)

APPENDIX F

Explanation of NUREG-0700 Guidelines Missing from BV-1 Checklist (See TER Appendix A-5)

Guideline	Explanation
6.1.2.2e(1a)	Inadvertently omitted. No discrepancies were found when checked in survey.
6.1.2.2e(1b)	Inadvertently omitted. No discrepancies were found when checked in survey.
6.1.2.2e(2)	Inadvertently omitted. No discrepancy with displays. There is a discrepancy in regard to reading annunciator legends from acknowledge button due to letter size of annunciator legends. See HED 77.
6.4.2.2a	Specific control coding consistency checked under guideline 6.4.1.1c(1). HEDs 90, 91, 92 and 94 were identified. Guideline should be marked "See 6.4.1.1c(2)".
6.4.2.2b	More specific criteria are listed under General Panel Layout. Guideline should be marked. See 6.8.1.1, 6.8.2.2, and 6.8.2.3.
6.5.4.1c	Guideline should be included and marked "See 6.5.1.5, 6.5.1.3 and 6.5.1.4.
6.6.1.1 through 6.6.6.4	Guidelines in Section 6.6, "Labels and Location Aids", were all rechecked as part of LMD study. Appendix M contains results of control room evaluation using the Section 6.6 guidelines and criteria.

APPENDIX G

DETAILED CONTROL ROOM DESIGN REVIEW

SUPPLEMENTAL REPORT

BVPS - 1

A P P E N D I X G

DISCUSSION OF PROBLEM AREAS CONVERTED INTO HEDS

HED: 500

PROBLEM AREA IDENTIFIED: Control Room Layout

APPLICABLE NUREG-0700 GUIDELINE: 6.1.1.1b

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Control Room Workspace/General Layout/Accessibility of Instrumentation/Equipmen /Arranged to Facilitate Coverage.

IDENTIFYING SOURCE: Operator Questionnaire Q-4*

CONCERN IDENTIFIED: The Subcooling Monitor Alarms require the operator to leave control boards.

RESOLUTION: Although the Subcooling Monitor Alarms require the operator to leave the control boards, the related pressure and temperature displays are in the main control area. In addition, the display and control locations for the Inadequate Core Cooling (ICC) Instrumentation system, which will replace the above monitor, were reviewed and found acceptable by the DCRDR team. The annunciators associated with the ICC Instrumentation Systems are also located on the appropriate panels relative to the controls. The ICC Instrumentation System will be fully operational by the end of 6-R. Therefore, we believe that this concern is adequately addressed.

* Complete text of Operator questionnaire and interview items that are identified is contained in Reference One (1) which follows this Appendix.

HED: 501

PROBLEM AREA IDENTIFIED: Lighting

APPLICABLE NUREG-0700 GUIDELINE: 6.1.5.3f

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Control Room Workspace/Environment/ Illumination/Glare

IDENTIFYING SOURCE: Operator Questionnaire Q-8

CONCERN IDENTIFIED: Some glare in the control room with full normal lighting was identified. However, the DCRDR team noted during the survey of the control room that full normal lighting is not preferred by the operators.

RESOLUTION: This item (glare) was reviewed during the survey with typically used lighting levels and for normal viewing positions of the control room displays. Glare did not appear to be a problem. However, because glare was identified as a concern, it was determined that it would be addressed again during the lighting survey for the combined Unit 1 and 2 control rooms.

HED: 502

PROBLEM AREA IDENTIFIED: Lighting Fixtures

APPLICABLE NUREG-0700 GUIDELINE: 6.1.5.7a(3)

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Control Room Workspace/Environment/ Ambience and Comfort

IDENTIFYING SOURCE: Operator Questionnaire Q-7

CONCERN IDENTIFIED: The lighting panels in the control room ceiling were described as broken.

RESOLUTION: This concern was previously identified for resolution under HED-41 (Please see Attachment 4 of the DCRDR Summary Report).

HED: 503

PROBLEM AREA IDENTIFIED: Emergency Lighting

APPLICABLE NUREG-0700 GUIDELINE: 6.1.5.4c

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Control Room Workspace/Environment Emergency Lighting.

IDENTIFYING SOURCE: Operator Questionnaire Q-9

CONCERN IDENTIFIED: The emergency lighting in the control room was identified as not being adequate.

RESOLUTION: This item will be checked during the lighting survey for the combined Unit 1 and 2 control room.

HED: 504

PROBLEM AREA IDENTIFIED: Noise

APPLICABLE NUREG-0700 GUIDELINE: 6.1.5.5d

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Control Room Workspace/Environment/ Auditory Environment/ Noise Distractions

IDENTIFYING SOURCE: Operator Questionnaire Q-10 & Q-11

CONCERN IDENTIFIED: The times when noise (distraction sources) were identified.

RESOLUTION: The background noise levels without the identified distraction sources (i.e., day shift,, traffic in the control room, shift turnover, and maintenance clearances) are believed to be acceptable especially with the installation of carpeting. Please see HEDs 12 & 39 and Attachment 1 to the DCRDR Summary Report for resolutions to the noise sources. The background noise levels will also be surveyed for the combined Unit 1 and 2 control rooms.

HED: 505

PROBLEM AREA IDENTIFIED: Reaching Controls

APPLICABLE NUREG-0700 GUIDELINE: 6.1.2.5a(1)

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Control Room Workspace, Work Station Design/Control Height.

IDENTIFYING SOURCE: Operator Questionnaire Q-17

CONCERN IDENTIFIED: The controls on the Building Service Panel (BSP) for the containment isolation valves were indicated as being located low.

RESOLUTION: The height of controls on the BSP was highlighted for review during the control room survey. No HEDs were identified. It is noted, however, that the survey for display height on the BSP resulted in HED-32.

HED: 506

PROBLEM AREA IDENTIFIED: Lower Vertical Board Displays

APPLICABLE NUREG-0700 GUIDELINE: 6.1.2.5b(1)

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Work Station Design/Vertical Panels/Display Height

IDENTIFYING SOURCE: Operator Questionnaire Q-18

CONCERN IDENTIFIED: The lower displays on the vertical boards are obscured by the benchboards

RESOLUTION: The DCRDR team checked for critical controls/displays that are obscured by the bench boards or below 41" (NUREG-0700 Guideline 6.7.2.5b(1). Please see HED-30 for the board modifications addressing this concern. (Note: Also see new HED-510)

HED: 507

PROBLEM AREA IDENTIFIED: Panel Layout

APPLICABLE NUREG-0700 GUIDELINE: 6.8.2.1a(2)

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Panel Layout, Layout Arrangement Factors/Sequence, Frequency of Use, and Functional Considerations

IDENTIFYING SOURCE: Operator Questionnaire Q-19

CONCERN IDENTIFIED: The location of some containment isolation valve controls and the control for valve, MOV-CH-310, Charging Header Isolation to the Regenerative Heat Exchanger, were identified as being located within the Chemical and Volume Control System (CVCS) Section of the control boards. This specific concern was included as part of the more general concern for the overall layout of the CVCS panel. To help in understanding this problem a brief description of the functional duality of part of the CVCS is presented below.

Other than the Charging/High Head Safety Injection Pumps, the CVCS is not required to function during a LOCA, nor is it required to take action to prevent an emergency condition. During a LOCA, this system is isolated at the containment boundary except for the charging pumps and the piping in the safety injection flow path.

The generation of a safety injection signal automatically closes the motor operated valves in the outlet line of the volume control tank and in the normal charging line, thus isolating the CVCS from the safety injection flow path. The letdown line is isolated by valves which automatically close as a result of a safety injection signal.

HED 507, (Cont'd)

RESOLUTION: The general layout of the CVCS panel was previously addressed by HED-346. Although the DCRDR team determined that the resolution to HED-346 would be to reorganize the CVCS panel, the teams final assessment was that the reorganization is not warranted. It should be noted that the containment isolation valve controls and the control for MOV-CH-310 are labeled correctly and are provided with the correct color of actuation tag. This labeling and the tags clearly distinguish these valve controls. Therefore, no further action is necessary to resolve HED-507.

HED: 508

PROBLEM AREA IDENTIFIED: Panel Layout - Meter Recognition (Labeling)

APPLICABLE NUREG-0700 GUIDELINE: 6.6.1.1

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Labels and Location Aids/Labeling Principles/Need for Labelling

IDENTIFYING SOURCE: Operator Questionnaire Q-19

CONCERN IDENTIFIED: The meters relating to the 4-KV system were identified as being physically similar.

RESOLUTION: Spacing, demarcation, and background color shading as location aids were considered inappropriate because of the number of different variables involved, i.e., volts, frequency, amps, vars., same bus different transformer. Improved labelling was determined to be the resolution. The AE and DF Emergency Bus Voltages are identified on the meter faces and clearly distinguishable. Permanent labeling will replace the temporary labelling above the meter groupings on the benchboard identifying the Main Generator, Station Service, and the No. 1 and 2 Diesel Generator Groupings.

HED: 509

PROBLEM AREA IDENTIFIED: Panel Layout

APPLICABLE NUREG-0700 GUIDELINE: 6.8.1.1b

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Panel Layout/General
Panel Layout/Assigning
Panel Contents/Grouping by System Function

IDENTIFYING SOURCE: Operator Questionnaire Q-21

CONCERN IDENTIFIED: The organization and location of the SI, CVC, and CCR System instrumentation were identified as problems.

RESOLUTION: The general concerns are identified in HED-347. The specific HEDs written include 331, 332, 333, 338, 339, 346, 352, 353, 354, 356 363, 389, and 391. The CCR valves tend to be spread out but are in groups and are not used in plant emergencies. Reorganization of SI controls is scheduled for 6R.

HED: 510

PROBLEM AREA IDENTIFIED: Panel Layout (Lower VB Displays)

APPLICABLE NUREG-0700 GUIDELINE: 6.1.2.5b(1)

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Work Station Design/Vertical Panels/Display Height

IDENTIFYING SOURCE: Operator Questionnaire Q-22

CONCERN IDENTIFIED: Some responses to Q-22 identified difficulties with vertical board display being too low, i.e., station air pressure and turbine supervisory locations relative to turbine startups.

RESOLUTION: These concerns for height of vertical board displays were considered under HED-30 resolution for board modifications.

HED: 511

PROBLEM AREA IDENTIFIED: Emergency Shutdown Panel

APPLICABLE NUREG-0700 GUIDELINE: 6.8.1

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Panel Layout/General
Panel Layout

IDENTIFYING SOURCE: Operator Questionnaire Q-23

CONCERN IDENTIFIED: The emergency shutdown panel was identified as lacking important controls and instruments.

RESOLUTION: The controls and instruments are adequate for their intended functions. It is noted that this item is not required to be reviewed under Supplement 1 to NUREG-0737.

HED: 512

PROBLEM AREA IDENTIFIED: Hardest Systems to Operate

APPLICABLE NUREG-0700 GUIDELINE: 6.5.1.2a

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Visual Displays/ Principles of Displays/ Usability of Displayed Values

IDENTIFYING SOURCE: Operator Questionnaire Q-27

CONCERN IDENTIFIED: The SI flow indicator was identified as being difficult to read.

RESOLUTION: This concern was addressed under HED-162.

HED: 513

PROBLEM AREA IDENTIFIED: Hardest Systems to Operate

APPLICABLE NUREG-0700 GUIDELINE: 6.5.1.2a

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Visual Displays/ Principles of Displays/ Usability of Displayed Values.

IDENTIFYING SOURCE: Operator Questionnaire Q-27

CONCERN IDENTIFIED: The river water flow indicator was identified as being difficult to use during operation surveillance tests.

RESOLUTION: It was determined that the indication of concern was not located in the control room and therefore it did not become a DCRDR item.

HED: 514

PROBLEM AREA IDENTIFIED: Types of Modifications Creating a Problem.

APPLICABLE NUREG-0700 GUIDELINE: 6.5.1.6b(1)

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Visual Displays/ Principles of Display/ Color Coding

IDENTIFYING SOURCE: Operator Questionnaire Q-31

CONCERN IDENTIFIED: Too much color coding in the control room was indicated to be a problem.

RESOLUTION: This item was reviewed during the survey under NUREG-0700 item 6.5.1.6b(1) and was determined to not be a problem. The inconsistency in overall color coding application was considered under HED-199. However, it was recognized that within specific applications the color coding was applied consistently and the colors have specific meanings.

HED: 515

PROBLEM AREA IDENTIFIED: Panel Layout

APPLICABLE NUREG-0700 GUIDELINE: 6.8.1.1b

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Panel Layout/General
Panel Layout/Assigning
Panel Contents/Grouping by System Function

IDENTIFYING SOURCE: Operator Questionnaire Q-32

CONCERN IDENTIFIED: The auxiliary steam and blowdown isolation switches are buried in the river water and quench spray section of the control boards.

RESOLUTION: The review showed that the concern related to backfit items and that the auxiliary steam switches are arranged together and that the blowdown isolation switches arrangement was generally okay. The resolution was that this concern was not a problem and therefore, no corrective action was recommended.

HED: 516

PROBLEM AREA IDENTIFIED: Control Recognition

APPLICABLE NUREG-0700 GUIDELINE: 6.4.1.1c(1)

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Controls/Selection of Controls/General Principles/Human Suitability

IDENTIFYING SOURCE: Operator Questionnaire Q-32

CONCERN IDENTIFIED: The use of different type of controls for similar equipment was identified as a problem, i.e., Quench spray pump (QS-P-4A control uses an OT-2 switch not normally used for pumps).

RESOLUTION: This concern resulted in HED-94. Also, please see HEDs 90 through 93 which identify similar concerns.

HED: 517

PROBLEM AREA IDENTIFIED: Switches that Operate Differently

APPLICABLE NUREG-0700 GUIDELINE: 6.5.3.2a

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Visual Displays/Light Indicators/Design and Use of Non-Legend Light Indicators

IDENTIFYING SOURCE: Operator Questionnaire Q-35

CONCERN IDENTIFIED: Three way valves, HCV-CH-389, LCV-CH-112, and LCV-CH-115 were identified as having controls that operate differently because they have dual red indicating lights. These controls are for the Chemical and Volume Control System (CVCS).

RESOLUTION: The switches have dual red indicating lights because they are selector controls. No action required for this HED.

HED: 518

PROBLEM AREA IDENTIFIED: Switches that Operate Differently

APPLICABLE NUREG-0700 GUIDELINE: 6.9.1.1c(1)(2)

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Control-Display Integration/Basic Control - Display Position Relationships/ Single Control and Display Pairs/Association

IDENTIFYING SOURCE: Operator Questionnaire Q-35

CONCERN IDENTIFIED: Emergency diesel generator governor and ground switch controls have open/shut, raise/lower reversed.

RESOLUTION: This concern was addressed under HED-442.

HED: 519

PROBLEM AREA IDENTIFIED: Switches that Operate Differently

APPLICABLE NUREG-0700 GUIDELINE: 6.4.2.1

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Control-Display Integration/Dynamic Control-Display Relationships/ General Movement Relationships/ Controls/ Design Principles/Direction of Movement

IDENTIFYING SOURCE: Operator Questionnaire Q-35

CONCERN IDENTIFIED: The Reactor Coolant System (RCS) and RCS Support System controllers have open/shut and raise/lower reversed.

RESOLUTION: This concern was addressed under HED-359.

HED: 520

PROBLEM AREA IDENTIFIED: Controls Too Large or Small (Not consistent with other controls)

APPLICABLE NUREG-0700 GUIDELINE: 6.4.1.1c(1)

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Controls/Selection of controls/General Principles/Human Suitability

IDENTIFYING SOURCE: Operator Questionnaire Q-37

CONCERN IDENTIFIED: The concern identified the controls for the Quench Spray Pumps (QS-P-4A, B, C, D). Review team determined that the concern is that the controls are not consistent with other pump controls).

RESOLUTION: This concern was identified in HED-94.

HED: 521

PROBLEM AREA IDENTIFIED: Controls Too Large or Small

APPLICABLE NUREG-0700 GUIDELINE: 6.4.1.1c(2)

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Controls/Selection of Controls/General Principles/Human Suitability.

IDENTIFYING SOURCE: Operator Questionnaire Q-37

CONCERN IDENTIFIED: The control pushbuttons for the SPING system were identified in the responses to this question.

RESOLUTION: This item was reviewed under NUREG-0700 Guideline 6.4.1.1c(2) and no discrepancy was identified.

HED: 522

PROBLEM AREA IDENTIFIED: Meter Scales

APPLICABLE NUREG-0700 GUIDELINE: 6.5.1.5c

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Visual Displays/ Principles of Display/ Scale Marking/Graduation Height/Values Indicated by Unit Graduations.

IDENTIFYING SOURCE: Questionnaire 38

CONCERN IDENTIFIED: The Heater drain tank level was identified as having a poor scale. Scale major increments are at 0, 24, 48, 72, 96. Intermediate marking are at 6, 12, 18, etc.

RESOLUTION: No action to be taken for following reasons:

1. Instrument is not required to support accident-related operator tasks identified inthe SFTA.
2. Instrument readability meets all criteria set forth in NUREG-0700.
3. Operator is under no time constraints when reading indicator so error probability is not exacerbated by stress.

HED: 523

PROBLEM AREA IDENTIFIED: Meter Scales

APPLICABLE NUREG-0700 GUIDELINE: 6.5.1.5c

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Visual Displays/ Principles of Display/ Seals Marking/ Valves indicated by Unit Graduations

IDENTIFYING SOURCE: Questionnaire 38

CONCERN IDENTIFIED: Containment recirc. air cooler temperatures - poor scales.

RESOLUTION: No action to be taken for following reasons:

1. Instrument is not required to support accident-related operator tasks identified inthe SFTA.

2. Instrument readability meets all criteria set forth in NUREG-0700.

3. Operator is under no time constraints when reading indicator so error probability is not exucerbated by stress.

HED: 524

PROBLEM AREA IDENTIFIED: Meter Scales

APPLICABLE NUREG-0700 GUIDELINE: 6.5.1.5C

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Visual Displays/ Principles of Display/ Seals Workings/ Values indicated by Unit Graduations.

IDENTIFYING SOURCE: Operator Questionnaire Q-38

CONCERN IDENTIFIED: Differential pressure cells used for flow indications for Operations Surveillance Tests (OSTs) Flow indicators, in general, have square root scales.

RESOLUTION: Control room flow indicators are addressed by existing HEDs (i.e., HEDs 158, 162 and 430).

HED: 525

PROBLEM AREA IDENTIFIED: Meter Scales

APPLICABLE NUREG-0700 GUIDELINE: 6.5.1.2b

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Visual Displays/ Principles of Display/ Information to be Displayed/ Usability of Displayed Values/ Elimination of Operator Conversion.

IDENTIFYING SOURCE: Operator Questionnaire Q-38

CONCERN IDENTIFIED: Tank levels are typically indicated in units of liquid height. Other units such as used for volume are needed and operators use curves to convert.

RESOLUTION: This item was checked during the verification and validation of the emergency operating procedures and no HEDs were identified. The use of conversion curves during normal operation was not considered to be a problem.

HED: 526

PROBLEM AREA IDENTIFIED: Meter Scales

APPLICABLE NUREG-0700 GUIDELINE: 6.5.1.2a

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Visual Displays/ Principles of Display/ Usability of Displayed Values/ Scale Selection

IDENTIFYING SOURCE: Operator Questionnaire Q-38

CONCERN IDENTIFIED: There is a lack of uniformity in meter scaling, especially on tank level instrumentation.

RESOLUTION: This item was checked during the survey and no discrepancy was identified. However, other meter scaling problems were identified for this guideline. (Reference HED-166, 167 and 168).

HED: 527

PROBLEM AREA IDENTIFIED: Instruments Difficult to Compare with Backups.

APPLICABLE NUREG-0700 GUIDELINE: 6.5.1.5d

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Visual Displays/ Principles of display/ Scale Markings/ Scale Compatibility.

IDENTIFYING SOURCE: Operator Questionnaire Q-40.

CONCERN IDENTIFIED: The Pressurizer pressure meter was identified as being scaled differently.

RESOLUTION: This concern is addressed in HED-189.

HED: 528

PROBLEM AREA IDENTIFIED: Instruments Difficult to Compare with Backups

APPLICABLE NUREG-0700 GUIDELINE: 6.5.4.1c

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Visual Displays/ Graphic Recorders/ General Characteristics of Graphic Records/ Scale Design

IDENTIFYING SOURCE: Operator Questionnaire Q-40

CONCERN IDENTIFIED: The Refueling Water Storage Tank (RWST) level recorder has strange units.

RESOLUTION: This concern is addressed by HED-443.

HED: 529

PROBLEM AREA IDENTIFIED: Instruments Difficult to Compare with Backups (Meter Scale)

APPLICABLE NUREG-0700 GUIDELINE: 6.5.1.5c

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Visual Displays/ Principles of Display/ Scale Marking/ Values Indicated by Unit Graduations.

IDENTIFYING SOURCE: Operator Questionnaire

CONCERN IDENTIFIED: The chilled water return header temperature was identified in the responses to this question.

RESOLUTION: The concern for this item was determined to be the Containment Recirculation Air Cooler Temperature which is identified in HED-523.

HED: 530

PROBLEM AREA IDENTIFIED: Instruments that must be read more precisely than scale.

APPLICABLE NUREG-0700 GUIDELINE: 6.5.1.2a

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Visual Display/ Principles of Display/ Usability of Displayed Values/ Scale Selection.

IDENTIFYING SOURCE: Operator Questionnaire Q-41.

CONCERN IDENTIFIED: The Nuclear Instrumentation power range was identified as a problem during calibration. The DCRDR team further identified that the problem was during the operations surveillance test (OST).

RESOLUTION: A review of OST 1.21, "Power Range Functional Test", showed that the test requires 5% increments and not 0.5% as originally believed to be the case by the DCRDR team. The instrumentation is required to be read within 1% which is within its capability. Therefore, no HED was written for this item.

HED: 531

PROBLEM AREA IDENTIFIED: Instruments that must be Read More Precisely Than Scale.

APPLICABLE NUREG-0700 GUIDELINE: 6.5.1.2a

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Visual Displays/ Principles of Display/ Usability of Displayed Values/ Scale Selection.

IDENTIFYING SOURCE: Operator Questionnaire Q-41.

CONCERN IDENTIFIED: The scale for the pressurizer relief tank level was identified. The scale was believed to not be adequate for Operation Surveillance Tests (OST) where 0.5% increments are needed.

RESOLUTION: A review of OST 1.6.1, "Reactor Coolant System (RCS) Leak Test" showed that readings were required within only 1%. Therefore, this concern is determined to not be a problem.

HED: 532

PROBLEM AREA IDENTIFIED: Labelling - Understanding

APPLICABLE NUREG-0700 GUIDELINE: 6.6.1.1

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Labels and Location Aids/Labelling Principles/ Need for Labelling.

IDENTIFYING SOURCE: Operator Questionnaire Q-44

CONCERN IDENTIFIED: Some Auto-manual (AM) station pots--unclear as to what they do.

RESOLUTION: This concern addressed by HEDs 263 and 295.

HED: 533

PROBLEM AREA IDENTIFIED: Labelling--Understanding

APPLICABLE NUREG-0700 GUIDELINE: 6.6.1.1

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Labels and Location Aids/Labeling Principles/Need for Labeling

IDENTIFYING SOURCE: Operator Questionnaire Q-44

CONCERN IDENTIFIED: The "Off-Active" positions for the deluge valves for fire protection in containment were identified as being improperly labelled.

RESOLUTION: Our review showed that these valve controls are properly labelled. Labelling their positions as for other valves as open/closed would be misleading in this case. Therefore, it was determined that this concern is not a problem.

HED: 534

PROBLEM AREA IDENTIFIED: Labelling-Understanding

APPLICABLE NUREG-0700 GUIDELINE: 6.6.1.1

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Label and Location Aids/Labelling Principles/Need for Labelling.

IDENTIFYING SOURCE: Operator Questionnaire Q-44

CONCERN IDENTIFIED: SI auto recirc. reset labelling inconsistent with OST for SSPS labelling.

The labelling for the Safety Injection Auto Recirc. Reset was identified as inconsistent with Operation Surveillance Test (OST) for the Solid State Protection System.

RESOLUTION: A review of OST 1.11.1 for this concern showed that no problem exists. It should be noted that this concern was identified prior to revisions for the procedures being completed.

HED: 535

PROBLEM AREA IDENTIFIED: Key Switches - Key Removal

APPLICABLE NUREG-0700 GUIDELINE: 6.4.4.3e

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Controls/Rotary Control Specifications/Key Operated Controls.

IDENTIFYING SOURCE: Operator Questionnaire Q-45

CONCERN IDENTIFIED: Overpressure protection (pressure for shutdown condition control switches) was identified as a key switch where the key could be removed when not in the off or safe position.

RESOLUTION: This concern was reviewed and no discrepancy was identified. Other descrepancies for key switches are addressed by HEDs 122, 123, 124, and 125.

HED: 536

PROBLEM AREA IDENTIFIED: Controls - Confusing to use

APPLICABLE NUREG-0700 GUIDELINE: 6.6.1.1

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Labels and Location Aids/Labelling Principles/Need for Labelling

IDENTIFYING SOURCE: Operator Questionnaire 47

CONCERN IDENTIFIED: Tandem controls, i.e., PRZR pressure

The tandem controls for the pressurizer pressure were identified as confusing to use. (One Hagan controller controls other controllers)

RESOLUTION: This concern is addressed in HED-286

HED: 537

PROBLEM AREA IDENTIFIED: Controls - Confusing to use (Panel layout)

APPLICABLE NUREG-0700 GUIDELINE: 6.8.1.1b

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Panel Layout/General
Panel Layout/Assigning
Panel Contents/Grouping by System Function

IDENTIFYING SOURCE: Operator Questionnaire Q-47

CONCERN IDENTIFIED: The atmospheric steam dump valve controls were identified as being separated from other steam generator controls and displays. The DCRDR team noted this concern for review during the survey.

RESOLUTION: This concern is addressed by HED-328.

HED: 538

PROBLEM AREA IDENTIFIED: Controls - Incorrect Action

APPLICABLE NUREG-0700 GUIDELINE: 6.8.3.1b

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Panel Layout/Specific Panel Layout Design/ Separation of Controls/ Inadvertent Actuation.

IDENTIFYING SOURCE: Operator Questionnaire Q-49

CONCERN IDENTIFIED: The 1A Charging Pump (CH-P-1A) was turned off when it was supposed to be CH-P-1C. The Charging Pump witches are identical and side by side.

RESOLUTION: This concern is addressed by HED-361.

HED: 539

PROBLEM AREA IDENTIFIED: Position not apparent

APPLICABLE NUREG-0700 GUIDELINE: 6.4.4.5c

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Controls/Rotary control Specifications/Rotary Selector Controls/ Readability.

IDENTIFYING SOURCE: Operator Questionnaire Q-52

CONCERN IDENTIFIED: Pump controls on top of benchboards have difficult to check target indicators.

RESOLUTION: This concern addressed by HEDs 128 through 136 and HEDs 138 through 146.

HED: 540

PROBLEM AREA IDENTIFIED: Control--Guards

APPLICABLE NUREG-0700 GUIDELINE: 6.4.1.2c(1)

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Controls/Selection of Controls/Prevention of Accidental Activation/ Movable Covers or Guards

IDENTIFYING SOURCE: Operator questionnaire Q-53

CONCERN IDENTIFIED: Turbine trip is guarded but not covered

RESOLUTION: The concern needed to be verified by the DCRDR team. It was verified and determined to meet the guideline.

HED: 541

PROBLEM AREA IDENTIFIED: Controllers-Inconsistent Relationships

APPLICABLE NUREG-0700 GUIDELINE: 6.4.2.1

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Controls/Design Principles/Deviation of Movement

IDENTIFYING SOURCE: Operator Questionnaire Q-54

CONCERN IDENTIFIED: The pressure, flow, and temperature controllers, PCV-CH-145, FCV-CH-122, TCV-CH-144, for the charging system were identified as having reversed controls (Open at 0%, closed at 100%)

RESOLUTION: This concern is addressed by HEDs 359 and 295.

HED: 542

PROBLEM AREA IDENTIFIED: Controllers - Inconsistent Relationships

APPLICABLE NUREG-0700 GUIDELINE: 6.4.2.1

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Controls/Design Principle/Direction of Movement

IDENTIFYING SOURCE: Operator Questionnaire Q-54

CONCERN IDENTIFIED: The controller HIC-GW-113 for the gaseous vent header discharge was identified as having inconsistent relationship.

RESOLUTION: This concern is addressed by HEDs 359 and 295.

HED: 543

PROBLEM AREA IDENTIFIED: Multi-position control - Inconsistent

APPLICABLE NUREG-0700 GUIDELINE: 6.4.2.1

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Control/Design Principles/Direction of Movement

IDENTIFYING SOURCE: Operator Questionnaire Q-55

CONCERN IDENTIFIED: The diesel generator ground switch was identified for inconsistent direction of movement.

RESOLUTION: This concern is addressed by HED-116.

HED: 544

PROBLEM AREA IDENTIFIED: Multi-Position/Speed Changer Control - Inconsistent

APPLICABLE NUREG-0700 GUIDELINE: 6.6.1.1

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Labels and Location Aids/Labelling Principles/Need for Labelling

IDENTIFYING SOURCE: Operator Questionnaire Q-55

CONCERN IDENTIFIED: The subcooling monitor input defeats are not labelled as to "enabled" or "disabled".

RESOLUTION: This concern will be removed because of the replacement of the subcooling monitor by the Inadequate Core Cooling Instrumentation System.

HED: 545

PROBLEM AREA IDENTIFIED: Multi-position/Speed Change Control -Inconsistent

APPLICABLE NUREG-0700 GUIDELINE: 6.4.2.1

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Controls/Design Principles/Direction of Movement

IDENTIFYING SOURCE: Operator Questionnaire Q-55

CONCERN IDENTIFIED: The pressurizer level control selector switch positions were identified as being out of sequence.

RESOLUTION: This concern is addressed by HED-114.

HED: 546

PROBLEM AREA IDENTIFIED: Display Scales Marked for Normal Operating Range.

APPLICABLE NUREG-0700 GUIDELINE: 6.5.2.3 General

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Visual Displays/ Meters/Zone Marking

IDENTIFYING SOURCE: Operator Questionnaire Q-57

CONCERN IDENTIFIED: It was identified that the operating ranges of display scales have been marked by the operators. The DCRDR team noted that this should be checked during the survey.

RESOLUTION: This concern is addressed by HED 204

HED: 547

PROBLEM AREA IDENTIFIED: Indication Failure Detection

APPLICABLE NUREG-0700 GUIDELINE: 6.5.1.1

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Normal Displays/ Principles of Display/ Information to be Displayed/Display Failure

IDENTIFYING SOURCE: Operator Questionnaire Q-58

CONCERN IDENTIFIED: Because the responses were mixed and no specific items identified; this concern was followed up in the survey and interviews.

RESOLUTION: There were no meters identified that fail in the normal operating range. This was also checked and verified in the interviews (Interview Item 17).

HED: 548

PROBLEM AREA IDENTIFIED: Chart Recorder Operational Problem

APPLICABLE NUREG-0700 GUIDELINE: 6.5.4.2 General

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Visual Displays/Graphic Recorders/Specific Recorder Types/Continuous Recorders.

IDENTIFYING SOURCE: Operator Questionnaire Q-58b

CONCERN IDENTIFIED: Various problems with chart drives, pickup wheels and inking were identified.

RESOLUTION: These concerns are addressed by HEDs 247, 248 and 249 and 250.

HED: 549

PROBLEM AREA IDENTIFIED: Adequate Annunciator Information

APPLICABLE NUREG-0700 GUIDELINE: 6.3.1.2b(1)

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Annunciator Warning Systems/General System Characteristics/Alarm Parameter Selection/ General Alarms.

IDENTIFYING SOURCE: Operator Quesionnaire Q-65

CONCERN IDENTIFIED: The remote alarm panel inputs do not have adequate control room information.

RESOLUTION: This concern is addressed in HED 53.

HED: 550

PROBLEM AREA IDENTIFIED: Reading and Identifying Annunciators

APPLICABLE NUREG-0700 GUIDELINE: 6.3.3.5a(1)

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Annunciator Warning Systems/Visual Alarm Subsystem/Visual Tile Readability/Distance

IDENTIFYING SOURCE: Operator Questionnaire Q-69

CONCERN IDENTIFIED: Letters on Annunciator Panels are too small.

RESOLUTION: This concern is addressed in HED 73.

HED: 551

PROBLEM AREA IDENTIFIED: Reading and Identifying Annunciators

APPLICABLE NUREG-0700 GUIDELINE: 6.3.3.4a

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Annunciator Warning Systems/ Visual Alarm Subsystems/Visual Tile Legends/Unambiguous.

IDENTIFYING SOURCE: Operator Questionnaire Q-69

CONCERN IDENTIFIED: Annunciator messages are not always clear.

RESOLUTION: This concern addressed in HED 71.

HED: 552

PROBLEM AREA IDENTIFIED: Additional Comments on Annunciators

APPLICABLE NUREG-0700 GUIDELINE: 6.3.3.5c(2)

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Annunciator Warning Systems/Visual Alarm Subsystems/Visual Tile Readability/Legend Contrast

IDENTIFYING SOURCE: Operator Questionnaire Q-69A

CONCERN IDENTIFIED: The need for new window holders and burned windows replaced was identified.

RESOLUTION: This concern is addressed in HED 76.

HED: 553

PROBLEM AREA IDENTIFIED: Non-useful Data on Computer

APPLICABLE NUREG-0700 GUIDELINE: 6.7.3.1c

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Process Computer/ Printers/Printer Characteristics/Form of Printed Information

IDENTIFYING SOURCE: Operator Questionnaire Q-86

CONCERN IDENTIFIED: Readings which read out in detector volts.

RESOLUTION: This concern is addressed by HED 315.

HED: 554

PROBLEM AREA IDENTIFIED: Computer Programs Could be Enhanced or Eliminated

APPLICABLE NUREG-0700 GUIDELINE: 6.7.1.1 General

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Process Computers/Computer Access/Software Security (General)

IDENTIFYING SOURCE: Operator Questionnaire Q-87

CONCERN IDENTIFIED: The entire list of programs needs to be reviewed.

RESOLUTION: This concern is addressed by HED-377.

HED: 555

PROBLEM AREA IDENTIFIED: P-10 Setpoint Violations

APPLICABLE NUREG-0700 GUIDELINE: 6.5.1.1a

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Visual Displays/ Principles of Display/ Information to be Displayed/Task Analysis.

IDENTIFYING SOURCE: Operator Interview I-6

CONCERN IDENTIFIED: There have been several instances where P-10 setpoints have been violated. Is there an instrumentation, Tech. Spec. or procedure problem?

During the first few years of operation, this problem occurred frequently during start-up. More recently, it has not been a problem as operating procedures do not require power to be maintained as close to the setpoints and operators are more experienced. There is plenty of instrumentation.

The problem was also identified in the Incident Report review and it was determined that the best way to avoid the reoccurrence of the problem was through training.

RESOLUTION: Since problem was identified, simulator has been installed, and operators are being trained on reactor startup. Training on the simulator has been the best way for operators to learn how to precisely implement the startup procedures and avoid the trp on P-10. No further action required.

HED: 556

PROBLEM AREA IDENTIFIED: Operation of Tap Changers

APPLICABLE NUREG-0700 GUIDELINE: 6.5.1.1a

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Visual Displays Principles of Display/Information to be Displayed/ Task Analysis.

IDENTIFYING SOURCE: Operator Interview I-10

CONCERN IDENTIFIED: There was a problem of loss of IA SYS STA Service Transformer due to problem with tap changers. Is there a problem with instrumentation?

The operators generally stated that they had initial problems with the tap changers in terms of how they worked and how to operate them. Primarily due to lack of training and sufficient documentation. Now there is a manual and operators have experience. No operator thought that the tap changers were a problem except for their location.

Although the problem has apparently gone away with operators becoming more experienced and a manual being available, the review team believes that the operators should not have to learn tap changer operations on-the-job but during formal training.

RESOLUTION: Since problem was identified, simulator has been installed, and operators receive training on use of tap changers. No further action required.

HED: 557

PROBLEM AREA IDENTIFIED: Base Adjust Manipulation

APPLICABLE NUREG-0700 GUIDELINE: 6.9.3.1a(1)

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Control-Display Integration/Dynamic Control-Display Relationships/General Movement Relationships/ Rotary Controls.

IDENTIFYING SOURCE: Operator Interview I-11.

CONCERN IDENTIFIED: Although no problems were identified by any operators in terms of manipulation of controls, the base adjust and voltage regulator controls and indication were noted to be checked because the guideline was violated.

RESOLUTION: The operation of the base adjust and voltage regulator are functionally related. This problem is identified by HED-259 which addresses its relationship to the power factor.

HED: 558

PROBLEM AREA IDENTIFIED: Equipment Status Indicated by Lights Being Off.

APPLICABLE NUREG-0700 GUIDELINE: 6.5.3.1c(1)

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Visual Displays/Light Indicators/Characteristics and Problems of Light Indicators/Precautions to Avoid Misinterpretations

IDENTIFYING SOURCE: Operator Interview I-14

CONCERN IDENTIFIED: Although no problem was indicated during the interviews for this problem area, the DCRDR team recommended that it be checked during the control-display integration walkdown/survey.

RESOLUTION: Although the integration walkdown/survey identified discrepancies, for example by HEDs 387, 391, 393, 404 and 442, none pertain specifically to this problem area. Light indicators are discussed further under 6.5.3.1a(2), Appendix L. It was verified that no problems exist for this specific concern.

HED: 559

PROBLEM AREA IDENTIFIED: Status Versus Demand Indication

APPLICABLE NUREG-0700 GUIDELINE: 6.5.1.1e(1)

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Visual Displays/ Principles of Display/ Information to be Displayed/Demand Information Versus Status Information

IDENTIFYING SOURCE: Operator Interview I-15

CONCERN IDENTIFIED: The Hagan Controllers were identified as usually indicating signal demand. However, it was also indicated that parameter indication was usually nearby. Therefore, it was decided to address this item in greater detail during the walkdown for the control-display integration survey.

RESOLUTION: This item is addressed by HED 153.

HED: 560

PROBLEM AREA IDENTIFIED: Control Room Communications

APPLICABLE NUREG-0700 GUIDELINE: 6.2.1.2c(1)

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Communications/Voice Communication Systems/ Conventional-Powered Telephone Systems/ Switching Mechanism.

IDENTIFYING SOURCE: Operator Interview I-25

CONCERN IDENTIFIED: The only problems indicated by the operators related to phone maintenance and line priority for the control room. The DCRDR team decided to review these items for more information.

RESOLUTION: These concerns are addressed by HEDs 48 and 49.

HED: 561

PROBLEM AREA IDENTIFIED: Loss of Computer Information During Paper Reload.

APPLICABLE NUREG-0700 GUIDELINE: 6.7.3.1e(2)

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Process Computers/ Printers/Printer Operation

IDENTIFYING SOURCE: Operator Interview I-27

CONCERN IDENTIFIED: Upon review of the responses to I-27, the DCRDR team decided that the loss of data during paper reload would have to be checked for the P250 Sequence of Events.

RESOLUTION: This concern is addressed by HED 318.

HED: 562

PROBLEM AREA IDENTIFIED: Color Coding for Light Indicators

APPLICABLE NUREG-0700 GUIDELINE: 6.5.1.6d(1)

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Visual Displays/ Principles of Display/Color Coding/ Consistency of Meaning

IDENTIFYING SOURCE: Operator Interview I-31

CONCERN IDENTIFIED: Upon review of the response to Item d of I-31, the DCRDR team decided that adherence to the white-red & green-red indicator light conventions for pumps and valves, respectively, be checked during the control-display integration walkdown.

RESOLUTION: Violation to color coding convention for light indicators are identified in HED-116 and HED 442.

HED: 563

PROBLEM AREA IDENTIFIED: Emergency Shutdown Panel (ESP) Control

APPLICABLE NUREG-0700 GUIDELINE: 6.3.1.2.b(1)

APPLICABLE NUREG-0700 SECTION/SUBSECTION: Annunciator Warning Systems/General System Characteristics/Alarm Panel Selections/General Alarms

IDENTIFYING SOURCE: Operator Interview I-31

CONCERN IDENTIFIED: Upon review of the responses to Item h of I-31, the DCRDR team noted that procedures should be checked to verify that clearance for transfer of control to the ESP is addressed.

RESOLUTION: It was determined that the Nuclear Shift Supervisor's or the Nuclear Shift Operations Foreman's approval is required to exercise the controls at the ESP in order to perform Operations Surveillance Tests. The control room is provided with an annunciator, A4-73 to indicate that control is at the shutdown panel. This annunciator is also checked upon transfer of control to the ESP.

Reference One (1)

Operator Questionnaire and Interview Items

OPERATOR QUESTIONNAIRE ITEMS

Workspace and Environment

OQ-1 What equipment or equipment arrangement has hindered your movement about the control room in the course of normal or emergency operations?

OQ-2 What peripheral console/cabinet arrangements are ineffective and/or obstruct your movement about the control room?

OQ-3 Does your specific work location station provide adequate access to storage or desk facilities?

OQ-4 Are you required to leave the primary control boards for instruments/displays in other areas? (How often, how long?)

OQ-5 What do you dislike about the arrangement of restrooms, kitchen, place to eat and break area?

OQ-6 Is the furniture arrangement adequate and/or convenient for your use?

OQ-7 How adequate is the control room lighting and illumination control?

OQ-8 Do you have problems with glare and/or reflections in the control room?

OQ-9 Were there incidents where lighting has been ineffective and/or interfered with job performance?

OQ-10 What specific times is the noise level in the control room at an unreasonable level and the cause of annoying distractions?

OQ-11 What particular sources (equipment and/or people) of noise cause annoyance and/or distraction in the control room?

OQ-12 What problems do you have with the heating/air conditioning system, humidity, and ventilation system in the control room?

OQ-13 Has static electricity caused you any particular problems in the control room?

OQ-14 Do you have any problems controlling the number of people in the control room during normal or emergency operations?

OQ-15 Do you feel there is a need for additional policies or actions to limit traffic and distractions in the control room? Identify what they could be.

OQ-16 Are there any operations in the control room where the actions of another operator interfere with your tasks?

OQ-17 What problems do you have in reaching any of the controls on the control board?

OQ-18 What important controls or displays are not easily visible to you?

OQ-19 Is the overall layout and shape of the control board/console adequate for effective monitoring and operations?

OQ-20 Is it significantly difficult to move back and forth between the vertical boards and the bench board?

OQ-21 Which major systems are not organized properly around the control boards for both normal and emergency operation?

OQ-22 Have there been incidents where you had to be in two places at once because of board layout to control and monitor a specific plant evolution?

OQ-23 Did you or would you have any problems in the operation of the emergency shutdown panel? Consider location, design, and controls at the shutdown panel.

OQ-24 Describe features about the control board layout which have assisted you in job performance, i.e., color codes, etc.

OQ-25 Describe other features about the control room environment which have interfered with job performance.

Panel Design

OQ-26 What do you consider to be the three easiest systems to operate? Include system/panel location, why you feel they are easiest to use and any inadvertent activation of these systems.

OQ-27 What do you consider to be the three most confusing or difficult systems to operate and why? Give examples of incidents in which there was difficulty in operating the systems.

OQ-28 What systems do you operate that give you problems with a particular panel arrangement? Describe what you think is wrong with the arrangement.

OQ-28a Are there any problems in the operation, location, or design of the emergency shutdown panel?

OQ-29 Which controls and indications are difficult for you to recognize as a related group?

OQ-29a It has been proposed to establish a "green is normal" convention for all control lights associated with pumps, valves, and breakers. The normal arrangement would be based on 100% power operation. The intent is to provide prompt operator recognition of a change in component status. This means, however, that you will not be able to tell a component's status until you view these status lights associated with the switch, for example, if the left side is green and lit then the valve switch is closed or the pump is on. Do you consider this proposal an advantage or disadvantage to operations? Consider any problems with particular switches, status of switches, difficulty in the thought process of green being normal, red is not, etc.

OQ-30 Which types of modifications (mimics, color codes, etc.) to the boards would you consider the most useful to you?

OQ-31 Which types of modifications to the boards have created a hindrance for you?

OQ-32 Describe panel design characteristics and/or panel locations not discussed above which create particular problems for you as an operator.

OQ-33 What controls and displays of particular systems are too far away from each other for proper operation?

OQ-34 Are there any controls that are difficult to adjust as precisely as they need to be adjusted?

OQ-35 Are there any switches that are operated differently but physically are identical to other switches?

OQ-36 Are there switches that are difficult to turn?

OQ-37 Which controls do you find too large or too small to operate easily?

OQ-38 Are there meters that are scaled in different units than the procedures you have to use with them? For example, do you have to use nomographs or conversion factors other than powers of 10?

OQ-38a Are there instrument indicators that are pegged low or high during normal operation making it impossible to monitor the steady state performance of a process?

OQ-39 Are there controls and displays that work together in unusual ways (i.e., containment temperature affecting seal leak off indication)?

OQ-40 Are there instruments that are difficult to compare with backups because of differences in scale units, elevated zeros, etc.?

OQ-41 Are there instruments that are hard to use because they have to be read more precisely than the scale allows?

OQ-42 Do you have any difficulties with lamp replacement such as snock, accidental activation, or need to replace from behind panel?

OQ-43 Are there important instruments on back panels that do not have either an alarm you can hear in the control room or their own annunciator?

OQ-44 Are there labels (on controls or displays) that are unclear about what is actually being controlled or displayed, what the control does, what position a control is in, or which could cause a mistaken identity with another control?

OQ-45 Are there key switches where the key can be removed when the switch is not in its "Off" or "Safe" position?

OQ-46 Has there been any interference to instrumentation by radio or walkie-talkie signals?

OQ-47 Are there any control devices which you find confusing or difficult to operate?

OQ-48 When operating controls, do you use any of the existing coding and how important is it to you as an operating aid, i.e., color, sound, shape, location, etc.? What coding schemes are most useful to you? What types of color coding would you like to see on controls or indicators (i.e., power supply coding on instruments)?

OQ-49 Are there any occurrences where the wrong control has been activated or where a control was activated inadvertently or incorrectly? Do you know what caused this to happen and how and when the error was discovered?

OQ-50 What were the consequences of the occurrences asked about in the previous question?

OQ-51 Have there been recurring instances where the wrong control has been activated, or a control was activated inadvertently or incorrectly? What would you recommend to prevent recurrence of any of these problems?

OQ-52 Are there controls where it is not always apparent as to what position they are turned to (i.e., pointer indicators are not obvious because of poor contrast due to design, location, level or glare)?

OQ-53 Are there emergency or other critical controls which are neither coded nor guarded (e.g., turbine trip push buttons, rod control startup push button)?

OQ-54 Are there controllers with inconsistent relationship between control effects and indicator (e.g., open is indicated by 0% and close by 100%)?

OQ-55 Are there multiple-position controls or speed changer controls which do not follow conventional use for right-center-left positions or clockwise movement (i.e., diesel generator ground switch deviates from normal convention)?

OQ-56 Are there positive means to determine indicator light failure?

OQ-57 Are display scales adequately marked for normal operating ranges or setpoints?

OQ-58 Is it always apparent to the operator when a vital indicator fails or becomes inoperative?

OQ-58a Are there recorders that cannot be viewed from several locations on the board where equipment is routinely controlled that heavily influence changes to the recorded parameters (i.e., pressurizer level, pressure, and T Recorders, etc.)?

OQ-58b Do you have significant operational problems with chart recorders?

OQ-58c Are there times when chart recorders are not operational? What problems does this cause for you?

OQ-58d What additional comments do you have on controls and displays?

Annunciator Warning System

OQ-59 Are nuisance alarms a significant problem? Please describe.

OQ-60 Do you get particular recurring invalid alarms? Please describe.

OQ-61 What alarms are insignificant from an operational point of view?

OQ-62 What significant problems has the existing annunciator system design caused you?

OQ-63 Are there any problems with identifying new alarms when they come in?

OQ-64 Are there features of the annunciator warning system that have resulted in inefficient or erroneous fault identification?

OQ-65 Does the annunciator system provide an adequate amount of information to you during a major transient?

OQ-66 Are visual and auditory alarms satisfactory?

OQ-67 Are auditory signals annoying? Can you easily differentiate between different auditory signals?

OQ-68 Are any important annunciators missing or located where they should not be?

OQ-69 Do you have problems reading or identifying annunciators while you are conducting normal or emergency operations?

OQ-69a What additional comments do you have on annunciators?

Procedures

OQ-70 Do you have any problems finding or retrieving procedures that you need during emergency situations?

OQ-71 Are there adequate props for using procedures while you operate? What would be useful to you in this respect?

OQ-72 Are procedures maintained in good physical condition (e.g., are pages properly and securely inserted, are updates and changes handled properly, etc.)?

OQ-73 Do you feel there are too many procedures that operators are required to memorize? How does it affect operator performance during emergency operations?

OQ-74 Are operator comments or requested changes to written procedures satisfactorily considered and processed?

OQ-75 What plant procedures (i.e., startup, shutdown) have insufficient detail or are not clearly written to the point that errors could be introduced?

OQ-76 Are there incidents whereby following procedures resulted in ineffective or erroneous performance by the operator? What was the origin of the deficiency in the procedures and how was the deficiency corrected?

OQ-77 What specific problems have you found with following routine procedures and how could they be corrected most effectively?

OQ-77a What additional comments do you have on procedures?

Communications

OQ-78 Are there nuisance problems with unauthorized communications to the control room?

OQ-79 What problems do you have with the page phones, loudspeakers, and radios? Consider equipment condition, availability of the system to the operator and outside interference (noise level, people, etc.).

OQ-80 Are the page phones and loudspeakers serviceable to you for effective communication with auxiliary operators, maintenance personnel, etc.?

OQ-81 Are there instances where control room phones have prevented or interfered with your ability to communicate with other personnel? Consider for example, delays, interference, availability of a phone, etc.

OQ-82 Are there situations where the lack of proper communications caused operational problems?

OQ-83 What characteristics of the control room communications systems do you find most ineffective in providing you timely, intelligible contact with other personnel?

Process Center

OQ-84 Does the process computer provide inaccurate data at any time? Consider operating conditions, important system parameters, etc.

OQ-85 Is the process computer data timely? Are there emergency situations in which you would be reluctant or hesitant to use the computer for information because of its response time?

OQ-86 Is there data on the computer which you do not find useful?

OQ-87 What computer program do you feel could be better utilized or eliminated?

OQ-88 Is there data on the computer which you find difficult to use? Consider format of printout, type of parameter trending, etc.

OQ-89 What percentage of computer printout is useful to the operator during operation? Consider normal, abnormal, and emergency operations.

OQ-90 Are there other specific computer difficulties on which you would like to comment? Consider especially emergency operations but do not limit yourself to emergency operations only.

Staffing

OQ-91 Are there incidents in which the number of personnel on duty impeded your prompt response to an operational situation?

OQ-92 Are there incidents where workload requirements restricted your response to any operational situation?

OQ-92a Is the control room adequately staffed during normal, abnormal, and emergency periods and during all shifts?

OQ-93 Are job responsibilities clearly defined such that a response to a transient or an emergency situation proceeds smoothly?

OQ-94 List the three most desirable characteristics of the staffing program and job assignments which provide for smooth, continuous, system operation.

OQ-95 Do your procedures provide adequate coverage for turning over a shift to incoming personnel? Consider the amount of time allowed for shift turnover, information exchange, etc.

OQ-96 Are there incidents where you were given incorrect and/or insufficient information during shift turnover?

OQ-97 Are there incidents where your efficiency was significantly degraded because of shift work or overtime?

OQ-97a Is the control room sufficiently staffed to allow for vacations and other justified reliefs?

OQ-98 To what degree does shift work impact on your homelife, social life, and/or work attitudes?

OQ-99 In what ways can your job be made more interesting and your time more productively spent? Consider ways that would increase operator alertness, combat monotony, make backshifts more admissible, etc.

OQ-100 Are your duties explained to you such that you clearly understand what they are?

OQ-101 Are there incidents where it was unclear or confusing as to who was in charge and/or who should be reporting what to whom? What was the cause and was the problem corrected or did it recur?

OQ-102 Are there enough avenues open to you for resolving a personal or job related problem? Are they effective?

OQ-103 Are there other problems with staffing and/or job design on which you would like to comment?

Corrective and Preventive Maintenance

OQ-104 Are there incidents where an operator surveillance test caused an operational problem? Consider the cause, operational status, effect on operation and/or the operator, corrective action, etc.

OQ-105 Are there incidents where maintenance actions affected the safe operation of the plant? Consider the cause, operational status, effect on operation and/or the operator, corrective action, etc.

OQ-106 Are there control room preventive maintenance procedures and/or characteristics which are ineffective?

OQ-107 What is the most effective characteristic of the maintenance program?

OQ-108 What maintenance or surveillance test procedures would you like to see changed because of their negative impact on operations?

OQ-109 Are there other things in the maintenance and/or surveillance test programs on which you would like to comment?

Training

OQ-110 Are there plant control, protection, electrical, or mechanical systems on which you would like more intensive training and in what respect (simulator, class, discussion, lecture)?

OQ-111 Has your training provided you with the confidence that you could perform successfully during an emergency situation? Are there situations about which you feel inadequately prepared?

OQ-112 Are you adequately trained in the operation of the emergency shutdown panel?

OQ-113 What characteristics of your classroom training have been most effective in preparing you for control room operation?

OQ-114 Have you received training on effective communications techniques?

OQ-115 Is the use of protective gear and equipment included in your training program?

OQ-116 Are you adequately trained in using the process computer to full advantage?

OQ-117 What characteristies of your requalification training or practice sessions have been most effective in preparing you for control room operations?

OQ-118 What aspects of your training do you feel were especially ineffective or need improvement?

OQ-119 Are there other comments which you would like to make on the quality of your training?

OQ-120 What characteristics of simulator training have you found and/or do you think will be most effective in preparing you for control room operations?

Simulator Training

OQ-121 What aspects of simulator training do you feel should be eliminated or modified?

OQ-122 Are there specific operations on which more emphasis should be placed during simulator training?

OQ-123 What amount of time do you feel would be adequate for simulator training?

OQ-124 What situations, transients, etc. which have or could arise would you like to see run on the simulator?

OQ-125 Are there other aspects of simulator training and use on which you would like to comment?

Use the space below for additional comments on any of the topics covered herein or others that you may consider pertinent to this effort.

INTERVIEW ITEMS

A. CONTROLS

1. Are there switches that do not "snap" into position or that can be left halfway between switch positions or, where appropriate, do not have spring return? (NUTAC OQ-3)

2. Are there switches that are difficult to turn? (NUTAC OQ-3)

3. Are there control knobs or handles that slip or move loosely on their shaft? (NUTAC OQ-7)

4. Are there any problems with switch designations stop, off, PTL - are they clearly understood? (IR 75-21)

5. Is there a convention for use of stop, off, PTL? (IR 75-21)

6. There have been several instances where P-10 setpoints have been violated, attributed frequently to operator inattentiveness, is there an instrumentation, TS, or procedure problem? (76-80)

7. There have been several instances where there has been a loss of an inverter, not attributed to operator, but is there a need for more instrumentation? (79-57,-58)

8. There have been several instances where the RWST level is below TS,

   a. Is instrumentation adequate? (80-100)
   b. Is OST procedure a problem? (80-100)

9. There was an instance of inadvertent operation of boronometer relief valve (RV-CH-103), is there a problem with control guarding or identification? (83-19)

10. There was a problem of loss of IA SYS STA Service Transformer due to problem with tap changers. Is there a problem with instrumentation? (83-27)

11. When bringing down load, is BASE ADJUST difficult to manipulate? (78-33)

12. What are the control and instrumentation problems associated with feedwater during startup? (76-50)

B. DISPLAYS

13. Do you have to use nomographs while performing operations? Do you have any trouble with any of the nomographs? Which ones specifically? (OQ-9)

B. DISPLAYS (Cont'd)

14. Are there indicator lights where equipment status is indicated by a light being off (for example, pump is off when light is off)? (OQ-19)

15. Which indicators or groups of indicators show that a control signal has been sent rather than the resultant system condition? (EQ-4; OQ-20)

    a. What are the back-up displays for these indicators?

16. Do chart recorders operate at a high speed when fast tracking rates or trending is required? (OQ-21)

    a. If no, what do you use to get information?

17. Which displays would fail in normal operating range on loss of power or input signal? (EQ-5)

18. There have been problems with Boron Concentration being out of spec, is there adequate instrumentation to perform jobs associated with Boron Concentration? (76-27)

19. There have been several problems with discharge of liquid waste tanks, is instrumentation adequate for jobs? (76-39)

20. Occasionally there are problems with dual indication of indicator and a need for limit switch adjustments. Has this ever created a problem for you? (82-95)

C. ANNUNCIATORS

21. In the event of flasher failure to an alarmed annunciator tile, is it obvious to the operator? If yes, describe how the flasher malfunction is identified. (EQ-1)

22. How are other failed annunciator lights and indicator lights identified? (EQ-6)

23. For multipoint annunciators, is the alarmed point printed out or otherwise indicated in the CR? (EQ-9) Identify any exceptions that you can think of.

24. After acknowledgement of a multipoint annunciator, will the annunciator respond if another of its setpoints is exceeded? (EQ-10)

    a. Describe how multipoint annunciators work. (EQ-10)

D. MISCELLANEOUS

25. Are there any problems with communications in the CR? (80-122)

D. MISCELLANEOUS (Cont'd)

a. PA System
b. Phones
c. Interoperator Comm
d. During Emergency

26. Compare daytime and other shifts in terms of the following. (81-108, 79-78)

a. Workload
b. Noise
c. Interference/interruptions from other people in CR

27. When the computer printer is being reloaded, are data and information that normally would be printed lost? (OQ-42)

28. Has significant degradation of the computer or plant systems been caused by inadvertent actions at keyboard? (OQ-43)

29 Can you think of any control actions that you must take where you do not have a display indicating the result of your action?

30. What important and frequently used controls and displays can not be seen from in front of the BB's.

APPENDIX H

DETAILED CONTROL ROOM DESIGN REVIEW

SUPPLEMENTAL REPORT

BVPS - 1

A P P E N D I X H

HEDS ADDRESSED IN LMD STUDY

(SEE TER APPENDIX C-1)

APPENDIX H

HEDs Addressed in LMD Study
(See TER Appendix C-1

The following list contains each of the HEDs listed in TER Appendix C-1 and for each HED the specific guideline/criterion violated is identified, and the proposed resolution is discussed.

HED	GUIDELINE	DISCUSSION
54	6.3.1.2c(1)	The checking of guideline 6.3.1.2a(2) and the resolution of HED 54 (multiple input alarms) and HED 83 (need for alarm reflash) are all related. DLC attempted to resolve all three by having operators review each annunciator window. The results were mixed and appeared to reflect too much on individual operator opinion and their degree of knowledge of the logic of the annunciator system engineering. In order to obtain a more systemmatic evaluation of the guideline and the HEDs, DLC will analyze the documentation on each alarm and determine (1) violations to guideline 6.3.1.2a(2) and complete resolution to HEDs 54 and 83. The analysis will be completed by May 30, 1988. The results will be sent to the NRC by July 15, 1988.
57	6.3.1.4a(1&2)	HED is that annunciators are not prioritized in accordance with guidelines. The resolution is that a prioritization scheme does exist in that there is a reactor and turbine first out panel and all radiation alarms are grouped. No further action required.
58	6.3.1.4b(1 & 2)	HED is that there is no coding of windows to event priorities. Resolution is that annunciator prioritization is accomplished via first out panel and grouping of high priority radiation alarms. No further action required.

HED	GUIDELINE	DISCUSSION
60	6.3.2.2b	HED is that there is no auditory coding for high priority alarms. Resolution is that annunciator auditory signal is coded by general location of alarm. No further action required.
61	6.3.3.1a	HED is that there are annunciator windows that are not located above the related controls and displays. See HEDs 62 and 87 for specific examples of the discrepancy and resolutions.
62	6.3.3.1a	HED is that some operators would like Containment Instrument Air System Pressure Low annunciator moved from annunciator panel A6 to Panel A10. Resolution is no action required for following reasons (1) the containment instrument air pressure meter is being relocated to where it will be easily located and read from the normal operator position (See HED 30). Meter was below 41" on vertical board and could not be easily seen from normal operator position and (2) annunciator is grouped with other containment instrument air alarms. Relocating it would violate criteria for functional grouping.
63	6.3.3.1B(1&2)	HED is that annunciator panel labels are not located above panel and label lettering height is less than recommended. Resolution is that new labels will be made and placed above panels.

HED	GUIDELINE	DISCUSSION
67	6.3.3.3b	HED is that some visual alarms are not grouped by function within annunciator panels. Specific problems and resolutions associated with first out panel are covered in HEDs 55 and 56. Resolution for other panels, where functional grouping needs to be emphasized, is to employ demarcation and/or other location aids.
69	6.3.3.3c(2)	HED is that annunciator panel coordinate designations are on bottom of panel and letter height does not meet minimum criteria. Resolution is to make new labels and place on top of panels.
71	6.3.3.4a	HED is that visual tile legends are sometimes ambiguous. Resolution is to revise/standardize wording and abbreviations and replace tiles.
72	6.3.3.4d	HED is that visual tile legend abbreviations are not consistent with standardized list. Resolution is to revise/standardize wording and abbreviations and replace tiles.
73	6.3.3.5a(1)	HED is that visual tile letter height is less than minimum criteria. Although minimum criteria for letter height is not met, no problems related to reading alarm legends emerged during SFTA and EOP V&V.
74	6.3.3.5a(2)	HED is that visual tile letter height varies from 7/32" to 5/32". Resolution is to standardize letter height on new tiles.
75	6.3.3.5b(2)	HED is that different type styles and stroke widths are used on annunciator visual tiles. Resolution is to standardize type style on new tiles.
77	6.3.3.5d(1-6)	HED is that letter dimension and spacing varies on annunciator visual tiles. Resolution is to standardize letter dimension and spacing on new tiles.

HED	GUIDELINE	DISCUSSION
81	6.3.1.2	HED that was initially identified was that there were six unnecessary alarms. Subsequent review determined that the only unnecessary alarm is load dispatch alert. However, alarm is not a nuisance. Resolution is to not remove any of the alarms.
82	6.3.1.2	HED is that operators would like to have alarm for (1) boron evaporator overhead pressure, (2) turbine temperature, and (3) diesel running. Subsequent review determined that existing instrumentation was adequate and alarm would not enhance plant safety. Resolution is to not add any of the alarms.
83	6.3.2.1e	The checking of guideline 6.3.1.2a(2) and the resolution of HED 54 (multiple input alarms) and HED 83 (need for alarm reflash) are all related. DLC attempted to resolve all three by having operators review each annunciator window. The results were mixed and appeared to reflect too much on individual operator opinion and their degree of knowledge of the logic of the annunciator system engineering. In order to obtain a more systemmatic evaluation of the guideline and the HEDs, DLC will analyze the documentation on each alarm and determine (1) violations to guideline 6.3.1.2a(2) and complete resolution to HEDs 54 and 83. The analysis will be completed by May 30, 1988. The results will be sent to the NRC by July 15, 1988.
84	6.3.4.1	HED is that operators would like to have an alarm silence control placed on the vertical boards. Recommendations rejected for the following reason: 1. Silence control at each set of annunciator controls will silence all auditory alerts, so additional silence pushbutton not necessary.

HED	GUIDELINE	DISCUSSION
		2. Operator cannot adequately view annunciator panels from operator position in front of vertical boards, so operator may not know which alert is being silence and which alarm came in. 3. It is desirable to keep annunciator controls in sets including silence, acknowledge, reset, and test. Resolution is that no action to be taken.
86	6.3.4	HED is that there are too many alarms and too much information presented during transients. Reorganization of first out panel (see HED 57) will help organize a part of the information. No further action required.
87	6.3.3.1a	HED is that sump alarm should be above LW displays and steamline stop valves alarm is not located above related controls or displays. Resolution is that no action required for following reasons: 1. Sump level alarm is located above sump level displays and grouped with other sump related alarm. Moving it over the LW displays and controls to provide additional LW inventory information would create more significant problems in terms of locating the alarm and readily recognizing containment sump related alerts. 2. The "Steamline Stop Valve - Not Fully Open" alarm is grouped with SI actuation and other SI "diagnostics" alarms above VA3 rather than over the controls on BC1. The alarm was placed in this location because if one of stop valves closes, SI will

HED	GUIDELINE	DISCUSSION
		occur. Therefore, the annunciator may alert operator to the cause of SI. Alarm is located correctly given its function and the circumstances related to the alert.
113	6.6.3.8a	HED is that all switch positions are not labeled on the Power Range Trip and Intermediate Range trip switches. Unmarked position is spring return inactive position and does not require label.
114	6.4.2.1	HED is that switch positions are out of sequence (i.e., 3-1-2) on PRZR Level Channel HSS-ILM-459 control. Resolution is that no action required for the following reason. Control provides for selection of PRZR level channels. Channels selected have been designated as positions 1, 2, or 3. There is no control movement to conform to population stereotype (e.g., this is a selector switch - not a sequence switch) and the switch is a one of a kind as a selector switch so no control room coding conventions are violated. Positions and associated channels are clearly labeled. Finally procedures identify channels to be selected and channels are clearly labeled.
118	6.3.3.5a	HED is that there are 4 lines of text on some annunciators. Resolution is that this HED should not exist since 4 lines of text on annunciator tiles are allowable as long as readability requirements are met. The 4 lines of text criteria does apply to legend lights but not to visual alarm tiles in annunciator panel. No action required.
174	6.1.2.5b(1)	HED is that there are vertical indicators on the vertical boards that have units printed too low on face plate to be read from benchboards. Resolution is to raise all accident related indicators below 41" to position where they can be easily read (See HED 30). No further action required.

HED	GUIDELINE	DISCUSSION
199	6.5.1.6d(1)	HED is that there are inconsistencies in color convertions/coding in the control room. See HEDs 437 and 394 for specific color code discrepancies and resolutions.
212	6.5.3.3b(4)	HED is that wording on legend lights on status panel are ambiguous in that there is differences in how condition are described (i.e., one legend light states "P-6" while another states "NOT P-8"). It was thought that the use of the negative on some status legends might be a problem. Further review indicates that no problem exists and the legends contain precisly the information required by the operator. Resolution is that no action required.
213	6.5.3.3b(b)	HED is that abbreviations on status panels are not totally consistent with the standardized list of abbreviations developed for the BV-1 control room. Included are the following: F instead of FLW for Flow S.G. instead of SG for Steam Generator Lo instead of Low PZR instead of PRZR for Pressurizer ST.PT. instead of SP for Setpoint Hi instead of High FDWTR instead of FW for Feedwater CODEN instead of CNDS for Condenser PR instead of Press for Pressure ISOLA instead of ISOL for Isolation S.Inj.Blk instead of SI BLK for Safety Injection Block Resolution is to take no action because abbreviations used are commonly used in the industry and are not ambiguous to operator.

HED	GUIDELINE	DISCUSSION
263	6.9.1.1c(2)	HED is same as HED 359. The description for this HED is more clearly stated that for the Hagan controllers there are differences as to whether an increase, or decrease, in demand signal opens or shuts a valve. The Hagan indication typically shows percent demand signal for opening or closing a flow control valve (FCV). If the FCV is designed to fail closed on the loss of power, the demand indication will show valve shut for 0% signal. IF the FCV is designed to fail open on the loss of power, the demand indication will be reversed. Therefore, the demand signal indication and movements of the meter needle is appropriate for design and human engineering criteria. However, relative to the design operation of the FCV, the demand signal corresponds proportionable valve opening or valve closing, as the case may be. Based on the above the DCRDR team recommended that the FCV shut/open (S/O) position be clearly labelled above the meter face. The intent is to aid the operators remember the relationship between the demand signal and valve position for the associated controller and FCV.
264	6.6.4.1a	HED is that minimum letter height criteria are not met for all labels. DLC has determined that although minimum letter height criteria are not met, the letter size for the component labels will not be increased during the relabelling effort for the following reasons: 1. No problems related to reading labels emerged during SFTA and EOP V&V. 2. There is not enough room between the component and its indicator lights for larger labels, which would be required if letter height is increased.

HED	GUIDELINE	DISCUSSION
		3. Operators do not indicate any problems with label legibility. 4. Relabelling of control room will standardize abbreviations and provide other labelling enhancements which will improve label comprehension. 5. Relabelling will result in standardization by hierarchial level and/or function for labels.
265	6.6.2.1e	HED is an ambiguously placed label. Resolution is to relocate label during relabelling of control room.
266	6.6.2.1e	HED is an ambiguously placed label. Resolution is to relocate label during relabelling of control room.
267	6.6.2.1e	HED is an ambiguously placed label. Resolution is to relocate label during relabelling of control room.
268	6.6.2.1e	HED is an ambiguously placed label. Resolution is to relocate label during relabelling of control room.
269	6.6.2.1e	HED is an ambiguously placed label. Resolution is to relocate label during relabelling of control room.
270	6.6.2.1e	HED is an ambiguously placed label. Resolution is to relocate label during relabelling of control room.
271	6.6.2.1e	HED is an ambiguously placed label. Resolution is to relocate label during relabelling of control room.
272	6.6.1.1	HED is that component/panel element does not have a label. Resolution is to label component/panel element.
273	6.6.1.1	HED is that component/panel element does not have a label. Resolution is to label component/panel element.

HED	GUIDELINE	DISCUSSION
274	6.6.2.1e	HED is an ambiguously placed label. Resolution is to relocate label during relabelling of control room.
275	6.6.2.1	HED is that label is below the panel element instead of above it. Resolution is to place label in proper location during labelling of control room.
276	6.6.2.1	HED is that label is below the panel element instead of above it. Resolution is to place label in proper location during labelling of control room.
277	6.6.3.4e	HED is that roman numerals are utilized in the control room. Further review indicated that roman numerals are used in only a few cases to indicate channels. Resolution is that inappropriate roman numerals will be eliminated during relabeling of the control room.
278	6.6.3.4a	HED is that there is no labelling indicating functions or items serviced through panel access doors. Resolution is to label panel access openings.
279	6.6.1.1	HED is that component/panel element does not have a label. Resolution is to label component/panel element.
280	6.6.1.1	HED is that component/panel element does not have a label. Resolution is to label component/panel element.
281	6.6.1.1	HED is that component/panel element does not have a label. Resolution is to label component/panel element.
282	6.6.1.1	HED is that acoustic monitor labels are confusing. Resolution is to label monitors as per control room outline drawing 25AJ during labelling of control room.
283	6.6.1.1	HED is that component/panel element does not have a label. Resolution is to label component/panel element.

HED	GUIDELINE	DISCUSSION
284	6.6.1.1	HED is that component/panel element does not have a label. Resolution is to label component/panel element.
285	6.6.1.1	HED is that component/panel element does not have a label. Resolution is to label component/panel element.
286	6.6.3.2b	HED is that the label providing technical information related to PRZR Pressure Controller is located between two controllers. Further review revealed that technical information label is common to both controllers. Label clearly indicates that this is the case. No action required.
287	6.6.1.1	HED is that component/panel element does not have a label. Resolution is to label component/panel element.
288	6.6.1.1	HED is that component/panel element does not have a label. Resolution is to label component/panel element.
289	6.6.3.5	HED is that many labels are too wordy. Resolution is to review and revise the labels and correct during the relabelling of the control room accordingly to the standard format and abbreviations.
290	6.6.3.3b	HED is that abbreviations and acronyms are not used consistently in the labels. Resolution is that a standardized list of abbreviations has been developed, and labels will be changed to comply with list during the relabelling of the control room.
291	6.6.2.4c	HED is that labels associated with pump controls on top row of benchboard are obstructed by the pump handles. Resolution is that no action is required for the following reason. View of labels is obstructed only at one viewing angle (i.e., when the operator is directly in front of control). Moderate change to the angle allows the operator to clearly

HED	GUIDELINE	DISCUSSION
		read the label and reach the control at the same time. Moving the label to below the control would violate guidelines criteria. Changing these pump controls would violate a control room convention on control coding.
292	6.6.2.4c	HED is that label associated with pump controls on top row of benchboard are obstructed by the pump handles. Resolution is that no action is required for the following reason. View of labels is obstructed only at one viewing angle (i.e., when the operator is directly in front of control). Moderate change to the angle allows the operator to clearly read the label and reach the control at the same time. Moving the label to below the control would violate guidelines criteria. Changing these pump controls would violate a control room convention on control coding.
293	6.6.2.4c	HED is that the labels associated with the pump controls that are located on the top row of the benchboards are obscured by the operators' hands during operation of control. Resolution is that no action is required for the following reasons. There is no extended manipulation or adjustment required where operating the pump switches so there is no continuous feedback data being obscured. The pump indicating lights are clearly visible and the labels are clearly visible to the operator when locating the controls.
294	6.6.4.1b(1)	HED is that labels are black with white lettering. No action required since (1) dirt buildup in labels is not a problem in the control room and (2) label cleaning is administratively controlled.
295	6.5.1.1e	HED is same as HED 263.

HED	GUIDELINE	DISCUSSION
296	6.6.6.4b(4&5)	HED is that mimic lines between PORVs and their block valves do not have termination or origination points. Resolution is no action required because lines are there to associate each PORV with its block valve and the lines begin and end at labelled elements.
297	6.6.6.4b(3)	HED is that mimic lines between PORVs and their block valves do not have arrows indicating flow. Resolution is no action required. Lines are there to indicate valve association not necessarily flow path.
298	6.6.6.4a(1)	HED is that mimic lines between PORVs and their block valves are different colors. Resolution is no action required. Lines are there to indicate valve association not flow. Use of the different colors actually enhances location and association.
299	6.6.6.4b(2)	HED is that mimic lines between PORVs and their block valves overlap. Resolution is no action required because by use of color coding the lines, which indicate valve association and not flow path, there is no problem tracing line from PORV to block valve.
300	6.6.6.2a & b	HED is that demarcation lines distinguishing between grouping of SI indicators and boron recovery instrumentation are placed contiguous to labels which makes it difficult to identify groupings. Resolution is to use narrower demarcation and add additional demarcation line to right of "Cold Leg Hi Head SI - Loop 3 Flow" indicator that will envelope and distinguish the grouping of SI indicators.
301	6.8.3.2c	HED is that rod stop counters (8 per bank) violate the criteria that no more than 5 similar components should be laid out in an unbroken row. Resolution is no action required. Rod stop counters are organized same as rod banks. Breaking up banks of rod step counters would misrepresent plant design.

HED	GUIDELINE	DISCUSSION
302	6.8.2.3a	HED is that all trains are not laid out identically and there is no mimicing or demarcation. Panel elements are being reorganized (see HEDs 324, 329, 338, and 358). Also elements within each function (i.e., CI, FWI, etc) have color coded patches, and there is demarcation of some of the functional groups. No further action required.
303	6.8.2.3a	HED is that charging pump amp indicators on lower part of VA4 are separated from controls on BA4, and the indicators are difficult to locate among other instrumentation on VA4. Resolution is to demarcate charging pump controls and displays. It is not necessary to move amp indicator since flow and pressure indication associated with pump operation is on the benchboard. Resolution also enhances separation of charging pump controls and displays and RCP controls and displays.
304	6.6.3.2	HED is that similar elements on separate trains have different labels PRZR Relief Tank Vent Cnmt Isolation - TV-DG-109A1 on Train A and MOV-DG-109A2 on Train B. Resolutions is to correct label during relabelling of control room.
305	6.6.3.2	HED is that valve TV-CC-110F, has a misleading name ("CNMT Recirc. Cool Coils CCW Sys Outlet Isolation Valve"). Resolution is to correct label during relabeling of control room.
330	6.6.1.1	HED is that FW Pumps discharge pressure indicators are mislabeled. Resolution is to make correction when relabelling the control room.
372	6.6.1.1	HED is that Delta T defect and Tave controls not labeled identically to the displays. Resolution is to correct labelling.

HED	GUIDELINE	DISCUSSION
391	6.8.2.3a	HED was incorrectly identified. Initial HED was related to separation of controls performing similar functions. Specifically, the DCRDR team thought that AM-CH-115E was a manual override switch for MOV-CH-115E which is on lower row of controls on BA5. Hagan controller AM-CH-115E is on the kickup on BA5. Position indication on valves is via conventional red/green indicator lights. Further study reveals that AM-CH-115E is an auto/manual station nat controls a different valvue. There is no relationship between AM-CH-115E and MOV-CH-115E. AM-CH-115E is related to selector switch LCV-CH-115A, LCV-CH-112 and HIC 115 (manual station). Relocating these four controls and indicator lights in one grouping would require reorganization of the CVCS system. No corrective action is recommended.
396	6.3.3.3b 6.3.3.1a	HED is that boron recovers alarms are split between panels A2 and A3. Resolution is that no action required for the following reason: 1. Annunciators are at left end of A3 and right end of A2. Since panels are only 10" apart, separation is not great. 2. Annunciators are directly above controls and displays.
399	6.6.3.2	HED is that label on selector switch HSS-LW-2 is misleading in that it states that it controls recirculation and drain. It does not control drain. Resolution is to correct label during relabelling of the control room.
401	6.4.1.1c(1)	HED is that HSS-GW-110 selector switch has a T handle control. T handles are used for pumps; therefore, coding convention is violated. Resolution is revised. (See Appendix A).

HED	GUIDELINE	DISCUSSION
405	6.6.3.2	HED is that Containment sump labelling on VA indicators are not clear. Label should be changed to read Containment Safeguards Sump. Resolution is to correct label during relabelling of control room.
421	6.8.3.1b	HED is that operators could confuse reset and actuation pushbuttons for SI, CIA and CIB. Resolution is that guards have been placed on actuation controls and label improvements are being made during relabelling of control room.
437	6.7.2.7(2)	HED is that color coding on SPDS is not consistent with control room convention. Yellow instead of green, is used to indicate normal/safe data. For other computer systems and control room generally,, yellow is code for suspect data or as a low level alarm. Resolution is to change color on SPDS to be consistent with other uses of yellow and green.
440	6.7.1.2c(2)	See HED 441 for specific examples of problems of SPDS abbreviations and/or symbol use that is not consistent with the standardized list for control room use. Resolution is that no action is required since the abbreviations in question are all generally used in the industry and there is no ambiguity or confusion.
445	6.5.33a(1&2)	HED is the several light indicators on status panels are black with white legend that is difficult to read when legend light is not lit. The resolution is to take no action for the following reasons: 1. These are light indicators that inform operators of plant conditions during certain specific operating modes. The operators do not have to locate status lights to manipulate so there is no need for them to meet standard readability criteria when not lit.

HED	GUIDELINE	DISCUSSION
		2. Legends are readable when not lit but not from usual operator position. Operator must reduce viewing distance which is not a problem.

APPENDIX I

DETAILED CONTROL ROOM DESIGN REVIEW

SUPPLEMENTAL REPORT

BVPS - 1

A P P E N D I X I

HEDS "HAT RECEIVED FURTHER STUDY

(SEE TER APPENDIX C-2)

APPENDIX I

HEDs That Received Further Study
(See TER Appendix C-2)

With the exception of HEDs 430 and 435, the HEDs listed in Appendix C-2 to the TER are not from Appendix S of the BV-1 Summary Report. The HEDs that were listed in Appendix S were 38, 111, 430, and 435. Additionally, guideline 6.5.3.1d was listed since it needed to be rechecked to ensure that turbine controls/displays on VC2 met the criteria. The following paragraphs describe the results of the further study of the HEDs and the recheck of the guideline listed in Appendix S.

HED	Results of Further Study
HED 38	The HED identified the BV-1 control room air conditioning as not working properly or reliably. Since the BV-1 and BV-2 control rooms have been connected by the removal of a separating wall, this guideline and air conditioning will be rechecked in the HVAC surveys.
HED 111	HED 111 identified that several of the spring loaded OT-2 switches spring back part center position and actuate third position when released. The switches relating to this HED are those which provide a blocking function for the Train A and Train B Power, Intermediate and Source Range Trips, the Pressurizer Safety Injection Actuation and the Steamline Safety Injection actuation signals. It has been determined that proper operation of these switches and operator awareness of the operation of these switches is reinforced in training. Therefore, no further action is recommended.
6.5.3.1d	This guideline addresses the use of status light indicators to alert the operators to unfavorable status rather than using the annunciator system. The specific items remaining to be checked was the operation of the turbine EHC System and the use of the related status, limit, and monitor lights on VC2. It has been determined that no discrepancy exists since these indicating lights provide status and diagnostic information. For turbine related problems, annunciators are provided to alert the operators of a turbine overspeed, partial trip annunciators.
HED 430	HED was identified because of difficulty of reading low GPM values on the low head SI flow meter which has a square root scale. The instrument is used in support of EOP FR.C-1. However, the EOP only requires that flow is indiciated so the operator is not required to

HED	Results of Further Study

read a particular value. The instrumentation should be adequate for determining flow and the EOP does not exit to another EOP until flow is established. No action is required to resolve HED.

HED 435 This HED was identified because an operator misread the RCS pressure indicator during validation of the EOPs on the simulator. Meter does meet readability criteria for vertical meters/visual displays set forth in the NUREG-0700 guidelines. There is no violation of the guidelines. No discrepancy.

To ensure that DLC had not overlooked any HEDs that needed to be studied further, each of the HEDs listed in TER Appendix C-2 were reviewed even though further study was not indicated exception the cases of HEDs 430 and 435. The results are provided below.

- HEDs 8, 64, 68, 70, 76, 85, 120 and 231 were resolved by board enhancements.
- HEDs 95 and 185 were resolved by instrument modifications. Resolutions were assigned a Priority 3.
- HEDs 159 and 162 will be resolved by changer in procedures. Resolution assigned a priority 1.
- HEDs 345, 346, 352, 353, 354 and 356 resulted in recommendations for reorganizing the CVCS which was assigned a priority 4.
- HEDs 430 and 435 were in Appendix S and are addressed in a prior part of this response.
- HED 318 resulted in a recommendation for modifying the paper feed on the SOE computer/printer and was assigned a priority 3.
- HED 439 resulted in recommendations for a modification to the SPDS and assigned a priority 1.

APPENDIX J

DETAILED CONTROL ROOM DESIGN REVIEW

SUPPLEMENTAL REPORT

BVPS - 1

A P P E N D I X J

Expanded Descriptions of HED Corrective Actions

Not Evaluated by NRC (See TER Appendix B-2)

APPENDIX J

Expanded Descriptions of HED Corrective Actions
Not Evaluated by NRC (See TER Appendix B-2)

HED-10 Problem is locating keys for locked controls associated with EOPs. Now all keys are kept together.

The keys used by the operators to access locked areas or equipment in the plant are available in the control room. There are several keys and some are stored singly and some together on key rings depending on the operator needs for various activities such as routine walkdowns of plant areas. The concerns addressed by HED-10 relate to emergency operations and are (1) potential delay to take accident consequence mitigating actions caused by operator search time for the correct key(s) and/or (2) potential delays caused by selecting the incorrect key and taking it into the plant only to discover the error upon use. By providing separate key rings containing the keys required for emergency operations only, the DCRDR team believes that the potential delays can be effectively eliminated. Please see Appendix O for resolution of this item.

HED-14 Back row on controls on benchboard and control on benchboard backup exceed maximum reach criteria.

The CRDR team does not believe that the discrepancy causes a problem for reaching the back row of controls for the minimum allowed operator reach provided that the operator is permitted an extended reach by leaning over the front of the boards. However, if the operator finds it necessary to lean over the boards to reach the back row of controls, then inadvertent actuation of controls nearer the front of the boards becomes a potential problem. Therefore, the boards were surveyed to identify the controls that could be inadvertently actuated, and the resolution recommends placing protective plexi-glass guards on these controllers. It is noted that the front of the benchboard height is 30 inches and that the distance on the slope is 32 inches to the front of the "kick-up" portion of the benchboards. Therefore, we believe that a reasonable consideration to resolving this HED is the "extended reach" approach for reaching the back row of controls.

The above resolution was reviewed. It was indicated that controler operation would be difficult with the guards. The controls identified for this HED are the pushbuttons on the Hagan Auto/Manual controllers. Consequently, the operation of the pushbuttons was investigated further.

The operation of the controller pushbuttons was tested on the BVPS Simulator. We determined that to actuate the pushbuttons requires depressing them to slightly below the top surface of the controller. This confirmed that the guards would make it difficult to operate the pushbuttons. Therefore, it was determined that the guards should not be installed.

We also tested the possibility of inadvertently actuating the pushbuttons when the operator leans over the controllers. This test is descriptively referred to as the "tummy test". An operator of appropriate stature was engaged for the test and the downward pressure on the pushbuttons was exaggerated. The pushbuttons could not be actuated by this test.

Based on the above testing, we concluded that inadvertent actuation of the controller pushbuttons, when the operator leans over the boards to reach the back row of controls, is not a problem. Therefore, this concern is removed from the resolution to this HED.

In conclusion, the discrepancy of HED-14 is that the benchboards exceed the maximum reach criteria. We do not believe that this discrepancy causes a problem provided the operator is permitted an extended reach. This resolution is provided on the HED computer listing.

HED-38 AC does not work consistently; heat causes operator discomfort; may effect instrumentation

This discrepancy was based on the operator responses indicating that there had been receiving problems with the A/C. It was also voted that the A/C was repaired and worked well after maintenance was performed on it. This information resulted in the recommendation to replace the A/C if maintenance costs were excessive. After the assessment and recommendation for this concern was completed, it has been determined that the A/C no longer has the recurring problems since they have appropriately been fixed. In addition, the A/C will be addressed again during the environmental survey of the Unit 1 and Unit 2 control room and new HEDs will be written, if necessary. Based on the above, no further action is planned to address HED-38 specifically since the above cited survey will identify new HEDs, if necessary.

HED-55 No separate 1st out panel for reactor

HED-56 No separate 1st out panel for turbine

NUREG-0700 Guideline 6.3.1.3 recommends that a separate first out panel should be provided for the reactor system and for the turbine-generator system. Annunciator panel A5 for BVPS-1 contains the first out annunciators for both the reactor system and the turbine-generator system. The CRDR team does not believe that the redesigning the Panel A5 into two separate panels is necessary and recommended in Attachment 5 to the Summary Report that one non-related annunciator be moved to another panel and that another annunciator be moved within Panel A5. The team also recommended that demarcation between the two first out groups would enhance the recognition of each grouping.

HED-111 Spring loaded OT-2 switches springback past center position and actuate 3rd position.

This discrepancy was identified as a potential problem with OT-2 switches by two (2) operators during the interviews although specific switches were not identified or the occurrence of such a problem could not be verified. The CRDR team also could not immediately identify specific switches that could be problems. Therefore, it was not clear that the problem could occur and the recommendation for additional study was made. It has since been determined that there are ten (10) OT-2 switches on benchboard b that have spring return action. These switches have "block" function for either the train A or train B of the power, intermediate; and source range trips and two (2) SI initiations (PRZR and Steamline). No problem with these switches were identified and the proper operation of these switches is reinforced during operator training. Based on the above, we believe that no further action is required for HED-111.

HED-150 Flow indicators generally have square root scales that are difficult to read on low end

Flow indicators were recognized as a potential problem because of their contracted scale for the low-flow regime. The difficulty to accurately read the scale at low flow values, however, does not necessarily identify a scale inadequacy. A scale becomes inadequate only if it is not useable based on operator tasks, i.e., information requirements. This "discrepancy" was noted under Guideline 6.5.1.1a as a reminder to check the flow scales during the EOP verification and validation and adequacy of instrumentation. Consequently, HEDs 158, 162 and 430 were generated. These HEDs are now referenced by HED-150. This type of flow indication is typically not a problem for normal operation since the scales are designed to be readible in the normal operating band of values. HED-196 is redundant and also incorrectly referenced in Guideline 6.5.1.5.e. HED 196 has been corrected to reference Guideline 6.5.1.2a and although redundant, will also reference HEDs 158, 162 and 430.

HED-158 25 GPM (required by EOP) cannot be read accurately on square root scale of AFW flow indicator

HED-159 350 GPM (required by EOP) of total feed flow cannot be read accurately

HED-163 335 PSI of SG pressure (required by EOP) cannot be read accurately

Procedural changes were recommended for these HEDs because of the DCRDR team's judgement that, for the related EOPs, a more conservative value could be specified that would enable the operator to more easily read the value from the display and not alter the EOP strategy or delay accident mitigating actions. The changes, of course, are subject to engineering and procedure evaluation to ensure that changes are permissable so as not to degrade plant safety. If a more conservative value is possible, either by increasing or decreasing the existing EOP value, then this becomes a more practical resolution than changing out existing instrumentation scales and incurring recalibration of the instrument.

HED-198 Red/green usage in CR violates conventions

This convention is in reference to the red/green indicating lights for controls, i.e., red indicating open/running/hot (steam) and green indicating closed/off or cold. This convention is widespread throughout the control room and is conventional for the fossil-fired plants. The convention is accepted and anywhere it is not followed, these specific problems are identified in the HEDs.

HED-208 Green Status Lights on Status Panels 622 & 623 do not appear lit and panel may require reorganization

There are two issues addressed in this HED. The first issue addresses the organization of Status Panels 622 and 623. There are five (5) background colors associated with each panel. Four colors correspond to the instrumentation channel color code conventions and the other is black and is used for system status such as "condenser available" or logic status such as "2/3 Overpower ΔT Run Back". In general, the overall pattern of colors is maintained in columns for 622 and rows for 623. However, there is a lack of consistency or layout of the status lights with the black background and especially on Panels 622. Therefore, the DCRDR team recommended reorganization of the panels.

The status panels were reviewed and it was determined the non-black background status lights were systematically grouped by functions and ordered/located in accordance with the guidelines in NUREG-0700. Therefore, breaking up these systematic groups in order to reorganize the black background status lights would cause a significant problem. Also, the black background is not associated with a single functional group but used for several single unrelated parameters on condition. Therefore, the separation of the black background status lights correctly emphasize the relationship of the status lights. Therefore, no action is recommended.

The second part of this HED addresses the light intensity of green legend lights. This concern was visually identified as a potential concern. It was visually rechecked after it had been identified and subsequently determined not to be a problem. Notwithstanding, light intensity will be measured during the lighting survey. To ensure that this specific concern is addressed during the lighting survey, it has been assigned a separate number. (HED-564)

HED-259 Base adjust indicators moves opposite direction from control increase/decrease.

This discrepancy addresses instrumentation which displays a parameter for the complex electrical relationships of current, voltage, frequency and wave phase angles. Although the relative directions of movement of these controls and indications do not adhere to human engineering principles, the relative directions of movement are those that would be anticipated by the operator based on the physical laws involved. Therefore, the CRDR team determined that the operation of this instrumentation is correct as installed and acceptable on the basis of the operator anticipating the movement of indication to reflect the physical relationships. To provide additional assurance that the operators understand this particular control display relationship, the CRDR team decided to include a recommendation to training to develop and conduct special training on the process and the instrumentation.

HED-325 Main feed isolation valve separated from main feed controls

The main feed isolation valve controls are located to the upper left of the other feedwater controls. The ideal location would be to have the isolation valves below the other feedwater controls, however, there is no space. Although improper feedwater isolation was considered as the possible error caused by the present arrangement, the DCRDR team determined that the error would not be accident or tech spec related. The team evaluated reorganizing the boards for the general area of concern and determined that a complete board redesign would be necessary to accommodate all the related controls and to preclude creating a similar problem with other feedwater controls. The other resolution was to improve the labeling and demarcation associated with those valves to remind the operators that they are isolation valves. Based on the above the DCRDR team determined that the latter action resolved the problem.

HED-359 Hagan controllers have reversed controls

The description for this HED is more clearly stated that for the Hagan controllers there are differences as to whether an increase, or decrease, in demand signal opens or shuts a valve. The Hagan indication typically shows percent demand signal for opening or closing a flow control valve (FCV). If the FCV is designed to fail closed on the loss of power, the demand indication will show valve shut for 0% signal. IF the FCV is designed to fail open on the loss of power, the demand indication will be reversed. Therefore, the demand signal indication and movements of the meter needle is appropriate for design and human engineering criteria. However, relative to the design operation of the FCV, the demand signal corresponds proportionable valve opening or valve closing, as the case may be. Based on the above the DCRDR team recommended that the FCV shut/open (S/O) position be clearly labelled above the meter face. The intent is to aid the operators remember the relationship between the demand signal and valve position for the associated controller and FCV.

HED-424 FW isolation not properly verified because indicators split between BA1 and BC2 and FW isolation indicators on BC2 do not have identification patches.

Valve positions associated with automatic initiation of certain isolation functions are indicated by a colored patch positioned around the control indicating light for the actuated position. For those controls actuated by a feedwater isolation signal, the patch color is green. These patches were missing for the indicators on BB-C2 as identified by this HED. The obvious and necessary resolution is to add the patches. In addition, the checklists used by operator to verify isolation were reorganized to facilitate a systematic check of all valve positions (including the feedwater isolation related valves on BC2) and to reduce the likelihood of an operator error.

HED-432 Operator was manipulating changing pump control when AO working on/resetting breaker. Bad operating practice - could be dangerous.

The auxiliary operator (AO) was sent to locally reset the breaker on a charging pump. While he was in the process of resetting the breaker the operator in the control room (simulator) was attempting to start the pump. While this may have been performed in this manner because it was on the simulator (i.e., the control room operator knowing the AO was not actually resetting on a breaker), the CRDR observers considered it noteworthy and subsequently recommended that training address this type of situation if not already done so.

The recommended resolution was reviewed and it was determined that the more appropriate resolution would be to address this concern in the operating manual. Therefore, the breaker racking procedures were revised.

HED-153 Most Hagan controllers display only demand signal and frequently actual status not indicated

The displays with which this HED is concerned are an integral part of the Hagan Controllers. The controllers are used to set various demand position, typically for flow conditions. The operators are trained and are aware that these controllers do not provide status indication. There are two factors involved here. 1) The Hagan Controllers are physically much different from any other controls in the control room and, therefore, are easily identified and 2) the operators training emphasizes that all available instrumentation is used to determine system status.

Particular attention was paid to the Hagan controllers and associated information during the DCRDR verification of task performance capabilities and validation of control room function in order to determine if there were accident-related information requirements that operators were using demand signal to satisfy rather than parameter or position data. HED 422 was only HED identified. No further action required for this HED.

APPENDIX K

DETAILED CONTROL ROOM DESIGN REVIEW

SUPPLEMENTAL REPORT

BVPS - 1

A P P E N D I X K

Description and Resolution of HEDs Referencing
Simulator Exercise (SIMEX) or SPDS (See TER Appendix D)

APPENDIX K

Description and Resolution of HEDs Referencing Simulator Exercise (SIMEX) or SPDS (See TER Appendix D)

In the TER, the NRC requested that DLC (1) identify specific guidelines violated (2) provide descriptions of the violation, and (3) provide descriptions of the resolution for the following HEDs that referenced the simulator exercise (SIMEX) or the SPDS study rather than a specific NUREG-0700 criteria.

407	409	410	411	412	413
414	415	416	417	418	419
420	421	422	423	424	425
426	427	428	429	430	431
432	433	434	435	436	437
438	439	441			

Two other HEDs also referenced SIMEX. They are 271 and 440. These are included in the following responses:

HED	Guideline	Description
271	No Specific Guideline. Relates to NUREG-0700, Section 3.8	HED was identified during combined V & V of EOPs on simulator and the validation of control room functions (Section 3.8 of NUREG-0700). Resolution is to develop description of STA job functions within the structure of defined operating and emergency procedures/ events. Resolution assigned a priority 1 and has been completed.
407	6.8.1.1b	HED represents violation of criteria for grouping controls by function. Resolution is to move atmospheric dump control from BA3 to BC1 where FW system is primarily located. Resolution assigned a priority 4.
409	6.1.1.4a(1&2)	HED is that cooldown charts are difficult to read. Resolution is that the cooldown charts, which are located above vertical boards, were copied and copies were placed on the table in the CR and on the RO log clipboard. Priority 1.
410	6.6.3.3c	HED was a typographical error in procedure, EOP E-3 step 19-B. Correction has been made.

HED	Guideline	Description
411	6.1.2.5b(1)	T-hot indicator below 41" minimum on vertical boards. Resolution is to move the indicator to comply with criteria. Priority 1 (See also HED 30).
412	6.8.2.1a	HED is that two valves that must be operated in sequence during EOP implementation are separated. HED was identified during simulator exercise. Although 6.8.2.1a is violated during implementation of some EOPs, the value controls are located in the functional groups to which they belong (6.8.1.2c). Review of the HED revealed (1) that the EOP sequence involving the two controls is not time critical and 2) violating the functional grouping criteria would create control recognition and location problems for the operators.
413	6.1.1.4c(2)	Originally all EOPs and Attachments were placed in a single 3-ring notebook. This notebook proved to be difficult to handle and to open fully. Resolution was to place E, ECA, and F series EOPs in different volumes. Resolution complete.
414	6.1.1.4c(2)	See above
415	6.8.2.1a(2)	The sequence of the valve lineup checklist required in Step 21 of EOP E-9 required the operator to walk back and forth from board to board. The sequence in which the valve positions are checked is not important (what is important is valve position and time required to check position or identify incorrectly positioned valve). The checklist was re-ordered so that when the operator performs the check, he moves from left to right across all the benchboards.
416	6.8.1.2c	During the validation of task performance capabilities this HED was identified because the RWST level

HED	Guideline	Description
		annunciator is on vertical board A and the RWST level meter is on vertical board C. Upon further review, it was determined that the annunciator is properly located since it is above the RWST level recorder which is functionally grouped wit other related instrumentation. The RWST level meter is on VC1 so that it may be viewed by the RO from operator positions by BB3 and BC1. No resolution required since no problem exists.
417	6.5.1.2a	This HED is similar to several other HEDs listed in Appendix L to the BV-1 Summary Report where procedures have been modified to eliminate HEDs. In these cases, the values that are in the EOPs were derived from engineering calculations and have been carried to a level of precision that cannot be read on standard instrumentation without interpolation, which may contribute to operator error. The resolution is to round off to a more conservative value that can be read, based on engineering review. The resolution to this HED has been completed.
418	6.2.1.1a	HED was identified because of differences in telephone communication procedures by different operators during EOP V&V. Communication practice is addressed in training and a new operating procedure section.
419	No Specific Guideline. Relates to NUREG-0700 Section 3.8	During EOP V&V, it was observed that shift foremen when following EOP actions did not call or read out cautions and notes to the ROs. Resolution was to (1) emphasize importance and practice of reading notes and cautions to CR crew and (2) improving highlighting of notes in EOPs. Priority 1.

HED	Guideline	Description
420	6.5.1.2a	HED was that RWST level of 19'2 1/2" called out in the EOPs, could not be read to level of required precision on level meter (problem same as HED 417). The resolution was to round off to a more conservative value that can be read and change procedure. Priority 1. Required level reading of 20. has been established. EOP changes complete.
421	6.8.3.1b	HED is based on concern of CRDR Team that operators would confuse reset and actuation pushbuttons for SI, CI, etc. Actuation pushbuttons have been protected by guards and new labels are being made to improve element identification. Priority 1.
422	6.5.1.1e(2)	See HED 154
423	No Specific Guideline. Relates to NUREG-0700 Section 3.8	HED was based on DCRDR Team concern that there was not enough time for auxiliary operator to go out in plant to close valve IA-90 when CNMT AIR required. Review of HED revealed that IA pressure was good for a minimum of 30 minutes after loss of compressor. 30 minutes is sufficient time for aux operator to close valve. Resolution is that no action required.
424	6.6	HED is that several FW isolation controls and indicators on BC2 did not have the green patches that characterize the FW isolation valves on BA1. Resolution is to add patches where needed. Also revision of valve lineup checklists reduces likelihood of error. Priority-enhancement. See Appendix J.
425	6.6	HED is that several CIA valves on BSP do not have orange position patches that characterize other CIA controls and displays. Resolution is to add patches. Priority enhancement.

HED	Guideline	Description
426	6.6.3.3	HED is that a difference in terminology and label callouts exist between the actual label and the PASS Procedure. Resolution is to correct procedure to match the labeling. Priority 1.
427	6.5.1.1e	HED is based on two cases in EOPs where operators used demand signal to verify valve positions. In both cases, instrumentation available to verify valve position via flow indication. Resolution is for training to emphasize use of Hagan controllers. Priority 1.
428	No Specific Guideline. Related to Section 3.8 of NUREG-0700.	After reactor trip, operators verify automatic actions occurred. HED is that is not precise enough in calling out how to check rod actions. Resolution is to revise procedure and add note for emphasis. Operator to be trained on new procedure as part of immediate actions.
429	6.3.3.4c 6.3.1.2c	HED is that RCP Hi Hi alarm has multiple inputs from three RCPs. Operator cannot tell from alarm where problem is. Individual RCP vibration indicators are in the CR in a back panel. It was determined that there is not problem. Resolution is that no action required.
430	6.5.1.5e	HED was identified because of difficulty of reading low GPM values on the low head SI flow meter which has square root scale. The instrument is used in support of EOP FR.C-1. However, the EOP only requires that flow is indicated so the operator is not required to read a particular value. The instrumentatio should be adequate for determining flow and the EOP does not exit to another EOP until flow is established. No action is required to resolve HED.
431	6.5.1.1c	HED is that the part-length rod bottom lights are no longer used; thus violate criteria related to unnecessary information. Resolution is to remove indicators. Priority 3.

HED	Guideline	Description
432	No Specific Guideline. Relates to NUREG-0700 Section 3.8.	HED noted during simulator exercise of EOPs was that operator action of manipulating charging pumps control when aux operators or maintenance personnel are working on pump or resetting breakers is not accepted operating practice. Reemphasizing following personnel safety operating guidelines in training was the resolution. See Appendix J for revision.
433	No Specific Guideline. Relates to NUREG-0700 Section 3.8.	During simulator exercise of EOP E-3, operators had difficulty using the table contained in Step 17. Resolution is to train operators how to use the table during the EOP classroom training. Priority 1.
434	6.1.2.5	HED is that WR SG level recorder is below 41" height criteria. Resolution to critical displays below recommended display height. WR SG level recorder is being raised. Priority 1.
435	6.5.1.3	HED is that the RCS pressure indicator was misread by operator during simulator exercise of EOPs. Review of HED indicates that there the vertical meter meets the NUREG-0700 guidelines and criteria for visual displays. Resolution is that no actio is required.
436	6.6.3.6 6.6.3.2	HED is there is similarity in the labelling and terminology used when discussing RHR controls and the Residual Heat Release Valve. Resolution is to codify labels as per LMD study. It should be noted that inadvertent actuation is prevented by interlocks.
437	6.7.2.71(2) 6.5.1.6d(2)	Yellow, instead of the green called out in guidelines, is used for normal/safe data. Other systems, and in CR generally, yellow is a code for suspect data or as a low level alarm condition. Resolution is to correct color usage to be consistent with other computer systems.
438	6.7.1.3c	HED is that there are audio or visual cues or mode designation to identify information levels or modes/file in the

HED	Guideline	Description
		SPDS. The resolution is that no modifications to the system is required. The reasons are that (1) the SPDS is not file oriented and (2) information levels are evident to operator because of type and format of information presented. Mode designation would not be useful and it would be a distractor in the CRT.
439	6.7.2.6i	HED is that there is no indication of changes in system functions (e.g., SPDS failure is not immediately recognizable. Resolution is that this should not be an HED because there are alarms for SPDS CPU trouble.
440	6.7.1.2c(2)	HED is that on the SPDS and PVC there are deviations from the standardized lists in the use of symbology and abbreviations. (See also HED 441). The resolution is that no action is required because the abbreviations and symbols that are used are commonly used in the industry and are not confusing or ambiguous to the operator.
441	6.7.2.7g	HED is that on SPDS displays graphics are used to represent safety or relief valves but not specifically identify other valves as motor or air operated. The resolution is to take no action for the following reason. First, information on operators of specific valves is not necessary for the SPDS to perform its design functions. Second, in the event this information is required, P&IDs and descriptions of major valves are contained in the control room.

APPENDIX L

DETAILED CONTROL ROOM DESIGN REVIEW

SUPPLEMENTAL REPORT

BVPS - 1

A P P E N D I X L

Discussion of HEDs Where Justification For No Corrective Action Was Insufficient (See TER Appendix E-2)

APPENDIX L

Discussion of HEDs Where Justification For No Corrective Action Was Insufficient

HED 161 Value of 1585 psig (required by EOP) could not be read accurately on RCS pressure indicator. Resolution was to revise procedure by change 1585 psig to 2 a more conservative value that could be accurately read.

The corrective action to resolve HED 161 was taken, however, it did not adequately resolve the HED. The corrective action also had not undergone validation by the DCRDR team at the time of the NRC staff meeting with DLC.

We have since reviewed the resolution of HED- 161 to determine if further action was necessary. The following provides background information for this HED.

HED 161 was identified during the EOP Walkthroughs of procedure FR-I3, Response to Voids in the Reactor Vessel. The step in FR-I3, for which the HED was identified instructs the operator to check if an RCS pressure increase is allowable and if so, to increase RCS pressure in order to condense the condensable voids. There are two conditions which should be met before an increase in pressure is permitted.

The first is to ensure that adequate margin exists between the RCS pressure and the Technical Specification cooldown pressure limitation determined for the pressure at which further increases will, in all likelihood, do nothing to condense the void. If the RCS pressure is already at the full power hot leg temperature's saturation pressure, either a super heated (hard) steam bubble exists or the voids are primarily non-condensible. Further pressurization will do little to eliminate voids if either type exists. The operator is instructed to continue with this procedure without increasing RCS pressure, since subsequent steps address these types of voids.

The second condition above is one for which the operator needs to know the value of the RCS pressure relative to 1590 psig. In the event that the RCS pressure is between 1550 and 1600 psig, the operator cannot accurately determine from the meter if it is less than, equal to, or greater than 1590 psig because of the scale graduations on the existing meters.

Our review shows that the operator will be able to accurately read the RCS pressure on the plasma display of the Inadequate Core Cooling (ICC) Instrumentation System. In addition, this information is available on the same page of the plasma display as that which aids the operator in the

determination of condition 1 above. Therefore, the operators should not only already know what the RCS pressure is from the determination of condition 1 above but also have the value on the plasma display.

The ICC Instrumentation System will be fully operational following the BVPS-1 sixth refueling outage. Based on the above, we believe that no further action is required to resolve HED 161.

HED 66 Annunciator panels are not "dark". There are 30 green-normal lit tiles.

The green lit annunciator tiles are currently located within their functional group and on panels above related system instrumentation on the vertical and bench boards. Some of these annunciators function to alert the operators to abnormal conditions during other than power operation. The operators are trained to respond to these annunciators whenever the alarm comes in. Specific instructions are included in the operating manual for the evaluation of annunciated alarms.

The BVPS-1 green lit tiles are a solution to an existing problem which we believe minimizes the visual distractions in the control room since, the green color used is not a strong attention getting color, the tiles normally have steady illumination and are not flashing distracting, and the number of tiles represent a small percentage of the total annunciators in the control room.

Based on the above, we believe that the green lit annunciators should not be regrouped since they represent several different functional groups, that removal to another location would not be desirable because they currently occupy appropriate functional locations, and that to attribute a status indicating function to them would not adequately represent those performing an alerting function. For these reasons we also believe that removing them from their existing location would create an annoyance for the operators by increasing the difficulty to locate these annunciators and could cause confusion as to their functional association.

HED 90 Throttle MOV switches have same type control as open/close MOV switches

We have reviewed the control boards to identify the throttle MOV switches with the same type controls as the open/shut MOV switches. We determined that there are three pairs of throttle MOV switches which are arranged top-to-bottom in pairs on bench board C The arrangement of these switches is addressed in HED-355 (DWG-25AE). The labels for each of

these switches clearly identify that the switches are for throttle valves. Instructions to the operator to hold the switch closed for approximately 5 seconds after indication is provided on a label - quality plate (not temporary) which is located immediately above the switches. Another label which identifies the steam generator fed through a particular pair of throttle valves is located between each pair of switches. Based on the above, we have determined that the existing labelling provides adequate indication to the operators that these switches are for operating throttle valves. We believe that the existing labelling will satisfy the Staff's concern.

HED 78 Annunciator controls not arranged in same order on all locations - arrangement on BSP is different

The annunciator controls in the control room consist of sets of four (4) pushbuttons which operate the annunciator acknowledge, reset, silence, or test functions. The annunciator controls on the Building Service Panel (BSP) are arranged differently than the other annunciator controls on the main bench boards. It consists of a vertical board only, i.e., no bench board. The annunciator controls on the BSP are located near the top for the control panel, approximately eye-level, and we arranged in pairs, one pair above the other, and in a different sequence than those on the main boards. The annunciator controls on the mainboards are located near the front edge of the bench boards and are arranged in a row.

All the annunciator pushbuttons have their function identified on the face plate. In addition, each button on the BSP has a label immediately above it which also identifies its function. Additional enhancements to the annunciator controls are identified in the resolution to HED 79. These enhancements consist of changing the color of the silence button to white and of background shading for the controls. These changes are intended to make it easier for the operator to locate and annunciator controls and to quickly identify the silence button.

Because of the height at which the annunciator controls are placed, their arrangement in pairs, and the additional labelling for each button, we believe that the operators will not find it difficult to properly operate the annunciator controls on the BSP. The enhancements identified above will reduce the operator's search time for locating the controls and finding individual buttons. Based on the above, we believe that HED 78 is adequately resolved.

HED 117 <u>The discrepancy is that the turbine and reheater status lights and pushbuttons are identical in design.</u>

The NRC review team stated that the operator should be able to visually differentiate between status and pushbutton light. Although the status lights and pushbutton are identical in shape for the turbine, they can be differentiated visually by color and/or location. There are two functions for the status lights: (1) to indicate valve position and (2) to indicate turbine mode. The valve status lights are distinctively colored a 1/2 red-1/2 green with appropriate legends to indicate valve position. The color code is consistent with the control room convention. The mode indicators are brown in color, are located separately in a group, and the group is labelled turbine mode as well as each status light having a legend. In both cases, the status lights are readily differentiated visually.

On the reheater, there are a total of 8 pushbuttons and status lights located in two separated rows of six and to. The two lights in the separate row are valve status and are readily recognizable because they have a split legend, which is used only with status lights, and come in green or red depending valve position.

The row of six contains only pushbutton controls. Therefore, pushbutton controls are separated from the two status lights and the status lights are different in they have the split legends and come on in different colors. They are readily distinguished visually from the pushbutton controls.

HED 400 <u>This HED addresses the LW-TK-7A/B groups in the auxiliary building and the need to have a related tank level indication in the control room.</u>

The HED is that there is no indication for LW-TK-7A&B level or for the tank circulating pumps in the control room. (This HED is same as HED 260) It was believed that the indicators are needed in the control room, although tank and associated equipment control is responsibility of the plant operator, since there have been several tech. spec. violations related to filling and discharging tanks.

Further review of the LERs and reports associated with problems with the tanks revealed that the improper discharges have been due primarily to improper valve alignment or other procedural errors by the AO, such as not running the recirculation pumps for the required duration prior to discharge. In neither case would a control room indication have prevented the problem. The problem lies outside the control room and is not a DCRDR issue.

HED 383 The HED is that the indicator lights for valves associated with steam flow are on status panel 622 while the selector switches are on the benchboard.

The reason that this was stated to be no problem is that the selector switches allow the operator to select a steam path. Each path has several valves associated with it, and the valves are automatically actuated when a particular path is selected. These are no individual controls for those valves in the control room. If a particular path is selected and there is no flow, the status panel is employed by the operator to determine which valve(s) are not in the proper position. DLC does not believe that there is a possibility for display/control relationship confusion.

The NRC stated that "Examination of this panel containing both pushbutton switches and status lights suggests the possibility for display/control relationship confusion". It should be noted that status panel 622, like all the other designated status panels, contain only statu slights. There are no pushbutton controls in the status panels.

TER Appendix E-2 identifies the following two NUREG-0700 guidelines dealing with precautions to assure availability of light indicators as not having an adequate response.

6.5.3.1a(1) Dual bulb or dual filament light assemblies should be used.

6.5.3.1a(2) Bulb-test capability should be provided.

Light indication is employed primarily in three places in the BV-1 control room:

1. On the annunciator panels
2. On status panels
3. On control indicating lights that indicate valve position, breaker position, or position of other elements which generally may be described as on or off, auto or manual, etc.

DLC believes that adequate precaution to assure availability is accounted for in each case via both design and operating practices. Description of these precautions are contained in the following paragraphs.

1. There is a bulb-test capability for the annunciators. Administrative procedure requires that annunciator bulbs be tested each shift.

2. Dual bulbs are used with status lights. Administrative procedures address the changing of status lights.

3. Indicating lights are always in pairs or sets and one or the other lights in each pair or set should always be on. Therefore, when all indicating lights associated with a control are out, there is clear indication that a bulb is out or there is a more serious problem. Administrative procedures for board walkdowns for each shift ensure that critical indicator lights are checked frequently.

DLC does not believe that any further action is required to ensure availability of light indication or recognition of bulb failure.

APPENDIX M

DETAILED CONTROL ROOM DESIGN REVIEW

SUPPLEMENTAL REPORT

BVPS - 1

A P P E N D I X M

SUMMARY OF NUREG-0700 GUIDELINES CHECKED DURING THE LMD STUDY

GUIDELINE

COMPLIANCE CHECKLIST

N/A	Yes	No	Reference/Comment
		X	HED 169 HED 178
	X		
		X	HED 170
	X		

6.5.1.3 READABILITY

a. CHARACTER HEIGHT – Character height should subtend a minimum visual angle of 15 minutes, or 0.004 x viewing distance. The preferred visual angle is 20 minutes, or 0.006 x viewing distance.

b. TYPE STYLE – Exhibits 6.5-1 and 6.5-2 present two recommended sets of characters. The recommendation is based on satisfactory testing and use by the military services. In general, character size and style should meet the following:

(1) Type styles should be simple.

(2) Type styles should be consistent.

(3) Only upper-case letters should be used.

Exhibit 6.5-1. A recommended set of characters (from U.S. Military Specification MIL-M-18012B).

A B C D E F G H I J K L M
N O P Q R S T U V W X Y Z
0 1 2 3 4 5 6 7 8 9

Exhibit 6.5-2. A recommended set of characters (from U.S. Military Standard MS-33558 (ASG)).

COMPLIANCE CHECKLIST

N/A	Yes	No	Reference/Comment
	X		
	X		
	X		
	X		
	X		
	X		
	X		
	X		

6.5.1.3 READABILITY (Cont'd)

c. CONTRAST--Highest contrast is provided by black and white.

(1) Visual displays should normally contain black markings on a white background.

(2) The use of color should be consistent with the recommendations of Guideline 6.5.1.6. Color combinations should be selected to provide good contrast.

d. CHARACTER DIMENSIONS AND SPACING--Recommended dimensional characteristics of visual display characters and spacing are as follows:

(1) Stroke-width-to-character-height ratios should be between 1:6 and 1:8.

(2) Letter width-to-height ratios should be between 1:1 and 3:5.

(3) Numeral width-to-height ratios should be 3:5.

(4) Minimum space between characters should be one stroke width.

(5) Minimum space between words should be the width of one character.

(6) Minimum space between lines should be one-half the character height.

e. CHARACTERS FOR CRT PRESENTATION--Recommended character styles for CRT use are presented in Section 6.7, Guideline 6.7.2.2.g.

GUIDELINE

COMPLIANCE CHECKLIST

N/A	Yes	No	Reference/Comment
		X	HEDs 174, 173 171, 172
	X		
		X	HED 175
	X		
		X	
		X	HED 426
	X		

6.5.1.4 PRINTING ON THE DISPLAY FACE

Besides scale markings and scale numbering, brief printed material is often included on the display face. The valid purposes justifying such printing are: identification of the parameter displayed, indication of the units shown, and indication of transformations required in reading (such as multiply x 100).

a. PROVISION OF NEEDED MESSAGE—If any of the above information categories are required to use the display, the required message must be provided close enough to the scale so that the scale and the message are clearly associated in the viewer's mind. The message may be communicated:

   (1) By printing on the display face.

   (2) By an appropriate label adjacent to the display.

b. AVOIDANCE OF EXTRANEOUS ITEMS—Categories of information not needed in using the display should be avoided (e.g., patent notices, manufacturer's trademark or address).

c. BREVITY—To avoid distraction and interference with the needed essential markings, messages should be written as briefly as clarity permits.

d. ABBREVIATIONS – Only standard and commonly accepted abbreviations should be used.

e. CONSISTENCY WITH PROCEDURES—The printed message should use the same terms as the procedures in display identification, parameter identification, and units displayed.

f. INDICATION OF TRANSFORMATIONS NEEDED—Where necessary to multiply or divide the displayed readings by powers of 10 to determine quantitative value, the operation required and result derived must be clearly indicated.

GUIDELINE

6.6.1.1 NEED FOR LABELING

Controls, displays, and other equipment items that must be located, identified, or manipulated should be appropriately and clearly labeled to permit rapid and accurate human performance.

COMPLIANCE CHECKLIST

N/A	Yes	No	Reference/Comment
		X	HEDs 330, 372, 272, 273, 282, 279, 280, 281, 282, 284, 285, 287, 288

GUIDELINE

6.6.1.2 HIERARCHICAL SCHEME

To reduce confusion, operator search time, and redundancy, a hierarchical labeling scheme should be used. (See Exhibit 6.6-1.)

a. RANKING

(1) Major labels should be used to identify major systems or operator work stations.

(2) Subordinate labels should be used to identify subsystems or functional groups.

(3) Component labels should be used to identify each discrete panel or console element.

(4) Labels should not repeat information contained in higher-level labels.

b. LETTER GRADATIONS—Labels should be graduated in letter size such that:

(1) System/work station labels are about 25% larger than

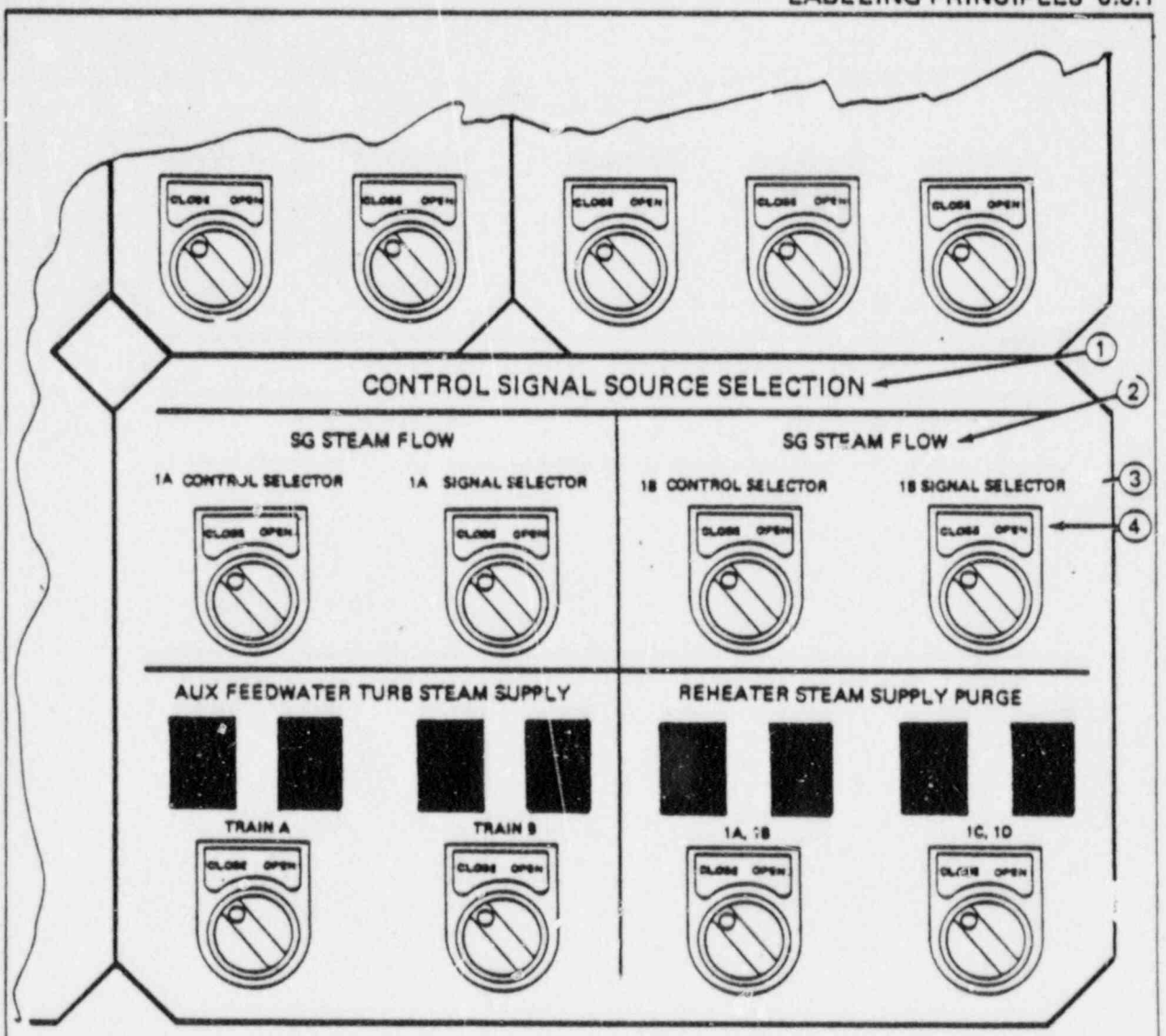
(2) Subsystem/functional group labels which are about 25% larger than

(3) Component labels which are about 25% larger than

(4) Control position identifiers.

COMPLIANCE CHECKLIST

N/A	Yes	No	Reference/Comment
		X	To be corrected during relabelling of Control Room.
		X	"
		X	"
	X		"
		X	"
		X	
		X	"
		X	"
		X	"



Label Designation	Location
1. System/workstation label	Centered near top edge of panel
2. Subsystem/functional label	Centered near top of subsection
3. Component label	Above component display or control
4. Control position indicator	Near control

Exhibit 6.6-1. Example of good panel labeling (numerals correspond to numbered items in table).

GUIDELINE

6.6.2.1 PLACEMENT

a. **NORMAL PLACEMENT** – Labels should be placed above the panel element(s) they describe.

b. **PANEL LABELING**—The placement of labels on control panels should conform to the guidance shown in Exhibit 6.3-1.

c. **VISIBILITY ENHANCEMENT**—Labels for elements located above eye level should be positioned to ensure label visibility.

d. **PROXIMITY**—Labels should be placed close to the panel element. See Exhibit 6.6-2.

COMPLIANCE CHECKLIST

N/A	Yes	No	Reference/Comment
		X	HEDs 275, 276
	X		
	X		
	X		

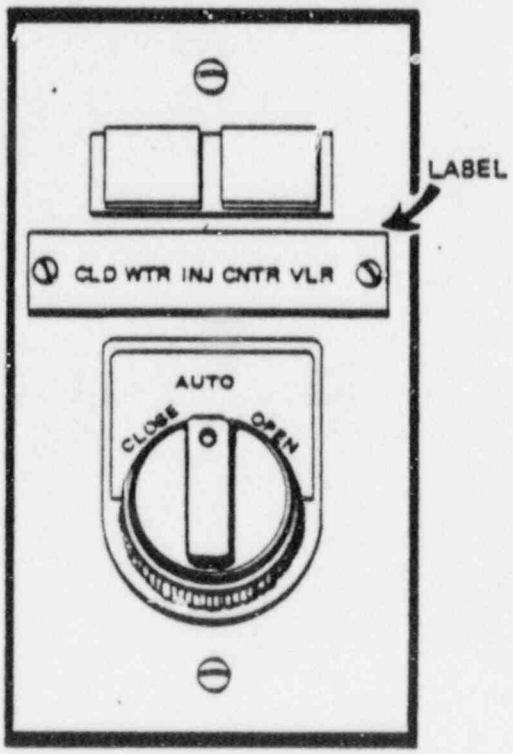


Exhibit 6.6-2. Label in close proximity to panel element.

COMPLIANCE CHECKLIST

N/A	Yes	No	Reference/Comment
		X	HEDs 265, 266, 276, 268, 269, 270, 271, 274
	X		

6.6.2.1 PLACEMENT (Cont'd)

e. LABELS ON CONTROLS--Labels should not appear on the control itself when an adjustment or manipulation is required that causes the operator's hand to obscure the label for an extended time period.

f. ADJACENT LABELS--Adjacent labels should be separated by sufficient space so that they are not read as one continuous label. See Exhibits 6.6-3 and 6.6-4.

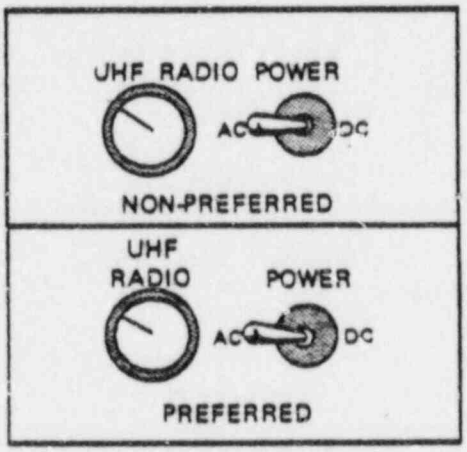


Exhibit 6.C-3. Preferred and non-preferred label placement.

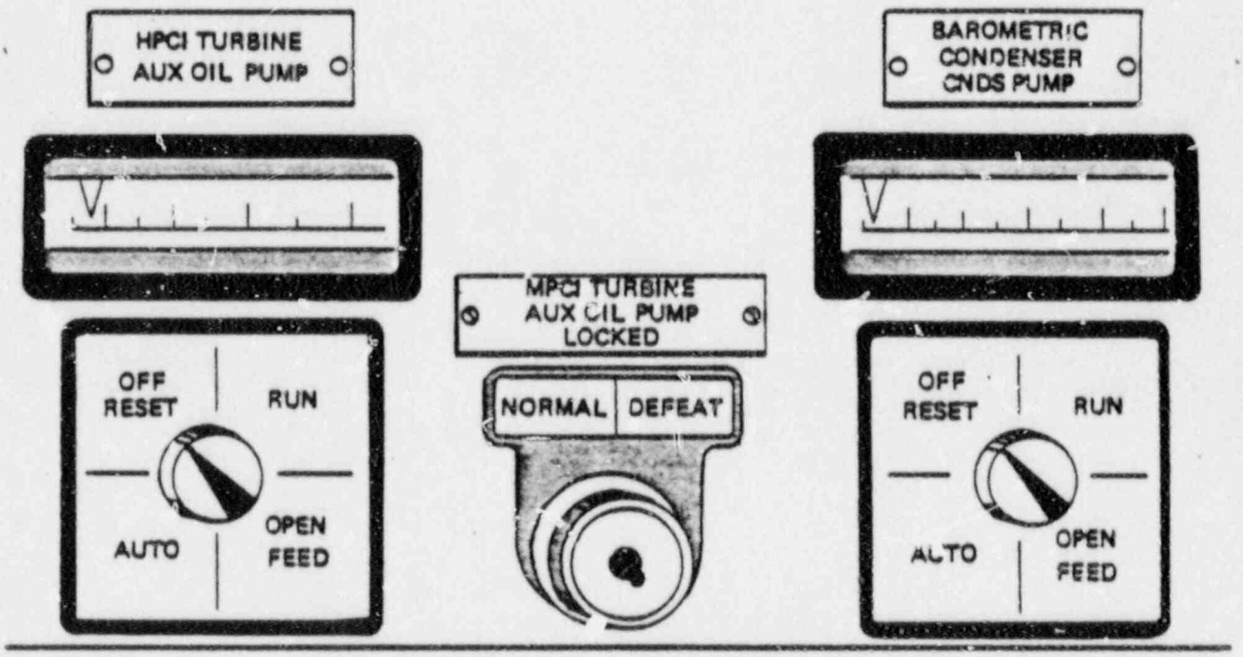


Exhibit 6.6-4. Adjacent labels with good separation.

GUIDELINE

6.6.2.2 MOUNTING

a. INTEGRITY—Labels should be mounted in such a way as to preclude accidental removal.

b. SURFACE—Labels should be mounted on a flat surface.

COMPLIANCE CHECKLIST

N/A	Yes	No	Reference/Comment
	X		
	X		

GUIDELINE

COMPLIANCE CHECKLIST

N/A	Yes	No	Reference/Comment
	X		
	X		
	X		

6.6.2.3 SPATIAL ORIENTATION

Improperly oriented labels can lead to confusion and cause delays in location and identification of important controls and/or displays.

a. HORIZONTAL ORIENTATION

(1) Labels should be oriented horizontally so that they may be read quickly and easily from left to right.

(2) Although not normally recommended, vertical orientation may be used only where space is limited.

b. CURVED PATTERNS—Curved patterns of labeling should be avoided. See Exhibit 6.6-5.

Exhibit 6.6-5. Poor practice: Curved pattern.

GUIDELINE

6.6.2.4 VISIBILITY

a. OTHER INFORMATION SOURCES—Labels should not cover any other information source. They should not detract from or obscure figures or scales which must be read by the operator.

b. CONCEALMENT—Labels should not be covered or obscured by other units in the equipment assembly.

c. CONTROLS—Labels should be visible to the operator during control actuation.

d. CLEANING—Administrative procedures should be in place for the periodic cleaning of labels.

COMPLIANCE CHECKLIST

N/A	Yes	No	Reference/Comment
	X		
	X		
		X	MED 291, 292, 293
	X		

GUIDELINE

6.6.3.1 KINDS OF INFORMATION

a. PRIMARY FUNCTION—Labels should describe the function of equipment items.

b. SECONDARY FUNCTION—If needed for clarity, engineering characteristics or nomenclature may also be described.

COMPLIANCE CHECKLIST

N/A	Yes	No	Reference/Comment
	X		
	X		

GUIDELINE

COMPLIANCE CHECKLIST

N/A	Yes	No	Reference/Comment
		X	HED 304, 305, 399, 405
		X	HED 286
	X		
	X		
	X		
	X		

6.6.3.2 WORD SELECTION

a. INTENDED ACTION—The words employed in the label should express exactly what action is intended.

b. CLARITY—Instructions should be clear.

c. DIRECT—Instructions should be direct.

d. MEANING—Words should be used that have a commonly accepted meaning for all intended users.

e. TECHNICAL TERMS—Unusual technical terms should be avoided.

f. SPELLING—Words should be correctly spelled.

GUIDELINE

COMPLIANCE CHECKLIST

N/A	Yes	No	Reference/Comment
	X		
		X	HED 290
		X	HED 426, 380

6.6.3.3 CONSISTENCY

a. ADMINISTRATIVE CONTROL—A list of standard names, acronyms, abbreviations and part/system numbers should be in place and administratively controlled.

b. INTERNAL CONSISTENCY – Labels should be consistent within and across pieces of equipment in their use of words, acronyms, abbreviations, and part/system numbers. See Exhibit 6.6-6.

c. CONSISTENCY WITH PROCEDURES—There should be no mismatch between nomenclature used in procedures and that printed on the labels.

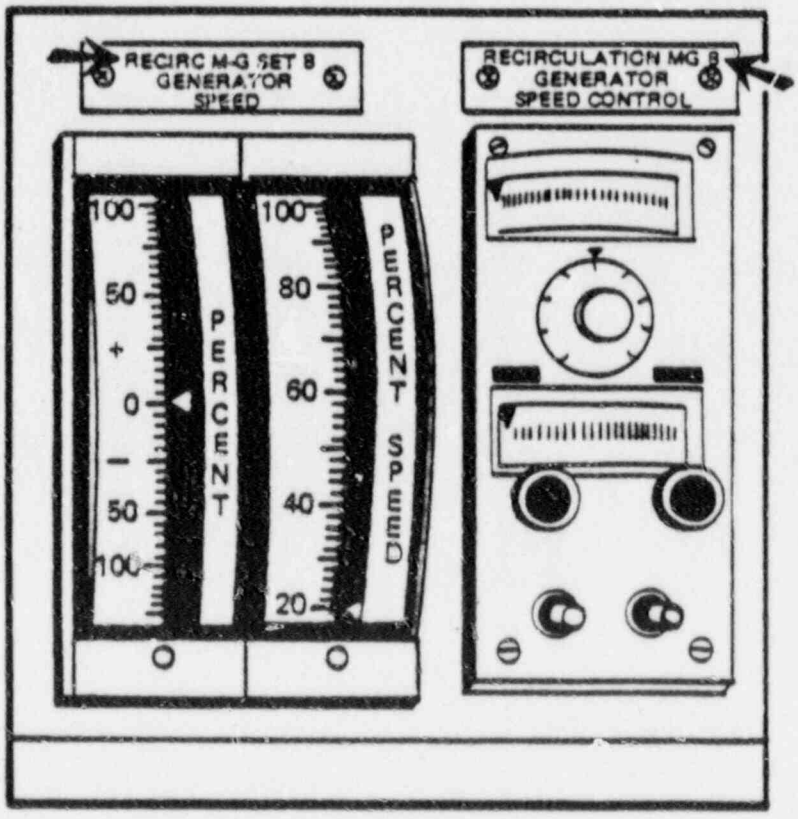


Exhibit 6.6-6. Inconsistent labeling.

GUIDELINE

COMPLIANCE CHECKLIST

N/A	Yes	No	Reference/Comment
	X		
	X		
	X		
	X		
		X	HED 277

6.6.3.4 SYMBOLS

a. MEANING – Abstract symbols should be used only if they have a commonly accepted meaning for all intended users (e.g., %).

b. DISTINGUISHABILITY – Symbols should be unique and distinguishable from each other.

c. STANDARD – A commonly accepted standard configuration should be used.

d. CONSISTENCY – Symbols should be consistently used within and across panels.

e. ROMAN NUMERALS – Use of Roman numerals should be avoided.

GUIDELINE

COMPLIANCE CHECKLIST

N/A	Yes	No	Reference/Comment
		X	HED 289

6.6.3.5 BREVITY

Brevity should not be stressed if the results will be unfamiliar to operating personnel. Words on labels should be concise and still convey the intended meaning. See Exhibit 6.6-7.

24 VDC SWITCHBOARD	24 VOLT DIRECT CURRENT SWITCHBOARD
PREFERRED	NON-PREFERRED

Exhibit 6.6-7. Labeling brevity.

GUIDELINE

COMPLIANCE CHECKLIST

N/A	Yes	No	Reference/Comment
	X		

6.6.3.6 SIMILARITY

Words and abbreviations of similar appearance should be avoided where an error in interpretation could result. When labels containing similar words, abbreviations, or acronyms are located in close proximity to each other, different words should be selected or means of coding should be used to reduce the probability of selecting the wrong control or reading the wrong display. See Exhibit 6.6-8.

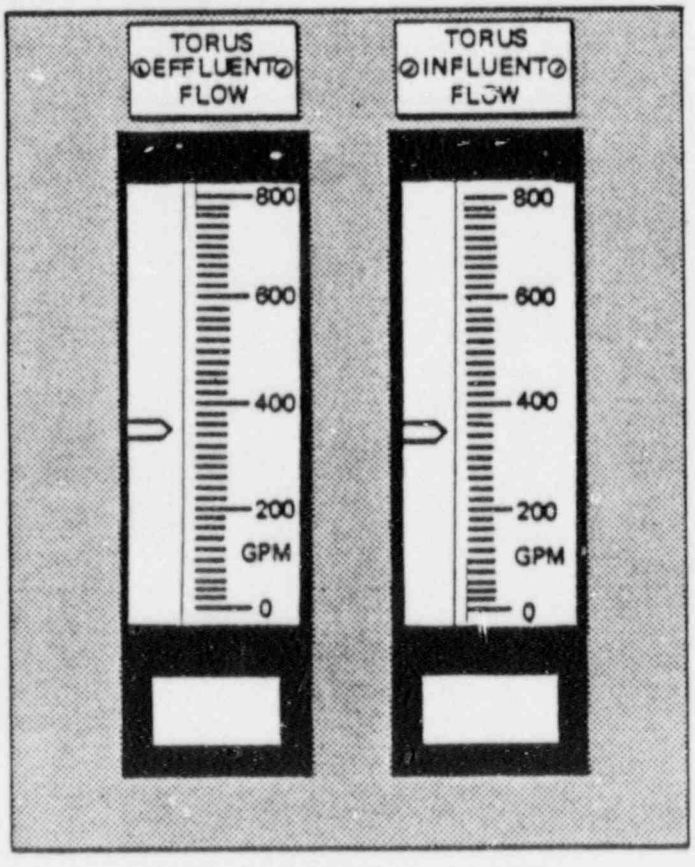


Exhibit 6.6-8. Labels are too similar.

GUIDELINE

COMPLIANCE CHECKLIST

N/A	Yes	No	Reference/Comment
	X		
	X		

6.6.3.7 FUNCTIONAL GROUPS

a. FUNCTIONAL RELATIONSHIP—Labels should be used to identify functionally grouped controls or displays.

b. LOCATION—Labels should be located above the functional groups they identify.

GUIDELINE

6.6.3.8 CONTROL POSITION LABELING

a. **POSITION**—All discrete functional control positions should be identified.

b. **DIRECTION**—Direction of motion (increase, decrease) should be identified for continuous motion rotary controls.

c. **VISIBILITY**—Control position information should be visible to the operator during operation of the control.

COMPLIANCE CHECKLIST

N/A	Yes	No	Reference/Comment
		X	HED 113
	X		
	X		

GUIDELINE

6.6.3.9 ACCESS OPENING, DANGER, WARNING, AND SAFETY INSTRUCTION LABELING

a. **ACCESS OPENING LABELS**—Each access opening used by control room operators should be labeled to identify the function of items accessible through it.

b. **DANGER, WARNING, AND SAFETY INSTRUCTION LABELS**—All danger, warning, and safety instruction labels should be in accordance with appropriate safety standards.

COMPLIANCE CHECKLIST

N/A	Yes	No	Reference/Comment
		X	HED 278
	X		

GUIDELINE

COMPLIANCE CHECKLIST

N/A	Yes	No	Reference/Comment
		X	HED 264
		X	HED 264
		X	HED 294
	X		

6.6.4.1 READABILITY

The speed and accuracy of human performance in identifying controls/displays is influenced by the style and size of characters used for label lettering.

a. CHARACTER HEIGHT

(1) Character height should subtend a visual angle of 15 minutes as a minimum, or 0.004 x viewing distance. A visual angle of 20 minutes, or 0.006 x viewing distance, is preferred.

(2) Letter height should be identical for all labels within the same hierarchical level, based on the maximum viewing distance.

b. CONTRAST

(1) To ensure adequate contrast and prevent loss of readability because of dirt, dark characters should be provided on a light background.

(2) If colored print is used for coding purposes, it should conform to the established color coding scheme for the control room. (See Guideline 6.5.1.6.) Colors should be chosen for maximum contrast against the label background. Exhibit 6.6-9 rates various color combinations in terms of relative legibility.

Legibility Rating	Color Combination
Very good	Black letters on white background
Good	Black on yellow Dark blue on white Grass green on white
Fair	Red on white Red on yellow White on black
Poor	Green on red Red on green Orange on black Orange on white

Exhibit 6.6-9. Relative legibility of color combinations.

GUIDELINE

COMPLIANCE CHECKLIST

N/A	Yes	No	Reference/Comment

6.6.4.2 STYLE

Recommended character styles are shown in Exhibits 6.5-1 and 6.5-2.

a. CHARACTER SELECTION

(1) Labels should be prepared in capital letters. — X

(2) The design of letters and numerals should be simple and without flourishes or serifs. — X

b. CHARACTER WIDTH

(1) Letter width-to-height ratio should be between 1:1 and 3:5. — X

(2) Numeral width-to-height ratio should be 3:5 except for the numeral "4" which should be one stroke width wider and the numeral "1" which should be one stroke in width. — X

c. STROKE WIDTH—Stroke width-to-character height ratio should be between 1:6 and 1:8. — X

d. SPACING

(1) The minimum space between characters should be one stroke width. — X

(2) The minimum space between words should be one character width. — X

(3) The minimum space between lines should be one-half of the character height. — X

GUIDELINE

COMPLIANCE CHECKLIST

N/A	Yes	No	Reference/Comment

6.6.5.1 USE

When necessary to identify out-of-service equipment; accommodate unique, one-time plant activities; or to improve operator understanding and efficiency, temporary labels may be used until permanent labels are available or until the temporary label is no longer necessary.

a.	NECESSITY—Temporary labels should be used only when necessary.		X	
b.	HUMAN FACTORS PRACTICES—Temporary labels should conform to good human engineering principles.		X	
c.	VISIBILITY—Temporary labels should not obscure prior permanent labels unless the old label is to be replaced.		X	
d.	IDENTIFICATION—Tag-out labels should clearly identify out-of-service components and equipment.		X	
e.	MOUNTING—Tag-outs should be securely affixed.		X	
f.	OBSCURATION—Tag-outs should not obscure the label associated with the non-operable device.		X	
g.	ACTIVATION—Tag-outs should be designed to physically prevent actuation of a control.		X	
h.	ADJACENT DEVICES—Tag-outs should not obscure any adjacent devices or their associated labels.		X	

GUIDELINE

6.6.5.2 CONTROL

a. ADMINISTRATIVE PROCEDURES—The use of temporary labels should be administratively controlled.

b. REVIEW PROCEDURES—A review procedure should be in place that will result in a determination of:

(1) When temporary labels are needed;

(2) how they will be used;

(3) their content (given human engineering requirements);

(4) their installation;

(5) the impact of their use on other system equipment (e.g., annunciators, mimics);

(6) documentation requirements;

(7) re-training requirements;

(8) their periodic review; and

(9) their removal

COMPLIANCE CHECKLIST

N/A	Yes	No	Reference/Comment
	X		
	X		
	X		
	X		
	X		
	X		
	X		
	X		
	X		
	X		

GUIDELINE

COMPLIANCE CHECKLIST

N/A	Yes	No	Reference/Comment

6.6.6.1 NEED FOR LOCATION AIDS

Operator performance can be enhanced through the use of location aids such as demarcation, color, and mimics.

GUIDELINE

COMPLIANCE CHECKLIST

N/A	Yes	No	Reference/Comment
		X	HED 300
	X		

6.6.6.2 DEMARCATION

a. USE—Lines of demarcation can be used to:
   (1) Enclose functionally related displays.
   (2) Enclose functionally related controls.
   (3) Group related controls and displays.

b. CONTRAST—Lines of demarcation should be visually distinctive from the panel background.

c. PERMANENCE—Lines of demarcation should be permanently attached.

GUIDELINE

COMPLIANCE CHECKLIST

N/A	Yes	No	Reference/Comment
	X		

6.6.6.3 COLOR

Color should be dedicated to specific functions or conditions throughout the control room in order for the code to elicit the expected operator response. The color coding scheme should be used consistently throughout the control room. Refer to Guideline 6.5.1.6 for specific recommendations on the use of color.

GUIDELINE

6.6.6.4 USE OF MIMICS

Mimics integrate system components into functionally oriented diagrams that reflect component relationships. Properly designed mimics should decrease the operator's decisionmaking load.

a. COLOR

(1) Flow paths should be color coded. Colors should be selected in conformance with Guideline 6.5.1.6.

(2) The mimic colors should be discriminably different from each other.

(3) There should be adequate contrast between the mimic colors and the panel.

(4) Mimic lines depicting flow of the same contents (e.g., steam, water, electricity) should be colored the same throughout the control room.

(5) No more than 4 mimic lines of the same color should run in parallel if the operator must quickly identify any one of the lines.

b. MIMIC LINES

(1) Differential line widths may be used to code flow paths (e.g., significance, volume, level).

(2) Overlapping of mimic lines should be avoided.

(3) Flow directions should be clearly indicated by distinctive arrowheads.

(4) All mimic origin points should be labeled or begin at labeled components.

(5) All mimic destination or terminal points should be labeled or end at labeled components.

(6) Component representations on mimic lines should be identified.

COMPLIANCE CHECKLIST

N/A	Yes	No	Reference/Comment
		X	HED 248
	X		
	X		
	X		
	X		
	X		
		X	HED 249
		X	HED 247
	X		
		X	HED 296
	X		

COMPLIANCE CHECKLIST

N/A	Yes	No	Reference/Comment
	X		
	X		

6.6.6.4 USE OF MIMICS (Cont'd)

c. SYMBOLS

(1) Graphic symbols should be readily understood and commonly used.

(2) Symbols should be used consistentiy.

GUIDELINE

COMPLIANCE CHECKLIST

N/A	Yes	No	Reference/Comment
		X	HEDs 349, 350
	X		See 6.6.6.2 . Demarcation to be used as corrective action to some HEDs.

6.8.1.3 ENHANCING RECOGNITION AND IDENTIFICATION

Several enhancement techniques are available for setting apart groups of controls and displays. Three preferred techniques for enhancement are spacing, demarcation, and color shading. Other acceptable techniques for setting apart groups of controls include the use of insert panels and added panel relief.

a. SPACING – Spacing consists of physically separating groups of components on a panel with enough space between groups so that the boundaries of each group are obvious. Spacing between groups should be at least the width of a typical control or display in the group (see Exhibit 6.8-1).

b. DEMARCATION – Demarcation consists of circumscribing functional or selected groups of controls and displays with a contrasting line. The application of demarcation techniques should conform to Guideline 6.6.8.2. (See also Exhibit 6.8-1.)

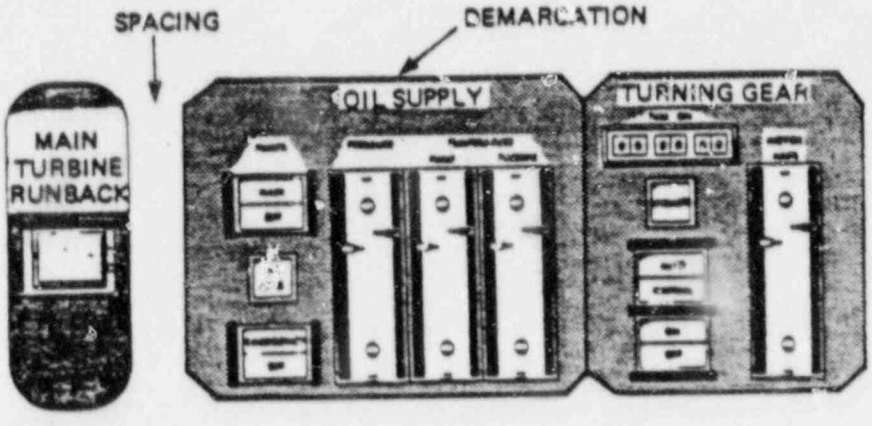


Exhibit 6.8-1. Separation of functional groups by spacing and demarcation.

6.8.1.3 ENHANCING RECOGNITION AND IDENTIFICATION (Cont'd)

c. COLOR SHADING – Color shading may be used to enhance recognition of controls, displays, or functional groups. When color shading is used, colors should provide adequate contrast, and should be consistent with other color coding in the control room.

d. EMERGENCY CONTROLS – Distinctive enhancement techniques should be used for emergency controls.

COMPLIANCE CHECKLIST

N/A	Yes	No	Reference/Comment
	X		No shading used but shading is recommended as part of corrective action for some HEDs.
		X	HED 351

APPENDIX N

DETAILED CONTROL ROOM DESIGN REVIEW

SUPPLEMENTAL REPORT

BVPS - 1

APPENDIX N

DETAILED CONTROL ROOM DESIGN REVIEW

SUPPLEMENTAL REPORT

BVPS - 1

A P P E N D I X N

Description of Initial EOP Verification and Validation

(Excerpted from Procedures Generation Package)

V. Initial EOP Verification and Validation

A. BVPS-Unit 1

"All three programs, table-top validation, walk-through validation, and the EOP validation on the simulator were used for the initial EOP development. All procedures were validated twice, once by the table-top method and once by the walk-through method. Each procedure was validated based on the plant accident conditions for which the procedure was designed to recover from.

The majority of the EOPs were also validated by using accident scenarios run on the BVPS simulator. The scenarios were developed beginning with the bases provided in Section 2, Paragraph II.C.4. Since two previous validations, as described above, were performed on the EOPs, the intended purpose of this validation was to exercise a sufficient number of procedural paths to assure that the EOPs could be used by the operators in the control room. However, as described below, the majority of the EOPs were exercised. The Walk-through and Simulator Validation Programs were managed by the DCRDR Team and are reported in more detail in Section 2.4.8, Validation of Control Room Functions, of the BVPS-1 DCRDR Summary Report.

The scenarios developed for the validation on the simulator are presented in detail in Appendix E of the BVPS-1 DCRDR Summary Report and summarized below.

Because of the various paths needed to lead the operators through the EOPs, complex scenarios were developed which included more than one initiating event and more than one component failure. The set of scenarios selected for this validation program contained twenty-four accident sequences, some of which included similar initiating events but for different severity levels, i.e., LOCAs with different break flows. The initiating events included; SGTRs, main steam line breaks, LOCAs, loss of all AC power, ATWS and Spurious S.I.

Of the twenty-four scenarios, thirteen had more than one initiating event and six of these included more than one component failure. The remaining eleven scenarios of the 24 had one initiating event with four of these having more than one component failure. Overall, of the ten scenarios having more than one component failure, at least five of the failures could be considered severe, i.e., loss of all high level safety injection pumps or all auxiliary feedwater pumps.

The scenarios run on the simulator for the initial EOP development were performed shortly after the simulator was installed at BVPS. Not all the scenarios were run all the way through because of certain software limitations that existed at that time. It was arranged, therefore, to complete the validation program during the training of the operators on the new EOPs. This had the benefit of feedback from all the operating crews in training, exercising the new EOPs.

The validation program on the simulator described above resulted in exercising all but 12 of the procedures. These 12 procedures were subsequently validated by the Table-top and walk-through method. Being able to exercise the majority of the EOPs and to successfully run the complex scenarios are indications of the capability of the BVPS simulator to deal well with plant responses. Based on the above, it was concluded that the programs were exhaustive in testing all the EOPs during their initial development."

APPENDIX O

DETAILED CONTROL ROOM DESIGN REVIEW

SUPPLEMENTAL REPORT

BVPS - 1

MED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
1	6.1.1.3(A)	GENERAL	REACTIVITY COMPUTER IN MIDDLE OF CR	: NRC APPROVED TAKING NO FURTHER CORRECTIV
			DIRECT VIEW	: E ACTION
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:AAAA			RESOLUTION:REACTIVITY COMPUTER WAS BEEN REMOVED	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
2	6.1.1.3(A)	SS OFFICE	SHIFT SUPERVISOR CANNOT VIEW ALL OF CR	: NRC APPROVED TAKING NO CORRECTIVE ACTION
			FROM DESK.	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - SS HAS GOOD ACCESS AND COMMUNICATION TO CR.	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
3	6.1.1.3C(1)	GENERAL	FRAYED & CURLED UP PAD IN FRONT OF	: CONTROL ROOM CARPETED. REVIEW SHOWS THAT
			PANELS COULD TRIP OPERATOR	: PADS NO LONGER CREATE TRIPPING HAZARD.
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:CRUPGR			RESOLUTION:CARPET CONTROL ROOM (SEE MED 41 & ATTACHMENT 4)	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
4	6.1.1.3C(1)	VB3	BETWEEN VBC3 & BBC2, CABLES ON FLOOR	: CABELS HAVE BEEN REROUTED. MED-7 WILL BE
			TO SG RECORDERS POSE TRIPPING HAZZARD.	: USED TO TRACK CORRECTIVE ACTION TO COVER
STATUS: CLOSED			-0-	: HOLES IN VB.
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:REDSGN			RESOLUTIO..:REROUTE CABLES FRO. VB TO BB AND COVER HOLES IN VB	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
5	6.1.1.3D(1)	BB2	ONLY 1 18" OPENING IN BENCHBOARD. ACCESS	: NRC APPROVED TAKING NO CORRECTIVE ACTION
			TO VBS IS LIMITED.	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - DID NOT CAUSE PROBLEM DURING SIMULATOR EXER.	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
6	6.1.1.3F(1)	GENERAL	DISTANCE BETWEEN BB & VB IS 32	: NRC APPROVED TAKING NO CORRECTIVE ACTION
			MINIMUM OF 50	:
STATUS: CLOSED			-0-	:
GROUP : LSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM OPERATOR HAS ROOM TO OPERATE CONTROLS ON VB	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
7	6.1.1.3G	VC2	UNGUARDED OPENINGS IN 8-C3 FROM STM FLOW AND FEED FLOW RECORDERS PLACED ON BB-C2. -O- -O-	: CORRECTIVE ACTIONS TO BE COMPLETED PER : DCP-804 SCHEDULED FOR 6R. NRC APPROVED : CORRECTIVE ACTION.
STATUS: HOLD				
GROUP : ENG				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : 3				
RESOLUTION CATEGORY:REDSGN			RESOLUTION:PLUG OR COVER HOLES AFTER CABLES REROUTED (SEE HED #4 & 47)	
IMPLEMENT DATE : / /			REV'D RESU:	
8	6.1.1.4D	GENERAL	BORON CALCULATION TABLE IS WORN. -O- -O- -O-	: APPENDIX I
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY : ENHANC				
RESOLUTION CATEGORY:ENHANC			RESOLUTION:REPLACE PAGE AND PROTECT WITH PLASTIC SLEEVE.	
IMPLEMENT DATE : / /			REV'D RESU:	
9	6.1.1.5B	GENERAL	FUSE FOR SOURCE RANGE DETECTOR IS REMOVED FROM INSTRUMENT WHEN NOT IN USE. PROBLEM MAY BE LOCATING IT DURING AN EMERGENCY SHUT DOWN. -O-	: CORRECTIVE ACTIONS TO BE COMPLETED PER : DCP-804 SCHEDULED FOR 6R. NRC APPROVED : CORRECTIVE ACTION.
STATUS: HOLD				
GROUP : ENG				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : ENHANC				
RESOLUTION CATEGORY:ENHANC			RESOLUTION:INSTALL FUSE HOLDER OUTSIDE DRAWER. SPARE FUSES ARE IN SS KB	
IMPLEMENT DATE : / /			REV'D RESU:	
10	6.1.1.5E	GENERAL	PROBLEM IS LOCATING KEYS FOR LOCKED CONTROLS ASSOCIATED WITH EOPS. NOW ALL KEYS ARE KEPT TOGETHER. -O- -O-	: A SEPARATE RING OF KEYS IS USED FOR APPE : NDIX R CONDITIONS. FOR EOPS OPERATORS : TAKE SPECIFIC KEYS DEPENDING ON ACCIDENT : EVOLUTION. A SEPARATE EOP RING IS NOT : PRACTICAL DUE TO NUMBER OF KEYS. APP J
STATUS: HOLD				
GROUP : NSD				
REV'D RES :YES	NRC APPROVAL :NO			
PRIORITY : ENHANC				
RESOLUTION CATEGORY:ENHANC			RESOLUTION:HAVE SPEPARATE KEY RINGS FOR EOP KEYS	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT	
11	6.1.1.5F	GENERAL	NO RECORDS ARE KEPT AS TO STATUS OF EXPENDABLES AND SPARE PARTS. -O- -O- -O-	: NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - SPARES CONTROL IS MAINTAINED	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
12	6.1.1.7	GENERAL	TOO MANY PEOPLE ARE IN CONTROL ROOM - PARTICULARLY DURING DAYLIGHT SHIFT. -O- -O- -O-	: KEY CARD ACCESS REQUIRES APPROVAL BY : DESIGNATED SUPERVISION FOR TIME AND DATE : OF ACCESS. ALSO REMOVAL OF SECURITY : ENCLOSURE REDUCES TRAFFIC.ADMINISTRATIVE : CONTROLS CONSIDERED ADEQUATE.
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:CHNGR			RESOLUTION:SEE HED 39; ATTACHMENT 1 -O-	
IMPLEMENT DATE : 04/10/87			REV'D RESU:SEE ABOVE COMMENT	

HED	GUIDELIN	LOCATION	DISCREPANCY	COMMENTS
			TAP CHANGER HEIGHT ON VB-C3	: NRC APPROVED TAKING NO CORRECTIVE ACTION
13	6.1.2.2B(1)	VB4	-0-	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM-TAP CHANGER CONTROLARE REACHABLE	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			BACK ROW OF BB CONTROLS AND CONTROLS	: APPENDIX J
14	6.1.2.2C	BB GENERIC	MOUNTED ON VERTICAL SECTION OF BB EXCEED	:
STATUS: HOLD			MAX REACH RECOMMENDED.	:
GROUP : NSD			-0-	:
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM IF OPERATOR PERMITTED EXTENDED REACH	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
			HAGAN CONTROLLERS ON BB-BA6 ARE LESS THAN	: INADVERTENT ACTUATION OF HAGAN PUSHBUTNS
15	6.1.2.2D(1)	BA6	3	: WHILE OPERATOR REACHING FOR OTHER
STATUS: HOLD			-0-	: CONTROLS SHOWN TO NOT BE A PROBLEM.
GROUP : NSD			-0-	: APPENDIX J HED-14.
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:SEE HED #14 - TO BE GUARDED	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
			HAGAN CONTROLLERS ON BB-B1 ARE LESS THAN	: INADVERTENT ACTUATION OF HAGAN PUSHBUTNS
16	6.1.2.2D(1)	BB1	3	: WHILE OPERATOR REACHING FOR OTHER
STATUS: HOLD			-0-	: CONTROLS SHOWN TO NOT BE A PROBLEM.
GROUP : NSD			-0-	: APPENDIX J HED 14.
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:SEE HED #14 - TO BE GUARDED	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
			HAGAN CONTROLLERS ON BB-C1 (MAIN FEED	: NRC APPROVED TAKING NO CORRECTIVE ACTION
17	6.1.2.2D(1)	BC1	REG) ARE LESS THAN 3	:
STATUS: CLOSED			BB.	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO NEED TO REACH OVER IN ORDERTO USE OTHER CONTROLS	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			EMER GEN START AND FIELD FLASH ARE LESS	: RESOLUTION WAS INTENDED TO AVOID
18	6.1.2.2D(1)	BC4	THAN 3 INCHES FROM FRONT OF BB-C4.	: EXERCISING DIESELS. NO PROBLEMS OF
STATUS: HOLD			-0-	: INADVERTENT ACTUATIONS IDENTIFIED.
GROUP : NSD			-0-	: NO SIGNIFICANT ADVERSE CONSEQUENCES.
REV'D RES :YES	NRC APPROVAL :NO		-0-	: NO FURTHER ACTION RECOMMENDED.
PRIORITY : 4				
RESOLUTION CATEGORY:ENHANC			RESOLUTION:PLACE GUARDS ON CONTROLS TO PRECLUDE INADVER. ACTUATION	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			ALL OF THE FIRST ROW OF OT-2 SWITCHES	: NRC APPROVED TAKING NO CORRECTIVE ACTION
19	6.1.2.2D(1)	BB GENERIC	ARE LESS THAN (@ 1-1/2 - 2	:
STATUS: CLOSED			3	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - CANNOT BE IN ADVERTANTLY ACTUATED	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			ANNUNCIATOR CONTROL PUSHBUTTONS ARE	: NRC APPROVED TAKING NO CORRECTIVE ACTION
20	6.1.2.2D(1)	ANNUN	LESS THAN 3 INCHES FROM FRONT OF BB.	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM-PUSHBUTTONS GUARDED-0-	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			TOP CONTROLS ON RAD MON PANELS OVER 70	: NRC APPROVED TAKING NO CORRECTIVE ACTION
21	6.1.2.5A(1)	N/A		:
STATUS: CLOSED				:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM. CONTROLS ONLY MANIPULATED DURING TESTING.	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			TOP CONTROLS ON NIS PANELS OVER 70	: NRC APPROVED TAKING NO CORRECTIVE ACTION
22	6.1.2.5A(1)	NIS	-0-	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM-MISCELLANEOUS ALAR M9; TEST CONTROLS	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			LOWER CONTROLS ON VB-C2 LESS THAN 34	: NRC APPROVED TAKING NO CORRECTIVE ACTION
23	6.1.2.5A(1)	VB3	-0-	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - CONTROL IS OBSOLETE (TOGGLE SWITCH FOR RECOR)	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			LOWER CONTROLS ON VB-A2 LESS THAN 34	: NRC APPROVED TAKING NO CORRECTIVE ACTIVE
24	6.1.2.5A(1)	VA2	-0-	: ACTION
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - (H2 ANAL & PASS) ARE KEY LOCK	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			CONTROLS LESS THAN 34" APDMS.	MODIFICATION SCHEDULED FOR 6R.
26	6.1.2.5A(1)	NIS	-0-	NRC APPROVED CORRECTIVE ACTION.
STATUS: HOLD			-0-	
GROUP : ENG			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : IN-PROG				
RESOLUTION CATEGORY:BRD MD			RESOLUTION:REMOVE APDMS- ICC IS REPLACING-0-	
IMPLEMENT DATE : / /			REV'D RESU:	
			ALL VB ANNUCIATORS ABOVE 70	NRC APPROVED TAKING NO CORRECTIVE ACTION
27	6.1.2.5B(1)	VB GENERIC	-0-	
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - LEGENDS ARE READ-ABLE	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			TOP NIS DISPLAYS ABOVE 70	NRC APPROVED TAKING NO CORRECIVE ACTION
28	6.1.2.5B(1)	NIS	-0-	
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - OPERATOR HAS SR INDICATOR ON BB2	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			TOP RAD MON DISPLAYS ABOVE 70	NRC APPROVED TAKING NO CORRECTIVE ACTION
29	6.1.2.5B(1)	RAD MON	-0-	
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - THERE ARE ALARMS,TREND CHECKS, & TREND RECORDER	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			ALL VB SECTIONS HAVE DISPLAYS BELOW 41	CORRECTIVE ACTIONS TO BE COMPLETED PER
30	6.1.2.5B(1)	VB GENERIC	-0-	DCP-804 SCHEDULED FOR 6R. NRC APPROVED
STATUS: HOLD			-0-	CORRECTIVE ACTION.
GROUP : ENGR			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : 1				
RESOLUTION CATEGORY:BRD MD			RESOLUTION:SEE ATTACHMENT 3 & DRWGS. 25AH, 25AK, 25AL, 25AE, & 25AJ	
IMPLEMENT DATE : / /			REV'D RESU:	
			NIS DISPLAYS BELOW 41 INCHES.	NRC APPROVED TAKING NO CORRECTIVE ACTION
31	6.1.2.5B(1)	NIS	-0-	
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - CHECKED DURING SIMULATOR EXERCISE	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			LOWER BSP DISPLAYS BELOW 41	: NRC APPROVED TAKING NO CORRECTIVE ACTION
32	6.1.2.5B(1)	BSP	-0-	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - ONLY INDICATOR LIGHTS LOW	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			TABLE HOLDING NEW PVC IS 24 1/2"HIGH,	: NRC APPROVED TAKING NO CORRECTIVE ACTION
33	6.1.2.7D(5)	GENERAL	1/2 INCH BELOW MINIMUM OF 25 INCHES.	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM @ 25 AS PER GUIDELINE	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			OST 148.1 CONTROL BOARD CHECKLIST NOT	: CHECKLIST SYSTEMATICALLY ORDERED.
34	6.1.1 GEN	GENERAL	SYSTEMATICALLY ORDERED.	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:FRCDRE			RESOLUTION:CHANGE CHECKLIST -0-	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			TOO MUCH TRAFFIC IN CR DUE TO GUARD	: GUARD SHACK HAS BEEN REMOVED. ALSO,SEE
35	6.1.1 GEN	GENERAL	SHACK AND CLEARANCE PROCEDURE.	: HEDS 12 AND 39.
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:CRUPGR			RESOLUTION:SEE HED #12 -0-	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			LACK OF PERSONAL STORAGE SPACE FOR SS	: NO ACTION RECOMMENDED BECAUSE OF SPACE
36	6.1.1 GEN	GENERAL	AND SHIFT FOREMAN.	: LIMITATIONS.
STATUS: HOLD			-0-	:
GROUP : NSD			-0-	:
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : 4				
RESOLUTION CATEGORY:CRUPGR			RESOLUTION:ADD SMALL LOCKER FOR SHIFT FOREMAN & SS	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT	
			SS OFFICE TOO SMALL - LACK OF STORAGE	: REDESIGN OF SS OFFICE NOT CONSIDERED
37	6.1.1 GEN	GENERAL	SPACE.	: PRACTICAL BECAUSE OF WALL DESIGN
STATUS: HOLD			-0-	: REQUIREMENTS.
GROUP : NSD			-0-	:
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : 4				
RESOLUTION CATEGORY:CRUPGR			RESOLUTION:REDESIGN SS OFFICE WHEN HED #12 RESOLVED	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			AC DOES NOT WORK CONSISTENTLY -- HEAT	: TO BE CHECKED DURING COMBINED CONTROL
38	6.1.5.1A	GENERAL	CAUSES OPERATION DISCOMFORT; MAY AFFECT	: ROOM HVAC STUDY.
STATUS: OPEN			INSTRUMENTATION.	:
GROUP : NSD			-0-	:
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : 3				
RESOLUTION CATEGORY:TBC			RESOLUTION:REPLACE AC IF PAST MAINTENANCE COST HAS BEEN EXCESSIVE	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
			LARGE NUMBER OF PEOPLE IN CR DURING	: KEY CARD ACCESS REUIRES APPROVAL OF
39	6.1.5.5D	GENERAL	DAYLIGHT SHIFT CAUSE NOISE DISTRACTIONS	: DESIGNATED SUPERVISION FOR TYPE, TIMES,
STATUS: CLOSED			-0-	: AND DATES OF ACCESS.
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:CRUPGR			RESOLUTION:SEE HED #12	-0-
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			CR COLOR COORDINATION NOT ESTHETICALLY	: WALLS REPAINTED AND NEW WALL INSTALLED
40	6.1.5.7A(1)	GENERAL	PLEASING.	: FOR COMBINED CONTROL ROOMS.
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:CRUPGR			RESOLUTION:SEE HED #41	-0-
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			CR APPEARANCE NEEDS UPGRADE.	: GENERAL CONTROL ROOM APPEARANCE HAS BEEN
41	6.1.5.7A(2)	GENERAL	-0-	: UPGRADED BY CARPETING AND PAINTING.
STATUS: HOLD			-0-	: ADDITIONAL REVIEWS TO BE COMPLETED
GROUP : NSD			-0-	: UNDER HEDS 43 AND 43A.
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : 3				
RESOLUTION CATEGORY:CRUPGR			RESOLUTION:SEE ATTACHMENT 4 (RELATED HEDS= 2, 40, 42, 43, 43A)	
IMPLEMENT DATE : / /			REV'D RESU:	
			NO CARPETING TO LESSEN THE FATIGUE OF	: CARPETING WAS INSTALLED IN CONTROL ROOM.
42	6.1.5.7A(5)	GENERAL	STANDING AND WALKING	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:CRUPGR			RESOLUTION:SEE HED #41 & 3 (SMR IN PROGRESS)	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			KITCHEN AND EATING AREA ARE NOT	: TO BE REVIEWED FOR COMBINED CONTROL
43	6.1.5.7B(1)	GENERAL	PLEASANTLY ARRANGED AND FURNISHED.	: ROOM FACILITIES.
STATUS: OPEN			-0-	:
GROUP : NSD			-0-	:
REV'D RES :YES	NRC APPROVAL :YES		-0-	:
PRIORITY : 3				
RESOLUTION CATEGORY:CRUPGR			RESOLUTION:SEE HED #41	-0-
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			THERE IS NO REST AREA OR LOUNGE	: TO BE REVIEWED FOR COMBINED CONTROL
43	6.1.5.7C	GENERAL	CONDUCIVE TO RELAXATION AND	: ROOM FACILITIES.
STATUS: OPEN			REVITALIZATION.	:
GROUP : NSD			-0-	:
REV'D RES :YES	NRC APPROVAL :YES		-0-	:
PRIORITY : 3				
RESOLUTION CATEGORY:CRUPGR			RESOLUTION:SEE HED #41	-0-
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
			NEED PAGE PHONES INSIDE RCP CUBICLE.	: NRC APPROVED TAKING NO CORRECTIVE ACTION
44	6.10	RCP CUBICLE	-0-	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NOT A CRDR ISSUE	-0-
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			PAGE PHONE CORDS ARE LONG AND COULD TRIP	: RETRACTABLE CORDS ALSO CONSIDERED
45	6.2.1.2B(5)	GENERAL	OPERATORS.	: HAZARDOUS. BECAUSE NO TRIPPING HAS BEEN
STATUS: HOLD			-0-	: RECORDED FOR PAST 10 YR. OPERATION, NO
GROUP : NSD			-0-	: ACTION IS RECOMMENDED. APPENDIX A.
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : 4				
RESOLUTION CATEGORY:ENHANC			RESOLUTION:INSTALL PHONES WITH RETRACTABLE CORDS	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
			WIRES TO SG RECORDERS MOUNTED ON BB ARE	: WIRES HAVE BEEN REROUTED. TAPE ACROSS
47	6.2.1.2B(5)	VC2	TAPED ACROSS AILES BETWEEN VB & BB.	: AILES NO LONGER REQUIRED.
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:REDSGN			RESOLUTION:SEE HED #4	-0-
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			NO DIFFERENCE IN TELEPHONE SWITCHING	: NRC APPROVED TAKING NO CORRECTIVE ACTION
48	6.2.1.2C(1)	GENERAL	DURING NORMAL OR EMERGENCY CONDITIONS.	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N\A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:EPP HANDLES EMER. COMMUNICATIONS	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			CR HAS NO PROGRAMMED PRIORITY ACCESS TO	: NRC APPROVED TAKING NO CORRECTIVE ACTION
49	6.2.1.2C(2)	GENERAL	TELEPHONE SWITCHING.	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N\A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:EPP HANDLES EMER. COMMUNICATIONS	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	

HED - GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
		ANNUNCIATOR ALARM TONES ARE KEYED TO	: LOCATION OF ALARMS DOES NOT APPEAR TO BE
50 6.2.2.1B	ANNUN	LOCATION BUT ARE HARD TO DISTINGUISH.	: A PROBLEM. TONES ARE AUDIBLE.
STATUS: HOLD		-0-	:
GROUP : NSD		-0-	:
REV'D RES :YES NRC APPROVAL :NO		-0-	:
PRIORITY : 4			
RESOLUTION CATEGORY:ENHANC		RESOLUTION:ADJUST TONE FREQUENCY -0-	
IMPLEMENT DATE : 04/10/87		REV'D RESU:	
		CLAXONS (BUZZERS) ON FA & RAD.	: CORRECTIVE ACTIONS TO BE COMPLETED
51 6.2.2.2(A&B)	ANNUN	ACTUATION ARE SAME. CAUSE CONFUSION.	: PER DCP-804 SCHEDULED FOR 6R. APPENDIX A
STATUS: HOLD		-0-	:
GROUP : ENG		-0-	:
REV'D RES :YES NRC APPROVAL :NO		-0-	:
PRIORITY : 2			
RESOLUTION CATEGORY:BKD MD		RESOLUTION:REMOVE BUZZER ON RAD MONITOR SINCE ANNUCIATOR EXISTS	
IMPLEMENT DATE : / /		REV'D RESU:RAD MONITOR BUZZER TO BE MOD- IFIED TO LESS SEVERE TONE.	
		RAD MONITOR ALARM IS EXTREMELY INTENSE	: CORRECTIVE ACTIONS TO BE COMPLETED PER
52 6.2.2.6(B&C)	GENERAL	AND CAUSES OPERATOR DISCOMFURT.	: DCP-804 SCHEDULED FOR 6R. APPENDIX A.
STATUS: HOLD		-0-	:
GROUP : ENG		-0-	:
REV'D RES :YES NRC APPROVAL :NO		-0-	:
PRIORITY : 2			
RESOLUTION CATEGORY:BKD MD		RESOLUTION:THERE WILL BE NO PROBLEM IF BUZZER REMOVE AS PER HED#51	
IMPLEMENT DATE : / /		REV'D RESU:SEE HED-51.	
		LOCAL PANEL TROUBLE ALARMS -- SOLID	: NRC APPROVED TAKING NO CORRECTIVE ACTION
53 6.3.1.2B(1)	ANNUN	WASTE; AUX BOILERS, AUX INTAKE STRUCTURE	:
STATUS: CLOSED		-0-	:
GROUP : NSD		-0-	:
REV'D RES :NO NRC APPROVAL :YES		-0-	:
PRIORITY : N/A			
RESOLUTION CATEGORY:AAAA		RESOLUTION:NO PROBLEM AO HAS SUFFICIENT TIME TO PERFORM LOCAL ACTION	
IMPLEMENT DATE : 04/10/87		REV'D RESU:	
		SOME ALARMS HAVE MULTIPLE INPUTS.	: APPENDIX H.
54 6.3.1.2C(1)	ANNUN	-0-	:
STATUS: OPEN		-0-	:
GROUP : NSD		-0-	:
REV'D RES :YES NRC APPROVAL :NO		-0-	:
PRIORITY : IN PROG			
RESOLUTION CATEGORY:TBC		RESOLUTION:TO BE REVIEWED DURING LMD STUDY	
IMPLEMENT DATE : / /		REV'D RESU:REQUIRES SPECIAL STUDY;REPORT SCHEDULED FOR 7/15/77.	
		NO SEPARATE FIRST OUT PANEL FOR REACTOR	: CORRECTIVE ACTIONS TO BE COMPLETED PER
55 6.3.1.3A(1-3)	ANNUN	SYSTEM.	: DCP-804 SCHEDULED FOR 6R. SEE APPENDIX J
STATUS: HOLD		-0-	: OF SUPPLEMENTAL REPORT.
GROUP : ENG		-0-	:
REV'D RES :NO NRC APPROVAL :NO		-0-	:
PRIORITY : 2			
RESOLUTION CATEGORY:BKD MD		RESOLUTION:1ST OUT FOR RX & TURB TOGETHER, SEE ATTACH #5	
IMPLEMENT DATE : / /		REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			NO SEPARATE 1ST OUT PANEL FOR TURBINE.	: CORRECTIVE ACTIONS TO BE COMPLETED PER
56	6.3.1.3B	ANNUN	-0-	: DCP-804 SCHEDULED FOR 6R. SEE APPENDIX-J
STATUS: HOLD			-0-	: OF SUPPLEMENTAL REPORT.
GROUP : ENG			-0-	:
REV'D RES :NO	NRC APPROVAL :NO		-0-	:
PRIORITY : 2				
RESOLUTION CATEGORY:BRD MD			RESOLUTION:SEE HED #55	-0-
IMPLEMENT DATE : / /			REV'D RESU:	
			MOST ANNUNCIATOR WINDOWS NOT	: PRIORITIZATION VIA FIRST OUT PANEL.
57	6.3.1.4A(1&2)	ANNUN	PRIORITIZED.	: AWAITING NRC APPROVAL OF SUPPLEMENTAL
STATUS: HOLD			-0-	: REPORT (APPENDIX H)
GROUP : NSD			-0-	:
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:TO BE REVIEWED IN LMD STUDY	-0-
IMPLEMENT DATE : / /			REV'D RESU:NO ACTION REQUIRED.	
			NO CODING OF WINDOWS TO EVENT PRIORITIES	: FIRST OUT PANEL IS CONSIDERED ADEQUATE
58	6.3.1.4B (1&2)	ANNUN	SINCE MOST WINDOWS NOT PRIORITIZED.	: AWAITING NRC APPROVAL OF SUPPLEMENTAL
STATUS: HOLD			-0-	: REPORT. APPENDIX H.
GROUP : NSD			-0-	:
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : IN-PROG				
RESOLUTION CATEGORY:AAAA			RESOLUTION:TO BE REVIEWED IN LMD STUDY	-0-
IMPLEMENT DATE : / /			REV'D RESU:NO FURTHER ACTION REQUIRED.	
			NO AUDITORY CODES -- LEGENDS INDICATE	: NRC APPROVED TAKING NO CORRECTIVE ACTION
59	6.3.2.2A(1)	ANNUN	PROBLEM AREA.	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM LEGENDS INDICATE	PROBLEM AREA.
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			NO AUDITORY CODING - ALARMS/ANNUNCIATORS	: ANNUNCIATOR AUDITORY SIGNAL IS CODED TO
60	6.3.2.2B	ANNUN	NOT PRIORITIZED.	: GENERAL LOCATION. AWAITING NRC APPROVAL
STATUS: HOLD			-0-	: OF SUPPLEMENTAL REPORT. (APPENDIX H)
GROUP : NSD			-0-	:
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:TO BE REVIEWED IN LMD STUDY	-0-
IMPLEMENT DATE : / /			REV'D RESU:NO ACTION FURTHER REQUIRED.	
			FIRST OUT ALARMS ARE ABOVE RELATED	: SEE HED-62,87 FOR SPECIFIC DISCREPENCIES
61	6.3.3.1A	ANNUN	CONTROLS/DISPLAYS; SOME OF OTHERS ARE	: AWAITING NRC APPROVAL OF SUPPLEMENTAL
STATUS: HOLD			NOT.	: REPORT. (APPENDIX H)
GROUP : NSD			-0-	:
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:OTHER			RESOLUTION:TO BE REVIEWED IN LMD STUDY	-0-
IMPLEMENT DATE : / /			REV'D RESU:SEE HEDS-62 & 87.	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			ANNUNCIATOR FOR "CNMT INSTRUMENT AIR SYS	: OK IN GENERAL AREA. MOVING ANNUNCIATOR
62	6.3.3.1A	ANNUN	-PRESSURE LOW" IS LOCATED ON A6-10 BUT	: WOULD CREATE NEW HED. CONTAINMENT IN-
STATUS: HOLD			SHOULD BE LOCATED ON A-6.	: STRUMENT AIR DISPLAY MOVED HIGHER.
GROUP : NSD			-0-	: AWAITING NRC APPROVAL OF SUPPLEMENTAL
REV'D RES :YES	NRC APPROVAL :NO		-0-	: REPORT. (APPENDIX H)
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:TO BE REVIEWED IN LMD STUDY -0-	
IMPLEMENT DATE : / /			REV'D RESU:NO FURTHER ACTION REQUIRED.	
			NO LABELS ABOVE MAIN ANNUNCIATOR PANELS.	: LABELES TO BE PROVIDED ABOVE MAIN
63	6.3.3.1B(1&2)	ANNUN	-0-	: ANNUNCIATOR PANELS. (APPENDIX H)
STATUS: HOLD			-0-	:
GROUP : NSD			-0-	:
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:TO BE REVIEWED IN LMD STUDY -0-	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
			FLASH RATE ON ANNUNCIATORS IS @ 2 PER	: EXISTING FLASH RATE CONSIDERED ADEQUATE
64	6.3.3.2B	ANNUN	SECOND RATHER THAN 3-5 PER SECOND.	: FOR RECOGNIZING ACTUATED ALARMS.
STATUS: HOLD			-0-	: APPENDIX I.
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :NO		-0-	:
PRIORITY : 4				
RESOLUTION CATEGORY:ENHANC			RESOLUTION:INCREASE FLASH RATE IF OPER.WOULD LIKE AND NOT DIFFICULT	
IMPLEMENT DATE : / /			REV'D RESU:	
			TILE LIGHT DOES NOT ILLUMINATE AND BURN	: NRC APPROVED TAKING NO CORRECTIVE ACTION
65	6.3.3.2C	ANNUN	STEADILY WHEN FLASHER FAILS.	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - TILE LIGHTS TESTED EACH SHIFT	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			ANNUNCIATOR PANELS ARE NOT DARK	: AWAITING NRC APPROVAL OF SUPPLEMENTAL
66	6.3.3.2E	ANNUN	THERE ARE 30 GREEN - NORMAL TILES.	: REPORT. (APPENDIX L)
STATUS: HOLD			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :NO		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM TRAINING AND PROCEDURES ADDRESS GREEN TILES	
IMPLEMENT DATE : / /			REV'D RESU:	
			MANY ANNUNCIATOR WINDOWS ARE NOT GROUPED	: TO BE RESOLVED USING DEMARCATION.
67	6.3.3.3B	ANNUN	BY SYSTEM OR FUNCTION.	: AWAITNG NRC APPROVAL OF SUPPLEMENTAL
STATUS: HOLD			-0-	: REPORT. (APPENDIX H)
GROUP : NSD			-0-	:
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:TO BE REVIEWED IN LMD STUDY -0-	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
68	6.3.3.3C(1&2)	ANNUN	VERTICAL AXES OF ANNUNCIATOR PANELS NOT LABELLED WITH ALPHA NUMERICS. -- NUMBERING IS ACROSS BOTTOM OF PANEL	APPENDIX I.
STATUS: HOLD			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY : ENHANC				
RESOLUTION CATEGORY:ENHANC			RESOLUTION:RECOMMEND NUMBERING ACROSS TOPOF ANNUN. PANELS	
IMPLEMENT DATE : / /			REV'D RESU:	
69	6.3.3.3C(3)	ANNUN	LETTER HEIGHT FOR HORIZONTAL COORDINATE DESIGNATION SMALLER THAN RECOMMENDED SIZE OF .336	SIZE WILL BE INCREASED AND WILL BE RELOCATED ABOVE PANELS. AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. (APPENDIX H)
STATUS: HOLD			-0-	
GROUP : NSD			-0-	
REV'D RES :YES	NRC APPROVAL :NO			
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:TO BE REVIEWED IN LMD STUDY -0-	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
70	6.3.3.3D(1)	ANNUN	ANNUNCIATOR MATRICES CONTAIN 128 TILES NOT RECOMMENDED MAXIMUM OF 50.	APPENDIX I.
STATUS: HOLD			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY : ENHANC				
RESOLUTION CATEGORY:ENHANC			RESOLUTION:NO PROBLEM WITH RENUMBERING PER HED #68	
IMPLEMENT DATE : / /			REV'D RESU:	
71	6.3.3.4A	ANNUN	ANNUNCIATOR TILE LEGENDS ARE NOT UNAMBIGUOUS - PARTICULARLY MULTI-CONDITION ALARMS.	WILL STANDARDIZE LEGENDS. AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. (APPENDIX H)
STATUS: HOLD			-0-	
GROUP : NSD			-0-	
REV'D RES :YES	NRC APPROVAL :NO			
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:TO BE REVIEWED IN LMD STUDY -0-	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
72	6.3.3.4D	ANNUN	INCONSISTENCY IN USE OF ABBREVIATIONS AND ACRONYMS ON ANNUCIATORS LEGENDS.	WILL STANDARDIZE LEGENDS. AWAITING APPROVAL OF SUPPLEMENTAL REPORT. (APPENDIX H)
STATUS: HOLD			-0-	
GROUP : NSD			-0-	
REV'D RES :YES	NRC APPROVAL :NO			
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:LMD STUDY - THERE ARE COMMON ABBREV. BETWEEN UNIT 1 & 2	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
73	6.3.3.5A(1)	ANNUN	LETTER HEIGHT LESS THAN RECOMMENDED SIZE ON ANNUN TILES.	NO PROBLEM RELATED TO OPERATOR READING ALARM LEGENDS DURING SFTA. AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. (APPENDIX H)
STATUS: HOLD			-0-	
GROUP : NSD			-0-	
REV'D RES :YES	NRC APPROVAL :NO		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:TO BE REVIEWED IN LMD STUDY -0-	
IMPLEMENT DATE : / /			REV'D RESU:NO FURTHER ACTION.	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
74	6.3.3.5A(2)	ANNUN	LETTER SIZE VARIES FROM 7/32 ON ANNUNCIATOR TILES.	WILL STANDARDIZE LETTER SIZE. AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. (APPENDIX H)
STATUS: HOLD			-0-	
GROUP : NSD			-0-	
REV'D RES :YES	NRC APPROVAL :NO		-0-	
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:TO BE REVIEWED IN LMD STUDY -0-	
IMPLEMENT DATE : / /			REV'D RESU:	
75	6.3.3.5B(2)	ANNUN	SOME LEGENDS HAVE DIFFERENT STROKE WIDTHS.	WILL STANDARDIZE WIDTHS. AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. (APPENDIX H)
STATUS: HOLD			-0-	
GROUP : NSD			-0-	
REV'D RES :YES	NRC APPROVAL :NO		-0-	
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:TO BE REVIEWED IN LMD STUDY -0-	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
76	6.3.3.5C(2)	ANNUN	MANY TILES ARE BURNED - LEAVING A BROWN TINT ON TILES.	SEE APPENDIX I OF SUPPLEMENTAL REPORT.
STATUS: HOLD			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :NO		-0-	
PRIORITY : ENHANC				
RESOLUTION CATEGORY:ENHANC			RESOLUTION:REPLACE BURNED TILES ONCE LMD STUDY COMPLETED	
IMPLEMENT DATE : / /			REV'D RESU:	
77	6.3.3.5D(1-6)	ANNUN	TILE LEGEND LETTERS DIMENSIONS AND SPACING DOES NOT COMPLY WITH RECOMMENDED (1) STROKE WIDTH TO HEIGHT RATIO, (2) NUMERAL WIDTH TO HEIGHT RATIO, AND (3) LETTER SPACING.	WILL STANDARDIZE LETTER SPACING AND DIMENTIONS. AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. (APPENDIX H)
STATUS: HOLD				
GROUP : NSD				
REV'D RES :YES	NRC APPROVAL :NO			
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:TO BE REVIEWED IN LMD STUDY -0-	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
78	6.3.4.2A	ANNUN	ANNUNCIATOR CONTROLS ARE NOT ARRANGED IN SAME ORDER ON ALL LOCATIONS-ARRANGEMENT ON BSP DIFFERENT.	AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. (APPENDIX L)
STATUS: HOLD			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :NO		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM/OPERATORS RECOGNIZECONTROLS & ENHANC TO BE ADDED	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
79	6.3.4.2B(1-4)	ANNUN	ANNUNCIATOR CONTROLS ARE NOT DISTINCTIVELY SET OFF FROM OTHER CONTROLS ON BB.	CORRECTIVE ACTIONS TO BE COMPLETED PER DCP-804 SCHEDULED FOR 6R. ONLY BACKGROUND TO SILENCE BUTTON WILL BE SHADED WHITE. APPENDIX A.
STATUS: HOLD			-0-	
GROUP : ENG			-0-	
REV'D RES :YES	NRC APPROVAL :NO		-0-	
PRIORITY : ENHANC				
RESOLUTION CATEGORY:ENHANC			RESOLUTION:CHANGE SILENCE BUTTON COLOR TO WHITE & SHADE BACKGRD	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			ANNUNCIATOR CONTROLS ARE NOT	: NRC APPROVED TAKING NO CORRECTIVE ACTION
80	6.3.4.2C	ANNUN	NONDEFEATABLE	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM CONTROLLED BY ADMIN PROCEDURES	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			UNNECESSARY ALARMS: PRIMARY GRADE WATER,	: REVIEW DETERMINED THAT ONLY UNNESESSARY
81	6.3.1.2	ANNUN	LOAD DISPATCHES ALERT, WATER TREATING	: ALARM IS LOAD DISPACHER ALERT WHICH IS
STATUS: HOLD			ALARMS, BOREN RECOVERY SYSTEMS, GASEOUS	: NOT A NUSIANCE ALARM. IDENTIFIED ALARMS
GROUP : NSD			WASTE, SOLID WASTE	: WILL NOT BE REMOVED. AWAITING NRC
REV'D RES :YES	NRC APPROVAL :NO		-0-	: APPROVAL OF SUPP. REPORT. (APPENDIX H)
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:TO BE REVIEWED IN LMD STUDY -0-	
IMPLEMENT DATE : / /			REV'D RESU:NO FURTHER ACTION REQUIRED. SEE ABOVE COMMENT.	
			NEEDED ALARMS: 90KON EVAPORATOR OVERHEAD	: REVIEW DETERMINED THAT EXISTING INSTRU-
82	6.3.1.2	ANNUN	PRESSURE, TURBINE TEMP., DIESEL RUNNING-	: MENTATION IS ADEQUATE AND ALARMS WOULD
STATUS: HOLD			DO HAVE 2 TACHS, TV SA 105 CLOSED.	: NOT ENHANCE PLANT SAFETY. IDENTIFIED
GROUP : NSD			-0-	: ALARMS WILL NOT BE ADDED. AWAITING NRC
REV'D RES :YES	NRC APPROVAL :NO		-0-	: APPROVAL OF SUPP. REPORT. (APPENDIX H)
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:TO BE REVIEWED IN LMD STUDY -0-	
IMPLEMENT DATE : / /			REV'D RESU:NO FURTHER ACTION REQUIRED.	
			NEED FOR REFLASH ON NUMBER OF ALARMS.	: REQUIRES SPECIAL STUDY. REPORT SCHEDULED
83	6.3.1.2	ANNUN	-0-	: FOR 7/15/88. AWAITING NRC APPROVAL OF
STATUS: OPEN			-0-	: SUPPLEMENTAL REPORT. (APPENDIX H)
GROUP : NSD			-0-	:
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : IN-PROG				
RESOLUTION CATEGORY:TBC			RESOLUTION:PROVIDE REFLASH FOR ALARMS IDENTIFIED OR PROVIDE ADD. ANNUN	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
			NEED ALARM SILENCE BUTTON ON VB	: EXISTING SILENCE CONTROLS DETERMINED TO
84	6.3.4.1	ANNUN	-0-	: BE ADEQUATE AND APPROPRIATELY ARRANGED
STATUS: HOLD			-0-	: AND LOCATED. AWAITING NRC APPROVAL OF
GROUP : NSD			-0-	: SUPPLEMENTAL REPORT. (APPENDIX H)
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:TO BE REVIEWED IN LMD STUDY -0-	
IMPLEMENT DATE : / /			REV'D RESU:NO FURTHER ACTION REQUIRED.	
			ANNUNCIATOR WINDOWNS ARE NOT LABELLED TO	: APPENDIX I.
85	6.3.4GEN	ANNUN	FACILITATE ACCESS TO PROCEDURES.	:
STATUS: HOLD			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :NO		-0-	:
PRIORITY : ENHANC				
RESOLUTION CATEGORY:ENHANC			RESOLUTION:SEE HED #68 -0-	
IMPLEMENT DATE : / /			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			DURING TRANSIENTS - TOO MANY ALARMS, TOO	: RESOLUTION BASED ON FIRST OUT PANEL.
86	6.3.4	ANNUN	MUCH INFO, LACK OF PRIORITIZATION.	: (SEE HED-57) AWAITING NRC APPROVAL OF
STATUS: HOLD			-0-	: SUPPLEMENTAL REPORT. (APPENDIX H)
GROUP : NSD			-0-	:
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:TO BE REVEIWED IN LMD STUDY -0-	
IMPLEMENT DATE : / /			REV'D RESU:NO FURTHER ACTION REQUIRED.	
			ALARMS OUT OF PLACE	: REVIEW DETERMINED THAT EXISTING LOCA-
87	6.3.3.1A	ANNUN	1. SUMP ALARM NEAR LW INDICATORS	: TIONS ARE APPROPRIATE. AWAITING NRC
STATUS: HOLD			2. MS ANNUNCIATOR TRIP VALVE	: APPROVAL OF SUPPLEMENTAL REPORT.
GROUP : NSD			-0-	: (APPENDIX H)
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:TO BE REVEIWED IN LMD STUDY -0-	
IMPLEMENT DATE : / /			REV'D RESU:NO FURTHER ACTION REQUIRED.	
			EOP ES-1.1,STEP 9-RND REQUIRES OPERATOR	: NRC APPROVED TAKING NO CORRECTIVE ACTION
88	6.4	B GENERIC	TO OPEN VALVES MOV-CH-289 & 310 SEQUENT-	:
STATUS: CLOSED			IALLY. VALVES ON BA3 & BA1 RESPECTIVELY.	:
GROUP : NSD			OPERATOR HS TO WALK LENGTH OF TWO SEC-	:
REV'D RES :NO	NRC APPROVAL :YES		TIONS.	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:DON'T CHANGE-289 ISOLATION VALVE,TIME NOT CRITICAL	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			EOP E-0,STEP 29B-AER REQUIRES OPERATOR	: NRC APPROVED TAKING NO CORRECTIVE ACTION
89	6.4	BC2	TO THROTTLE AFW VALVES. THERE ARE THRE'	:
STATUS: CLOSED			VALVES PER TRAIN. IS PROBLEM IF VALVES	:
GROUP : NSD			TO BE THROTTLED SIMULTANEOUSLY	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO CHANGE - VALVES DO NOT HAVE TO BE THROTTLED SIMULTANEOUSL	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			THROTTLE MOV SWITCHES HAVE SAME TYPE	: AWAITING NRC APPROVAL OF SUPPLEMENTAL
90	6.4.1.1C(1&2)	GENERIC	CONTROL AS OPEN/CLOSE MOV SWITCHES.	: REPORT. (SEE APPENDIX L)
STATUS: HOLD			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :NO		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM VALVES HAVE DUEL IND. LITES, FLOW IND. & ALARM	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
			SAFETY RELATED CONTROLS NOT DISTINGUISHD	: NRC APPROVED TAKING NO CORRECTIVE ACTION
91	6.4.1.1C(1)	GENERIC	FROM NON-SAFETY RELATED CONTROLS.	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM PATCHES ON VALVES ADEQUATE FOR PLANT COND. IDEN.	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
92	6.4.1.1C(1)	BC3	BEARING OIL PUMP CONTROLS LO-M-16,17 ARE OT-2 SWITCHES. T HANDLES USUALLY USED FOR PUMP CONTROLS. -0- -0-	CORRECTIVE ACTIONS TO BE COMPLETED PER DCP-804 SCHEDULED FOR 6R. NRC APPROVED CORRECTIVE ACTION.
STATUS: HOLD				
GROUP : ENG				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : 3				
RESOLUTION CATEGORY: INS MD			RESOLUTION: REPLACE WITH ANOTHER TYPE OF SWITCH (DWG 25AE)	
IMPLEMENT DATE : / /			REV'D RESU:	
93	6.4.1.1C(1)	BSP	ON BSP, DIESEL FIRE PUMP START SWITCH IS A PUSH BUTTON. TRAIN A FIRE PUMP START SWITCH IS A J HANDLE. -0- -0-	PUSH BUTTON PREFERRED TO DISTINGUISH DIESEL ENGINE (SEE HED-96,105) AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. (APPENDIX A)
STATUS: HOLD				
GROUP : NSD				
REV'D RES :YES	NRC APPROVAL :NO			
PRIORITY : N/A				
RESOLUTION CATEGORY: AAAA			RESOLUTION: REPLACE DIESEL SWITCH WITH J HANDLE & SEE HED #96	
IMPLEMENT DATE : / /			REV'D RESU: SEE ABOVE COMMENT.	
94	6.4.1.1C(1)	BA3	QUENCH SPRAY PUMP CONTROLS ARE OT-2 SWITCHES. T HANDLES USUALLY USED FOR PUMP CONTROLS. -0- -0-	CORRECTIVE ACTIONS TO BE COMPLETED PER DCP-804 SCHEDULED FOR 6R. NRC APPROVED CORRECTIVE ACTION.
STATUS: HOLD				
GROUP : ENG				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : 3				
RESOLUTION CATEGORY: INS MD			RESOLUTION: MODIFY EXIST. SWITCH TO SMALL SIZED T OR J HANDLE (DWG 25AE)	
IMPLEMENT DATE : / /			REV'D RESU:	
95	6.4.1.1E(2)	BC2	PENNIES USED ON HAGAN FW CONTROLLERS TO KEEP CONTROLLERS STEADY. -0- -0-	CORRECTIVE ACTION COMPLETED. PERMANENT SHIMS PROVIDED. APPENDIX I OF SUPPLEMENTAL REPORT.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY : 3				
RESOLUTION CATEGORY: INS MD			RESOLUTION: USE PERMANENT SHIM OR REPLACE CONTROLLER	
IMPLEMENT DATE : / /			REV'D RESU:	
96	6.4.1.2A	BSP	CR PRESSURIZATION--CONTROL SHOULD BE PROTECTED FROM INADVERTANT ACTUATION DUE TO CONFUSION WITH DIESEL FIRE PUMP SWITCH. -0-	GAURD PRESSURIZATION PUSHBUTTON (SEE HED-93) AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. APPENDIX A HED-93.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :YES	NRC APPROVAL :NO			
PRIORITY : ENHANC				
RESOLUTION CATEGORY: ENHANC			RESOLUTION: NO PROBLEM IF DIESEL SWITCH CHANGED TO J.	
IMPLEMENT DATE : / /			REV'D RESU: SEE ABOVE COMMENT.	
97	6.4.1.2A	BA1	SI TRAIN B RESET-- CONTROL SHOULD BE PROTECTED FROM INADVERTANT ACTUATION -0- -0-	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY: AAAA			RESOLUTION: NONE RESETS SHOULD NOT BE GUARDED	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
98	6.4.1.2A	BA1	CIB TRAIN B ACTUATION--CONTROL SHOULD BE PROTECTED FROM INADVERTANT ACTUATION	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NONE SIMULTANIOUS 2-BUTTON ACTION REQUIRED	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
99	6.4.1.2A	BA1	CIA TRAIN A ACTUATION- CONTROL SHOULD BE PROTECTED FROM INADVERTANT ACTUATION	CORRECTIVE ACTIONS TO BE COMPLETED PER DCP-804 SCHEDULED FOR 6R. NRC APROVED CORRECTIVE ACTION.
STATUS: HOLD			-0-	
GROUP : ENG			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : ENHANC				
RESOLUTION CATEGORY:ENHANC			RESOLUTION:GUARD CONTROL	-0-
IMPLEMENT DATE : / /			REV'D RESU:	
100	6.4.1.2A	BB2	ROD CONTROL START UP--CONTROL SHOULD BE PROTECTED FROM INADVERTANT ACTUATION	ROD START UP CONTROL GUARDED.
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : ENHANC				
RESOLUTION CATEGORY:ENHANC			RESOLUTION:GUARD CONTROL	-0-
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
101	6.4.1.2A	BC2	FEEDWATER ISOLATION RESET-CONTROL BHOULD BE PROTECTED FROM INADVERTANT ACTUATION	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:RESET DOES NOT NEED GUARD	-0-
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
102	6.4.1.2A	VC2	TOGGLE SWITCHES ON VC2--CONTROL SHOULD BE PROTECTED FROM INADVERTANT ACTUATION	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:TOGGLE SWITCHES EITHER DEFUNCT OR USED IN TESTING	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
103	6.4.1.2A	BA1	CIA TRAIN B RESET-- CONTROL SHOULD BE PROTECTED FROM INADVERTANT ACTUATION	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:RESET SHOULD NOT BE GUARDED	-0-
IMPLEMENT DATE : 04/10/87			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
104	6.4.1.2A	BA1	CIA TRAIN B ACTUATION- CONTROL SHOULD BE PROTECTED FROM INADVERTANT ACTUATION -0- -0- -0-	: CORRECTIVE ACTIONS TO BE COMPLETED PER : DCP-804 SCHEDULED FOR 6R. NRC APPROVED : CORRECTIVE ACTION. : :
STATUS: HOLD				
GROUP : ENG				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : ENHANC				
RESOLUTION CATEGORY:ENHANC			RESOLUTION:GUARD CIA PUSHBUTTONS -0-	
IMPLEMENT DATE : / /			REV'D RESU:	
105	6.4.1.2A	BSP	DIESEL FIRE PUMP-- CONTROL SHOULD BE PROTECTED FROM INADVERTANT ACTUATION -0- -0- -0-	: AWAITING NRC APPROVAL OF REVISED RESOLU- : TION. IN ADVERTENT ACTUATION OF DIESEL : FIRE PUMP PUSHBUTTON WILL NOT CAUSE : ADVERSE CONSEQUENCES. NOT ACCIDENT : RELATED. APPENDIX A HED-93.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :YES	NRC APPROVAL :NO			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:SEE HED #93 - CHANGE PUSHBUTTON TO J HANDLE	
IMPLEMENT DATE : / /			REV'D RESU:NO ACTION REQUIRED.	
106	6.4.1.2A	BA1	SI TRAIN A ACTUATION-- CONTROL SHOULD BE PROTECTED FROM INADVERTANT ACTUATION -0- -0- -0-	: PUSH BUTTON HAS BEEEN GAURDED. : NRC APPROVED CORRECTIVE ACTION. : :
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:ENHANC			RESOLUTION:GUARD PUSHBUTTON -0-	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
107	6.4.1.2A	BA1	SPRAY ACTUATION--CONTROL SHOULD BE PROTECTED FROM INADVERTANT ACTUATION -0- -0- -0-	: NRC APPROVED TAKING NO CORRECTIVE ACTION : : : :
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NONE NO GUARD REQUIRED SINCE TWO SIMULTANEOUS ACTIONS REQUIR	
IMPLEMENT DATE : 04/10/87			REV'D RESU:ED.	
108	6.4.1.2A	BA1	CIA TRAIN A RESET-- CONTROL SHOULD BE PROTECTED FROM INADVERTANT ACTUATION -0- -0- -0-	: NRC APPROVED TAKING NO CORRECTIVE ACTION : : : :
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:RESET SHOULD NOT BE GUARDED -0-	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
109	6.4.1.2A	BA1	SI TRAIN A RESET-- CONTROL SHOULD BE PROTECTED FROM INADVERTANT ACTUATION -0- -0- -0-	: NRC APPROVED TAKING NO CORRECTIVE ACTION : : : :
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:RESET SHOULD NOT BE GUARDED -0-	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	

MED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
110	6.4.1.2A	SA1	SI TRAIN B ACTUATION-- CONTROL SHOULD BE PROTECTED FROM INADVERTANT ACTUATION -0- -0- -0-	CORRECTIVE ACTIONS TO BE COMPLETED PER DCP-804 SCHEDULED FOR 6R. NRC APPROVED CORRECTIVE ACTION.
STATUS: HOLD				
GROUP : ENG				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:	ENHANC		RESOLUTION:GUARD CONTROL -0-	
IMPLEMENT DATE : / /			REV'D RESU:	
111	6.4.1.2E	GENERIC	SPRING LOADED OT-2 SWITCHES SPRING BACK PAST CENTER POSITION AND ACTUATE 3RD POSITION. -0- -0-	BLOCK SWITCHES-OPERATOR AWARENESS REINFORCED IN TRAINING. AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. (APPENDIX I%J)
STATUS: HOLD				
GROUP : NSD				
REV'D RES :YES	NRC APPROVAL :NO			
PRIORITY : N/A				
RESOLUTION CATEGORY:	AAAA		RESOLUTION:NEEDS ADDITIONAL STUDY TO DETERMINE IF PROBLEM EXISTS.	
IMPLEMENT DATE : / /			REV'D RESU:NO FURTHER ACTION REQUIRED.	
112	6.4.2.1	BSP	THREE POSITION OUTSIDE & EXHAUST DAMPERS SWITCHES ARE REVERSED FROM CONVENTION (OPEN-AUTO-CLOSE RATHER THAN CLOSE-AUTO-OPEN) OT-2 SWITCHES. -0-	CORRECTIVE ACTIONS TO BE COMPLETED PER DCP-804 SCHEDULED FOR 6R. NRC APPROVED CORRECTIVE ACTION.
STATUS: HOLD				
GROUP : ENG				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : 2				
RESOLUTION CATEGORY:	INS MD		RESOLUTION:REWIRE SWITCHES -0-	
IMPLEMENT DATE : / /			REV'D RESU:	
117	6.6.3.8A	BB1	POWER RANGE TRIP AND INTER RANGE TRIP SWITCHES -- ALL SWITCH POSITIONS ARE NOT LABELED. -0- -0-	UNMARKED POSITION IS INACTIVE SPRING RETURN POSITION AND DOES NOT REQUIRE LABLE. APPENDIX H.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :YES	NRC APPROVAL :NO			
PRIORITY : ENHANC				
RESOLUTION CATEGORY:	LMD		RESOLUTION:LMD STUDY -0-	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENTS.	
114	6.4.2.1	BB1	PRZR LEVEL CHANNEL HSS - ILM - 459 SWITCH -- SWITCH POSITION ARE OUT OF SEQUENCE. -0- -0-	POSITIONS AND ASSOCIATED CHANNELS ARE CLEARLY LABELED ON SELECTOR SWITCH. NOT A SEQUENCE SWITCH, PROCEDURES IDENTIFY CHANNELS TO BE SELECTED. AWAITING NRC APPROVAL. (APPENDIX H)
STATUS: HOLD				
GROUP : NSD				
REV'D RES :YES	NRC APPROVAL :NO			
PRIORITY : N/A				
RESOLUTION CATEGORY:	AAAA		RESOLUTION:LMD STUDY -0-	
IMPLEMENT DATE : / /			REV'D RESU:NO FURTHER ACTION REQUIRED.	
115	6.4.2.1	VC4	NUMBER 3 TAP CHANGER -- RAISE/LOWER POSITIONS ARE REVERSED. -0- -0- -0-	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:	AAAA		RESOLUTION:NONE - PROBLEM CORRECTED -0-	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	

MED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
116	6.4.2.1	BC4	OT-2 EMER. GENERATOR GROUND SWITCH INDICATOR LIGHTS VIOLATE RED/GREEN CONVENTION. SHORT TERM CORRECTION -O- -O-	NRC APPROVED CORRECTIVE ACTION. LIGHT CONVENTION USED IS APPROPRIATE AND SUPPLEMENTAL LABELING PROVIDED.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :YES	NRC APPROVAL :NO			
PRIORITY : 4				
RESOLUTION CATEGORY: INS MD			RESOLUTION:WHITE LENS FOR OPEN; CORRECT SWITCH LABELLING	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
117	6.4.3.3A	BC3	TURBINE AND REHEATER STATUS LIGHTS AND PUSHBUTTONS ARE IDENTICAL IN DESIGN. -O- -O- -O-	AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. (APPENDIX L)
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY : N/A				
RESOLUTION CATEGORY: AAAA			RESOLUTION:NO PROBLEM - LEGENDS CLEAR -O-	
IMPLEMENT DATE : / /			REV'D RESU:	
118	6.3.3.5A	ANNUN	MANY ANNUNCIATOR WINDOWS HAVE FOUR LINES OF TEXT.	NOT A DISCREPENCY AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. (APPENDIX H)
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY : N/A				
RESOLUTION CATEGORY: AAAA			RESOLUTION:LMD STUDY	
IMPLEMENT DATE : / /			REV'D RESU:NO ACTION REQUIRED.	
119	6.4.3.3C(3)	GENERIC	SOME PUSHBUTTONS COULD BE ACTUATED DURING REPLACEMENT OF LAMPS. -O- -O-	REVIEW DETERMINED THIS NOT TO BE A PROBLEM. APPENDIX A.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :YES	NRC APPROVAL :NO			
PRIORITY : N/A				
RESOLUTION CATEGORY: AAAA			RESOLUTION:EMPHASIZE PROBLEM IN TRAINING -O-	
IMPLEMENT DATE : / /			REV'D RESU:NO FURTHER ACTION REQUIRED.	
120	6.4.3.3C(4)	GENERIC	PUSHBUTTON LEGENDS ARE NOT CODED FOR POSITION - COULD BE CONFUSING DURING MULTIPLE REPLACEMENT. -O- -O-	OPERATOR PRACTICE IS TO REPLACE SINGLY. APPENDIX A AND I.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :YES	NRC APPROVAL :NO			
PRIORITY : 4				
RESOLUTION CATEGORY: ENHANC			RESOLUTION:CODE PUSHBUTTON AFTER LMD STUDY AND EMPASIZE IN TRAINING	
IMPLEMENT DATE : / /			REV'D RESU:NO FURTHER ACTION REQUIRED.	
121	6.4.4.2A(1)	GENERIC	J HANDLE LENGTH IS LESS THAN RECOMMENDED LENGTH 3.5 RECOMMENDED. -O- -O-	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY: AAAA			RESOLUTION:OPERATORS DO NOT FIND DIFFICULT	
IMPLEMENT DATE : 08/10/87			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
122	6.4.4.3B	GENERIC	TEETH ARE POINTING DOWN ON KEY OPERATED CONTROL RATHER THAN UP. -0- -0- -0-	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - NO ERROR HISTORY & NO OPERATOR PROBLEM	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
123	6.4.4.3D	BA1	DCV-RC-455D KEY SWITCH - OFF POS. NOT VERTICAL - POSITIONS ARE SEQUENCED PROPERLY -0- -0-	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM SWITCH POSITION FOLLOWS CR CONVENTION	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
124	6 .4.3D	BB2	DCV-RC-455C KEY SWITCH - OFF NOT IN VERTICAL POSITION. POSITION ARE SEQUENCED PROPERLY -0- -0-	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NONE SAME AS HED #123 -0-	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
125	6.4.4.3G(1)	GENERIC	3 POSITION KEY SWITCH HAS ABOUT 45 DEGRE DISPLACEMENT RATHER THAN RECOMMENDED MINIMUM OF 80 DEGREE. -0- -0-	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NONE CR CONVENTION FOLLOWED, POSITIONS CLEARLY LABELLED	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
126	6.4.4.4C(1)	GENERIC	HAGAN CONTROLLERS - FINGERTIP GRASP KNOBS ARE SMALLER THAN 1/2 RECOMMENDED. -0- -0-	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NONE-POTS ARE STANDARD SIZE -0-	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
127	6.4.4.4C(2)	GENERIC	HAGAN CONTROLLERS - FINGERTIP GRASP KNOBS ARE SMALLER THAN RECOMMENDED. -0- -0- -0-	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NONE-POTS ARE STANDARD SIZE; SEE HED 126	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	

MED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			HYDRO TEST PUMP - LEGEND CANNOT BE SEEN	NRC APPROVED TAKING NO CORRECTIVE ACTION
128	6.4.4.5C	BA3	DUE TO LOCATION OF THE CONTROLLER KNOB.	
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NONE THERE ARE INDICATOR LIGHTS ON PUMPS	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			CH-P-2B VIEW OF LEGEND OBSTRUCTED BY	NRC APPROVED TAKING NO CORRECTIVE ACTION
129	6.4.4.5C	3A	CONTROLLER KNOB.	
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NONE - OPERATOR CAN MOVE HEAD SLIGHTLY AND SEE	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			BR-P-11AB LEGEND IS OBSTRUCTED BY	NRC APPROVED TAKING NO CORRECTIVE ACTION
130	6.4.4.5C	3A3	CONTROLLER KNOB.	
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NONE - OPERATOR CAN MOVE HEAD SLIGHTLY AND SEE	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			VOLTMETER SELECTOR SWITCHES - 4KVBUS AND	NRC APPROVED TAKING NO CORRECTIVE ACTION
132	6.4.4.5C	BC	MAIN GEN -- SWITCH HANDLE OBSTRUCTS VIEW	
STATUS: CLOSED			OF LEGEND/LABEL.	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NONE - OPERATOR CAN MOVE HEAD SLIGHTLY AND SEE	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			LW-P-10 VIEW OF LEGEND IS OBSTRUCTED BY	NRC APPROVED TAKING NO CORRECTIVE ACTION
132	6.4.4.5C	BA	CONTROLLER KNOB.	
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NONE - OPERATOR CAN MOVE HEAD SLIGHTLY AND SEE	
IMPLEMENT DATE : / /			REV'D RESU:	
			GASEOUS WASTE SAMPLE SELECTOR SWITCH-	NRC APPROVED TAKING NO CORRECTIVE ACTION
133	6.4.4.5C	BA	VIEW OF LEGEND IS OBSTRUCTED BY KNOB.	
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NONE - OPERATOR CAN MOVE HEAD SLIGHTLY AND SEE	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			SUMP PUMP 4A,B-- VIEW OF LEGEND/LABEL	NRC APPROVED TAKING NO CORRECTIVE ACTION
134	6.4.4.5C	BA	IS OBSTRUCTED BY KNOB	
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NONE - OPERATOR CAN MOVE HEAD SLIGHTLY AND SEE	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			INSIDE INSTRUMENT SUMP-- CONTROL HANDLE	NRC APPROVED TAKING NO CORECTIVE ACTION
135	6.4.4.5C	BA	OBSTRUCTS VIEW OF CONTROL LABEL POSITION	
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NONE - OPERATOR CAN MOVE HEAD SLIGHTLY AND SEE	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			BR-P-10A,B-- CONTROL HANDLE OBSTRUCTS	NRC APPROVED TAKING NO CORRECTIVE ACTION
136	6.4.4.5C	BA	VIEW OF LEGEND/LABEL	
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NONE - OPERATOR CAN MOVE HEAD SLIGHTLY AND SEE	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			HAGAN CONTROLLERS - MARKING ON VERNIER	NRC APPROVED TAKING NO CORRECTIVE ACTION
137	6.4.4.5GEN	GENERIC	CONTROL (POT) TOO SMALL	
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:POT SIZES ARE STANDARD -(-	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			FC-P-4A,B VIEW OF LEGEND OBSTRUCTED BY	NRC APPROVED TAKING NO CORRECTIVE ACTION
138	6.4.4.5C	BA	CONTROLLER KNOB.	
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NONE - OPERATOR CAN MOVE HEAD SLIGHTLY AND SEE	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			BR-P-B-- CONTROL HANDLE	NRC APPROVED TAKING NO CORRECTIVE ACTION
139	6.4.4.5C	BA	OBSTRUCTS VIEW OF LEGEND/LABEL	
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NONE - OPERATOR CAN MOVE HEAD SLIGHTLY AND SEE	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			LW-P-9A,B-- CONTROL HANDLE	: NRC APPROVED TAKING NO CORRECTIVE ACTION
140	6.4.4.5C	BF	OBSTRUCTS VIEW OF LEGEND/LABEL	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NONE - OPERATOR CAN MOVE HEAD SLIGHTLY AND SEE	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			LW-P-8-- CONTROL HANDLE	: NRC APPROVED TAKING NO CORRECTIVE ACTION
141	6.4.4.5C	BA	OBSTRUCTS VIEW OF LEGEND/LABEL	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NONE - OPERATOR CAN MOVE HEAD SLIGHTLY AND SEE	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			BR-P-6B,A-- CONTROL HANDLE	: NRC APPROVED TAKING NO CORRECTIVE ACTION
142	6.4.4.5C	BA	OBSTRUCTS VIEW OF LEGEND/LABEL	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NONE - OPERATOR CAN MOVE HEAD SLIGHTLY AND SEE	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			LW-P-2A,B-- CONTROL HANDLE	: NRC APPROVED TAKING NO CORRECTIVE ACTION
143	6.4.4.5C	BA	OBSTRUCTS VIEW OF LEGEND/LABEL	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NONE - OPERATOR CAN MOVE HEAD SLIGHTLY AND SEE	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			LW-P-1A,B-- CONTROL HANDLE	: NRC APPROVED TAKING NO CORRECTIVE ACTION
144	6.4.4.5C	BA	OBSTRUCTS VIEW OF LEGEND/LABEL	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NONE - OPERATOR CAN MOVE HEAD SLIGHTLY AND SEE	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			BR-P-9-- CONTROL HANDLE	: NRC APPROVED TAKING NO CORRECTIVE ACTION
145	6.4.4.5C	BA	OBSTRUCTS VIEW OF LEGEND/LABEL	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NONE - OPERATOR CAN MOVE HEAD SLIGHTLY AND SEE	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			BR-P-3B,A-- CONTROL HANDLE	NRC APPROVED TAKING NO CORRECTIVE ACTION
146	6.4.4.5C	BA	OBSTRUCTS VIEW OF LEGEND/LABEL	
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NONE - OPERATOR CAN MOVE HEAD SLIGHTLY AND SEE	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			HANDLES ON VOLTMETORS ON ELECTRICAL	NRC APPROVED TAKING NO CORRECTIVE ACTION
147	6.4.4.5D(2)	BC	DISTRIBUTION PANEL - POINTERS ARE TOO	
STATUS: CLOSED			FAR FROM SETTING TO WHICH THEY REFER	
GROUP : NSD			(POINTERS ON TOP OF CONTROL HANDLES	
REV'D RES :NO	NRC APPROVAL :YES		RATHER THAN CLOSE TO POSITION LEGENDS)	
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - POSITIONS ARE CLEARLY DISTINGUISHABLE	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			DEPTH OF SELECTOR SWITCHES (OT-2S)	NRC APPROVED TAKING NO CORRECTIVE ACTION
148	6.4.4.5E(4)	GENERIC	IS LESS THAN RECOMMENDED .625	
STATUS: CLOSED			DEVIATION IS SMALL - OPERATORS	
GROUP : NSD			INDICATED NO PROBLEM	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - OT-2'S STANDARD DEVIATION IS SMALL	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			THUMPWHEELS HAVE NO	NRC APPROVED TAKING NO CORRECTIVE ACTIO
149	6.4.5.1B		NO "ZERO""	
STATUS: CLOSED			POSITIONS TO FACILITATE STATUS---	
GROUP : NSD			RECOGNITION.	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:ALL THUMBWHEELS ARE EITHER DISABLED OR DON'T NEED "0" REF.	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			FLOW INDICATORS GENERALLY HAVE SO. ROOT	AWAITING NRC APPROVAL OF SUPPLEMENTAL
150	6.5.1.1A	GENERIC	SCALES THAT ARE DIFFICULT TO READ ON	REPORT. (REF. HEDS-158,162,196,430)
STATUS: HOLD			LOW END.	(APPENDIX J)
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :NO		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:OTHER			RESOLUTION:FLOW INDICATOR THAT ARE PROBLEMS ARE IDEN.IN HED #196	
IMPLEMENT DATE : / /			REV'D RESU:	
			IT WOULD BE EASIER FOR OPERATOR TO PER-	NRC APPROVED TAKING NO CORRECTIVE ACTION
151	6.5.1.1B	ANNUNCIATOR	FORM STEP 9A-AER, EOP E-0, IF THERE WAS	
STATUS: CLOSED			A CIA ANNUNCIATOR.	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:OPERATORS KNOW THAT CIA EXIST IF THERE IS SI	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			EOP ECA-1.1,ATTACHMENT 1. THERE IS NO DIRECT INDICATION OF FLOW FOR OUTSIDE SPRAY PUMPS TO MHSI PUMPS. -O- -O-	NRC APPROVED TAKING NO CORRECTIVE ACTION
152 6.5.1.1B STATUS: CLOSED GROUP : NSD REV'D RES :NO NRC APPROVAL :YES PRIORITY : N/A RESOLUTION CATEGORY:AAAA IMPLEMENT DATE : 04/10/87		BA3		RESOLUTION:OPERATOR HAS AMP METER & PUMP DISCHARGE PRESSURE REV'D RESU:
			MOST HAGAN CONTROLLERS DISPLAY ONLY DEMAND SIGNAL AND FREQUENTLY ACTUAL STATUS NOT INDICATED. -O- -O-	NRC APPROVED CORRECTIVE ACTION. SEE APPENDIX J FOR ADDITIONAL INFORMATION REQUESTED.
153 6.5.1.1E(1) STATUS: HOLD GROUP : TRNG REV'D RES :NO NRC APPROVAL :YES PRIORITY : COMPLETE RESOLUTION CATEGORY:TRNG IMPLEMENT DATE : / /		GENERIC		RESOLUTION:EMPHASIZE IN TRNG TO USE OTHER INDIC. WHERE SYS RESP NEEDED REV'D RESU:
			EOP E-0,STEP 21B-AER REQUIRES OPERATOR TO "CHECK NORMAL PRZR SPRAY VALVES CLOSED". THERE IS NO INSTRUMENTATTION TO VERIFY POSITION. HAGEN VALVE CONTROL IS DEMAND SIGNAL. NO FLOW INDICATOR.	APPENDIX A.
154 6.5.1.1E(2) STATUS: HOLD GROUP : NSD REV'D RES :YES NRC APPROVAL :NO PRIORITY : 1 RESOLUTION CATEGORY:REDSGN IMPLEMENT DATE : / /		:B1		RESOLUTION:PROVIDE OPER WITH FLOW OR VALVE POS IND REV'D RESU:SEE ABOVE COMMENT.
			EOP ES-0.1,STEP 4B(1)-RNO REQUIRES THAT FCV-CH-122 BE VERIFIED SHUT. HAGAN CONTROLLER HAS ONLY DEMAND SIGNAL. -O-	PROCEDURE MODIFICATION SCHEDULED FOR 6R.
155 6.5.1.1E(2) STATUS: HOLD GROUP : PROC REV'D RES :NO NRC APPROVAL :NO PRIORITY : 1 RESOLUTION CATEGORY:PRCDRE IMPLEMENT DATE : / /		BA6		RESOLUTION:OPER. HAS FLOW FI-CH-122A -- MOD PROCEDURE REV'D RESU:
			AS PER EOP E-0,STEP 1-AER, OPERATOR CAN NOT VERIFY "REACTOR TRIP & BYPASS BREAKERS-OPEN". HAGEN CONTROLLER INDICATES DEMAND SIGNAL ONLY. -O-	CORRECTIVE ACTION SCHEDULED TO BE COMPLETED FOR 6R.
156 6.5.1.1E(2) STATUS: HOLD GROUP : ENG REV'D RES :NO NRC APPROVAL :YES PRIORITY : IN-PROG RESOLUTION CATEGORY:REDSGN IMPLEMENT DATE : / /		BB1		RESOLUTION:PROVIDE OPERATOR WITH ANNUN AND INDICATION - (DCC - 622) REV'D RESU:
			VOLT METERS - MOST ARE ON THE 0-130V OR 0-150V SCALE. OPERATOR MUST CONVERT WHEN BUS HAS HIGHER VOLTAGE WHICH MOST DO. -O-	AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. APPENDIX A.
157 6.5.1.2A STATUS: HOLD GROUP : NSD REV'D RES :NO NRC APPROVAL :NO PRIORITY : N/A RESOLUTION CATEGORY:AAAA IMPLEMENT DATE : / /		BC		RESOLUTION:PUT STANDARD SCALE(RANGE)ON METER FACE. (0-130V) REV'D RESU:NO FURTHER ACTION REQUIRED.

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
158	6.5.1.2A	VC2	EOP ECA-2.1,CAUTION BEFORE STEP 2. 25 GPM AFW FLOW CANNOT BE ACCURATELY READ ON DUE TO SQUARE ROOT SCALE. -O-	PROCEDURE MODIFICATION SCHEDULED FOR 6R. (APPENDIX J)
STATUS: HOLD				
GROUP : PROC				
REV'D RES :NO	NRC APPROVAL :NO		-O-	
PRIORITY : 1				
RESOLUTION CATEGORY:PRCDRE			RESOLUTION:RECOMMEND PROCEDURAL CHANGE-IF NO CHANGE INSTALL LINEAR SCAL	
IMPLEMENT DATE : / /			REV'D RESU:	
159	6.5.1.2A	VC2	EOP ES-0.1,STEP 6A-RNO REQUIRES 350GPM TOTAL FEED FLOW BE READ. SCALE IS INADE-QUATE. -O-	PROCEDURE MODIFICATION SCHEDULED FOR 6R. APPENDIX I AND J.
STATUS: HOLD				
GROUP : PROC				
REV'D RES :NO	NRC APPROVAL :NO		-O-	
PRIORITY : 1				
RESOLUTION CATEGORY:PRCDRE			RESOLUTION:RECOMMEND PROCEDURAL CHANGE-IF NO CHANGE CONSID. OTHER ALTN.	
IMPLEMENT DATE : / /			REV'D RESU:	
160	6.5.1.2A	VA4	EOP ECA-0.2,STEP 1-AER. 19 FEET 2&1/2 CANNOT BE ACCURATELY READ ON INDICATOR DUE TO SCALE. -O-	NRC APPROVED TAKING NO FURTHER CORREC-TIVE ACTION
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES		-O-	
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:AAAA			RESOLUTION:PROCEDURE REVISED -O-	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
161	6.5.1.2A	VA6	EOP FR-I.3, STEP 6B- AER. RCS PRESS. OF 1585 PSIG CANNOT BE ACCURATELY READ DUE TO SCALE INCREMENTATION. -O-	AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. APPENDIX L.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO		-O-	
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:PROCEDURE REVISED -O-	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
162	6.5.1.2A	VA6	EOP ES-0.1,STEP 4B(3)-RNO. FI-CH-122A HAS A SQUARE ROOT SCALE MAKING IT DIFF ICULT TO READ 15GPM. -O-	EOP REVISION TO DENOTE THAT 15GPM IS THE FIRST INCREMENT/MINIMUM FLOW. PROCEDURE MODIFICATION SCHEDULED FOR 6R APPENDIX I.
STATUS: HOLD				
GROUP : PROC				
REV'D RES :YES	NRC APPROVAL :NO		-O-	
PRIORITY : 3				
RESOLUTION CATEGORY:PRCDRE			RESOLUTION:CHECK ON PROCDURAL CHANGE AND ACCURACY REQUIREMENTS	
IMPLEMENT DATE : / /			REV'D RESU:SEE COMENT ABOVE.	
163	6.5.1.2A	VC2	EOP ECA 2.3,STEP 29AER/ECA 0.0,STEP 6A-RNO. REQUIRED SG PRESSURE VALUES(335 CANNOT BE ACCURATELY READ DUE TO SCALE(INCREMENTS ARE 200 PSI) -O-	ADRESSED IN BACKGROUND DOCUMENTS TO DIRECT OPERATORS TO THE SPDS. PROCEDURE MODIFICATION SCHEDULED FOR 6R. (APPENDIX J)
STATUS: HOLD				
GROUP : PROC				
REV'D RES :NO	NRC APPROVAL :NO		-O-	
PRIORITY : 1				
RESOLUTION CATEGORY:PRCDRE			RESOLUTION:REVISE PROCEDURES -O-	
IMPLEMENT DATE : / /			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
164	6.5.1.2A	VA2	EOP E-1,STEP 20B-AER. SUMP LEVEL INDICATOR (LI-RS-151A,B) DIFFICULT TO READ REQUIRED VALUE DUE TO INCREMENTS OF 4 AND 1/2 -0-	PROCEDURE CHANGED TO INDICATE ALTERNATE SUMP LEVEL INDICATOR WITH CORRECT INCREMENTS. AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. (APPENDIX A)
STATUS: HOLD				
GROUP : NSD				
REV'D RES :YES	NRC APPROVAL :NO		-0-	
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:	PCRDR		RESOLUTION:CHANGE SCALE TO GRADUATIONS OF 10	
IMPLEMENT DATE : / /			REV'D RESU:SEE COMMENT ABOVE.	
165	6.5.1.2A	BB1	EOP FR-I.1,STEP 5A-AER/RNO. PRZR PRESS. (2335 & 2315 PSIG) CANNOT BE ACCURATELY READ DUE SCALE INCREMENTATION. -0-	NOT NEEDED TO BE ACCURATELY READ. BACKGROUND DOCUMENTS DIRECT OPERATOR TO USE SPDS. PROCEDURE MODIFICATIONS SCHEDULED FOR 6R. NRC APPROVED CORRECTIVE ACTION.
STATUS: HOLD				
GROUP : PROC				
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : 1				
RESOLUTION CATEGORY:	PRCDRE		RESOLUTION:REVISE PROCEDURES -0-	
IMPLEMENT DATE : / /			REV'D RESU:	
166	6.5.1.5D	VA6	CHARGING AND LETDOWN SCALES ARE DIFFERENT -0-	CORRECTIVE ACTIONS TO BE COMPLETED PER DCP-804 SCHEDULED FOR 6R. NRC APPROVED CORRECTIVE ACTION.
STATUS: HOLD				
GROUP : ENG			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : 1				
RESOLUTION CATEGORY:	INS MD		RESOLUTION:CHANGE SCALE TO MAKE SAME -0-	
IMPLEMENT DATE : / /			REV'D RESU:	
167	6.5.1.2B	RAD MON	RAD MON DIFFICULT TO READ AND INTERPOLTION REQUIRED. -0-	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED				
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:	AAAA		RESOLUTION:NO PROBLEM PRECISE INTERPOLATION NOT REQUIRED	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
168	6.5.1.2B	BC	FEED REG VALVES & BYPASS VALVE CONTROLLERS - CONTROLLERS SCALED 0-100%; FLOW IN POUNDS PER HOUR. -0-	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED				
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:	AAAA		RESOLUTION:NO PROB/0-100% IS DEMAND; LBS/HR MATCHES STEAM FLOW	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
169	6.5.1.5A	GENERIC.	DISPLAY SCALES HAVE A VARIETY OF SIZES AND FONT TYPES OF ALPHANUMERICS. -0-	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED				
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:	AAAA		RESOLUTION:OPERATORS INDICATE NO PROBLEM READING METER FACES	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
170	6.5.1.3B(1-3)	GENERIC	DISPLAYS HAVE A VARIETY OF TYPE STYLES AND BOTH UPPER CASE AND LOWER CASE LETTERS USED. -O- -O-	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED GROUP : NSD REV'D RES :NO NRC APPROVAL :YES PRIORITY : N/A RESOLUTION CATEGORY:AAAA IMPLEMENT DATE : 04/10/87			RESOLUTION:OPERATORS INDICATE NO PROBLEM READING METER FACES REV'D RESU:	
171	6.5.1.4A(1)	BA2	AUX RIVER WATER PUMP 9A,9B INDICATORS HAS NO PROCESS UNITS. -O- -O-	CORRECTIVE ACTIONS TO BE COMPLETED PER DCP-804 SCHEDULED FOR 6R. NRC APPROVED CORRECTIVE ACTION.
STATUS: HOLD GROUP : ENG REV'D RES :NO NRC APPROVAL :YES PRIORITY : 3 RESOLUTION CATEGORY:INS MD IMPLEMENT DATE : / /			RESOLUTION:ADD APPROPRIATE UNITS(AMPS) TO SCALE REV'D RESU:	
172	6.5.1.4A(1)	BA5	BORIC ACID HOLD TANK LEVEL INDICATOR-NO PROCESS UNITS ON INDICATOR. -O- -O-	CORRECTIVE ACTIONS TO BE COMPLETED PER DCP-804 SCHEDULED FOR 6R. NRC APPROVED CORRECTIVE ACTION.
STATUS: HOLD GROUP : ENG REV'D RES :NO NRC APPROVAL :YES PRIORITY : 3 RESOLUTION CATEGORY:INS MD IMPLEMENT DATE : / /			RESOLUTION:ADD APPROPRIATE UNITS(FEET)TO SCALE REV'D RESU:	
173	6.5.1.4A(1)	BB2	TREF STEAM DUMP INDICATOR - NO PROCESS UNITS ON INDICATOR. -O- -O-	CORRECTIVE ACTIONS TO BE COMPLETED PER DCP-804 SCHEDULED FOR 6R. NRC APPROVED CORRECTIVE ACTION.
STATUS: HOLD GROUP : ENG REV'D RES :NO NRC APPROVAL :YES PRIORITY : 3 RESOLUTION CATEGORY:INS MD IMPLEMENT DATE : / /			RESOLUTION:ADD APPROPRIATE UNITS(DEGREES F) TO SCALE REV'D RESU:	
174	5.1.2.5B(1)	GENERIC	VERTICAL INDICATORS ON VBS HAVE UNITS PRINTED TOO LOW ON THE FACE PLATE TO BE READ FROM THE BRS. - NEED TO IDENTIFY METERS. -O-	NO PROBLEM SINCE ACCIDENT RELATED INDICATORS BELOW 41" RAISED TO POSITION WHERE THEY CAN BE EASILY READ. AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. (APPENDIX H)
STATUS: HOLD GROUP : NSD REV'D RES :YES NRC APPROVAL :NO PRIORITY : N/A RESOLUTION CATEGORY:AAAA IMPLEMENT DATE /			RESOLUTION:LMD STUD -O- REV'D RESU:NO FURTHER ACTION REQUIRED.	
175	6.5.1.4B	VB 1	PI-RC-104 RCVS PRESSURE RANGE -- MOST DISPLAYS HAVE TRADEMARK OR OTHER INFO BUT DOES NOT DETRACT FROM DISPLAY READING. -O-	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED GROUP : NSD REV'D RES :NO NRC APPROVAL :YES PRIORITY : N/A RESOLUTION CATEGORY:AAAA IMPLEMENT DATE : 04/01/87			RESOLUTION:NO PROBLEM DOES NOT DISTRACT OPERATORS REV'D RESU:	

MED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
176	6.5.1.5A(3)	VC2	TOTAL FEED FLOW INDICATOR - 5 OR MORE GRADUATIONS BETWEEN NOS. WITH NO INTERMEDIATE OR MINOR GRADUATIONS. -0- -0-	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED				
GROUP : NSD,				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY: AAAA			RESOLUTION: NO PROBLEM READING SCALE TO REQUIRED ACCURACY	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
177	6.5.1.5A(3)	BC3	PHASE ANGLE VIBRATION & ECCENTRICITY INDICATOR 5 OR MORE GRADUATIONS BETWEEN NOS. WITH NO INTERMEDIATE OR MINOR GRADUATIONS. -0-	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : COMPLETE				
RESOLUTION CATEGORY: AAAA			RESOLUTION: NO PROBLEM METERS HAVE BEEN REPLACED	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
178	6.5.1.5B	BC	COOLING TOWER PPS DISCHARGE TEMP. -0- -0- -0-	OF NO CONSEQUENCE, READABILITY ACCEPTABLE FOR APPLICATION. AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. (APPENDIX A)
STATUS: HOLD				
GROUP : NSD				
REV'D RES :YES	NRC APPROVAL :NO			
PRIORITY : N/A				
RESOLUTION CATEGORY: AAAA			RESOLUTION: CHANGE METER SCALE -0-	
IMPLEMENT DATE : / /			REV'D RESU: SEE ABOVE COMMENT.	
179	6.5.1.5B	BB1	CONTROL ROD POSITION INDICATORS - VIOLATE RECOMMENDED GRADUATION HEIGHTS. -0- -0- -0-	NO PROBLEM-HAVE ROD BOTTOM LITES INDICATION-INCONSEQUENTIAL FOR ACIDENTS. AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. (APPENDIX A)
STATUS: HOLD				
GROUP : NSD				
REV'D RES :YES	NRC APPROVAL :NO			
PRIORITY : N/A				
RESOLUTION CATEGORY: AAAA			RESOLUTION: PROB. W/READABILITY & INS DRIFT; RECOMM. IMPROVED INSTRUMNTN	
IMPLEMENT DATE : / /			REV'D RESU: SEE ABOVE COMMENT.	
180	6.5.1.5B	VB	DISTILLATE ACCUMULATOR A & B LEVELS -- ALL GRADUATION MARKS ARE SAME LENGTH. -0- -0- -0-	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY: AAAA			RESOLUTION: NO PROBLEM - CAN READ TO REQUIRED PRECISION (1"INCREMENTS)	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
181	6.5.1.5B	GENERIC	ALL HAGAN CONTROLLERS - VIOLATE RECOMMENDED GRADUATION HEIGHTS. -0- -0- -0-	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY: AAAA			RESOLUTION: NO PROBLEM - CAN READ TO REQUIRED PRECISION	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	

MED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			DEGAS FEED FLOW MAG TEMPORARY SCALE	: CORRECTIVE ACTIONS TO BE COMPLETED PER
182	6.5.1.5B	VBA3	LABELLING.	: DCP-804 SCHEDULED FOR 6R. NRC APPROVED
STATUS: HOLD			-0-	: CORRECTIVE ACTION.
GROUP : ENG			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : 3				
RESOLUTION CATEGORY: INS MD			RESOLUTION:RECOMMEND PERMANENT SCALE AND MAKE SCALES THE SAME	
IMPLEMENT DATE : / /			REV'D RESU:	
			GOVERNOR VALVES, THROTTLE POSITION	: NRC APPROVED TAKING NO CORRECTIVE ACTION
183	6.5.1.5B	VC3	METERS AND TRACKING METERS-VIOLATE	:
STATUS: CLOSED			RECOMMENDED GRADUATION HEIGHTS	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY: AAAA			RESOLUTION:NO PROB W/READABILITY.	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			GAS WASTE VENT HEADER DISCHARGE FLOW	: NRC APPROVED TAKING NO CORRECTIVE ACTION
184	6.5.1.5C	VB4	METER - INDICATOR UNITS NOT IN MULTIPLES	:
STATUS: CLOSED			OF 1,2 OR 5. GRADUATIONS IN MULTIPLES OF	:
GROUP : NSD			4	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N\A				
RESOLUTION CATEGORY: AAAA			RESOLUTION:OPERATORS INDICATED NO PROBLEM READING REQUIRED ACCURACY	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			GAS WASTE COMPRESS SUCTION INDICATOR -	: CORRECTIVE ACTIONS TO BE COMPLETED PER
185	6.5.1.5C	VA4	+/- NOT MARKED - HI RANGE IN INCHES OF	: DCP-804 SCHEDULED FOR 6R. APPENDIX I.
STATUS: HOLD			MERCURY LO RANGE IN PSIG.	:
GROUP : ENG			-0-	:
REV'D RES :NO	NRC APPROVAL :NO		-0-	:
PRIORITY : 3				
RESOLUTION CATEGORY: INS MD			RESOLUTION:CHANGE SCALE TO INDICATE UNITS(IN. OF MERCURY OR PSIG)	
IMPLEMENT DATE : / /			REV'D RESU:	
			SG-1B PRESS INDICATOR HAS DIFFERENT	: CORRECTIVE ACTIONS TO BE COMPLETED
187	6.5.1.5D	VC2	MARKINGS THAN OTHER SG PRESS INDICATORS.	: DCP-804 SCHEDULED FOR 6R. NRC APPROV
STATUS: HOLD			-0-	: CORRECTIVE ACTIONS.
GROUP : ENG			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : 3				
RESOLUTION CATEGORY: INS MD			RESOLUTION:MAKE SG-1A,1B STEAM SUPPLY TO AUX FEED PUMP LIKE 1C SCALE	
IMPLEMENT DATE : / /			REV'D RESU:	
			STATUS PANEL - ARRANGEMENT OF INDICATOR	: NRC APPROVED TAKING NO CORRECTIVE ACTION
188	6.5.1.5D	VA1	LIGHTS/BUTTONS IS NOT BY CHANNEL OR	:
STATUS: CLOSED			FUNCTION.	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY: AAAA			RESOLUTION:NO PROBELM - JUST A BACKLIT, MANUAL STATUS PANEL	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			PRZR PRESS SCALES HAVE DIFFERENT	: CORRECTIVE ACTIONS TO BE COMPLETED PER
189	6.5.1.5D	BB2	SUBDIVISIONS.	: DCP-804 SCHEDULED FOR 6R. NRC APPROVED
STATUS: HOLD			-0-	: CORRECTIVE ACTIONS.
GROUP : ENG			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : 3				
RESOLUTION CATEGORY:INS MD			RESOLUTION:MAKE SCALES ON A&C SAME AS B -0-	
IMPLEMENT DATE : / /			REV'D RESU:	
			MAKEUP BATCH FLOW INDICATOR DOES NOT	: NRC APPROVED TAKING NO CORRECTIVE ACTION
190	6.5.1.5D	VA3	CORRESPOND TO OTHER INDICATORS THAT SHOW	:
STATUS: CLOSED			GALLONS ADDED TO SYSTEM.	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - OPERATORS CALCULATE ON DIFFERENT BASIS	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			CNMT PRESS/LEVEL/TEMP. INDICATORS -	: NRC APPROVED TAKING NO CORRECTIVE ACTION
191	6.5.1.5D	VA1	CHANNELS ARE LOCATED ABOVE/BELOW;	:
STATUS: CLOSED			NOT PREFERRED SIDE BY SIDE	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM INDICATORS ARE EASILY COMPARED	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			PRIMARY DRAINS XFER TANKS 1 & 2	: NRC APPROVED TAKING NO CORRECTIVE ACTION
192	6.5.1.5D	VA2	INDICATORS HAVE DIFFERENT SCALE.	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NONE - TANK PRESSURES MAY BE DIFFERENT	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			CONTAINMENT PRESS INDICATOR HAS UNUSUAL	: NRC APPROVED TAKING NO CORRECTIVE ACTION
193	6.5.1.5D	VA1	SCALE (INCREMENTS OF .5)	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:INDICATOR HAS TO BE READ AT THAT LEVEL OF PRECISION	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			BORONOMETER INDICATOR LIGHTS - SCALE	: NRC APPROVED TAKING NO CORRECTIVE ACTION
194	6.5.1.5D	VA4	INCREASES DOWNWARD (PPM) - CONVENTION	:
STATUS: CLOSED			VIOLATED.	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM INDICATOR DISCONNECTED	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
195	6.5.1.5D	VC2	SG FEED FLOW & STEAM FLOW INDICATORS -- INDICATORS ARE NOT ARRANGED TO PROMOTE COMPARISON ACROSS CHANNELS. -0- -0-	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED GROUP : NSD REV'D RES :NO NRC APPROVAL :YES PRIORITY : N/A RESOLUTION CATEGORY:AAAA IMPLEMENT DATE : 04/10/87			RESOLUTION:ARRANGEMENT FACILITATES COMPARISON FEED FLOW & STEAM FLOW REV'D RESU:	
196	6.5.1.2A	GENERIC	MOST FLOW INDICATORS HAVE SQUARE ROOT SCALES - MAY NOT BE A PROBLEM. -0- -0- -0-	AWAITNG NRC APPROVAL OF SUPPLEMENTAL REPORT. (REF: HED #158,162,430)
STATUS: HOLD GROUP : NSD REV'D RES :NO NRC APPROVAL :NO PRIORITY : N/A RESOLUTION CATEGORY:OTHER IMPLEMENT DATE : / /			RESOLUTION:SPECIFIC PROBLEM INSTRUMENTS IDENTIFIED IN OTHER HED'S REV'D RESU:	
197	6.5.1.5E	BC2	SG STEAM FLOW INDICATOR DOES NOT ADEQUATELY DISPLAY STEAM FLOW AT LOW PRESS. -0- -0-	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED GROUP : NSD REV'D RES :NO NRC APPROVAL :YES PRIORITY : N/A RESOLUTION CATEGORY:AAAA IMPLEMENT DATE : 04/10/87			RESOLUTION:BELOW 20% POWER, CONTROL IS BASED ON LEVEL REV'D RESU:	
198	6.5.1.6C(2)	GENERIC	CONVENTIONAL CR RED/GREEN USAGE VIOLATES RECOMMENDATION. -0- -0-	AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT.(APPENDIX J)
STATUS: HOLD GROUP : NSD REV'D RES :NO NRC APPROVAL :NO PRIORITY : N/A RESOLUTION CATEGORY:OTHER IMPLEMENT DATE : / /			RESOLUTION:ANY SPECIFIC PROBLEMS ARE IDENTIFIED IN OTHER HEDs REV'D RESU:	
199	6.5.1.6D(1)	GENERIC	INCONSISTENCIES IN COLOR CODING ACROSS CR - HOWEVER WITHIN SPECIF CODING APPLICATIONS, COLOR HAVE SPECIFIC MEANING. -0-	SPECIFIC COLOR CODE DISCREPANCIES ADRESSED IN HEDS 437 AND 594. AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. (APPENDIX H)
STATUS: HOLD GROUP : NSD REV'D RES :YES NRC APPROVAL :NO PRIORITY : N/A RESOLUTION CATEGORY:AAAA IMPLEMENT DATE : / /			RESOLUTION:SPECIFIC COLOR CODING PROBLEMS REVIEWED IN LMD STUDY REV'D RESU:NO FURTHER ACTION REQUIRED.	
200	6.5.1.6E(2)	BA1	PATCHES ON BR-A1 FOR STEAMLINE ISOLATION & CIA DO NOT CONTRAST WELL WITH BOARDS. -0- -0-	SCHEDULED FOR 6R.
STATUS: HOLD GROUP : NSD REV'D RES :NO NRC APPROVAL :NO PRIORITY : ENHANC RESOLUTION CATEGORY:ENHANC IMPLEMENT DATE : / /			RESOLUTION:REPLACE ALL IDENTIFICATION PATCHES REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
201	6.5.2.1A	VA1	EOP E-1,STEP 8-AER. CNMT PRESSURE OF 13.6 CANNOT BE READ ON INADEQUATE SCALE. -0- -0-	NEW SCALE FOR CNMT PRESSURE WHICH READS IN PSIG WAS INSTALLED DURING 4R. CNMT PRESS SET POINT CHANGED FROM 13.6 PSIA TO -1.0 PSIG WHICH CAN BE READ. NRC APPROVED.
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:PRCDRE			RESOLUTION:PROCEDURE REVISED -0-	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
202	6.5.2.2A(2)	GENERIC	HAGAN CONTROLLERS - POINTER OBSCURES DEMAND SIGNAL. -0- -0-	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:SCALE IS LINEAR AND PRECISE VALUES NOT USED	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
203	6.5.2.2B(2)	GENERIC	POSSIBLE PARALLAX PROBLEM READING INDICATORS FROM BENCHBOARDS E.G., REFUELING WATER STORAGE TANK LEVEL. -0- -0-	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - DISPLAYS IN ACCEPTABLE VIEWING FIELD	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
204	6.5.2.3(A-C)	GENERIC	MANY GAUGES HAVE BEEN MARKED UP BY OPERATORS TO INDICATE VARIOUS ZONES -- NO CONSISTENCY IN HOW OR WHAT COLOR ZONES ARE MARKED. -0-	BAND MARKINGS MADE CONSISTENT AND ARE COLOR CODED.
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : IN-PROG				
RESOLUTION CATEGORY:ENHANC			RESOLUTION:REMOVE GREASE PENCIL MARKS AND MAKE BANDS CONSISTENT	
IMPLEMENT DATE : / /			REV'D RESU:	
205	6.5.2.4A	RAD MON	CIRCULAR SCALES ON RAD MON PANEL HAVE NUMERALS THAT ARE NOT VERTICAL. -0- -0-	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - SCALES ARE NOT 360 DEGREES-NUMBERS EASILY READ	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
206	6.5.2.4C(3)	VC1	PRIMARY WATER AND CNMT AIR FLOW IND. SCALE IS ASYMMETRICAL - FAVORING NORMAL OPERATING RANGE. -0- -0-	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM VERTICAL SQ.RT. SCALES	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			ELECTRICAL METERS -- SCALE ASYMMETRICAL,	: NRC APPROVED TAKING NO CORRECTIVE ACTION
207	6.5.2.4C(3)	VC4	FAVORING NORMAL OPERATING RANGE.	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - STANDARD ELECTRICAL METERS	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			GREEN STATUS PANEL LIGHTS (622 & 623	: REEVALUEATION DETERMINED THAT NO RE-
208	6.5.3.1B	BC2	STATUS PANELS) DO NOT APPEAR ON - NO	: ORGANIZATION IS REQUIRED. APPENDIX A.
STATUS: HOLD			PROBLEM, BUT ORGANIZATION OF PANELS	: OF SUPPLEMENTAL REPORT) STATUS LIGHTS
GROUP : NSD			SHOULD BE IMPROVED	: ADRESSED IN HED-564.
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:REORGANIZE	-0-
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
			STATUS PANELS 176, 64 & 62 HAVE LEGENDS	: NRC APPROVED TAKING NO CORRECTIVE ACTION
209	6.5.3.3A(2&3)	STATUS PANELS	WITH LIGHT LETTERS ON DARK BACKGROUNDS	:
STATUS: CLOSED			THAT ARE DIFFICULT TO READ.	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - BECAUSE REGEND CAN BE READ WHEN LIT	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			STATUS PANEL PNL 176 NOT CONSISTENT WITH	: REEVALUATION DETERMINED THAT NO FURTHER
210	6.5.3.3B(1)	BB1	OTHER PANELS.	: ACTION BE RECOMMENDED.APPENDIX A.
STATUS: HOLD			-0-	:
GROUP : NSD			-0-	:
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:ARRANGE STATUS LITES IAW ROW CODING; MOVE P9 BETWEEN P8 &P10	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT	
			LETTERING ON STATUS PANELS DOES NOT	: NRC APPROVED TAKING NO CORRECTIVE ACTION
211	6.5.3.3B(2)	STATUS PANELS	COMPLY WITH RECOMMENDED SIZE.	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM READING PANELS	-0-
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			STATUS PANEL 176 LEGENDS ARE NOT CLEAR	: REVIEW INDICATES THAT NO PROBLEM EXISTS
212	6.5.3.3B(4)	STATUS PANELS	AND UNAMBIGUOUS.	: AND THE LEGENDS CONTAIN THE INFORMATION
STATUS: HOLD			-0-	: REQUIRED BY THE OPERATOR. AWAITING NRC
GROUP : NSD			-0-	: APPROVAL OF SUPPLEMENTAL REPORT.
REV'D RES :YES	NRC APPROVAL :NO		-0-	: (APPENDIX H)
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:LMD STUDY	-0-
IMPLEMENT DATE : / /			REV'D RESU:NO FURTHER ACTION REQUIRED.	SEE ABOVE COMMENT.

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
213	6.5.3.3B(6)	STATUS PANELS	NOMENCLATURE AND ABBREVIATIONS ON STATUS PANELS ARE NOT CONSISTENT WITH PROCEDURES AND OTHER USAGE OF ABBREVIATIONS. -O-	THE INDICATED ABBREVIATIONS ARE COMMONLY USED IN THE INDUSTRY AND ARE NOT CONFUSING TO THE OPERATORS. AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. (APPENDIX H)
STATUS: HOLD				
GROUP : NSD				
REV'D RES :YES	NRC APPROVAL :NO			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:LMD STUDY	-O-
IMPLEMENT DATE : / /			REV'D RESU:NO FURTHER ACTION REQUIRED	
214	6.5.4.1B	VA4	RCS PRESS RECORDER PR-RC-403 - PAPER SCALE WRONG. -O- -O- -O-	RECORDER HAS TWO SCALES 0-600 AND 0-3000 AND IS A TWO PEN RECORDER. BACKED UP BY RCS PRESSURE INDICATIONS OF 0-600 AND 0-3000. RECOMMEND THAT MOST APPROPRIATE PAPER AVAILABLE IN CR BE USED.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :YES	NRC APPROVAL :NO			
PRIORITY : ENHANC				
RESOLUTION CATEGORY:OTHER			RESOLUTION:GET PROPER PAPER (TRY "GRAPHICCONTROLS " AS SUPPLIER)	
IMPLEMENT DATE : / /			REV'D RESU:	
215	6.5.4.1B	VA3	BR EVAPORATOR STEAM PRESS - PAPER SCALE WRONG. -O- -O- -O-	PAPER SCALE WAS CORRECTED AND VERIFIED AS OF IMPLEMENTATION DATE.
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:OTHER			RESOLUTION:SAME AS #214	-O-
IMPLEMENT DATE : 12/08/87			REV'D RESU:	
216	6.5.4.1B	VA2	GW FLOW TO COOLING TK FR-GW-100- PAPER SCALE WRONG. -O- -O- -O-	SEE HED-443 FOR CORRECTIVE ACTION. SCHEDULED FOR 6R.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : ENHANC				
RESOLUTION CATEGORY:OTHER			RESOLUTION:SAME AS #214	-O-
IMPLEMENT DATE : / /			REV'D RESU:	
217	6.5.4.1B	VA2	REFUELING WATER STORAGE TK LEVEL - PAPER SCALE WRONG. (LR-105-100) -O- -O- -O-	SEE HED-443 FOR CORRECTIVE ACTION. SCHEDULED FOR 6-R.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : ENHANC				
RESOLUTION CATEGORY:OTHER			RESOLUTION:SAME AS #214	-O-
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
218	6.5.4.1B	VA1	CNMT PRESS PR-LM-100A - PAPER SCALE WRONG. -O- -O- -O-	PAPER SCALE NOT CONSIDERED A PROBLEM. PAPER SCALE IS IN PSIA AND RECORDER SCALE IS IN PSIG. BACKED UP BY TWO WIDE RANGE AND TWO NARROW RANGE INDICATORS.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : ENHANC				
RESOLUTION CATEGORY:OTHER			RESOLUTION:SAME AS #214	-O-
IMPLEMENT DATE : / /			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			HI CNMT PRESS PR-LM-101 -	: PAPER SCALE NOT CONSIDERED A PROBLEM.
219	6.5.4.1B	VA1	PAPER SCALE WRONG.	: PAPER SCALE IS 0-100 AND RECORDER SCALE
STATUS: HOLD			-0-	: IS 0-200(100 DIVISIONS). BACKED UP BY
GROUP : NSD			-0-	: TWO HIGH CONTAINMENT PRESSURE INDICATORS
REV'D RES :YES	NRC APPROVAL :NO		-0-	: RECOMMEND NO FURTHER ACTION.
PRIORITY : ENHANC				
RESOLUTION CATEGORY:OTHER			RESOLUTION:SAME AS #214	-0-
IMPLEMENT DATE : / /			REV'D RESU:	
			GW SURGE TK FLOW TO DECAY TK -RECORDER	: RECORDER HAS ODD SCALE OF 0-0.75 WITH
220	6.5.4.1B	VA2	PAPER SCALE WRONG. (FRC-1GW-103)	: 15 DIVISIONS. PAPER SCALE IN USE HAS A
STATUS: HOLD			-0-	: 0-0.6 RANGE.
GROUP : NSD			-0-	:
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : ENHANC				
RESOLUTION CATEGORY:OTHER			RESOLUTION:SAME AS #214	-0-
IMPLEMENT DATE : / /			REV'D RESU:	
			LW EVAP. BOILER STEAM PRESS -RECORDER	: PAPER SCALE WAS CORRECTED AND VERIFIED
221	6.5.4.1B	VA2	PAPER SCALE WRONG.(PR-1LW-118)	: AS OF IMPLEMENTATION DATE.
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:OTHER			RESOLUTION:SAME AS #214	-0-
IMPLEMENT DATE : 12/08/87			REV'D RESU:	
			LW DISCH. HEADER FLOW-- RECORDER	: PAPER SCALE WAS CORRECTED AND VERIFIED
222	6.5.4.1B	VA2	PAPER SCALE WRONG.(FRC-1LW-104)	: AS OF IMPLEMENTATION DATE.
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:OTHER			RESOLUTION:SAME AS #214	-0-
IMPLEMENT DATE : 12/08/87			REV'D RESU:	
			PROPERLY SCALED PAPER FOR RECORDERS NOT	: RECORDER PAPER IS REQUESTED AS NEEDED
223	6.5.4.1E		AVAILABLE IN CR.	: BY OPERATIONS AND RECEIVED SUPPLY IS
STATUS: CLOSED			-0-	: STAGED(STORED) IN BACK OF CONTROL ROOM.
GROUP : NSD			-0-	: VERIFIED AS OF IMPLEMENTATION DATE.
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:OTHER			RESOLUTION:SAME AS #214	-0-
IMPLEMENT DATE : 12/08/87			REV'D RESU:	
			LW &GW DISCH. RECORDERS ARE DIFFICULT	: NRC APPROVED TAKING NO CORRECTIVE ACTION
224	6.5.4.1H	VA3	TO LOCATE BECAUSE THEY ARE NOT SET	:
STATUS: CLOSED			AFART FROM OTHER INSTRUMENTATION.	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM RECORDER LABEL CAN BE EASILY READ	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			T HOT & T COLD DIFFICULT TO LOCATE.	CORRECTIVE ACTIONS TO BE COMPLETED PER
225	6.5.4.1H	VA6	-0-	DCP-804 SCHEDULED FOR 6R. NRC APPROVED
STATUS: HOLD			-0-	CORRECTIVE ACTION.
GROUP : ENG			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : 1				
RESOLUTION CATEGORY:BRD MD			RESOLUTION:MOVE THOT & TCOLD RECORDERS - SEE DIWG 25AH & HED 30	
IMPLEMENT DATE : / /			REV'D RESU:	
			RECORDERS GENERALLY DO NOT HAVE	NRC APPROVED TAKING NO CORRECTIVE ACTION
226	6.5.4.1I	GENERIC	MULTIPLE SPEEDS AS RECOMMENDED.	
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - MULTIPLE SPEEDS NOT REQUIRED	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			BORIC ACID FLOW RECORDERS ARE TOO SMALL	NRC APPROVED TAKING NO CORRECTIVE ACTION
227	6.5.4.1K	VA4	TO READ EASILY FROM BENCH BOARD.	
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM OPERATOR NOT REQ. TO READ FROM BB	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			CNMT PRESS PR-LM-100A - ARE TOO SMALL TO	NRC APPROVED TAKING NO CORRECTIVE ACTION
228	6.5.4.1K	VA1	READ EASILY FROM BENCH BOARD.	
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : 7/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM HAVE METERS FOR READING-RECORDERS FOR TRENDING	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			TAVE & TREF RECORDERS ARE TOO SMALL TO	CORRECTIVE ACTIONS TO BE COMPLETED PER
229	6.5.4.1K	VB	READ EASILY FROM BENCH BOARD.	DCP-804 SCHEDULED FOR 6R. NRC APPROVED
STATUS: HOLD			-0-	CORRECTIVE ACTION.
GROUP : ENG			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : 1				
RESOLUTION CATEGORY:BRD MD			RESOLUTION:SEE HED #30 AND DRWGS 25AK & AJ	
IMPLEMENT DATE : / /			REV'D RESU:	
			GW FLOW TO COOLING TOWER - TOO SMALL TO	NRC APPROVED TAKING NO CORRECTIVE ACTION
230	6.5.4.1K	VA2	READ EASILY FROM BENCH BOARD.	
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - CONTROL IS BY RECORDER	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
231	6.5.4.1K	VA2	GW DECAY TK FLOW TO INJECTOR TOO SMALL TO READ EASILY FROM BENCH BOARD. RECORDER GOES OFF SCALE DURING DISCHARGE (FRC-1GW-105). -O-	: REVIEW HAS DETERMINED THAT THE : RECOMMENDED RECALIBRAION WOULD REQUIRE : RESCALING OF INSTRUMENTATION. OPERATION : TO INJECTOR IS NOT ACCIDENT RELATED AND : NOT CONSIDERED NECESSARY. APPENDIX I.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :YES NRC APPROVAL :NO			-O-	
PRIORITY : ENHANC				
RESOLUTION CATEGORY:ENHANC			RESOLUTION:NO PROBLEM READING RECOMMEND RECALIBRATE RECORDER	
IMPLEMENT DATE : / /			REV'D RESU:	
232	6.5.4.1K	VA4	NO. 1 SEAL LEAK OFF NARROW RECORDERS ARE TOO SMALL TO READ EASILY FROM BENCH BOARD. -O- -O-	: NRC APPROVED TAKING NO CORRECTIVE ACTION : : : :
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO NRC APPROVAL :YES				
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM RECORDER CAN BE READ TO DESIRED ACCURACY	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
233	6.5.4.1K	VA2	REFUELING WATER STORAGE TK LEVEL RECORDER TOO SMALL TO READ EASILY FROM BENCH BOARD -O- -O-	: NRC APPROVED TAKING NO CORRECTIVE ACTION : : : :
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO NRC APPROVAL :YES				
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - THERE ARE 3 VERTICAL METERS	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
234	6.5.4.1K	VA2	LW DISCH. HEADER FLOW TOO SMALL TO READ EASILY FROM BENCH BOARD. -O- -O-	: NRC APPROVED TAKING NO CORRECTIVE ACTION : : : :
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO NRC APPROVAL :YES				
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - CAN BE READ TO REQUIRED ACCURACY	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
235	6.5.4.1K	VA2	LNDRY & CONTAM DRAINS DISCH. FLOW TOO SMALL TO READ EASILY FROM BENCH BOARD. -O- -O-	: NRC APPROVED TAKING NO CORRECTIVE ACTION : : : :
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO NRC APPROVAL :YES				
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM OPERATOR NOT REQUIRED TO READ FROM BB	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
236	6.5.4.1K	VA3	BORON RECOVERY DEGAS INLET PRESS TOO SMALL TO READ EASILY FROM BENCH BOARD. -O- -O-	: NRC APPROVED TAKING NO CORRECTIVE ACTION : : : :
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO NRC APPROVAL :YES				
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - CONTROLS ON VB, NOT READ FROM BB	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
237	6.5.4.1K	VA3	BORON RECOVERY EVAPORATOR LEVEL TOO SMALL TO READ EASILY FROM BENCH BOARD. -0- -0- -0-	NRC APPROVE TAKING NO CORRECTIVE ACTION
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM CONTROLS ON VB,NOT READ FROM BB	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
238	6.5.4.1K	VA4	FR-RC-403 TOO SMALL TO READ EASILY FROM BENCH BOARD. -0- -0- -0-	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - HAVE VERTICAL METERS TO READ	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
239	6.5.4.1K	VC3	ROTOR POSITION RECORDER ARE TOO SMALL TO READ EASILY FROM BENCH BOARD. -0- -0- -0-	NRC APPROVED TAKING NO FURTHER CORRECTIVE ACTION.
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - BEEN REMOVED -0-	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
240	6.5.4.1K	VA2	LW EVAPORATOR DISTILLATE COOLER OUTLET TO READ EASILY FROM BENCH BOARD. -0- -0- -0-	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM CONTROLS ON VB, NOT READ FROM BB	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
241	6.5.4.1K	VB1	POWER RANGE TOO SMALL TO READ EASILY FROM BENCH BOARD -0- -0- -0-	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM REC IS ONLY A BACK-UP	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
242	6.5.4.1K	VB1	PRZR LEVEL TOO SMALL TO READ EASILY FROM BENCH BOARD -0- -0- -0-	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - CAN READ INDICATORS ON BB	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			SG BLODDOWN HEAT EXCH. EFFLUENTS ARE TOO	: NRC APPROVED TAKING NO CORRECTIVE ACTION
243	6.5.4.1E	VC2	SMALL TO READ EASILY FROM BENCH BOARD.	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - NOT REQUIRED TO READ FROM BB	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			TURBINE SPEED ADDITIVES ARE TOO SMALL TO	: NRC APPROVED TAKING NO FURTHER
244	6.5.4.1E	VC3	READ EASILY FROM BENCH BOARD.	: CORRECTIVE ACTION.
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - BEEN REMOVED -0-	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			LW EVAP. LEVEL TOO SMALL TO READ EASILY	: NRC APPROVED TAKING NO CORRECTIVE ACTION
245	6.5.4.1E	VA2	FROM BENCH BOARD.	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - CONTROLS ON VB, NOT READ FROM BB	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			SG PRESS RECORDER IS TOO SMALL TO READ	: NRC APPROVED TAKING NO CORRECTIVE ACTION
246	6.5.4.1E	VC2	EASILY FROM BENCH BOARD.	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - CAN READ 3 CHANNELS OF VERTICAL METERS	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			TR-BR-100 - MARKINGS ARE UNREADABLE BY	: RECORDER CURRENTLY OUT OF SERVICE FOR
247	6.5.4.2A(1)	VA?	CHANNEL.	: MAINTENANCE.
STATUS: HOLD			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : 3				
RESOLUTION CATEGORY:OTHER			RESOLUTION:PERFORM PERIODIC MAINTENANCE &REPLACE PRINT WHEELS	
IMPLEMENT DATE : / /			REV'D RESU:	
			REACTOR COOLANT MOTOR RECORDERS ARE	: RECORDER CURRENTLY OUT OF SERVICE FOR
248	6.5.4.2A(1)	VA4	UNREADABLE BY CHANNEL. (TR-1RC-448 A&B)	: MAINTENANCE.
STATUS: HOLD			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : 3				
RESOLUTION CATEGORY:OTHER			RESOLUTION:PERFORM - PERIODIC MAINTENANCE & REPLACE PRINT WHEELS	
IMPLEMENT DATE : / /			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			TURBINE TEMP. REC. ARE	: RECORDER CURRENTLY OUT OF SERVICE FOR
249	6.5.4.2A(1)	VC3	UNREADABLE BY CHANNEL. (TR-TRREC-CST)	: MAINTENANCE.
STATUS: HOLD			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : 3				
RESOLUTION CATEGORY:OTHER			RESOLUTION:SAME AS #248	-0-
IMPLEMENT DATE : / /			REV'D RESU:	
			ANALOG TREND RECORDER TR-CP-761 -	: NRC APPROVED TAKING NO CORRECTIVE ACTION
250	6.5.4.2A(2)	VB2	RECORDER IS USING WRONG COLORED INK.	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - OPERATORS CAN SELECT COLORS--AN OPERATOR AID	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			RAD MONITOR DISPLAYS DO NOT PROVIDE	: NRC APPROVED TAKING NO CORRECTIVE ACTION
251	6.6.3.1B	RAD MON	INFORMATION EASILY ASSOCIATING MONITORS	:
STATUS: CLOSED			WITH RAD SOURCE.	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM-OPERATORS KNOW WHERE SENSORS ARE LOCATED	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			GW FLOW TOTALIZER PRIMARY DRAINS FLOW	: NRC APPROVED TAKING NO CORRECTIVE ACTION
252	6.5.5.1A(4)	VC	INTGRT. - DO NOT USE BLACK NUMBERS ON	:
STATUS: CLOSED			WHITE BACKGROUND.	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - CAN BE EASILY READ	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			ROD STEP COUNTERS - WHITE ON BLACK	: NRC APPROVED TAKING NO CORRECTIVE ACTION
253	6.5.5.1A(4)	BBB1	NUMBERS.	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:SAME AS #252	-0-
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			ROD STEP COUNTERS ARE MOUNTED ON	: NRC APPROVED TAKING NO CORRECTIVE ACTION
254	6.5.5.1B(1)	BB1	BENCHBOARD AT ANGLE TO LINE OF SIGHT.	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NONE SEE HED #255	-0-
IMPLEMENT DATE : 04/10/87			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			ROD STEP COUNTERS HAVE RAISED COVER	: NRC APPROVED TAKING NO CORRECTIVE ACTION
255	6.5.5.1B(2)	BR1	WHICH REDUCES VIEWING ANGLE.	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:OPERATOR HAVE TO LEAN OVER BUT NO CONTROLS CAN BE ACTUATED	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			RCP COOLING WATER FLOW INDICATOR USUALLY	: NRC APPROVED TAKING NO CORRECTIVE ACTION
256	6.5.1.2D(2)	VB	PEGGED HIGH TO PREVENT CLOGGING.	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:LINES ARE DESIGNED TO PRECLUDE EXCESSIVE FLOW	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			SEAL LEAKOFF RECORDER HAS NO BACKUP	: AWAITING NRC APPROVAL OF SUPPLEMENTAL
257	6.5.1.1D	VA4	INDICATORS.	: REPORT. APPENDIX D.
STATUS: HOLD			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :NO		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NOT A CRDR ISSUE-THERE IS TEMP IND.. & WR & NR RECORDERS	
IMPLEMENT DATE : / /			REV'D RESU:	
			BASE ADJUST INDICATOR MOVES OPPOSITE	: TRAINING PROVIDED. (APPENDIX J)
259	6.9.3.1A	BC3	DIRECTION FROM CONTROL INCREASE	:
STATUS: HOLD			DIRECTION.	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :NO		-0-	:
PRIORITY : 1				
RESOLUTION CATEGORY:TRNG			RESOLUTION:DEMAND WORKS PROPERLY WITH CONTROL-TRAIN. ON POWER FACTOR RL	
IMPLEMENT DATE : / /			REV'D RESU:	
			THERE IS NO INDICATION FOR LW-TK-7A,B	: NOT A DCRDR ISSUE. AWAITING NRC APPROVAL
260	6.5.1.1B	GENERAL	LEVEL OR FOR CIRCULATING PUMPS RUNNING.	: OF SUPPLEMENTAL REPORT. (APPENDIX A)
STATUS: HOLD			-0-	:
GROUP : NSD			-0-	:
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:INSTALL LEVEL IND. -0-	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
			FIRE ALARM DISPLAYS NOT VISIBLE OR	: GUARD SHACK REMOVED.
261	6.5.1.1B	GENERAL	EASILY ACCESSIBLE FROM CR.	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:CRUPGR			RESOLUTION:REMOVE GUARD SHACK SEE HED #12-0-	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			RAD MON NOT VISIBLE FROM MAIN CR.	: NRC APPROVED TAKING NO CORRECTIVE ACTION
262	6.5.1.1B	GENERAL	-0-	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - REFLASH ALARM	-0-
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			HAGAN CONTROLLERS-INCR/DECR PUSHBUTTONS-	: HAGANS TYPICALLY SHOW PERCENT DEMAND FOR
263	6.5.1.1E	GENERIC	DOES THIS MEAN VARIABLE OR EQUIPMENT	: VLV POSITIONING. RESOLUTION IS TO CLEAR-
STATUS: HOLD			ACTION (E.G., INCR THE VLV OPENING)	: LY LABEL O/S POSITION ABOVE METER FACE
GROUP : NSD			SURVEY OF HAGAN OPERATION NEEDED FOR	: AS AN AID TO HTE OPERATOR. SEE HED-359.
REV'D RES :YES	NRC APPROVAL :NO		EACH CONTROLLER.	: AWAITING NRC APPROVAL. (APPENDIX H)
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:LMD STUDY	-0-
IMPLEMENT DATE : / /			REV'D RESU:NO FURTHER ACTION REQUIRED.	
			LABELS - MANY LABELS HAVE FONT THAT	: LETTER SIZE WILL NOT BE INCREASED SINCE
264	6.6	GENERIC	IS TOO SMALL.	: NO RELIABILITY PROBLEMS EMERGED DURING
STATUS: HOLD			-0-	: SFTA AND EOP V & V, SPACE RESTRICTIONS,
GROUP : NSD			-0-	: AND RELABELING IMPROVEMENTS. AWAITING
REV'D RES :YES	NRC APPROVAL :NO		-0-	: NRC APPROVAL. (APPENDIX H)
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:LMD STUDY	-0-
IMPLEMENT DATE : / /			REV'D RESU:NO FURTHER ACTION REQUIRED.	
			RECIRC & CNMT SUMP LEVEL RECORDERS -	: LABEL WILL BE RELOCATED. AWAITING NRC
265	6.6.2.1E	VA	LABEL AMBIGUOUSLY PLACED BETWEEN OTHER	: APPROVAL OF SUPPLEMENTAL REPORT.
STATUS: HOLD			RECORDERS.	: (APPENDIX H)
GROUP : NSD			-0-	:
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:LMD STUDY	-0-
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
			PNL 13 MOV SHORTING PLUGS - LABELS ARE	: LABEL WILL BE RELOCATED. AWAITING NRC
266	6.6.2.1E	VA1	AMBIGUOUSLY PLACED WITH RESPECT TO	: APPROVAL OF SUPPLEMENTAL REPORT.
STATUS: HOLD			PLUGS.	: (APPENDIX H)
GROUP : NSD			-0-	:
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:LMD STUDY	-0-
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
			TR-RC410 - LABEL IS AMBIGUOUSLY PLACED.	: LABEL WILL BE RELOCATED. (NOTE: SEE HED-
267	6.6.2.1E	VA	-0-	: 225 FOR RELOCATION OF RECORDER).
STATUS: HOLD			-0-	: AWAITING NRC APPROVAL OF SUPPLEMENTAL
GROUP : NSD			-0-	: REPORT. (APPENDIX H)
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:LMD STUDY	-0-
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
268	6.6.2.1C	VA	BORON RECOVERY (PPM LABELS) - LABELS ARE AMBIGUOUSLY PLACED.	LABEL WILL BE RELOCATED. AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. (APPENDIX H)
STATUS: HOLD			-0-	
GROUP : NSD			-0-	
REV'D RES :YES	NRC APPROVAL :NO		-0-	
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:LMD STUDY	-0-
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
269	6.6.2.1C	VA2	EVAP DIST COOLER OUTLET TEMP CNTL - LABEL IS AMBIGUOUSLY PLACED.	LABEL WILL BE RELOCATED. AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. (APPENDIX H)
STATUS: HOLD			-0-	
GROUP : NSD			-0-	
REV'D RES :YES	NRC APPROVAL :NO		-0-	
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:LMD STUDY	-0-
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENTS.	
270	6.6.2.1C	VA2	EVAP LEVEL CONTROL - LABEL IS AMBIGUOUSLY PLACED.	LABEL WILL BE RELOCATED. AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. (APPENDIX H)
STATUS: HOLD			-0-	
GROUP : NSD			-0-	
REV'D RES :YES	NRC APPROVAL :NO		-0-	
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:LMD STUDY	-0-
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
271	6.6.2.1E	VC	EMERG GEN SWITCHES - LABEL PLACEMENT IS AMBIGUOUS.	LABEL WILL BE RELOCATED. AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. (APPENDIX H)
STATUS: HOLD			-0-	
GROUP : NSD			-0-	
REV'D RES :YES	NRC APPROVAL :NO		-0-	
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:LMD STUDY	-0-
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
271	3.8	GENERAL	THE JOB OF STA DOES NOT APPEAR TO BE WELL DEFINED INCLUDING WHAT ACTION HE MAY TAKE AS A NON-LICENSED INDIVIDUAL.	APPENDIX K.
STATUS: HOLD			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :NO		-0-	
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:OTHER			RESOLUTION:RECOMMEND OPERATIONS DEVELOP JOB DESCR. & EOP OPER. POLICY	
IMPLEMENT DATE : / /			REV'D RESU:	
272	6.6.1.1	VC	STM DMP CNTL BYPASS INTERLOCK SELECTOR SW - LABEL IS MISSING FOR TRAIN A.	TRAIN A SWITCH LABEL WILL BE PROVIDED. AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. (APPENDIX H)
STATUS: HOLD			-0-	
GROUP : NSD			-0-	
REV'D RES :YES	NRC APPROVAL :NO		-0-	
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:LMD STUDY	-0-
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			MAIN FW PMP FLOW INDICATORS - NO LABEL.	: INDICATORS WILL BE LABELED. AWAITING
273	6.6.1.1.	VC2	-0-	: NRC APPROVAL OF SUPPLEMENTAL REPORT.
STATUS: HOLD			-0-	: (APPENDIX H)
GROUP : NSD			-0-	:
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:LMD STUDY	-0-
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
			LABELS - LABEL POSITION (ABOVE OR BELOW	: LABEL POSITIONS ARE IDENTIFIED AND WILL
274	6.6.2.1E	BB-GENERIC	COMPONENT) IS INCONSISTENT.	: BE MADE CONSISTENT WITH CONTROL ROOM
STATUS: HOLD			-0-	: CONVENTIONS WHEREVER SPACE ALLOWS AND NO
GROUP : NSD			-0-	: OTHER CONTROL CONFLICTS ARISE. AWAITING
REV'D RES :YES	NRC APPROVAL :NO		-0-	: NRC APPROVAL. (APPENDIX H)
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:LMD STUDY	-0-
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
			FP-P-1 - LABEL IS BELOW INDICATOR.	: LABEL WILL BE PROPERLY PLACED. AWAITING
275	6.6.2.1	BSP	-0-	: NRC APPROVAL OF SUPPLEMENTAL REPORT.
STATUS: HOLD			-0-	: (APPENDIX H)
GROUP : NSD			-0-	:
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:LMD STUDY	-0-
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
			VS-D-40 A1 & 1C, 1B & 1D - LABEL IS	: LABEL WILL BE PROPERLY PLACED.
276	6.6.2.1	BSP	BELOW RESET BUTTON.	: (APPENDIX H)
STATUS: HOLD			-0-	:
GROUP : NSD			-0-	:
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:LMD STUDY	-0-
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
			LABELS - CHANNEL NUMBERS ARE OFTEN GIVEN	: IAPPROPRIATE ROMAN NUMERALS WILL BE
277	6.6.3.4E	GENERIC	WITH ROMAN NUMERALS.	: ELIMINATED. AWAITING NRC APPROVAL OF
STATUS: HOLD			-0-	: SUPPLEMENTAL REPORT. (APPENDIX H)
GROUP : NSD			-0-	:
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:LMD STUDY	-0-
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
			PANEL ACCESS OPENINGS - NO LABELLING IS	: PANEL ACCESS OPENINGS WILL BE LABELED
278	6.6.3.9A	GENERIC	PROVIDED AS TO FUNCTION OF ITEMS TO BE	: AWAITING NRC APPROVAL OF SUPPLEMENTAL
STATUS: HOLD			SERVICED THROUGH OPENINGS.	: REPORT. (APPENDIX H)
GROUP : NSD			-0-	:
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:LMD STUDY	-0-
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	

MED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			BORON COUNTER - NO LABEL.	: LABEL WILL BE PROVIDED. AWAITING NRC
279	6.6.1.1	BA6	-0-	: APPROVAL OF SUPPLEMENTAL REPORT.
STATUS: HOLD			-0-	: (APPENDIX H)
GROUP : NSD			-0-	:
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:LMD STUDY	-0-
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
			TR-RC44BA,D - RECORDERS ARE NOT	: LABELS WILL BE PROVIDED. AWAITING NRC
280	6.6.1.1	VA4	LABELLED.	: APPROVAL OF SUPPLEMENTAL REPORT.
STATUS: HOLD			-0-	: APPENDIX H.
GROUP : NSD			-0-	:
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:LMD STUDY	-0-
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT	
			GLAND STM & TURNING INDICATORS - NO	: LABELS WILL BE PROVIDED. AWAITING NRC
281	6.6.1.1	BC3	LABELS.	: APPROVAL OF SUPPLEMENTAL REPORT.
STATUS: HOLD			-0-	: (APPENDIX H)
GROUP : NSD			-0-	:
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:LMD STUDY	-0-
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
			ACOUSTIC FLOW MONITOR - LABELLING IS	: MONITORS WILL BE LABELED PER OUTLINE
282	6.6.1.1	VB1	VERY CONFUSING.	: DRAWING 25AJ. AWAITING NRC APPROVAL OF
STATUS: HOLD			-0-	: SUPPLEMENTAL REPORT. (APPENDIX H)
GROUP : NSD			-0-	:
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:LMD STUDY	-0-
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
			RECORDER (POWER RANGE) - NO LABEL.	: LABEL WILL BE PROVIDED. AWAITING NRC
283	6.6.1.1	VB1	-0-	: APPROVAL OF SUPPLEMENTAL REPORT.
STATUS: HOLD			-0-	: (APPENDIX H)
GROUP : NSD			-0-	:
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:LMD STUDY	-0-
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
			PR-RC403 RECORDER (PRZR PRESS) - NO	: LABEL WILL BE PROVIDED. AWAITING NRC
284	6.6.1.1	VA4	LABEL.	: APPROVAL OF SUPPLEMENTAL REPORT.
STATUS: HOLD			-0-	: (APPENDIX H)
GROUP : NSD			-0-	:
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:LMD STUDY	-0-
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			L&N RECORDER FOR FREQUENCY - CONTROLS	: LABEL WILL BE PROVIDED. AWAITING NRC
285	6.6.1.1	VC	NOT LABELLED.	: APPROVAL OF SUPPLEMENTAL REPORT.
STATUS: HOLD			-O-	: (APPENDIX H)
GROUP : NSD			-O-	:
REV'D RES :YES	NRC APPROVAL :NO		-O-	:
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:LMD STUDY	-O-
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
			PRZR PRESS CONTROLLER - LABEL WITH TABLE	: LABEL PROVIDES INFORMATION THAT IS
286	6.6.3.2B	BB	ABOVE THE HAGANS IS CONFUSING.	: COMMON TO BOTH CONTROLLERS AND IS NOT
STATUS: HOLD			-O-	: CONFUSING TO THE OPERATORS. AWAITING NRC
GROUP : NSD			-O-	: APPROVAL OF SUPPLEMENTAL REPORT.
REV'D RES :YES	NRC APPROVAL :NO		-O-	: (APPENDIX H)
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:LMD STUDY	-O-
IMPLEMENT DATE : / /			REV'D RESU:NO FURTHER ACTION REQUIRED.	
			INTEGRATOR BESIDE REHEATER STM OUT TEMP-	: LABEL WILL BE PROVIDED. APPENDIX H.
287	6.6	VC2	NO LABEL.	:
STATUS: HOLD			-O-	:
GROUP : NSD			-O-	:
REV'D RES :NO	NRC APPROVAL :NO		-O-	:
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:LMD STUDY	-O-
IMPLEMENT DATE : / /			REV'D RESU:	
			TOTAL FLOW, FW-F-1A, FW-P-1B INDICATORS-	: LABEL WILL BE PROVIDED. AWAITING NRC
288	6.6.1.1	VC2	NO FUNCTIONAL LABELS.	: APPROVAL OF SUPPLEMENTAL REPORT.
STATUS: HOLD			-O-	: APPENDIX H.
GROUP : NSD			-O-	:
REV'D RES :YES	NRC APPROVAL :NO		-O-	:
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:LMD STUDY	-O-
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
			LABELS - MANY LABELS ARE TOO WORDY.	: STANDARD FORMAT AND ABBREVIATIONS
289	6.6.3.5	GENERIC	-O-	: ARE BEING USED FOR RELABELLING.
STATUS: HOLD			-O-	: APPENDIX H.
GROUP : NSD			-O-	:
REV'D RES :YES	NRC APPROVAL :NO		-O-	:
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:LMD STUDY	-O-
IMPLEMENT DATE : / /			REV'D RESU:SE ABOVE COMMENT.	
			LABELS - ABBREVIATIONS AND ACRONYMNS	: STANDARD FORMAT AND ABBREVIATIONS WILL
290	6.6.3.5B	GENERIC	ARE NOT USED CONSISTENTLY.	: BE USED. AWAITING NRC APPROVAL OF
STATUS: HOLD			-O-	: SUPPLEMENTAL REPORT. (APPENDIX H)
GROUP : NSD			-O-	:
REV'D RES :YES	NRC APPROVAL :NO		-O-	:
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:LMD STUDY - STANDARD LIST DEVELOPED FOR UNIT 1 & 2	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	

HED	LOCATION	DISCREPANCY	COMMENTS
291 6.6 [illegible] .C STATUS [illegible] GROUP [illegible] REV'D RES [illegible] APPROVAL :NO PRI[illegible] RES[illegible] SY AAAA I[illegible]		LABELS ON TOP ROW OF BENCHBOARD SWITCHES - VIEW IS OFTEN OBSTRUCTED BY SWITCH HANDLE. -0- -0- RESOLUTION:LMD STUDY REV'D RESU:NO FURTHER ACTION REQUIRED.	: MODERATE CHANGE TO OPERATOR'S VIEWING : ANGLE OVERCOMES THIS PROBLEM. REPOSITION : ING OF LABELS CONFLICTS WITH OTHER : CRITERIA. AWAITING NRC APPROVAL OF SUPP- : LEMENTAL REPORT. (APPENDIX H) -0-
292 6.6.2.4C B2 STATUS: HOLD GROUP : NSD REV'D RES :YES NRC APPROVAL :NO PRIORITY : N/A RESOLUTION CATEGORY:AAAA IMPLEMENT DATE : / /		POOL PURIF & PRIMARY WATER SUP PMP SWITCHES & VIEW OF LABEL IS OBSTRUCTED BY SWITCH HANDLES. -0- -0- RESOLUTION:LMD STUDY REV'D RESU:NO FURTHER ACTION REQUIRED.	: MODERATE CHANGE TO OPERATOR'S VIEWING : ANGLE OVERCOMES THIS PROBLEM. REPOSITION : ING OF LABELS CONFLICTS WITH OTHER : CRITERIA. AWAITING NRC APPROVAL OF SUPP- : LEMENTAL REPORT. (APPENDIX H) -0-
297 6.6.2.4C BR2 STATUS: HOLD GROUP : NSD REV'D RES :YES NRC APPROVAL :NO PRIORITY : N/AD RESOLUTION CATEGORY:AAAA IMPLEMENT DATE : / /		PUMP SWITCHES (TOP ROW) - LABELS ARE OBSCURED BY ARM WHILE OPERATING SWITCH. -0- -0- RESOLUTION:LMD STUDY REV'D RESU:NO FURTHER ACTION REQUIRED. (SEE APPENDIX H)	: NO EXTENDED MANIPULATION OR ADJUSTMENT : REQUIRED TO OPERATE PUMP SWITCHES SO : THAT NO CONTINUOUS FEEDBACK DATA IS OB- : SCURED. LIGHTS AND LABELS CLEARY VISIBLE : FOR LOCATING CNTRLS. APPENDIX H. -0-
2[illegible]4 6.6.4.1B(1) GENERIC STATUS: HOLD GROUP : NSD REV'D RES :YES NRC APPROVAL :NO PRIORITY : N/A RESOLUTION CATEGORY:AAAA IMPLEMENT DATE : / /		LABELS - VIRTUALLY ALL LABELS ARE WHITE LETTERING ON BLACK BACKGROUND. -0- -0- RESOLUTION:LMD STUDY REV'D RESU:SEE ABOVE COMMENT.	: DIRT BUILD UP NOT A PROBLEM. : AWAITING NRC APPROVAL OF SUPPLE- : MENTAL REPORT. (APPENDIX H) -0-
295 6.5.1.2E GENERIC STATUS: HOLD GROUP : NSD REV'D RES :YES NRC APPROVAL :NO PRIORITY : N/A RESOLUTION CATEGORY:AAAA IMPLEMENT DATE : / /		HAGAN CONTROLLERS - RELATIONSHIP BETWEEN INDICATION, VARIABLE AND EQUIPMENT ACTION (E.E., VLV OPENING) IS NOT CLEAR ON MOST CONTROLLERS. -0- RESOLUTION:LMD STUDY REV'D RESU:NO FURTHER ACTION REQUIRED FORHED-295. (SEE HED-263)	: SAME AS HED-263. HED-263 WILL BE USED : FOR TRACKING COMPLETION OF DISCREPANCY. : AWAITING NRC APPROVAL OF SUPPLEMENTAL : REPORT. (APPENDIX H) -0-
296 6.6.6.4B(4&5) BR1 STATUS: HOLD GROUP : NSD REV'D RES :YES NRC APPROVAL :NO PRIORITY : N/A RESOLUTION CATEGORY:AAAA IMPLEMENT DATE : /		PORV VLV TO BLOCK VLV MIMIC-MIMIC LINE HAS NO START/END POINTS. -0- -0- RESOLUTION:NO PROBLEM WITH MIMIC IF BRD MD IMPLEMENTED REV'D RESU:NO FURTHER ACTION REQUIRED.	: MIMIC LINES ASSOCIATE EACH PORV WITH ITS : BLOCK VALVE AND BEGIN AND END AT LABELED : ELEMENTS. AWAITING NRC APPROVAL OF : SUPPLEMENTAL REPORT. (APPENDIX H) -0-

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
297	6.6.6.4B(3)	BB1	PRZR RELIEF VLV TO BLOCK VLV MIMIC - MIMIC LINE DOES NOT HAVE ARROWS.	: LINES DENOTE VALVE ASSOCIATION AND NOT FLOW. AWAITING NRC APPROVAL OF SUPPLE- MENTAL REPORT. (APPENDIX H)
STATUS: HOLD			-0-	
GROUP : NSD			-0-	
REV'D RES :YES	NRC APPROVAL :NO		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY: AAAA			RESOLUTION:NO PROBLEM WITH MIMIC IF BRD MD IMPLEMENTED	
IMPLEMENT DATE : / /			REV'D RESU:NO FURTHER ACTION REQUIRED.	
298	6.6.6.4A(1)	BB1	PRZR RELIEF VLV TO BLOCK VLV MIMIC - USE DIFFERENT COLOR MIMIC LINES.	: BECAUSE OF THEIR VALVE ASSOCIATION FUNC- TION, THE LINES OF DIFFERENT COLORS ENHANCE LOCATION & ASSOCIATION. AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. (APPENDIX H)
STATUS: HOLD			-0-	
GROUP : NSD			-0-	
REV'D RES :YES	NRC APPROVAL :NO		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY: AAAA			RESOLUTION:NO PROBLEM WITH MIMIC IF BRD MD IMPLEMENTED	
IMPLEMENT DATE : / /			REV'D RESU:NO FURTHER ACTION REQUIRED.	
299	6.6.6.4B(2)	BB1	PRZR RELIEF VLV TO BLOCK VLV MIMIC - MIMIC LINES OVERLAP.	: BECAUSE DIFFERENT COLORED LINES ARE USED THE ONES OVERLAP IS NOT CONFUSING. AWAIT- ING NRC APPROVAL OF SUPPLEMENTAL REPORT. (APPENDIX H)
STATUS: HOLD			-0-	
GROUP : NSD			-0-	
REV'D RES :YES	NRC APPROVAL :NO		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY: AAAA			RESOLUTION:NO PROBLEM WITH MIMIC IF BRD MD IMPLEMENTED	
IMPLEMENT DATE : / /			REV'D RESU:NO FURTHER ACTION REQUIRED.	
300	6.6.5.2A&B	VA4	DEMARCATION SEPARATING BOR REC & SI INDIC - DEMARCATION IS BLACK AND DIFFICULT TO READ FROM LABELS.	: NARROWER DEMARCATION LINES WILL BE USED AND WILL BE EXTENDED TO ENVELOPE GROUP- ING OF SI INDICATORS. AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. (APPENDIX H)
STATUS: HOLD			-0-	
GROUP : NSD			-0-	
REV'D RES :YES	NRC APPROVAL :NO		-0-	
PRIORITY : ENHANC				
RESOLUTION CATEGORY: LMD			RESOLUTION:LMD STUDY -0-	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
301	6.8.3.2C	VB2	ROD STEP COUNTERS - STRINGS OF IDENTICAL COMPONENTS ARE NOT SEPARATED.	: COUNTER ORGANIZATION REPRESENTS PLANT DESIGN AND CORRELATES TO ROD BANKS. AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. (APPENDIX H)
STATUS: HOLD			-0-	
GROUP : NSD			-0-	
REV'D RES :YES	NRC APPROVAL :NO		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY: AAAA			RESOLUTION:LMD STUDY -0-	
IMPLEMENT DATE : / /			REV'D RESU:NO FURTHER ACTION REQUIRED.	
302	6.6.2.3A	GENERAL	ALL - TRAINS ARE NOT IDENTICAL - HAVE NO MIMICING OR DEMARCATION.	: PANEL ELEMENTS BEING REORGANIZED UNDER HEDS-324,329,338,358. ALSO, ELEMENTS WITHIN EACH FUNCTION HAVE COLOR CODED PATCHES AND SOME HAVE DEMARCATION, AWAITING NRC APPROVAL. (APPENDIX H)
STATUS: HOLD			-0-	
GROUP : NSD			-0-	
REV'D RES :YES	NRC APPROVAL :NO		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY: OTHER			RESOLUTION:LMD STUDY -0-	
IMPLEMENT DATE : / /			REV'D RESU:NO FURTHER ACTION REQUIRED FORMED-392. (ADRESSED BY OTHER HED	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
303	6.8.2.3A	VA4	CHARGING PMP AMP INDICATOR - CONTROLS ON BA, INDICATOR ON VA BUT NOT DEMARCATED. -0- -0-	INDICATORS AND CONTROLS WILL BE DEMARCATED. AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. (APPENDIX H)
	STATUS: HOLD GROUP : NSD REV'D RES :YES NRC APPROVAL :NO PRIORITY : ENHANC RESOLUTION CATEGORY:LMD IMPLEMENT DATE : / /		RESOLUTION:LMD STUDY REV'D RESU:SEE ABOVE COMMENT.	-0-
304	6.6.3.2	BA2	EOP E-0,33D-AER. LABELING DIFF. ON TRAIN A & B FOR PRZ RELIEF TANK VENT CONT. ISOLATION. TRAIN A = TV-DG-109A1 TRAIN B = MOV DG 109A2 -0-	LABELING WILL BE CORRECTED. AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. (APPENDIX H)
	STATUS: HOLD GROUP : NSD REV'D RES :YES NRC APPROVAL :NO PRIORITY : ENHANC RESOLUTION CATEGORY:LMD IMPLEMENT DATE : / /		RESOLUTION:LMD STUDY REV'D RESU:SEE ABOVE COMMENT.	-0-
305	6.6.3.2	UNKNOWN	EOP E-0 STEP 36A-RNO. VALVE TV-CC-110F1 IS LABELED : SYS. OUTLET ISOLATION VALVE MISLEADING. -0-	LABELE WILL BE CORRECTED. AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. (APPENDIX H)
	STATUS: HOLD GROUP : NSD REV'D RES :YES NRC APPROVAL :NO PRIORITY : ENHANC RESOLUTION CATEGORY:LMD IMPLEMENT DATE : / /		RESOLUTION:LMD STUDY REV'D RESU:SEE ABOVE COMMENT.	-0-
306	6.7.1.1B	CRCS	OPERATING SOFTWARE HAS BACKUP BUT EXISTING MODS (I.E., CHANGES IN ALARM POINTS, ETC.) HAS TO BE RESET IF THERE ARE COMPUTER PROBLEMS. -0-	NRC APPROVED TAKING NO CORRECTIVE ACTION
	STATUS: CLOSED GROUP : NSD REV'D RES :NO NRC APPROVAL :YES PRIORITY : N/A RESOLUTION CATEGORY:AAAA IMPLEMENT DATE : 04/10/87		RESOLUTION:NO PROBLEM SET POINTS CHANGE ONLY FOR SPECIAL TEMP. PURPOSES REV'D RESU:	
307	6.7.1.3D	CRCS	IF MISTAKE IS MADE IN P-250 ENTRY, ENTIRE ENTRY MUST BE RETYPED; HOWEVER IT IS ONLY 6 - 8 CHARACTERS. -0- -0-	NRC APPROVED TAKING NO CORRECTIVE ACTION
	STATUS: CLOSED GROUP : NSD REV'D RES :NO NRC APPROVAL :YES PRIORITY : N/A RESOLUTION CATEGORY:AAAA IMPLEMENT DATE : 04/10/87		RESOLUTION:NO PROBLEM REENTRY SHORT REV'D RESU:	-0-
308	6.7.1.41	CRCS	KEYBOARD CALIBRATION KEYS ARE NOT USED BY OPERATORS. -0- -0- -0-	NRC APPROVED TAKING NO CORRECTIVE ACTION
	STATUS: CLOSED GROUP : NSD REV'D RES :NO NRC APPROVAL :YES PRIORITY : N/A RESOLUTION CATEGORY:AAAA IMPLEMENT DATE : 04/10/87		RESOLUTION:NO PROBLEM KEYS SEPARATED AT TOP & DIFFERENT TYPE KEY REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
309	6.7.2.4A(2)	CRCS	RAD MONITORING USES DRCM - THIS CODE HAS NO MEANING TO OPERATORS AND DOES NOT CORRELATE WITH CPM ON RAD MON RECORDERS.	OPERATOR DOESN'T NEED CORRELATION. APPENDIX A.
STATUS: HOLD			-0-	
GROUP : NSD			-0-	
REV'D RES :YES	NRC APPROVAL :NO			
PRIORITY : 4				
RESOLUTION CATEGORY:COMPTE			RESOLUTION:MODIFY SW TO CONVERT DRCM TO CPM OR OTHER USABLE FORMAT	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
310	6.7.1.7B	CRCS	P-250 COMPUTER CAN RUN BEHIND UP TO 30 MINUTES - PROVIDES NO MESSAGES. OPERATOR CAN NOT MAKE QUERIES WHEN POST TRIP DATA BEING RUN	SEE HED-317
STATUS: HOLD			-0-	
GROUP : NSD				
REV'D RES :YES	NRC APPROVAL :NO			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:CHANGE SW PLACE HIGH PRIORITY ON OPERATOR QUERIES.	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
311	6.7.1.8A(1)	CRCS	PROCEDURES FOR COMPUTER EXIST BUT OPERATOR MAY NOT HAVE ENOUGH TRAINING ON COMPUTER OPERATIONS.	NRC APPROVED CORRECTIVE ACTION.
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:TRNG			RESOLUTION:INCREASE TRAINING ON COMPUTER PROCEDURES	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
312	6.7.3 GEN	CRCS	LIGHTS ON P-250 CONSOLE NEED TO HAVE BULBS REPLACED.	BULB REPLACEMENT VERIFIED.
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:COMPTE			RESOLUTION:REPLACE LIGHT BULBS -0-	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
313	6.7.3 GEN	CRCS	TO AVOID PAPER CLOGGING, BACKS ARE REMOVED FROM PRINTER COVERS - RESULTS IN ADDED NOISE IN CR.	CARPETING REDUCES NOISE REDUCTION. OPERATOR NEEDS TO ALIGN PAPER PROPERLY. AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT.
STATUS: HOLD			-0-	
GROUP : NSD			-0-	
REV'D RES :YES	NRC APPROVAL :NO			
PRIORITY : 4				
RESOLUTION CATEGORY:COMPTE			RESOLUTION:MODIFY TYPEWRITERS-ADD PAPER TRAIN TO PREVENT JAMING	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
314	6.7.3 GEN	CRCS	SQS HAS PAPER COLLECTION DEVICE - P250 DOES NOT.	AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT.
STATUS: HOLD			-0-	
GROUP : NSD			-0-	
REV'D RES :YES	NRC APPROVAL :NO		-0-	
PRIORITY : 4				
RESOLUTION CATEGORY:COMPTE			RESOLUTION:SAME AS #313 -0-	
IMPLEMENT DATE : / /			REV'D RESU:SEE HED-313 COMMENT.	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
315	6.7.3.1C	CRCS	SOME MESSAGE INFORMATION IN DETECTOR VOLTS MUST BE INTERPRETED BY OPERATORS. -0- -0-	: MODIFICATION OF S W NOT RECOMMENDED. : AWAITING NRC APPROVAL OF SUPPLEMENTAL : REPORT. (APPENDIX A) :
STATUS: HOLD				
GROUP : NSD				
REV'D RES :YES	NRC APPROVAL :NO			
PRIORITY : 4				
RESOLUTION CATEGORY:COMPTE			RESOLUTION:MODIFY SW TO CONVERT DETECTOR VOLTS TO USABLE UNITS	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
316	6.7.3.1C	CRCS	ADDRESSES ARE IN 6 - CHARACTER CODES - OPERATOR MUST USE REFERENCE. COMPUTER POINTS SHOULD BE MARK NUMBERS. -0- -0-	: NRC APPROVED TAKING NO CORRECTIVE ACTION : : : :
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO CHANGE - ANY CHANGE WOULD REQUIRE REF TO CODE	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
317	6.7.3.1D	CRCS	P-250 PRINTER NOT FAST ENOUGH BUT SOE IS ADEQUATE. PROBLEM IS OPERATORS CANNOT USE P-250 WHEN PRINTER & COMPUTER ARE BACKED UP RUNNING POST-TRIP DATA -0-	: OPERATORS CAN NOW GET PLANT STATUS DATA : FROM PVC OR SPDS. AWAITING NRC APPROVAL : OF SUPPLEMENTAL REPORT.(APPENDIX A) :
STATUS: HOLD				
GROUP : NSD				
REV'D RES :YES	NRC APPROVAL :NO			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:SEE HED #310 -0-	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
318	6.7.3.1E(2)	CRCS	THERE IS NO POSITIVE INDICATION OF THE REMAINING SUPPLY OF PAPER. THERE IS POTENTIAL LOSS OF DATA ON SOE. -0- -0-	: STA TURNOVER-CHECKS ENOUGH PAPER. : AWAITING NRC APPROVAL OF SUPPLEMENTAL : REPORT. APPENDIX I. : :
STATUS: HOLD				
GROUP : NSD				
REV'D RES :YES	NRC APPROVAL :NO			
PRIORITY : 3				
RESOLUTION CATEGORY:COMPTE			RESOLUTION:REVIEW PROBLEM FOR RESOLUTION AND CORRECT	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
319	6.7.3.1E(3)	CRCS	SOE HAS INSTRUCTIONS FOR RELOADING PAPER POSTED, P-250 DOES NOT. -0- -0-	: REVIEW DETERMINED THAT PRINTER LOADING : IS STANDARD AND CAN BE EASILY PERFORMED. : OPERATORS DO NOT FIND LOADING DIFFICULT : AND INSTRUCTIONS ON SOE HAVE NOT BEEN : REPLACED. RECOMMEND NO FURTHER ACTION.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :YES	NRC APPROVAL :NO			
PRIORITY : 4				
RESOLUTION CATEGORY:COMPTE			RESOLUTION:PUT DIRECTIONS FOR PAPER RELOAD ON PRINTERS	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
320	6.7.3.2E	CRCS	THERE IS A NEED FOR REVIEW OF ALARM PRINTER MESSAGES AND ALARM SET POINTS AND CORRECT WHEN WRONG -0- -0-	: SEE COMMENTS FOR HED-317. : : : :
STATUS: HOLD				
GROUP : NSD				
REV'D RES :YES	NRC APPROVAL :NO			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:REVIEW ALARM PRINTER MESSAGES & CORRECT SW	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			PRINTED TABLES HAVE 19 COLUMN W/	: NO LONGER A PROBLEM TO GET INFORMATION
321	6.7.3.3D(1)	CRCS	CONTINUOUSLY PRINTED DATA - DIFFICULT TO	: BECAUSE OF PVC AND SPDS. AWAITING NRC
STATUS: HOLD			READ AND FIND SPECIFIC INFORMATION.	: APPROVAL OF SUPPLEMENTAL REPORT.
GROUP : NSD			-0-	: (APPENDIX A)
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:MOD SW TO PRINT BLOCK ID ON REPORT	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
			COLUMNS EXCEED RECOMMENDED GROUPING BY	: NRC APPROVED TAKING NO CORRECTIVE ACTION
322	6.7.3.3D(2)	CRCS	5 ITEMS BUT DO HAVE RED-BLACK	:
STATUS: CLOSED			ALTERNATING PRINT.	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM	-0-
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			SG NARROW RANGE LEVEL INDICATORS ARE	: CORRECTIVE ACTIONS TO BE COMPLETED PER
324	6.8.1.1B	VC2	ARRANGED IN WITH SG PRESS INDICATORS	: DCP-904 SCHEDULED FOR 6R.
STATUS: HOLD			ARRANGEMENT IS NOT BY FUNCTION OR	:
GROUP : ENG			CHANNEL.	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : 2				
RESOLUTION CATEGORY:HRD MD			RESOLUTION:SWAP STM AUX F/P IND. WITH CH.3NR LEVEL IND. (25 AK)	
IMPLEMENT DATE : / /			REV'D RESU:	
			MAIN FEED ISOLATION VALVE CONTROLS	: (APPENDIX J)
325	6.8.1.1B	BC2	SEPARATED FROM MAIN FEED CONTROLS	:
STATUS: HOLD			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :NO		-0-	:
PRIORITY : ENHANC				
RESOLUTION CATEGORY:ENHANC			RESOLUTION:IMPROVE LABELLING & DEMARCATION	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
			CH4 STEAM HEADER PRESS INDICATOR IS	: CORRECTIVE ACTIONS TO BE COMPLETED PER
326	6.8.1.1B	VC2	GROUPED WITH CH4 SG GENERATOR PRESS	: DCP-804 SCHEDULED FOR 6R. NRC APPROVED
STATUS: HOLD			INDICATORS AND HAS DIFFERENT SCALE - MAY	: CORRECTIVE ACTION.
GROUP : ENG			NOT BE A PROBLEM.	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : 3				
RESOLUTION CATEGORY:IN5 MD			RESOLUTION:CHANGE SCALE	-0-
IMPLEMENT DATE : / /			REV'D RESU:	
			SG PRESS INDICATORS - CHANNELS ARE	: NRC APPROVED TAKING NO CORRECTIVE ACTION
327	6.8.1.1B	VC2	ARRANGED DIFFERENTLY - MAY BE NO	:
STATUS: CLOSED			PROBLEM.	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM DESIGN ALLOWS ALTERNATE CHAN. SEL. FOR EACH IND.	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			ATMOSPHERE DUMP CONTROLS ARE SEPARATED	NOTE: ASSESSMENT OF RESOLUTION NOT FOUND
328	6.8.1.1B	BA	FROM OTHER STEAM GENERATOR CONTROLS	IN TER.
STATUS: HOLD			AND DISPLAYS ON BC2.	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :NO		-0-	
PRIORITY : 4				
RESOLUTION CATEGORY:	BRD MD		RESOLUTION:MOVE ATMOS STM DUMPS TO BC2 - CAN'T MOVE NO ROOM	
IMPLEMENT DATE :	/ /		REV'D RESU:	
			QUENCH SPRAY PUMP SUCTION AND DISCHARGE	CORRECTIVE ACTIONS TO BE COMPLETED PER
329	6.8.1.1B	BA2	VALVES ARE NOT BY PUMPS.	DCP-804 SCHEDULED FOR 6R.
STATUS: HOLD			-0-	
GROUP : ENG			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : 2				
RESOLUTION CATEGORY:	BRD MD		RESOLUTION:SEE DWG RE-25AB, 25AA	-0-
IMPLEMENT DATE :	/ /		REV'D RESU:	
			FW PUMP DISCHARGE PRESS INDICATORS	LABEL WILL BE CORRECTED. AWAITING NRC
330	6.6.1.1	VC2	LOCATED BETWEEN STEAM FLOW/FEED NARROW	APPROVAL OF SUPPLEMENTAL REPORT.
STATUS: HOLD			RANGE STRIP CHART RECORDERS. LABELLED	(APPENDIX M)
GROUP : NSD			SG-P-1A,B DISCH. PRESS. SHOULD BE	
REV'D RES :YES	NRC APPROVAL :NO		FW-P-1A,B.	
PRIORITY : ENHANC				
RESOLUTION CATEGORY:	LMD		RESOLUTION:LMD STUDY	-0-
IMPLEMENT DATE :	/ /		REV'D RESU:SEE ABOVE COMMENT.	
			FCV-CH-113A INDICATING LIGHTS NOT NEAR	NRC APPROVED TAKING NO CORRECTIVE ACTION
331	6.8.1.1B	BA3	THE CONTROLLER AND VALVE FCV-113A (BORIC	
STATUS: CLOSED			ACID TO BLENDER FLOW CONTROL).	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:	AAAA		RESOLUTION:REARRANGEMENT WOULD NOT IMPROVE	
IMPLEMENT DATE :	04/10/87		REV'D RESU:	
			FCV-CH-114A CONTROLLER LOCATED AWAY FROM	NRC APPROVED TAKING NO CORRECTIVE ACTION
332	6.8.1.1B	BA3	CONTROL STATION (PRIMARY WATER TO	
STATUS: CLOSED			BLENDER FLOW CONTROL).	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:	AAAA		RESOLUTION:SAME AS HED #331	-0-
IMPLEMENT DATE :	04/10/87		REV'D RESU:	
			BORON RECOVERY, LW & GW CONTROLS AND	NRC APPROVED TAKING NO CORRECTIVE ACTION
333	6.8.1.1B	BA4	DISPLAYS LOCATED BETWEEN IMPORTANT	
STATUS: CLOSED			CONTROLS.	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:	AAAA		RESOLUTION:NO PROBLEM FOR OPERATORS WOULD REQUIRE COMPLETE OR REDESIGN	
IMPLEMENT DATE :	04/10/87		REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			TURBINE FREQ. AND MW RECORDERS SEPARATED	: CORRECTIVE ACTIONS TO BE COMPLETED PER
334	6.8.1.1B	VC2	FROM REMAINDER OF TURBINE INDICATORS.	: DCP-804 SCHEDULED FOR 6R. NRC APPROVED
STATUS: HOLD			-0-	: CORRECTIVE ACTION.
GROUP : ENG			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : 1				
RESOLUTION CATEGORY:BRD MD			RESOLUTION:CHANGE AS PER DRWG 25AK	-0-
IMPLEMENT DATE : / /			REV'D RESU:	
			PORV BLOCK VALVES DIFFICULT TO ASSOCIATE	: NO PROBLEM - MIMICS & ENHANCED LABELING
335	6.8.1.1B	B91	WITH PORVS - ALTHOUGH WITH MIMIC MAY	: AWAITING NRC APPROVAL OF SUPPLEMENTAL
STATUS: HOLD			BE NO PROBLEM.	: REPORT. (APPENDIX A)
GROUP : NSD			-0-	:
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:SEE DRWG 25AD & HED #334	-0-
IMPLEMENT DATE : / /			REV'D RESU:NO PROBLEM WITH VALVE ASSOCIATION WITH MIMIC LINES.	
			STATION AIR & CNMT INSTRUMENT AIR	: CHANGE BY MOVING "STEAM CHEST" DOWN.
337	6.8.1.1B	VC3	INDICATORS ARRANGED AMONG TURBIN	: RECOMMEND BETTER LABELING & DEMARCATION.
STATUS: HOLD			INDICATORS. CONTROLS ARE ARRANGED	: APPENDIX A. BRD MOD SCHEDULED FOR 6R.
GROUP : ENG			SIMILARLY BUT DEMARCATED DIFFERENTLY.	:
REV'D RES :YES	NRL APPROVAL :NO		-0-	:
PRIORITY : 1				
RESOLUTION CATEGORY:BRD MD			RESOLUTION:SEE DWG 25AL & HED #30	-0-
IMPLEMENT DATE : / /			REV'D RESU:REORGANIZE INSTRUMENTATION (DWG 25AL)	
			MOV-SI-862B AND 862A CONTROLS HAVE	: CORRECTIVE ACTIONS TO BE COMPLETED PER
338	6.8.1.1B	BA2	DIFFERENT RELATIVE POSITIONS.	: DCP-804 SCHEDULED FOR 6R.
STATUS: HOLD			-0-	:
GROUP : ENG			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY :2				
RESOLUTION CATEGORY:BRD MD			RESOLUTION:SEE DWG 25AB, 25AA	-0-
IMPLEMENT DATE : / /			REV'D RESU:	
			MOV-SI-885A B,C,D NOT LOCATED IN	: NRC APPROVED TAKING NO CORRECTIVE ACTION
339	6.8.1.1B	BA	FUNCTIONAL GROUPING.	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO CHANGE DUE TO TRAIN SEPARATION	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			FW-P-1A,B FLOW AND TOTAL FLOW. TOTAL	: CORRECTIVE ACTIONS TO BE COMPLETED PER
341	6.8.1.1B	VC2	FLOW IS ARRANGED BETWEEN FW-P-1A & 1B.	: DCP-804 SCHEDULED FOR 6R.
STATUS: HOLD			SHOULD BE WITH DISCHARGE PRESS	:
GROUP : ENG			INDICATORS.	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : 3				
RESOLUTION CATEGORY:BRD MD			RESOLUTION:MOVE SG-P-1A,B DIS. PRESS OV FW-P-1A,B & TOTAL IND. DWG 25AK	
IMPLEMENT DATE : / /			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			TEST TANK 2A INDICATOR SHOULD BE GROUPED	NRC APPROVED TAKING NO CORRECTIVE ACTION
342	6.8.1.1B	VA3	WITH COOLANT RECOVERY.	
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:MOVING CREATES NEW HED'S	LEAVE AS IS
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			TURBINE EHC & SEAL OIL PRESS INDICATORS	CORRECTIVE ACTIONS TO BE COMPLETED PER
343	6.8.1.1B	VC3	REVERSED IN ALIGNMENT WITH RESPECT TO	DCP-804 SCHEDULED FOR 6R.
STATUS: HOLD			OIL PUMP CONTROL SWITCHES. H2 PRESS	
GROUP : ENG			SHOULD BE BETWEEN THESE.	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : 3				
RESOLUTION CATEGORY:BRD MD			RESOLUTION:SWAP LOCATIONS OF METERS (H2 & EHC) (DRWG 25AF)	
IMPLEMENT DATE : / /			REV'D RESU:	
			PORV ACOUSTIC MONITOR DISPLAYS ORDER	AWAITING NRC APPROVAL OF SUPPLEMENTAL
344	6.8.1.1B	VB1	REVERSED FROM PORV CONTROLS.	REPORT. (APPENDIX A)
STATUS: HOLD			-0-	
GROUP : NSD			-0-	
REV'D RES :YES	NRC APPROVAL :NO		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:OK WHEN PORVs MOVED	SEE ATTACHAA (DWG 25AD)
IMPLEMENT DATE : / /			REV'D RESU:NO PROBLEM-USED AT ONE TIME & ALSO HAVE A4-5&6 ANNUNCIATORS.	
			MOV-FW-105 (UPSTREAM AFW ISOLATION)	AWAITING NRC APPROVAL OF SUPPLEMENTAL
345	6.8.1.1B	BA1	SEPARATED FROM REST OF AUX FW CONTROLS	REPORT. APPENDIX I.
STATUS: HOLD			ON BC2 LOCATED IN CNMT ISOLATION SECTION	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :NO		-0-	
PRIORITY : 4				
RESOLUTION CATEGORY:BRD MD			RESOLUTION:CONSIDER REARRANGING CVCS	-0-
IMPLEMENT DATE : / /			REV'D RESU:	
			CNMT ISOLATION & MOV-CH-310 LOCATED	AWAITING NRC APPROVAL OF SUPPLEMENTAL
346	6.8.1.1B	BA4	IN WITH CVCS CONTROLS.	REPORT. APPENDIX I.
STATUS: HOLD			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :NO		-0-	
PRIORITY : 4				
RESOLUTION CATEGORY:BRD MD			RESOLUTION:CONSIDER REARRANGING CVCS	-0-
IMPLEMENT DATE : / /			REV'D RESU:	
			SI, CVCS, CW CONTROLS AND DISPLAYS ARE	AWAITING NRC APPROVAL OF SUPPLEMENTAL
347	6.8.1.1B	GENERIC	MOUNTED IN VARIOUS PLACES ON BOARDS -	REPORT.
STATUS: HOLD			NOT ARRANGED BY SYSTEM OR FUNCTION.	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :NO		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:BRD MD			RESOLUTION:SEE OTHER HED'S FOR SPECIFICS	-0-
IMPLEMENT DATE : / /			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
348	6.8.1.1B	BC2	AUX FEED PUMP AMPS INDICATORS - ORDER IS REVERSED FROM CONTROLS. -O- -O- -O-	CORRECTIVE ACTIONS TO BE COMPLETED PER DCP-804 SCHEDULED FOR 6R. NRC APPROVED CORRECTIVE ACTION.
STATUS: HOLD				
GROUP : ENR				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : 1				
RESOLUTION CATEGORY: BRD MD			RESOLUTION: SWAP AUX FEED PUMP CONTROL (DWG-25AE)	
IMPLEMENT DATE : / /			REV'D RESU:	
349	6.8.1.3A	NIS	NIS INSTRUMENTATION IS NOT SPACED OR OTHERWISE SET APART TO READILY IDENTIFY COMPONENTS. -O- -O-	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY: AAAA			RESOLUTION: NO PROBLEM - INSTRUMENTS ARE ADEQUATELY LABELLED	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
350	6.8.1.3A	RAD MON	RAD MON INSTRUMENTATION IS NOT SPACED OR OTHERWISE SET APART TO READILY IDENTIFY COMPONENTS. -O- -O-	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY: AAAA			RESOLUTION: NO PROBLEM - INSTRUEMENTION ADEQUATELY LABELLED	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
351	6.8.1.3D	GENERIC	THERE IS NO DISTINCTIVE ENHANCEMENT TECHNIQUE USED TO IDENTIFY CONTROLS DURING EMERGENCIES. -O- -O-	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY: AAAA			RESOLUTION: PATCHES ARE EXCELLENT OPER. AIDS RELATED TO AUTO ACTIONS	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
352	6.8.2.2A	BA3	MOV-SI-867C & 867D BORON INJECTION OUTLET VALVES READ RIGHT TO LEFT. (B THEN A). -O- -O-	AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. APPENDIX I.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY : 4				
RESOLUTION CATEGORY: BRD MD			RESOLUTION: CONSIDER CVCS REORG. -O-	
IMPLEMENT DATE : / /			REV'D RESU:	
353	6.8.2.2A		HCV-1CH-105-1B & HCV-1CH-110-1A RECIRC FLOW CONTROLS ARE ARRANGED 1B OVER 1A. -O- -O-	AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. APPENDIX I.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY : 4				
RESOLUTION CATEGORY: BRD MD			RESOLUTION: SAME AS HED #352 - CVCS REORG. -O-	
IMPLEMENT DATE : / /			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
354	6.8.2.2A	BA3	MOV-SI-867A & 867B - BORON INJECTION INLET ISOLATION VALVES READ RIGHT TO LEFT (B THEN A). -O- -O-	AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. APPENDIX I.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY : 4				
RESOLUTION CATEGORY:	BRD MD		RESOLUTION:SAME AS HED #352 - CVCS REORG. -O-	
IMPLEMENT DATE : / /			REV'D RESU:	
355	6.8.2.2A	C2	AUX FEEDWATER THROTTLE VALVE CONTROLS ARE LABELLED C-TOP, B-MID, A-BOTTOM. -O- -O-	CORRECTIVE ACTIONS TO BE COMPLETED PER DCP-804 SCHEDULED FOR 6R. AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT.
STATUS: HOLD				
GROUP : ENG				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY : 1				
RESOLUTION CATEGORY:	BRD MD		RESOLUTION:SWAP A&C VALVES (DWG - 25AE) -O-	
IMPLEMENT DATE : / /			REV'D RESU:	
356	6.8.2.2A	BA3	MOV-SI-869A & 869B HI HEAD SI TO RX COOLANT HOT LEGS READ RIGHT TO LEFT (B THEN A). -O- -O-	AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. APPENDIX I.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY : 4				
RESOLUTION CATEGORY:	BRD MD		RESOLUTION:SEE CVCS REORG. RECOMMENDATION HED# 352	
IMPLEMENT DATE : / /			REV'D RESU:	
358	6.8.2.3A	BA1	CIB TRAINS ARE NOT CONSISTENTLY LAID OUT. -O- -O-	CORRECTIVE ACTIONS TO BE COMPLETED PER DCP-804 SCHEDULED FOR 6R.
STATUS: HOLD				
GROUP : ENG				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : 2				
RESOLUTION CATEGORY:	BRD MD		RESOLUTION:REORGANIZE AS PER DWG RE-25AA -O-	
IMPLEMENT DATE : / /			REV'D RESU:	
359	6.8.3 GEN	GENERIC	HAGAN CONTROLLERS HAVE REVERSED CONTROLS. -O- -O-	APPENDIX J.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY : ENHANC				
RESOLUTION CATEGORY:	ENHANC		RESOLUTION:CLEARLY LABEL CLOSE /OPEN ON ALL HAGAN CONTROLLERS	
IMPLEMENT DATE : / /			REV'D RESU:	
360	6.8.3 GEN	BA6	BORIC ACID XFER PUMP INDIC. LITES (CH-P-2A,B) DON'T MATCH WITH SELECTOR SWITCHES. -O- -O-	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY:	AAA		RESOLUTION:NO PROBLEM - CLEARLY LABELLED, RUNS SLOW MOST OF TIME	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			CH-P-1A & CH-P-1C - SWITCHES ARE EASY	: NRC APPROVED TAKING NO CORRECTIVE ACTION
361	6.8.3.1B	BBA6	TO CONFUSE (SIDE BY SIDE)	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM C PUMP IS SWING PUMP	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			EXCITER CIRCUIT BREAKER CAN BE CONFUSED	: CORRECTIVE ACTIONS TO BE COMPLETED PER
362	6.8.3.1B	BC3	WITH INSTRUMENT AIR COMPRESSOR (SIDE BY	: DCP-804 SCHEDULED FOR 6R. NRC APPROVED
STATUS: HOLD			SIDE).	: CORRECTIVE ACTION.
GROUP : ENG			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : 1				
RESOLUTION CATEGORY:INS MD			RESOLUTION:CHANGE EXCITER CIRUIT BREAKER CONTROL TO PISTOL GRIP	
IMPLEMENT DATE : / /			REV'D RESU:	
			C CHARGING PUMP CAN BE CONFUSED WITH	: RESOLUTION HAS BEEN IMPLEMENTED.
363	6.8.3.1B	BB1	A-RCP (SIDE BY SIDE)	: NRC APPROVED CORRECTIVE ACTION.
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:ENHANC			RESOLUTION:DEMARCATION HAS BEEN ADDED -0-	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			TURBINE AND REHEATER PUSH BUTTONS ARE	: NRC APPROVED TAKING NO CORRECTIVE ACTION
364	6.8.3.1B	BC3	CONTIGUOUS WITH NO PROTECTIVE BARRIERS.	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:OPERATORS CONTROL IN MANUAL USING POTS.	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			RPI DISPLAY STRINGS EXCEED SUGGESTED	: NRC APPROVED TAKING NO CORRECTIVE ACTION
366	6.8.3.2B	BB	20	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO CHANGE RPI ORGANIZED BY BANK	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			RPI DISPLAYS ARE IN GROUPS OF 8,	: NRC APPROVED TAKING NO CORRECTIVE ACTION
367	6.8.3.2C(1)	BB	EXCEEDING SUGGESTED STANDARD OF 5.	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - RODS GROUPED BY 8 IN BANKS	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			STATUS LIGHT PANEL 380A & B DO NOT	: NRC APPROVED TAKING NO CORRECTIVE ACTION
369	6.8.3.2D(1)	VAI	COORDINATE AXES LABELLED.	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - PANEL A SELECTOR PANEL	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			STATUS LIGHT PANEL, PNL-176 DOES NOT	:
370	6.8.3.2D(1)	BB1	HAVE COORDINATE AXES LABELLED.	:
STATUS: HOLD			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : ENHANC				
RESOLUTION CATEGORY:ENHANC			RESOLUTION:LABEL HORIZONTAL AXIS -0-	
IMPLEMENT DATE : / /			REV'D RESU:	
			DELTA T DEFEAT CONTROLS NOT EASILY	: LABELING WILL BE CORRECTED. AWAITING NSC
372	6.6.1.1N	BC3	ASSOCIATED WITH DISPLAY-NEED LABELLING	: APPROVAL OF SUPPLEMENTAL REPORT.
STATUS: HOLD			ON CONTROLS INDENTICAL TO DISPLAYS	: APPENDIX H.
GROUP : NSD			-0-	:
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:CORRECT LABELING TO MATCH WITH DISPLAYS-LMD STUDY	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
			EOP FR-H.2,STEP 6-AER. AFW VALVES NOT	: TO BE COMPLETED PER DCP-804 SCHEDULED
374	6.9	BC2	RELATED SG DISPLAYS IN CONVENTIONAL WAY.	: FOR 6R. NRC APPROVED CORRECTIVE ACTION.
STATUS: HOLD			MOV-FW-151E&F GO TO SG A	:
GROUP : ENG			MOV-FW-151C&D GO TO SG B	:
REV'D RES :NO	NRC APPROVAL :YES		MOV-FW-151A&B GO TO AG C	:
PRIORITY : 1				
RESOLUTION CATEGORY:BRD MD			RESOLUTION:ADRESSED BY HED #355 -0-	
IMPLEMENT DATE : / /			REV'D RESU:	
			EOP ES-0.3,STEP 11A(2)-RNO. STEAM DUMP	: SCHEDULED FOR 6R COMPLETION.
375	6.9.2.3A	BC2	CONTROLS ON BC2 WHILE SUBCOOLING MONITOR	: NRC APPROVED CORRECTIVE ACTION.
STATUS: HOLD			NIS	: PLEASE SEE APPENDIX G HED-500 FOR FUTHER
GROUP : ENG			-0-	: INFORMATION ON ICC INSTRUMENTATION SYS.
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : IN-PROG				
RESOLUTION CATEGORY:INS MD			RESOLUTION:NEW ICC PACKAGE WILL CORRECT PROBLEM	
IMPLEMENT DATE : / /			REV'D RESU:	
			THERE ARE NO PAGE NUMBERS ON PRINT OUTS.	: NRC APPROVED TAKING NO CORRECTIVE ACTION
376	6.7.2.8A(1)	CRCS	DATA AND ALARM PRINTOUTS ARE BY TIME.	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :NO		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM PAGE # NOT IMP. -0-	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
377	6.7.2.4A(1)	CRCS	THE FOLLOWING COMPUTER PROGRAM NEED ENHANCING TO PROVIDE BETTER DATA: CALCULATION OF SECONDARY HEAT BALANCE, BORON FOLLOW, XENON FOLLOW, AND TILTING FACTOR REVIEW.	SOFTWARE WILL NOT BE MODIFIED DUE TO POSSIBLE ADVERSE IMPACT ON PERFORMANCE AND COST. AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. (APPENDIX A)
STATUS: HOLD			RESOLUTION: UPGRADE SOFTWARE	-0-
GROUP : NSD			REV'D RESU: SEE ABOVE COMMENT.	
REV'D RES : YES	NRC APPROVAL : NO			
PRIORITY : N/A				
RESOLUTION CATEGORY: AAAA				
IMPLEMENT DATE : / /				
378	PROCEDURE	BC	EOP E-0, STEP 8A-AER STATES INDICATING LIGHTS WITH GREEN FWI MARKS FOR VERIFYING FWI. SOME FWI INDICATIONS DO NOT HAVE GREEN MARKS -0-	COVERED IN HED - 424. TO BE COMPLETED PER DCP-804 SCHEDULED FOR 6R. NRC APPROVED CORRECTIVE ACTION.
STATUS: HOLD			RESOLUTION: PLACE PATCHES ON VALVES-IMPROVE STATUS PANEL 623	
GROUP : NSD			REV'D RESU:	
REV'D RES : NO	NRC APPROVAL : YES			
PRIORITY : ENHANC				
RESOLUTION CATEGORY: ENHANC				
IMPLEMENT DATE : / /				
379	PROCEDURE	GENERAL	EOP ES-0.3, STEP 5-RNO. STEP UNCLEAR WHETHER OR NOT COOLDOWN RATE CURVES TAKE PRECEDENCE OVER RVLIS UPPER RANGE VALUE. -0- -0-	PROCEDURE ISSUE WAS ADDRESSED AND IS ALSO CLARIFIED IN TRANING. NRC APPROVED CORRECTIVE ACTION.
STATUS: CLOSED			RESOLUTION: PROCEDURE ISSUE - HAS BEEN ADDRESSED	
GROUP : NSD			REV'D RESU:	
REV'D RES : NO	NRC APPROVAL : YES			
PRIORITY : COMPLETE				
RESOLUTION CATEGORY: PRCDRE				
IMPLEMENT DATE : 04/10/87				
380	PROCEDURE	GENERAL	PROCEDURES NEED LOCATION DATA CALLED OUT FOR VALVES TO BE ALIGNED. (EOPs) -0- -0-	GENERAL OPERATING PROCEDURES PROVIDED WITH VALVE LOCATIONS AND EOPS HAVE BEEN REVISED TO ADDRESS THIS HED.
STATUS: CLOSED			RESOLUTION: PROCEDURE ISSUE-HAS BEEN ADDRESSED	
GROUP : NSD			REV'D RESU:	
REV'D RES : NO	NRC APPROVAL : YES			
PRIORITY : COMPLETE				
RESOLUTION CATEGORY: PRCDRE				
IMPLEMENT DATE : 04/10/87				
381	PROCEDURE	GENERAL	EOP E-1, STEP 15A-AER. INSUFFICIENT INFORMATION ON STARTING HYDROGEN ANALYZERS AND HOW MUCH TIME REQUIRED. -0- -0-	EOP REFERENCES PROCEDURE IN OPERAING MANUAL FOR INFORMATION ON STARTING HYDROGEN ANALYZERS. NRC APPROVED CORRECTIVE ACTION.
STATUS: CLOSED			RESOLUTION: PROCEDURE ISSUE-HAS BEEN ADDRESSED	
GROUP : NSD			REV'D RESU:	
REV'D RES : NO	NRC APPROVAL : YES			
PRIORITY : COMPLETE				
RESOLUTION CATEGORY: PRCDRE				
IMPLEMENT DATE : 04/10/87				
383	6.9	BC2	INDICATOR LIGHT FOR STEAM DUMP CONTROLLER & SELECTOR SWITCHES ARE ON STATUS PANEL 622 - MAY NOT BE A PROBLEM - 18 VALVES AND DIFFERENT SEQUENCES NO PROBLEM	(APPENDIX L)
STATUS: HOLD			RESOLUTION: NO PROBLEM - 18 VALVE POSITIONS NEED TO BE ON STATUS PANEL	
GROUP : NSD			REV'D RESU: SEE ABOVE COMMENT.	
REV'D RES : NO	NRC APPROVAL : NO			
PRIORITY : N/A				
RESOLUTION CATEGORY: AAAA				
IMPLEMENT DATE : / /				

MED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
384	6.9.1.1	BB1	STEAM LINE SI-BLOCK OT-2 ON BB1 - STATUS ON STATUS PANEL 623 - NOT EASILY ASSOCIATED -0- -0-	: NO PROBLEM - ONLY USED DURING SU & SD. : RE EVALUATED TO BE BETTER ON PNL 623. : AWAITING NRC APPROVAL OF SUPLEMENTAL : REPORT.(APPENDIX A) :
STATUS: HOLD				
GROUP : NSD				
REV'D RES :YES	NRC APPROVAL :NO			
PRIORITY : N/A				
RESOLUTION CATEGORY: AAAA			RESOLUTION: MORE STATUS LITE TO SP 176 NEXT TO PRZ SI BLOCK STATUS LITE	
IMPLEMENT DATE : / /			REV'D RESU: NO PROBLEM - INSTRUMENTATION IN PROPER LOCATION.	
385	6.9	BB1	PART LENGTH ROD STEP COUNTERS, ROD CONTROL ARE UNNECESSARY - NOT USED -0- -0- -0-	: CORRECTIVE ACTIONS TO BE COMPLETED PER : DCP-804 SCHEDULED FOR 6R. NOTE: PART : LENGTH ROD IN-OUT LEVER CONTROL WILL NOT : BE REMOVED BECAUSE IT WILL BE RETAINED : AS A SPARE ON THE BOARDS.
STATUS: HOLD				
GROUP : ENG				
REV'D RES :YES	NRC APPROVAL :NO			
PRIORITY : 3				
RESOLUTION CATEGORY: BRD MD			RESOLUTION: REMOVE FROM BOARDS -0-	
IMPLEMENT DATE : / /			REV'D RESU: SEE ABOVE NOTE.	
386	6.9	BB1	BLOCK VALVES - SHOULD BE ORDERED (1) SOURCE, (2) INTERMEDIATE, AND (3) POWER -0- -0-	: CORRECTIVE ACTIONS TO BE COMPLETED PER : PER DCP-804 SCHEDULED FOR 6R. REORDERING : OF POSITIONS WILL BE TO MEET OPERATOR : EXPECTATIONS; POWER INTERM.,SOURCE. : APPENDIX A.
STATUS: HOLD				
GROUP : ENG				
REV'D RES :YES	NRC APPROVAL :NO			
PRIORITY : 3				
RESOLUTION CATEGORY: BRD MD			RESOLUTION: CHANGE POSITIONS OF VALVES (25AD)	
IMPLEMENT DATE : / /			REV'D RESU: SEE ABOVE COMMENT.	
387	6.9	BC2	BYPASS FW FCV-479,89,99 INDICATING LIGHT TO LEFT OF CONTROLS - MAY BE NO PROBLEM - HAS DEMARCATION - NO PROBLEM -0- -0-	: NRC APPROVED TAKING NO CORRECTIVE ACTION : : : :
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY: AAAA			RESOLUTION: NO PROBLEM - CLEAR ASSOCIATION -0-	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
388	6.9	BA6	NO POSITION INDICATION FOR FOLLOWING CONTROLLERS: FCV-CH-160, FCV-CH-122 FCV-CH-145, TCV-CH-144, MOV-CH-142 NOW HAS INDICATION -0-	: NRC APPROVED TAKING NO CORRECTIVE ACTION : : : :
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY: AAAA			RESOLUTION: NO PROBLEM - ALL HAVE IND. LITES OR PARAMETER INDICATORS	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
389	6.9	BA5	FCV-CH-114A, 113A INDICATION LIGHTS ON PICKUP -- NOT OVER CONTROLLERS - NOT EASILY ASSOCIATED -0- -0-	: NRC APPROVED TAKING NO CORRECTIVE ACTION : : : :
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY: AAAA			RESOLUTION: NO PROBLEM - IND LITES WITH BLENDER MAKEUP SELECTOR SWITCH	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	

MED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			LACK OF AUTOMATIC PRESSURIZATION	: NRC APPROVED TAKING NO CORRECTIVE ACTION
390	6.9	BSP	OF CR. NO. 50 - ON CIB OR CHLORINE	:
STATUS: CLOSED			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - MED WRONG -0-	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			AM-CH-115E - INDICATING LGIHTS DOWN BY	: MED WAS INCORRECTLY IDENTIFIED. RELOCA-
391	6.8.2.3A	BAS	OVERRIDE SWITCH WHERE THEY BELONG.	: TION OF NEWLY IDENTIFIED CONTROLLER RE-
STATUS: HOLD			CONTROLLERS SHOULD BE BELOW MANUAL	: LATIONSHIP WOULD REQUIRE REORGANIZATION
GROUP : NSD			OVERRIDE SWITCH	: OF CVCS. AWAITING NRC APPROVAL OF
REV'D RES :YES	NRC APPROVAL :NO		-0-	: SUPPLEMENTAL REPORT. (APPENDIX H.
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO ROOM TO MOVE CONTROLLER REFER TO LMD	
IMPLEMENT DATE : / /			REV'D RESU:NO FURTHER ACTION REQUIRED.	
			LCV-CH-115 (OT-2 SELECTOR SWITCH)	: CORRECTIVE ACTIONS TO BE COMPLETED PER
392	6.9	BAS	SWITCH PSITION BACKWARDS FROM INDICATING	: DCP-804 SCHEDULED FOR 6R. NRC APPROVED
STATUS: HOLD			LIGHTS	: CORRECTIVE ACTION.
GROUP : ENG			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : 3				
RESOLUTION CATEGORY:HKD MD			RESOLUTION:SWAP INDICATOR LIGHTS FOR BOTH LCV-CH-112 & LCV-CH-115	
IMPLEMENT DATE : / /			REV'D RESU:	
			HSS-BR 19A PERMISSIVES FOR VALVES -	: NRC APPROVED TAKING NO CORRECTIVE ACTION
393	6.9	BAS	INDICATOR LIGHTS ON BB, CONTROLLERS ON	:
STATUS: CLOSED			VC	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - PARAMETER INDICATORS PRESENT	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			BR-P-2A,B & MOV-BR-105A,B PUMP AND	: NO PROBLEM - CONSEQUENCES OF MISOPER-
394	6.7.8.1.1B	BAS	VALVES ARE SEPARATED	: ATION ARE NOT SIGNIFICANT.AWAITING NRC
STATUS: HOLD			-0-	: APPROVAL OF SUPPLEMENTAL REPORT.
GROUP : NSD			-0-	: (APPENDIX A)
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:MOVE VALVE CONTROLS ABOVE PUMP ON PICKUP	
IMPLEMENT DATE : / /			REV'D RESU:SEE COMMENT ABOVE.	
			HSS-MR-2 IS AN OT-2 SHOULD BE A SELECTOR	: REVIEW DETERMINED TO NOT RECOMMEND
395	6.9	BAS	SWITCH	: MODIFICATION. APPENDIX A.
STATUS: HOLD			-0-	:
GROUP : NSD			-0-	:
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : ENGINE				
RESOLUTION CATEGORY:INS MD			RESOLUTION:CHANGE TO SELECTOR SWITCH -0-	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			BORON EVAPORATOR ON A-2 SHOULD BE ON A3	: BECAUSE SEPARATION IS NOT GREAT AND
396	6.3.3.3B	ANNUN-A2	-0-	: LOCATED ABOVE ON CONTROLS AND DISPLAYS,
STATUS: HOLD			-0-	: NO ACTION IS REQUIRED. (ALSO ADRESSES
GROUP : NSD			-0-	: GUIDELINE 6.3.3.1A) AWAITING NRC APPRO-
REV'D RES :YES	NRC APPROVAL :NO		-0-	: VAL OF SUPPLEMENTAL REPORT. (APPENDIX H)
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:ALARM WOULD BE BETTER ON A3 -0-	
IMPLEMENT DATE : / /			REV'D RESU:NO FURTHER ACTION REQUIRED.	
			LABELING	: CHANGING TAG NUMBERS WOULD REQUIRE
397	6.9	BA4	BR-P-2A, 2B GO TO TEST TANK 5A, 5B	: MODIFYING DRAWINGS AND OTHER DOCUMENTS.
STATUS: CLOSED			LW-P-1A, 1B GO TO TANK 3A, 3B	: ITEMS ARE NOT ACCIDENT RELATED.
GROUP : NSD			LW-P-9A, 9B TO TO TANK 5A, B	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : 4				
RESOLUTION CATEGORY:OTHER			RESOLUTION:NO CHANGE RECOMMENDED.	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			DG-P-2A,B CONTROLS ON BA4, RELATED	: NRC APPROVED TAKING NO ACTION
398	6.9	BA4	DISPLAYS ON VA6 DG-P-1A,B CONTROL ON	:
STATUS: CLOSED			BA4, PRIMARY DRAINS XFER TK 1&2 ON VA6	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM -- ALARM ON TKS SEPARATION ACCEPTABLE	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			HSS-LW-2 OT-2 SELECTOR SWITCH TO CONTROL	: LABEL WILL BE CORRECTED. AWAITING NRC
399	6.6.3.2	BA4	RECIRC & DRAIN DOES NOT CONTROL DRAIN --	: APPROVAL OF SUPPLEMENTAL REPORT.
STATUS: HOLD			LABELLING	: (APPENDIX H)
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:CORRECT LABEL -0-	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
			LW-TK-7A,B - PUMP IN AUX BLDG. IS 12A,B	: AWAITING NRC APPROVAL OF SUPPLEMENTAL
400	6.9		ALSO AS NOTED BEFORE TK LEVEL INDICATION	: REPORT. (APPENDIX L)
STATUS: HOLD			NEEDED IN CR.	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :NO		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - PUMP IN AUX BLDG.-0-	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
			HSS-GW-110 T HANDLE SELECTOR SWITCH	: REVIEW DETERMINED TO NOT RECOMMEND
401	6.4.1.1C(1)	BA4	SHOULD BE DIFFERENT TYPE CONTROL	: MODIFICATION. APPENDICES A AND H.
STATUS: HOLD			-0-	:
GROUP : NSD			-0-	:
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : 3				
RESOLUTION CATEGORY:INS MD			RESOLUTION:CHANGE T HANDLE TO SELECTOR SWITCH	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENTS.	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
402	6.9	BA3	PCV-MS-101A,B,C CONTROLLERS AND INDICATORS SEPARATED AND NOT EASILY ASSOCIATED.	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - CONTROL PROPERLY ASSOCIATED WITH PRESS IND.	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
403	6.9	BA3	RH-P-1A,B, MOV-RH - 720A,B, (OUT) 700, 701(IN) NOT IN CONVENTIONAL ORDER SWAP DISCHARGE & SUCTION VAVLES	REVIEW DETERMINED TO NOT RECOMMEND MODIFICATION. APPENDIX A.
STATUS: HOLD			-0-	
GROUP : NSD			-0-	
REV'D RES :YES	NRC APPROVAL :NO			
PRIORITY : 3				
RESOLUTION CATEGORY:BRD MD			RESOLUTION:SWAP SUCTION AND DISCHARGE VALVES (25AB)	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
404	6.9	BA3	NO POSITION INDICATION FOR FOLLOWING CONTROLLERS : MOV-RH-805, 758,1 HCV-MS-104	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM - ALL HAVE PARAMETER INDICATORS	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
405	6.6.3.2	VA3	CNMT SUMP LABELLING ON VA INDICATORS NOT CLEAR REFER TO LMD CHANGE LABEL TO READ CNMT SAFEGUARDS SUMPS	LABELING WILL BE CORRECTED. (APPENDIX H)
STATUS: HOLD			-0-	
GROUP : NSD			-0-	
REV'D RES :YES	NRC APPROVAL :NO			
PRIORITY : ENHANC				
RESOLUTION CATEGORY:LMD			RESOLUTION:REFER TO LMD -0-	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
406	6.9	BA3	DS-P-4A-1 TF W/LEVEL/TEMP ON VC1 WITH RWST	NRC APPROVED TAKING NO CORRECTIVE ACTION
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM TF LEVEL & TEMP. ALARMS CONTROLS PUMP AUTO STOPS	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
407	6.8.1.1B	BA3	LOCATION OF AIMOS STM DUMPS FORCES FO TO WALK BACK AND FORTH BETWEEN BA3 AND BC2 WHERE FW CONTROLS ARE.	NRC APPROVED TAKING NO CORREC.IVE ACTION APPENDIX K.
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:COVERED IN PREVIOUS HEDN 328 -0-	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
409	6.1.1.4A(1&2)	VB2	CHARTS OF COOLDOWN CURVES CAN NOT BE READ EASILY DUE TO LOCATION	CURVES AVAILABLE IN REFERENCE BINDER AT OPERATOR'S STATION. APPENDIX K.
STATUS: HOLD			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :NO		-0-	
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:OTHER			RESOLUTION:HAVE EOP CHARTS AVAILABLE ON TABLE & RO LOG CLIPBOARD	
IMPLEMENT DATE : / /			REV'D RESU:	
410	6.6.3.3C	PROCEDURE	EOP E-3 STEP 19-B TYPO--SHOULD BE DEGREE NOT %	EOP CORRECTED. APPENDIX K. NRC APPROVED CORRECTIVE ACTION.
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:PRCDRE			RESOLUTION:CORRECTED BY EOP TEAM -0-	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
411	6.1.2.5B(1)	VA6	T-HOT RECORDER NOT VISIBLE FROM BB. OPERATOR HAS TO GO TO VA6	REFER TO Th & Tc RECORDERS (HED-225) TO BE COMPLETED PER DCP-804 SCHEDULED FOR 8R. NRC APPROVED CORRECTIOVE ACTION. APPENDIX K.
STATUS: HOLD			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : 1				
RESOLUTION CATEGORY:BRD MD			RESOLUTION:(SEE SWG 25AH) ADRESSED BY HED #225	
IMPLEMENT DATE : / /			REV'D RESU:	
412	6.8.2.1A	BA1	OPERATOR REQUIRED TO OPERATE MOV-CH-289 & 310 SEQUENTIALLY. CONTROLS ON DIFFERENT ENDS OF BA.	NRC APPROVED TAKING NO CORRECTIVE ACTION APPENDIX K.
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:COVERED IN HED 88 -0-	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
413	6.1.1.4C(2)	PROCEDURE	FOREMAN HAS DIFFICULTY OPENING EOP BOOK TO ATTACHMENTS.	ATTACHMENTS HAVE BEEN PLACED IN IN SEPARATE BOOKS. NRC APPROVED CORRECTIVE ACTION. APPENDIX K
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:PRCDRE			RESOLUTION:ATTACHMENTS PLACED IN SEPARATE BOOK	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
414	6.1.14C(2)	PROCEDURE	EOP BOOK TOO LARGE FOR FOREMAN TOO HANDLE EASILY.	EOP BOOK HAS BEEN SEPARATED INTO TWO BOOKS WHICH CAN BE EASILY HANDLED. WE BELIEVE THIS TO BE A MORE PRACTICAL AND SATISFACTORY CORRECTION. APPENDIX K.
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:PRCDRE			RESOLUTION:EOP BOOK SEPARATED INTO 3 BOOKS--E-SERIES;ECA; & F- SERIES	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	

NED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
415	6.8.2.1A(2)	PROCEDURE	VALVE LINE-UP REQUIRED IN STEP 21 OF EOP E-0 IS NOT ORGANIZED CORRECTLY.	EOP REVISED AND VALVE LINE-UP IS CORRECT NRC APPROVED CORRECTIVE ACTION. APPENDIX K.
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES.:NO	NRC APPROVAL :YES		-0-	
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:PRCDRE			RESOLUTION:VALVE CHECKLIST HAS BEEN CORRECTED.	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
416	6.8.1.2C	VA4	RWST ANNUNCIATOR NOT BY RWST LEVEL METER S ON VC1. THEY ARE OVER RWST RECORDER ON VA4.	APPENDIX K.
STATUS: HOLD			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :NO		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM--ANNUN IN GOOD LOCATION BECAUSE OF LOC OF CIRC VL	
IMPLEMENT DATE : / /			REV'D RESU:	
417	6.5.1.2A	PROCEDURE	EOP E-3 STEP 15, OPERATOR HAS TO INTERPOLATE WHEN MANUALLY SETTING POT.	EOP REVISED SO OPERATOR CAN SET POT ACCORDING TO INTACT SG. NRC APPROVED CORRECTIVE ACTION. APPENDIX K.
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:PRCDRE			RESOLUTION:PRCEDURE REVISED	-0-
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
418	6.2.1.1A	GENERAL	COMMUNICATIONS- USE OF NON-STANDARD TERMINOLOGY; LACK OF CONSISTENCY IN WAY ACTIONS PERFORMED; INCONSISTENT TELEPHONE COMMUNICATIONS.	APPENDIX K.
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:OTHER			RESOLUTION:NEED POLICY, PROCEDURES, AND TRAINING ON COMMUNICATIONS.	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
419	3.8	PROCEDURES	SHIFT FOREMAN DOES NOT READ OUT ALL CAUTION AND NOTES.	NUMBER OF CAUTIONS AND NOTES ARE MINIMIZED. TRAINING ADRESSES THE IMPORTANCE OF CALLING OUT ALL CAUTIONS AND NOTES. NRC APPROVED CORRECTIVE ACTION. APPENDIX K.
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:PRCDRE			RESOLUTION:REC. BETTER HIGHLIGHTING NOTE S & CAUTIONS; TRAIN. EMPHASIS	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
420	6.5.1.2A	VC1	CAN'T READ 19' 2 1/2	HAS BEEN CHANGED TO 20 FEET. NRC APPROVED CORRECTIVE ACTION. APPENDIX K.
STATUS: CLOSED			-0-	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:PRCDRE			RESOLUTION:PROCEDURE REVISED	-0-
IMPLEMENT DATE : 04/10/87			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			OPERATORS CONFUSE PUSHBUTTONS FOR RESET	: APPENDIX H AND K.
421	6.8.3.1B	BA	& ACTUATION OF SI, CIA, & CIB.	:
STATUS: HOLD			-0-	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :NO		-0-	:
PRIORITY : IN-PROG				
RESOLUTION CATEGORY:LMD			RESOLUTION:GUARD ACTUATION BUTTONS; REFER TO LMD FOR BETTER CODING.	
IMPLEMENT DATE : / /			REV'D RESU:	
			OPERATOR CANNOT VERIFY PRZR SPRAY VALVES	: ADDRESSED IN HED-154. APPENDIX A AND K.
422	6.5.1.1E(2)	BB1	CLOSED. HAGAN IS DEMAND SIGNAL ONLY.	:
STATUS: HOLD			-0-	:
GROUP : NSD			-0-	:
REV'D RES :YES	NRC APPROVAL :NO		-0-	:
PRIORITY : 1				
RESOLUTION CATEGORY:REDSGN			RESOLUTION:COVERED IN PREVIOUS HED*- PROVIDE NEEDED INSTRUMENTATION.	
IMPLEMENT DATE : / /			REV'D RESU:	
			WHEN CNMT AIR REQUIRED, IT MAY TAKE AN	: NRC APPROVED TAKING NO CORRECTIVE ACTION
423	3.8	GENERAL	AUX OPERATOR SEVERAL MINUTES TO LOCATE	: APPENDIX K.
STATUS: CLOSED			AND CLOSE IA-90. TIME DELAY COULD CAUSE	:
GROUP : NSD			PROBLEM.	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:IA PRESS GOOD FOR 30' WITH LOSS OF COMPRESSOR--NO PROBLEM.	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			FW ISOLATION NOT PROPERLY VERIFIED BECAU	: CORRECTIVE ACTIONS TO BE COMPLETED PER
424	6.6	BC2	SE INDICATORS SPLIT BETWEEN BA1 & BC2.	: DCP-804 SCHEDULED FOR 6R. NRC APPROVED
STATUS: HOLD			ALL FW ISOL. IND ON BC2 DO NOT HAVE	: CORRECTIVE ACTION. APPENDIX J AND K.
GROUP : ENG			GREEN PATCHES. ALSO SOME ON STATUS 623.	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : ENHANC				
RESOLUTION CATEGORY:ENHANC			RESOLUTION:ADD GREEN PATCHES. EMPHASIZE IN TRAINING	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
			3 VALVES-- TV-FP-105,106,& 107 ON BSP	: CORRECTIVE ACTIONS TO BE COMPLETED PER
425	6.6	BSP	NEED CIA ORANGE PATCHES.	: DCP-804 SCHEDULED FOR 5R. NRC APPROVED
STATUS: HOLD			-0-	: CORRECTIVE ACTION. APPENDIX K.
GROUP : ENG			-0-	:
REV'D RES :NO	NRC APPROVAL :YES		-0-	:
PRIORITY : ENHANC				
RESOLUTION CATEGORY:ENHANC			RESOLUTION:ADD PATCHES -0-	
IMPLEMENT DATE : / /			REV'D RESU:	
			CHEMISTRY PROCEDURE TO USE PASS USES	: PROCEDURE INCLUDES VALVE MARK NUMBERS
426	6.6.3.3	PROCEDURE	DIFFERENT LABEL CALLOUTS THAN ON PASS	: FOR PROPER IDENTIFICATION.
STATUS: HOLD			BYPASS VALVE CONTROL.	:
GROUP : NSD			-0-	:
REV'D RES :NO	NRC APPROVAL :NO		-0-	:
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:PRCDRE			RESOLUTION:CORRECT CHEMISTRY PROCEDURE. -0-	
IMPLEMENT DATE : / /			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
427	6.5.1.1C	GENERAL	OPERATORS FREQUENTLY LOOK AT HAGAN CONTROLLERS TO VERIFY VALVE POSITIONS. GET DEMAND SIGNAL ONLY. -0- -0-	CONDITION COVERED DURING OPERATOR LICENSE TRAINING, STA TRAINING AND LICENSE RETRAINING. APPENDIX K.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:TRNG			RESOLUTION:EMPHASIZE IN TRAINING. -0-	
IMPLEMENT DATE : / /			REV'D RESU:	
428	3.8	BB2	ON REACTOR TRIP, IT IS EASY FOR OPERATOR TO MISS IF A ROD BOTTOM LIT DOES NOT COME ON--PRIMARILY BECAUSE PROCEDURE DOE S NOT HAVE THEM CHECK INDIVIDUAL LITES. -0-	MISSING OF ROD BOTTOM LIGHTS NOT CRITICAL.(HOWEVER,ITEM COVERED IN TRNG.) OPERATOR USES REACTOR TRIP INDICATOR LITES AND NUCLEAR INST. NRC APPROVED C.A. APPENDIX K AND L.
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:PRCDRE			RESOLUTION:ADD NOTE IN EOP TO CHECK INDIVIDUAL RBL.	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
429	6.3.3.4C	VA3	RCP VIBRATION HI HI ALARM DOES NOT INDICATE PROBLEM RCP. -0- -0-	NRC APPROVED TAKING NO CORECTIVE ACTION ADRESSES GUIDELINE 6.3.1.2C ALSO. APPENDIX K.
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM-- VIBRATION METERS ON BACK PANEL IN CR.	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
430	6.5.1.5E	VA3	LHSI FLOW INDIDCATOR(SQ. RT. SCALE) COULD NOT BE READ BELOW 2000GPM. OPERATOR HAD LHSI FLOW BUT DID NOT KNOW IT. -0- -0-	INSTRUMENTATION ADEQUATE FOR IDENTIFYING PRESENCE OF FLOW. AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. APPENDIX I HED-150 AND APPENDIX K.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :YES	NRC APPROVAL :NO			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:RE-EVALUATE SIGNIFICANCE OF PROBLEM	
IMPLEMENT DATE : / /			REV'D RESU:NO FURTHER ACTION REQUIRED. SEE ABOVE COMMENT.	
431	6.5.1.1C	BB2	PART LENGTH ROD BOTTOM LIGHTS SHOULD BE REMOVED -0- -0-	CORRECTIVE ACTIONS TO BE COMPLETED PER DCP-304 SCHEDULED FOR 6R. NRC APPROVED CORRECTIVE ACTION. APPENDIX K.
STATUS: HOLD				
GROUP : ENG				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : 3				
RESOLUTION CATEGORY:BRD MD			RESOLUTION:REMOVE PART LENGTH RBL. (SEE HED #385,ALSO)	
IMPLEMENT DATE : / /			REV'D RESU:	
432	3.8	GENERAL	OPERATOR WAS MANIPULATING CHARGING PUMP CONTROL WHEN AO WORKING ON/RESETTING BREAKER-- BAD OPERATING PRACTICE; COULD BE DANGEROUS. -0-	BREAKER RACKING PROCEDURES IN OP MANUAL HAVE BEEN REVISED. APPENDIX J AND K.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :YES	NRC APPROVAL :NO			
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:PRCDRE			RESOLUTION:TRAINING TO ADDRESS SAFE OPERATING PRATICES.	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
433	3.8	PROCEDURES	EOP E-3,STEP 15A-- THERE WAS SOME UNCERTAINTY REGARDING HOW TO USE TABLE AND WHEN VALUES SELECTED SHOULD BE UPDATED. -0- -0-	NRC APPROVED CORRECTIVE ACTION. APPENDIX K.
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:TRNG			RESOLUTION:REFER TO TRAINING	-0-
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
434	6.1.2.5	VC2	WR SG LEVEL RECORDER NEEDS TO BE HIGHER ON VB FOR OPERATOR TO SEE OVER BB. -0- -0-	CORRECTIVE ACTIONS TO BE COMPLETED PER DCP-804 SCHEDULED FOR 6R. NRC APPROVED CORRECTIVE ACTION. APPENDIX K.
STATUS: HOLD				
GROUP : ENG				
REV'D RES :NO	NRC APPROVAL :YES			
PRIORITY : 1				
RESOLUTION CATEGORY:BRD MD			RESOLUTION:SEE DWG 25AK & HED #30	-0-
IMPLEMENT DATE : / /			REV'D RESU:	
435	6.5.1.3	VA6	RCS PRESS INDICATOR ON VA6 MISREAD TWICE DURING THE VALIDATION. -0- -0-	AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. METER MEETS READIBILITY CRITERIA AND IS NOT A DISCREPANCY. APPENDICES I AND K.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :YES	NRC APPROVAL :NO			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:RECHECK READABILITY OF INDICATOR WITH OPERATORS	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
436	6.6.3.6	BA3	TERMINOLOGY USED IN DISCUSSING RHR & RESIDUAL HEAT RELEASE VALVE COULD BE CONFUSING. -0- -0-	NRC APPROVED TAKING NO CORRECTIVE ACTION ADRESSES GUIDELINE 6.6.3.2 ALSO. APPENDIX K.
STATUS: CLOSED				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROB.-- CAN'T MAKE ERROR BECAUSE OF PRESSURE INTERLOCK.	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
437	6.7.2.7(2)	SPDS	COLORS USED IN SPDS DISPLAY INCONSISTENT WITH PVC & VIOLATES CR CONVENTION -- YELLOW USED FOR NORMAL/SAFE CONDITION -0- -0-	ADRESSES GUIDELINE 6.5.1.6D(2) ALSO. SPDS COLORS WILL BE CHANGED TO BE CONSISTENT WITH OTHER USES OF YELLOW AND GREEN. APPENDICES H AND K.
STATUS: HOLD				
GROUP : ENG				
REV'D RES :YES	NRC APPROVAL :NO			
PRIORITY : 3				
RESOLUTION CATEGORY:COMPTE			RESOLUTION:LMD STUDY	-0-
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
438	6.7.1.3C	SPDS	NO AUDIO OR VISUAL CUES ON SECONDARY DISPLAY TO REMIND OPERATOR TO RETURN TO PRIMARY DISPLAYS. -0- -0-	AWAITING NRC APPROVAL OF SUPPLEMENTAL REPORT. APPENDIX K.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO PROBLEM	-0-
IMPLEMENT DATE : / /			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			SPDS FAILURE IS NOT IMMEDIATELY	
439	6.7.2.6I	SPDS	RECOGNIZABLE BY OPERATOR	AWAITING NRC APPROVAL OF SUPPLEMENTAL
STATUS: HOLD			-0-	REPORT. ALARMS ARE AVAILABLE AND HED
GROUP : NSD			-0-	IS NOT A DISCREPANCY. APPENDICES I AND K
REV'D RES :YES	NRC APPROVAL :NO		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:CORRECT VIA HARDWARE OR SOFTWARE MODIFICATION	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
			THERE ARE INCONSISTENCIES IN THE USE OF	SEE HED-441 FOR SPECIFIC DISCREPANCIES
440	6.7.1.2C(2)	SPDS	SYMBOLOGY & ABBREVIATIONS ON SPDS - ALSO	ABBREVIATIONS GENERALLY USED IN INDUSTRY
STATUS: HOLD			DIFFERS FROM CR CONVENTION & PVC	AND THERE IS NO AMBIGUITY OR CONFUSION
GROUP : NSD			-0-	APPENDIX K.
REV'D RES :YES	NRC APPROVAL :NO		-0-	
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:LMD STUDY	-0-
IMPLEMENT DATE : / /			REV'D RESU:NO FURTHER ACTION REQUIRED.	
			GRAPHICS HAVE SYMBOLS FOR SAFETY AND	AWAITING NRC APPROVAL OF SUPPLEMENTAL
441	6.7.2.7B	SPDS	RELIEF VALVES BUT DO NOT IDENTIFY MOTOR	REPORT. APPENDICES H AND K.
STATUS: HOLD			OR AIR OPERATION	
GROUP : NSD			-0-	
REV'D RES :YES	NRC APPROVAL :NO		-0-	
PRIORITY : 4				
RESOLUTION CATEGORY:SPDS			RESOLUTION:MODIFY GRAPHICS	-0-
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	
			EMERG GEN GOVERNOR CONTROL - IND LITE	COMPLETED PER DCP-556 DURING 5R.
442	6.9	BC3	SEPERATED FROM CONTROL AND RED GREEN	NRC APPROVED CORRECTIVE ACTION.
STATUS: CLOSED			CONVENTION VIOLATED	
GROUP : NSD			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : COMPTE				
RESOLUTION CATEGORY:BRD MD			RESOLUTION:CORRECTIVE ACTION BEING TAKEN (DCP-556)	
IMPLEMENT DATE : 04/10/87			REV'D RESU:	
			RECORDER SCALES ARE NON-CONVENTIONAL	CORRECTIVE ACTIONS TO BE COMPLETED PER
443	6.9	VA	FOR RUST LEVEL, LR-DS-100 & GW FLOW TO	DCP-804 SCHEDULED FOR 6R. NRC APPROVED
STATUS: HOLD			COOLING TOWER FR-GW-108	CORRECTIVE ACTION.
GROUP : ENG			-0-	
REV'D RES :NO	NRC APPROVAL :YES		-0-	
PRIORITY : 3				
RESOLUTION CATEGORY:INS MD			RESOLUTION:REVISE SCALES & INSTALL PROPERPAPER	
IMPLEMENT DATE : / /			REV'D RESU:	
			LIMITER STATUS LIGHT IN WRONG POSITION	CHANGE VERY COSTLY; THIS ITEM TO BE
444	6.5.1.5B	VC3	NOTE: FOUND WHEN ASSESSING HED #185	RESOLVED BY PROCEDURE.
STATUS: HOLD			-0-	AWAITING NRC APPROVAL OF SUPPLEMENTAL
GROUP : NSD			-0-	REPORT. (APPENDIX A)
REV'D RES :YES	NRC APPROVAL :NO		-0-	
PRIORITY : 3				
RESOLUTION CATEGORY:PRCDRE			RESOLUTION:HAVE SETTER LED BLINK IF LIMITVIOLTD;MOVE GOV VLV STATUS LGT	
IMPLEMENT DATE : / /			REV'D RESU:SEE ABOVE COMMENT.	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
445	6.5.3.7A(1&2)	STATUS PANEL	STATUS LIGHT PANEL 176, 64, 62 HAVE LIGHT COLORED LETTERS ON DARK BACKGROUND	OPERATORS DO NOT HAVE TO LOCATE STATUS LIGHTS TO MANIPULATE WHEN NOT LIT. LEGENDS ARE READIBLE FROM REDUCED VIEWING DISTANCE WHEN NOT LIT. (APPENDIX H)
STATUS: HOLD			-O-	
GROUP : NSD			-O-	
REV'D RES : YES	NRC APPROVAL : NO		-O-	
PRIORITY : N/A				
RESOLUTION CATEGORY: AAAA			RESOLUTION: LMD STUDY	-O-
IMPLEMENT DATE : / /			REV'D RESU: NO FURTHER ACTION REQUIRED.	
500	6.1.1.1B		THE SUBCOOLING MONITOR ALARMS REQUIRE THE OPERATOR TO LEAVE THE CONTROL BOARDS	RELATED PRESS & TEMP DISPLAYS ARE IN MAIN AREA. THE DISPLAY & CONTROL LOCATIONS FOR ICC INST.SYS. WILL REPLACE THIS MONITOR , ICC LOCATED RELATIVE TO CONTROLS. APPENDIX G.
STATUS: HOLD				
GROUP : NSD				
REV'D RES : NO	NRC APPROVAL : NO			
PRIORITY : N/A				
RESOLUTION CATEGORY: AAAA			RESOLUTION: NO FURTHER ACTION PLANNED.	
IMPLEMENT DATE : / /			REV'D RESU:	
501	6.1.5.3F		GLARE IN CONTROL ROOM WITH FULL NORMAL LIGHTING. APPENDIX G.	
STATUS: OPEN				
GROUP : NSD				
REV'D RES : NO	NRC APPROVAL : NO			
PRIORITY : TBC				
RESOLUTION CATEGORY: TBC			RESOLUTION: TO BE ADRESSED DURING U1 U2 CR LIGHTING SURVEY.	
IMPLEMENT DATE : / /			REV'D RESU:	
502	6.1.5.7A(3)		LIGHTING PANELS IN CONTROL ROOM CEILING DESCRIBED AS BROKEN.	SEE ATTACHMENT 4 OF DCRDR SUMMARY REPORT APPENDIX G.
STATUS: HOLD				
GROUP : NSD				
REV'D RES : NO	NRC APPROVAL : NO			
PRIORITY : COMPLETE				
RESOLUTION CATEGORY: OTHER			RESOLUTION: ADRESSED IN HED-41	
IMPLEMENT DATE : / /			REV'D RESU:	
503	6.1.5.4C		EMERGENCY LIGHTING IN THE CONTROL ROOM NOT ADEQUATE.	APPENDIX G.
STATUS: OPEN				
GROUP : NSD				
REV'D RES : NO	NRC APPROVAL : NO			
PRIORITY : TBC				
RESOLUTION CATEGORY: TBC			RESOLUTION: TO BE ADRESSED DURING U1 U2 CR LIGHTING SURVEY.	
IMPLEMENT DATE : / /			REV'D RESU:	
504	6.1.5.5D		NOISE AS A SOURCE OF DISTRACTION.	APPENDIX G.
STATUS: OPEN				
GROUP : NSD				
REV'D RES : NO	NRC APPROVAL : NO			
PRIORITY : TBC				
RESOLUTION CATEGORY: TBC			RESOLUTION: TO BE ADRESSED IN U1 U2 CR NOISE SURVEY.	
IMPLEMENT DATE : / /			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			CONTROLS ON BSF FOR CONTAINMENT ISOL	: APPENDIX G.
505	6.1.2.5A(1)		VALVES LOCATED TOO LOW.	:
STATUS: HOLD				:
GROUP : NSD				:
REV'D RES :NO	NRC APPROVAL :NO			:
PRIORITY :				
RESOLUTION CATEGORY:OTHER			RESOLUTION:SEE HED-32	
IMPLEMENT DATE : / /			REV'D RESU:	
			LOWER DISPLAYS ON THE VERTICAL BOARDS	: APPENDIX G.
506	6...2.5B(1)		ARE OBSCURED BY BENCH BOARDS.	:
STATUS: HOLD				:
GROUP : NSD				:
REV'D RES :NO	NRC APPROVAL :NO			:
PRIORITY :				
RESOLUTION CATEGORY:OTHER			RESOLUTION:SEE HED-30,510	
IMPLEMENT DATE : / /			REV'D RESU:	
			LOCATION OF SOME CONTAINMENT ISOL VLVS &	: APPENDIX G.
507	6.8.2.1A(2)		THE CONTROL FOR MOV-CH-310 ARE LOCATED	:
STATUS: HOLD			WITHIN CVCS SECTION OF CONTROL BOARDS.	:
GROUP : NSD				:
REV'D RES :NO	NRC APPROVAL :NO			:
PRIORITY :				
RESOLUTION CATEGORY:OTHER			RESOLUTION:ADRESSED BY HED-346.	
IMPLEMENT DATE : / /			REV'D RESU:	
			METERS RELATING TO THE 4KV SYSTEM ARE	: APPENDIX G.
508	6.6.1.1		PHYSICALLY SIMILAR.	:
STATUS: HOLD				:
GROUP : NSD				:
REV'D RES :NO	NRC APPROVAL :NO			:
PRIORITY :				
RESOLUTION CATEGORY:LMD			RESOLUTION:PERMENANT LABELS TO REPLACE TEMP. LABELS ABOVE METER GROUP	
IMPLEMENT DATE : / /			REV'D RESU:	
			ORGANIZATION & LOCATION OF THE SI,CVC,&	: APPENDIX G.
509	6.8.1.1B		CCR SYSTEM INSTRUMENTATION WERE IDENTI-	:
STATUS: HOLD			FIED AS PROBLEMS	:
GROUP : NSD				:
REV'D RES :NO	NRC APPROVAL :NO			:
PRIORITY :				
RESOLUTION CATEGORY:OTHER			RESOLUTION:SEE HEDS-347,331-333,338,339,346,352-354,356,363,389,391	
IMPLEMENT DATE : / /			REV'D RESU:	
			VERTICAL BOARD DISPLAYS TOO LOW FOR STAT	: APPENDIX G.
510	6.1.2.5B(1)		ION AIR PRESS. & TURBINE SUPERVISORY	:
STATUS: HOLD			LOCATIONS RELATIVCE TO TURBINE START UP.	:
GROUP : NSD				:
REV'D RES :NO	NRC APPROVAL :NO			:
PRIORITY :				
RESOLUTION CATEGORY:OTHER			RESOLUTION:SEE HED-30.	
IMPLEMENT DATE : / /			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			EMERGENCY SHUTDOWN PANEL IDENTIFIED AS	: NOT REQUIRED TO BE REVIEWED UNDER SUPP 1
511	6.8.1		LACKING IMPORTANT CONTROLS & INSTRUMENTS	: TO NUREG-0737, APPENDIX G.
STATUS: HOLD				:
GROUP : NSD				:
REV'D RES :NO	NRC APPROVAL :NO			:
PRIORITY : COMPLETE				
RESOLUTION CATEGORY:AAAA			RESOLUTION:CNTRLS & INSTR. ARE ADEQUATE FOR INTENDED FUNCTION.	
IMPLEMENT DATE : / /			REV'D RESU:	
			SI FLOW INDICATOR DIFFICULT TO READ.	: APPENDIX G.
512	6.5.1.2A			:
STATUS: HOL				:
GROUP : NS				:
REV'D RES :	APPROVAL :NO			:
PRIORITY :				
RESOLUTION CA	RY:OTHER		RESOLUTION:SEE HED-162.	
IMPLEMENT DATE : / /			REV'D RESU:	
			RIVER WATER FLOW INDICATOR DIFFICULT TO	: APPENDIX G.
513	6.5.1.2A		USE DURING OSTS	:
STATUS: HOLD				:
GROUP : NSD				:
REV'D RES :NO	NRC APPROVAL :NO			:
PRIORITY :				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NOT IN CNTRCL ROOM. NOT A DCRDR ITEM.	
IMPLEMENT DATE : / /			REV'D RESU:	
			TOO MUCH COLOR CODING IN THE CONTROL	: APPENDIX G.
514	6.5.1.6B(1)		ROOM.	:
STATUS: HOLD				:
GROUP : NSD				:
REV'D RES :NO	NRC APPROVAL :NO			:
PRIORITY :				
RESOLUTION CATEGORY:OTHER			RESOLUTION:SEE HED-199	
IMPLEMENT DATE : / /			REV'D RESU:	
			THE AUX STEAM AND BLDN ISOL SWITCHES ARE	: APPENDIX G.
515	6.8.1.1.B		BURRIED IN THE RIVER WATER AND QUENCH	:
STATUS: HOLD			SPRAY SECTION OF THE CONTROL BOARDS.	:
GROUP : NSD				:
REV'D RES :NO	NRC APPROVAL :NO			:
PRIORITY :				
RESOLUTION CATEGORY:OTHER			RESOLUTION:CONCERN NOT A PROBLEM. NO ACTION PLANNED.	
IMPLEMENT DATE : / /			REV'D RESU:	
			THE USE OF DIFFERENT TYPE OF CNTRLS FOR	: APPENDIX G.
516	6.4.1.1C(1)		SIMILAR EQUIPMENT. ie. QS-P-4A CONTROL	:
STATUS: HOLD			USES AN OT-2 SWITCH NOT NORMALLY USED	:
GROUP : NSD			FOR PUMPS.	:
REV'D RES :NO	NRC APPROVAL :NO			:
PRIORITY :				
RESOLUTION CATEGORY:OTHER			RESOLUTION:SEE HED-94.	
IMPLEMENT DATE : / /			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
517	6.5.3.2A		3-WAY VALVES, HCV-CH-387,LCV-CH-112,115 HAVE CNTRLS THAT OPERATE DIFFERENTLY. BECAUSE THEY HAVE DUAL RED INDICATOR LIGHTS.	THE SWITCHES HAVE DUAL RED INDICATING LIGHTS BECAUSE THEY ARE SELECTOR CONTROLS. APPENDIX G.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:CONCERN NOT A PROBLEM -NO ACTION REQUIRED.	
IMPLEMENT DATE : / /			REV'D RESU:	
518	6.9.1.1C(1&2)		EMERGENCY DIESEL GENERATOR GOVERNOR AND GROUND SWITCH CONTROLS HAVE OPEN/SHUT RAISE/LOWER REVERSED.	APPENDIX G.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY :				
RESOLUTION CATEGORY:OTHER			RESOLUTION:SEE HED-442	
IMPLEMENT DATE : / /			REV'D RESU:	
519	6.4.2.1		JTF REACTOR COOLANT SYSTEM AND RCS SUPPORT SYSTEM CONTROLLERS HAVE OPEN/SHUT AND RAISE/LOWER REVERSED.	APPENDIX G.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY :				
RESOLUTION CATEGORY:OTHER			RESOLUTION:SEE HED-359	
IMPLEMENT DATE : / /			REV'D RESU:	
520	6.4.1.1C(1)		CONTROLS FOR QS-P-4A,B,C,D ARE NOT CONSISTENT WITH OTHER PUMP CONTROLS.	APPENDIX G.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY :				
RESOLUTION CATEGORY:OTHER			RESOLUTION:SEE HED-94.	
IMPLEMENT DATE : / /			REV'D RESU:	
521	6.4.1.1C(2)		THE CONTROL PUSH BUTTONS FOR THE SPING SYSTEM IDENTIFIED IN THE RESPONSE TO THIS QUESTION.	ITEM REVIEWED UNDER NUREG-0700 GUIDELINE 6.4.1.1.C(2) & NO DISCREPENCY WAS IDENTIFIED. APPENDIX G.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NOT A DISCREPANCY.	
IMPLEMENT DATE : / /			REV'D RESU:	
522	6.5.1.5C		THE HEATER DRAIN TANK LEVEL WAS IDENTIFIED AS HAVING A POOR SCALE.	INSTRUMENT NOT REQUIRED TO SUPPORT ACCIDENT RELATED STEPS AND READABILITY AND READABILITY CRITERIA MET. APPENDIX G.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO ACTION PLANNED.	
IMPLEMENT DATE : / /			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
523	6.5.1.5C		CONTAINMENT RECIRC AIR COOLER TEMP. IDENTIFIED AS HAVING A POOR SCALE.	INSTRUMENT NOT REQUIRED TO SUPPORT ACC-IDENT RELATED STEPS AND READABILITY CRITERIA MET. APPENDIX G.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO ACTION PLANNED.	
IMPLEMENT DATE : / /			REV'D RESU:	
524	6.5.1.5C		DIFFERENTIAL PRESS. CELLS USED FOR FLOW INDICATIONS FOR OSTS FLOW INDICATORS HAVE SQUARE ROOT SCALES.	CONTROL ROOM FLOW INDICATORS ARE ADRESS-ED BY EXISTING HEDS. APPENDIX G.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY :				
RESOLUTION CATEGORY:OTHER			RESOLUTION:SEE HEDS-158,162,430.	
IMPLEMENT DATE : / /			REV'D RESU:	
525	6.5.1.2B		TANK LEVELS INDICATED IN UNITS OF LIQUID HEIGHT. OPERATORS USE CURVES TO CONVERT FOR UNITS OF VOLUME.	ITEM CHECKED DURING VERIFICATION AND VALIDATION OF EOPS. NO HEDS IDENTIFIED. THE USE OF CONVERSION CURVES DURING NORMAL OPERATION WAS NOT CONSIDERED TO BE A PROBLEM.APPENDIX G.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NOT CONSIDERED A PROBLEM. NO ACTION PLANNED.	
IMPLEMENT DATE : / /			REV'D RESU:	
526	6.5.1.2A		LACK OF UNIFORMITY IN METER SCALING, ESPECIALLY ON TANK LEVEL INSTRUMENTATION	ITEM CHECKED DURING SURVEY & DISCREPANCY IDENTIFIED. OTHER METER SCALING PROBLEM IDENTIFIED FOR THIS GUIDELINE. APPENDIX G.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY :				
RESOLUTION CATEGORY:OTHER			RESOLUTION:SEE HEDS-166,167,168.	
IMPLEMENT DATE : / /			REV'D RESU:	
527	6.5.1.5A		PRESSURIZER SCALED DIFFERENTLY.	APPENDIX G.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY :				
RESOLUTION CATEGORY:OTHER			RESOLUTION:SEE HED-189.	
IMPLEMENT DATE : / /			REV'D RESU:	
528	6.5.4.1C		THE RWST LEVEL RECORDER HAS STRANGE UNITS.	APPENDIX G.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY :				
RESOLUTION CATEGORY:OTHER			RESOLUTION:SEE HED-443.	
IMPLEMENT DATE : / /			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
529	6.5.1.5C		THE CHILLED WATER RETURN HEADER TEMPERATURE WAS IDENTIFIED IN THE RESPONSE TO THIS QUESTION.	ITEM IS THE CNMT RECIRC. AIR CLR. TEMP. AND IS IDENTIFIED IN HED-523. APPENDIX G.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY :				
RESOLUTION CATEGORY:OTHER			RESOLUTION:SEE HED-523.	
IMPLEMENT DATE : / /			REV'D RESU:	
530	6.5.1.2A		NUCLEAR INSTRUMENTATION POWER RANGE IDENTIFIED AS A PROBLEM DURING CALIBRATION AND DURING THE OST.	REVIEW DETERMINED THAT INSTRUMENTATION HAS THE REQUIRED CAPABILITY. APPENDIX G.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NOT A DISCREPANCY.	
IMPLEMENT DATE : / /			REV'D RESU:	
531	6.5.1.2A		SCALE FOR PZR RELIEF TANK RELIEVED NOT ADEQUATE FOR OSTS WHERE 0.5% INCREMENTS ARE NEEDED.	REVIEW OF OST 1.6.1 SHOWED READINGS WERE REQUIRED WITHIN 1%. APPENDIX G.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NOT A DISCREPANCY.	
IMPLEMENT DATE : / /			REV'D RESU:	
532	6.6.1.1		SOME AUTO MANUAL STATION POTS UNCLEAR AS TO WHAT THEY DO.	APPENDIX G.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY :				
RESOLUTION CATEGORY:OTHER			RESOLUTION:SEE HED-263,295	
IMPLEMENT DATE : / /			REV'D RESU:	
533	6.6.1.1		THE OFF-ACTIVE, POSITIONS FOR THE DELUGE VALVES FOR FIRE PROTECTION IN CONTAINMENT WERE IDENTIFIED AS BEING IMPROPERLY LABELED.	REVIEW SHOWED VALVES ARE LABELED PROPERLY. LABELING THEIR POSITIONS AS OTHER VALVES, OPEN/CLOSED WOULD BE MISLEADING. APPENDIX G.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NOT A DISCREPANCY.	
IMPLEMENT DATE : / /			REV'D RESU:	
534	6.6.1.1		LABELING FOR SI AUTO RECIRC INCONSISTENT WITH OST FOR SOLID STATE PROTECTION SYSTEM.	REVIEW OF OST 1.11.1 FOR THIS CONCERN SHOWED NO PROBLEM EXISTS. CONCERN IDENTIFIED PRIOR TO PROCEDURE REVISIONS. APPENDIX G.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NOT A DISCREPANCY.	
IMPLEMENT DATE : / /			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			OVER PRESS. PROTECTION WAS IDENTIFIED AS A KEY SWITCH WHERE THE KEY COULD BE REMOVED WHEN NOT IN THE OFF OR SAFE POSITION.	THIS CONCERN REVIEWED AND NO DISCREPENCY WAS IDENTIFIED. OTHER DISCREPENCIES FOR KEY SWITCHES ARE ADRESSED BY OTHER HEDS. APPENDIX G.
535	6.4.4.3E			
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY :				
RESOLUTION CATEGORY:OTHER			RESOLUTION:SEE HED-122,123,124,125.	
IMPLEMENT DATE : / /			REV'D RESU:	
			THE TANDEM CONTROLS FOR THE PRESSURIZER PRESSURE WERE IDENTIFIED AS CONFUSING TO USE.	APPENDIX G.
536	6.6.1.1			
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY :				
RESOLUTION CATEGORY:OTHER			RESOLUTION:ADRESSED IN HED-286.	
IMPLEMENT DATE : / /			REV'D RESU:	
			ATMOSPHERIC STEAM DUMP VLV CONTROLS ARE SEPARATED FROM OTHER S/G CONTROLS AND DISPLAYS.	DCRDR TEAM NOTED THIS CONCERN FOR REVIEW DURING THE SURVEY. APPENDIX G.
537	6.8.1.1B			
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY :				
RESOLUTION CATEGORY:OTHER			RESOLUTION:ADRESSED IN HED-328.	
IMPLEMENT DATE : / /			REV'D RESU:	
			CH-P-1A TURNED OFF WHEN CH-P-1C WAS TO BE TURNED OFF. CHARGING PUMP SWITCHES PUMP SWITCHES ARE IDENTICAL AND SIDE BY SIDE.	APPENDIX G.
538	6.8.3.1B			
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY :				
RESOLUTION CATEGORY:OTHER			RESOLUTION:ADRESSED IN HED-361.	
IMPLEMENT DATE : / /			REV'D RESU:	
			PUMP CONTROLS ON TOP OF BENCHBOARDS HAVE DIFFICULT CHECK TARGET INDICATIONS.	APPENDIX G.
539	6.4.4.5E			
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY :				
RESOLUTION CATEGORY:OTHER			RESOLUTION:ADRESSED BY HEDS 128-136 AND 138-146.	
IMPLEMENT DATE : / /			REV'D RESU:	
			TURBINE TRIP IS GAURDED BUT NOT COVERED.	THE CONCERN NEEDED TO BE VERIFIED BY THE DCRDR TEAM. CONCERN WAS VERIFIED AND DETERMINED TO MEET THE GUIDLINE. APPENDIX G.
540	6.4.1.2C(1)			
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO ACTION PLANNED.	
IMPLEMENT DATE : / /			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
541	6.4.2.1		FCV-CH-145;FCV-CH-122;TCV-CH-144 CONTROLS FOR CHARGING SYSTEM HAVE REVERSE CONTROLS.	OPEN AT 0% CLOSED AT 100%. APPENDIX G.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY :				
RESOLUTION CATEGORY:OTHER			RESOLUTION:ADRESSED IN HED-359 & 295.	
IMPLEMENT DATE : / /			REV'D RESU:	
542	6.4.2.1		THE CONTROLLER HIC-GW-113 FOR GASEOUS VENT HEADER DISCHARGE HAS INCONSISENT RELATIONSHIP.	APPENDIX G.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY :				
RESOLUTION CATEGORY:OTHER			RESOLUTION:ADRESSED IN HEDS-359 & 295.	
IMPLEMENT DATE : / /			REV'D RESU:	
543	6.4.2.1		THE DIESEL GENERATOR GROUND SWITCH IDENTIFIED FOR INCONSISTANT DIRECTION OF MOVEMENT.	APPENDIX G.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY :				
RESOLUTION CATEGORY:OTHER			RESOLUTION:ADRESSED IN HED-116.	
IMPLEMENT DATE : / /			REV'D RESU:	
544	6.6.1.1		THE SUBCOOLING MONITOR INPUT DEFEATS ARE NOW LABELED AS TO ENABELED OR DISABELED	CONCERN WILL BE REMOVED BECAUSE OF REPLACEMENT OF SUBCOOLING MONITOR BY THE INADEQUATE CORE COOLING INSTRUMENTATION SYSTEM. APPENDIX G.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:REPLACEMENT BY ICC INSTRUMENTATION. NO FURTHER ACTION.	
IMPLEMENT DATE : / /			REV'D RESU:	
545	6.4.2.1		THE PRESSURIZER LEVEL CONTROL SELECTOR SWITCH POSITIONS IDENTIFEID AS BEING OUT OF SEQUENCE.	APPENDIX G.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY :				
RESOLUTION CATEGORY:OTHER			RESOLUTION:ADRESSED IN HED 114	
IMPLEMENT DATE : / /			REV'D RESU:	
546	6.5.2.3		OPERATING RANGES OF DISPLAY SCALES HAVE BEEN MARKED BY THE OPERATORS.	CHECKED DURING SURVEY. APPENDIX G.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY :				
RESOLUTION CATEGORY:OTHER			RESOLUTION:ADRESSED BY HED-264.	
IMPLEMENT DATE : / /			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
547	6.5.1.1		BECAUSE THE RESPONSES WERE MIXED AND NO SPECIFIC ITEMS IDENTIFIED, THIS CONCERN WAS FOLLOWED UP IN THE SURVEY AND INTERVIEWS.	THERE WERE NO METERS IDENTIFIED THAT FAIL IN THE NORMAL RANGE. THIS WAS ALSO CHECKED & VERIFIED IN THE INTERVIEWS. (INTERVIEW ITEM 17). APPENDIX G.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NOT A DISCREPANCY.	
IMPLEMENT DATE : / /			REV'D RESU:	
548	6.5.4.2		VARIOUS PROBLEMS WITH CHART DRIVES, PICK UP WHEELS AND INKING.	APPENDIX G.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY :				
RESOLUTION CATEGORY:OTHER			RESOLUTION:SEE HEDS-247,248,249,250.	
IMPLEMENT DATE : / /			REV'D RESU:	
549	6.3.1.2B(1)		THE REMOTE ALARM PANEL INPUTS DO NOT HAVE ADEQUATE CONTROL ROOM INFORMATION.	APPENDIX G.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY :				
RESOLUTION CATEGORY:OTHER			RESOLUTION:SEE HED-53.	
IMPLEMENT DATE : / /			REV'D RESU:	
550	6.3.3.5A(1)		LETTERS ON ANNUNCIATOR PANELS ARE TOO SMALL.	APPENDIX G.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY :				
RESOLUTION CATEGORY:OTHER			RESOLUTION:SEE HED-73.	
IMPLEMENT DATE : / /			REV'D RESU:	
551	6.3.3.4A		ANNUCIATOR MESSAGES ARE NOT ALWAYS CLEAR	APPENDIX G.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY :				
RESOLUTION CATEGORY:OTHER			RESOLUTION:SEE HED-71.	
IMPLEMENT DATE : / /			REV'D RESU:	
552	6.3.3.5C(2)		THE NEED FOR REPLACEMENT OF NEW WINDOW HOLDERS AND BURNED WINDOWS.	APPENDIX G.
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY :				
RESOLUTION CATEGORY:OTHER			RESOLUTION:SEE HED-76.	
IMPLEMENT DATE : / /			REV'D RESU:	

HED	GUIDELINE	LOCATION	DISCREPANCY	COMMENTS
			READINGS WHICH READ OUT IN DETECTOR VOLTS.	APPENDIX G.
553	6.7.3.1C			
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY :				
RESOLUTION CATEGORY:OTHER			RESOLUTION:ADRESSED IN HED-315.	
IMPLEMENT DATE : / /			REV'D RESU:	
			THE ENTIRE LIST OF PROGRAMS NEEDS TO BE REVIEWED.	APPENDIX G.
554	6.7.1.1			
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY :				
RESOLUTION CATEGORY:OTHER			RESOLUTION:SEE HED-377.	
IMPLEMENT DATE : / /			REV'D RESU:	
			THERE HAVE BEEN SEVERAL INSTANCES WHERE P-10 SETPOINTS HAVE BEEN VIOLATED.	PROBLEM OCCURED FREQUENTLY DURING START-UP. NOT A RECENT PROBLEM. PROCEDURES DO NOT REQUIRE POWER TO BE MAINTAINED AS CLOSE TO SETPOINTS & OPERATORS ARE MORE EXPERIENCED. APPENDIX G.
555	6.5.1.1A			
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO FURTHER ACTION REQUIRED.	NO LONGER A PROBLEM.
IMPLEMENT DATE : / /			REV'D RESU:	
			LOSS OF 1A SYS STA SERVICE TRANSFORMER DUE TO PROBLEM WITH TAP CHANGES.	PROBLEM WITH TAP CHANGERS WAS DUE TO LACK OF TRAINING AND SUFFICIENT DOCUMENTATION. APPENDIX G.
556	6.5.1.1A			
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO FURTHER ACTION REQUIRED.	NO LONGER A PROBLEM.
IMPLEMENT DATE : / /			REV'D RESU:	
			BASE ADJUST & VOLTAGE REGULATOR CONTROLS & INDICATION WERE NOTED TO BE CHECKED BECAUSE THE GUIDLINE WAS VIOLATED.	OPERATION OF BASE ADJUST AND VOLTAGE REGULATOR ARE FUNCTIONALY RELATED. HED-259 ADRESSES ITS RELATIONSHIP TO THE POWER FACTOR. APPENDIX G.
557	6.9.3.1A(1)			
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY :				
RESOLUTION CATEGORY:OTHER			RESOLUTION:SEE HED-259.	
IMPLEMENT DATE : / /			REV'D RESU:	
			NO PROBLEM IDENTIFIED DURING INTERVIEWS. DCRDR TEAM RECOMENDED CHECKING DURING THE CONTROL DISPLAY INTEGRATION WALKDOWN SURVEY.	VERIFIED THAT NO PROBLEM EXISTS. ALSO, SEE 6.5.3.1A(2) IN APPENDIX L. APPENDIX G.
558	6.5.3.1C(1)			
STATUS: HOLD				
GROUP : NSD				
REV'D RES :NO	NRC APPROVAL :NO			
PRIORITY : N/A				
RESOLUTION CATEGORY:AAAA			RESOLUTION:NO FURTHER ACTION REQUIRED.	NO PROBLEM.
IMPLEMENT DATE : / /			REV'D RESU:	

HED / GUIDELINE / LOCATION	DISCREPANCY	COMMENTS
559 6.5.1.1E(1) STATUS: HOLD GROUP : NSD REV'D RES :NO NRC APPROVAL :NO PRIORITY : RESOLUTION CATEGORY:OTHER IMPLEMENT DATE : / /	HAGEN CONTROLLERS USUALLY INDICATE SIGNAL DEMAND; PARAMETER INDICATION WAS USUALLY NEAR BY. RESOLUTION:SEE HED-153. REV'D RESU:	ADRESSED DURING THE WALKDOWN FOR THE CONTROL DISPLAY INTEGRATION SURVEY. APPENDIX G.
560 6.2.1.2C(1) STATUS: HOLD GROUP : NSD REV'D RES :NO NRC APPROVAL :NO PRIORITY : RESOLUTION CATEGORY:OTHER IMPLEMENT DATE : / /	PROBLEMS INDICATED, RELATED TO PHONE MAINTENANCE AND LINE PRIORITY FOR THE CONTROL ROOM. RESOLUTION:SEE HED-48,49. REV'D RESU:	APPENDIX G.
561 6.7.3.1E(2) STATUS: HOLD GROUP : NSD REV'D RES :NO NRC APPROVAL :NO PRIORITY : RESOLUTION CATEGORY:OTHER IMPLEMENT DATE : / /	UPON REVIEW OF I-27, DCRDR TEAM DECIDED LOSS OF DATA DURING PAPER RELOAD WOULD BE CHECKED FOR THE P-250 & SEQUENCE OF EVENTS. RESOLUTION:SEE HED-318. REV'D RESU:	APPENDIX G.
562 6.5.1.6D(1) STATUS: HOLD GROUP : NSD REV'D RES :NO NRC APPROVAL :NO PRIORITY : RESOLUTION CATEGORY:OTHER IMPLEMENT DATE : / /	ADHERENCE TO WHITE-RED & GREEN-RED INDICATOR LIGHT CONVENTIONS FOR PUMPS & VLVS RESPECTIVELY, WOULD BE CHECKED DURING CONTROL DISPLAY INTEGRATION WALKDOWN. RESOLUTION:SEE HED-116,442. REV'D RESU:	APPENDIX G.
563 6.3.1.2B(1) STATUS: HOLD GROUP : NSD REV'D RES :NO NRC APPROVAL :NO PRIORITY : N/A RESOLUTION CATEGORY:AAAA IMPLEMENT DATE : / /	PROCEDURES SHOULD BE CHECKED TO VERIFY THAT CLEARENCE FOR TRANSFER OF CONTROL TO THE ESP IS ADRESSED. RESOLUTION:NOT A PROBLEM. REV'D RESU:	NSS,NSOF APPROVAL REQUIRED FOR CONTROLS AT ESP TO PERFORM OSTs. A4-73 INDICATES CONTROL IS AT SHUTDOWN PANEL. A4-73 IS CHECKED UPON TRANSFER OF CONTROL TO ESP. APPENDIX G.
564 6.5.3.3.9(1) STATUS: HOLD GROUP : NSD REV'D RES :NO NRC APPROVAL :NO PRIORITY : TBC RESOLUTION CATEGORY:TBC IMPLEMENT DATE : / /	ADEQUACY OF LIGHT INTENSITY FOR GREEN BACKGROUND LEGEND LIGHT INDICATIONS ON STATUS PANELS 622 & 623. RESOLUTION:TO BE CHECKED DURING THE U1 & U2 LIGHTING SURVEY. REV'D RESU:	APPENDIX J HED-208.